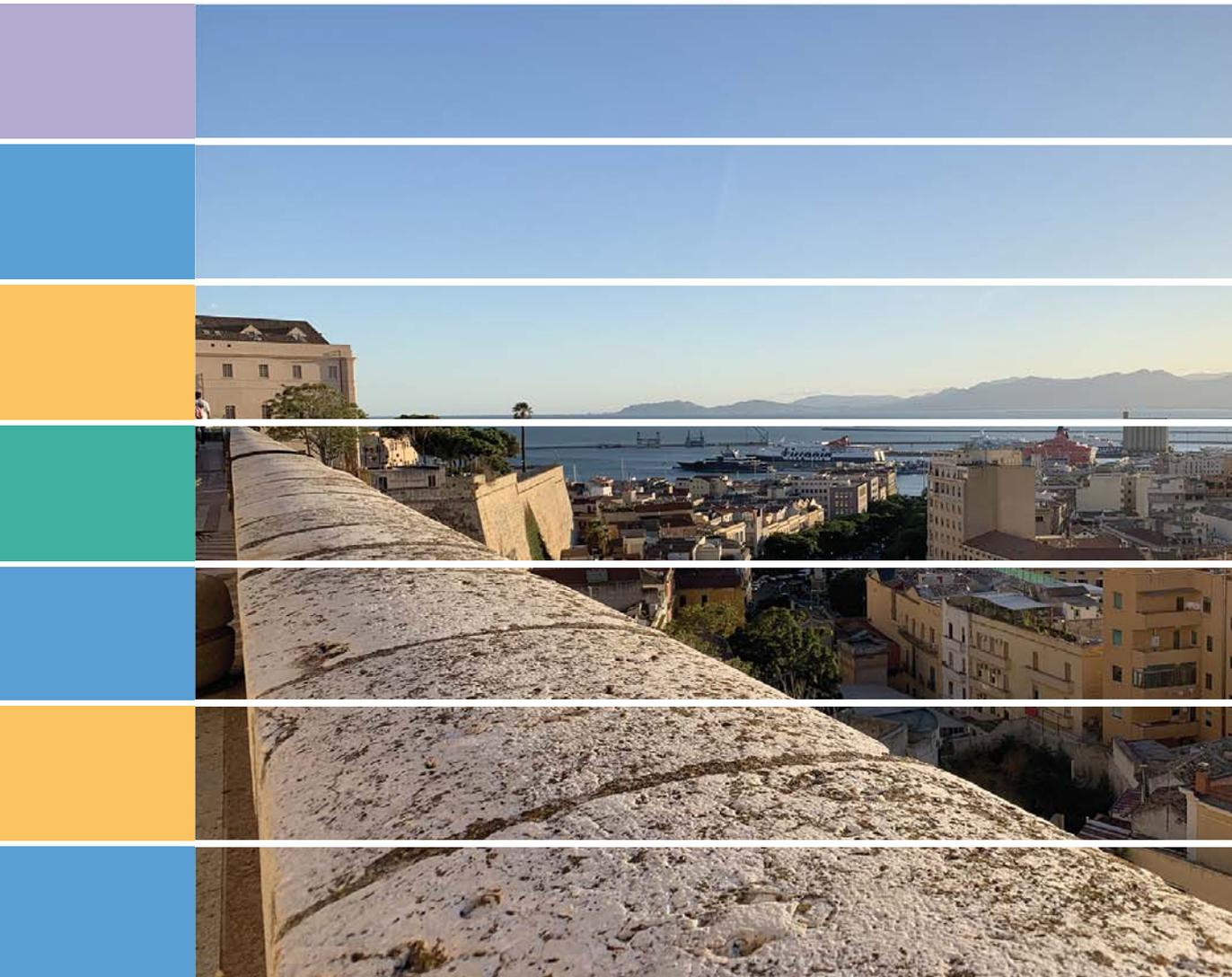


Carmela Gargiulo Corrado Zoppi
Editors

Planning, Nature and Ecosystem Services



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Università degli Studi di Napoli Federico II
Scuola Politecnica e delle Scienze di Base

Smart City, Urban Planning for a Sustainable Future

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Carmela Gargiulo Corrado Zoppi
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Planning, Nature and Ecosystem Services

INPUT aCAdeMy 2019
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INPUT aCAdeMy Conference will focus on contemporary planning issues with particular attention to ecosystem services, green and blue infrastructure and governance and management of Natura 2000 sites and coastal marine areas.

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This book is the most recent scientific contribution of the “Smart City, Urban Planning for a Sustainable Future” Book Series, dedicated to the collection of research e-books, published by FedOAPress - Federico II Open Access University Press. The volume contains the scientific contributions presented at the INPUT aCademy 2019 Conference. In detail, this publication, including 92 papers grouped in 11 sessions, for a total of 1056 pages, has been edited by some members of the Editorial Staff of “TeMA Journal”, here listed in alphabetical order:

- Rosaria Battarra;
- Gerardo Carpentieri;
- Federica Gaglione;
- Carmen Guida;
- Rosa Morosini;
- Floriana Zucaro.

The most heartfelt thanks go to these young and more experienced colleagues for the hard work done in these months. A final word of thanks goes to Professor Roberto Delle Donne, Director of the CAB - Center for Libraries "Roberto Pettorino" of the University of Naples Federico II, for his active availability and the constant support also shown in this last publication.

Rocco Papa

Editor of the Smart City, Urban Planning for a Sustainable Future” Book Series
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NEW LOCAL PROJECTS FOR DISADVANTAGED INNER AREAS

FROM TRADITIONAL MODEL
TO BIO-REGIONAL PLANNING

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ABSTRACT

The reflections on the so-called "internal areas" are developed, in Italy, following the definitions of specific policies for the South, focused on the promotion of generally exogenous industrial models that are detached from the context. At the same time, having to respond to the challenges posed by the intensification of territorial inequalities and the urgent need to concretely implement the ecological transition, the territorial communities have developed several "bottom-up" projects linked to the practice of multifunctional agriculture, recovery of civic uses, circular economy and recovery of traditional supply chains for the purpose of a re-reading of the context through a bio-regionalist perspective, according to the principles and procedures defined by Alberto Magnaghi. The paper investigates the systemization of these bottom-up initiatives within the planning system. Through the case study of the historic region of Ogliastra, the work provides some insights to foster new synergies between the communities that support these initiatives and the institutions responsible for plans and programs at various decision-making levels.

KEYWORDS

Bioregion; Inner Areas; Local Development; Sardinia; Ogliastra Region

* The other authors are: Sergio Serra, Alessia Usai.

1 INNER AREAS AND LOCAL PROJECT: FROM THE TRADITIONAL PARADIGM TO THE BIO-REGIONALIST MODEL

The reflections on the so-called “inner areas” in our country develop following the definition of specific policies for the South, focused on the promotion of generally exogenous industrial models (Barbera, 2015; Parascandolo, 2016). The process of globalization has profoundly changed the linear relationship between places of production and the well-being of the territories, but it is not sufficient in itself to explain the phenomena of rising unemployment, creating pockets of poverty and the state of suffering of many peripheral territories: these dynamics have a complex and multi-scale genesis (Veltz, 2008).

The French economist Laurent Davezies underlines the ineffectiveness of the traditional economic models used on the national scale for the analysis of local territorial realities: in these contexts, the basic incomes are increasingly disconnected from the productive capacity and from the exports of goods and services following the financial crisis of 2008-2009 and the debt crisis of 2010-2011. Even in the presence of a general resilience of France as a whole, the different territories have registered very different behaviors (Davezies, 2001; Davezies & Lejoux, 2003; Davezies, 2012). Similar dynamics of acute intra-national territorial imbalances occurred in numerous western contexts.

The territorial communities living in the internal areas, with a view to responding to the challenges posed by the intensification of territorial inequalities and the urgent need to concretely implement the ecological transition, have generated a whole series of projects with a bottom-up approach, linked to the practice of multifunctional agriculture, the recovery of civic uses, the circular economy and the recovery of traditional supply chains. This “back-to-the-land” approach, however, requires a shared vision capable of generating coordinated support actions (Marchetti et al., 2017; Parascandolo, 2017; Viesti, 2017).

In such a scenario, the bioregional paradigm can constitute an important element in the process of conscious re-appropriation of territorial resources by local communities (Colavitti, 2013, 2017).

Traditional planning tools available at local and regional scale, based on a rationalist approach, have proved to be generally outdated and unable to provide adequate responses to territorial challenges. The question is in particular about the capacity of local territorial plans to contribute qualitatively to contemporary development processes and to the re-generation of “common goods” (Palermo, 2009) through functionalist-based planning mechanisms, which are still expressed by the urban standard per inhabitant and by the determination of specific urban functional units for every part of the municipal territory.

Alberto Magnaghi defines the concept of "urban bioregion" as a set of strongly anthropized local territorial systems, interrelated by environmental relations characterizing a bioregion (a valley system, an orographic node, a hilly system, a coastal system and its hinterland, etc.) and characterized internally by the presence of a plurality of urban and rural centers (Magnaghi, 2014).

Among the aims of such a bioregional system, Magnaghi identifies the enhancement of local territorial identities, the production of "territorial added value" (Magnaghi, 2014) and the "redesign of urbanity" to cope with the dynamics of de-territorialization of the contemporary metropolis (Magnaghi, 2000).

Therefore, seven construction elements to govern the bioregional project are defined (Magnaghi, 2014):

- the culture and the knowledge of the territory and the landscape;
- the environmental structures;
- the urban centralities and the polycentric system of settlements;
- the local productive systems;
- the local energetic resources;
- the multifunctional agroforestry structures;
- the structures of self-government for participatory federalism.

Finally, it is useful to show the way in which Magnaghi structures the socio-cultural relationships between the settled populations and their own living place from the perspective of the bioregion through a dialogue between the "energies of contradiction" and the "energies of innovation" (Magnaghi, 2001). The Italian architect and urban planner defines "contradictory energies", "the behaviors, the social and cultural movements and the conflicts that emanate from the new poverties produced by the processes of de-territorialization" (Magnaghi, 2001) in order therefore to be configured as new forms of spatial and relational connections, in opposition to the ongoing dominant processes. The "energies of ambivalence and innovation" are, instead, those "technological potentials – communicative, telematics, biological, energy, etc. – that can foster, if correctly directed and managed, the development of a new territoriality" (ibid.). Among these, we can highlight, for example, telematics technologies and those for the production of clean energy.

2 RECENT TERRITORIAL DYNAMICS AND REGIONAL LANDSCAPE PLAN: THE CASE-STUDY OF OGLIASTRA

In Sardinia, the policies related to tourism and economic development have generated important territorial imbalances, which have been highlighted through a process of

concentration of the population in coastal areas and a consequent abandonment of internal areas. In general, the process has resulted in a reduction of the role of representation and the presence of intermediate bodies in places of the community (Decandia & Lutzoni, 2016; Magnaghi, 2000; Rosboch, 2017).

Even though, from a certain point of view, the depopulation dynamics represent an endemic element of the Sardinian territorial reality (Brundu, 2017), the decisive contribution of contemporary development strategies linked to the "Rebirth Plan" after World War II cannot be underestimated (Colavitti, 2013; Lecis, 2017; Scroccu, 2011). According to data from the 2015 IFEL report, in Sardinia, 84.4% of the Municipalities, which account for the 52.3% of the total regional population, belong to the so-called internal areas as defined in the National Strategy for Internal Areas (SNAI).

Among the territories considered as extreme periphery, there are large areas of the historic regions of Gallura, Ogliastra and Barbagie, affected by an important depopulation phenomenon that led to a loss of population of 13.9% from 1971 to 2011. Among the national and international policies pursued for local development, starting from the year 2000, the Local Action Groups (LAGs) foreseen by the Leader program, show the interest towards the territory as a "community of life" among their strong points.

The historic region of Ogliastra represents an excellent case-study for the construction of a bioregional scenario supporting inland areas. According to the last census, the population of the Municipalities belonging to the suppressed province of Ogliastra¹ amounts to 57,185 inhabitants; the two main urban centers of the area, Tortoli and Lanusei, do not exceed 15,000 inhabitants. In the year 2017, according to the ISPRA Report on Land Consumption, the Province of Ogliastra appears to be among the Italian provinces with the lowest percentage of consumed land, equal to 2.61% of the whole municipal surface area, although in the presence of strong imbalances between several municipalities: the highest values are recorded in the coastal municipalities of Bari Sardo (6.5%), Girasole (7.11%), Lotzorai (8.3%) and Tortoli (13.71%), mainly due to settlement pressure linked to tourist flows, especially inside the 300 meter strip from the coastline.

The territory is structured according to a "cavea" conformation constituted by the ridge of the reliefs of the Gennargentu massif, closed in an arc on the coastal plain.

The Ogliastra settlement system reflects this conformation and the main inhabited centers are arranged along three main lines (Sanna & Cuboni, 2009):

¹ The former province of Ogliastra included the Municipalities of Arzana, Bari Sardo, Baunei, Cardedu, Elini, Gairo, Girasole, Jerzu, Ilbono, Lanusei, Loceri, Lotzorai, Osini, Perdasdefogu, Seui, Talana, Tertenia, Tortoli, Triei, Ulassai, Ussassai, Urzulei and Villagrande Strisaili.

- the municipalities of the Rio Pardu valley (Gairo, Osini, Ulassai, Jerzu);
- the settlement belt halfway up the hill, along the eastern slope of the massif of Gennargentu (Lanusei, Ilbono, Elini, Arzana, Villagrande Strisaili, Talana, Urzulei, Triei e Baunei);
- the coastal settlement and the wetland area (Tertenia, Cardedu, Bari Sardo, Tortoli, Lotzorai and Baunei).

Presence of “civic uses” is another interesting fact – consisting of the right to collective use of the land for grazing, agriculture and forestry activities: these areas cover a 60% of the Ogliastra area and about 482 km² fall into protected areas of the Natura 2000 network (Programming Service of the Province of Ogliastra, 2013).

The active population is mainly employed in the secondary and tertiary sector, in particular in the tourist and hospitality sector. Instead, the weight of craft or agricultural professions continues to decline. Ogliastra also presents a population with an Aging Index of 165.3%, which is increasing and is already above the national average²; this data justifies the inclusion of Ogliastra in the Blue zones with the highest longevity in the world (Pes & Poulain, 2014; Buettner, 2015).

The historical region is included in one of the 27 landscape units of the Regional Landscape Plan, which defines some strategic project guidelines. Among the most significant identified measures, it is possible to highlight the redevelopment of the slope centers through the strengthening of services for hospitality and receptivity, the enhancement of the environmental system of municipalities in the Rio Pardu valley, the redevelopment of the coastal settlement along the SS125 line by strengthening and integrating local services and connections between the coastal municipalities and those of the hinterland, the conservation of the ecological potential of the coastal ecosystem, of the wetlands of Tortoli and of the hydro-geographic basin that feeds them.

3 REPLICABILITY OF THE BIO-REGIONAL MODEL FOR THE INTERNAL AREAS: WHICH “ENERGIES” HAVE TO BE USED FOR OGLIASTRA?

From a bio-regionalist point of view, Ogliastra presents a settlement structure composed of medium-small centers hierarchically oriented towards the coastal settlements in which the main services are concentrated, despite the absence of real dominant polarities.

The data taken from the 2011 ISTAT census describe an activity rate of around 48% of the population, a figure just below the regional average, which stands at 49.9%. The territory's

² ISTAT data- 8mila Census “Profilo del territorio della provincia di Ogliastra”.

workforce is represented by a total of almost 24,000 active individuals (of whom 19,637 are employed) out of a total of 50,035. A significant portion, around 23% of the employed population, works in the commerce and hospitality sector, while over 20% is engaged in the industrial sector.

In the agriculture, forestry, and fishing sector, however, only 12% of the population is occupied, confirming the dynamics found at the regional level. Finally, the 2010 Agricultural Census shows the presence of 3,336 farms on the territory of the former province of Ogliastra – more than 50% are small businesses that use an agricultural area of less than 2 hectares, while about 27% of companies exceeds 5 hectares of utilized agricultural area. The territorial connections with the other historical regions are guaranteed by the SS125 “Orientale Sarda”, the main arterial road that runs through the region from North to South; railway connections are limited to the presence of the historic route of the *Trenino Verde*, currently used for seasonally tourist purposes. Ogliastra responds to the territorial type of bioregional contexts characterized by a coastal system and the complex multi-scale relations with its own hinterland, generated by the polarization of the dynamics between mountain and coast. According to Patrick Geddes, the Ogliastra context could be an excellent example of a “valley section” (Geddes, 1925).

For a retelling of the context in a bio-regionalist point of view, however, it is necessary to integrate and systemize also those bottom-up initiatives created with the aim of opposing the dominant economic paradigm. These local initiatives are capable of producing conditions of self-sustainability and “Territorial added value” through a new alliance between citizens and local producers. Among the bottom-up initiatives, it has been pointed out, by way of example, the “Terra Libera.

Biodiversity in Ogliastra” project, consisting of mini-courses of self-production and various “know-how workshops”. Coping with the issue of the productive relationships linked to the food resource, the Solidarity Purchase Groups (SPGs), the experiences of direct sales between consumer and producer and the farmers’ markets, are among the most common forms through which the citizens are freed from the channels of the traditional food chain. The SPGs, despite their strategic importance, have been recognized by an administrative act drawn up by the Union of Municipalities of Ogliastra³, which unfortunately has never been put in place. Only one social farm is present within the “Regional register of multi-functionality of agricultural and fish farms” for the former province of Ogliastra, in contrast with 10 educational farms.

³ Del. n. 26/2014 by the Administrative Board of the Municipalities Union of Ogliastra. Online: https://www.regione.sardegna.it/documenti/1_17_20140908182541.pdf [last accessed: 11/03/2019].

In both cases, almost all of these activities are located in coastal Municipalities, which probably shows that even the existence of these realities follows in some way the same dynamics that have characterized the tourism sector.

4 FINAL CONSIDERATIONS

At the end of the reflections carried out so far, it is possible to trace some considerations.

The present research shows the many possibilities and perspectives that would be generated by the adoption of a bio-regional development model for a context such as that of Ogliastra. Public planning initiatives at different institutional levels, aiming at promoting and enhancing the territorial heritage, cultures and knowledge deposited in the local *milieu*, constitute a good starting point, as a result of an increased awareness by administrators and local stakeholders. However, it is clear the need to significantly schedule the knowledge of local resources, as well as to enhance the bottom-up initiatives deriving from the will of citizens and associations, which constitute the “contradictory energies” of bioregional contexts and that are often not taken into account by the provisions of institutional plans and programs.

The Regional Landscape Plan of Sardinia was drafted in 2006 with the purpose to resolve some urgent problems about the model of development. It represented an important innovation in terms of maintenance of the widespread cultural heritage, restoration of historical centres and protection of coastal and agricultural landscapes.

Nevertheless, the planning objectives are implemented through traditional prescriptive rules, in which the bounding conservation elements prevail over project strategies. In comparison, regional Landscape Plans of Tuscany and Apulia based on a “territorialist” approach appear to be more dynamic and participation-based. Furthermore, existing local municipal plans are not able to fully grasp the whole territorial relationships and doesn't take into account the richness of grass-root initiatives and informal “energies” expressed by local communities.

To systematize these energies into an overall framework and integrate the dimension of bottom-up initiatives in programming and planning tools, a highly original element could be found in the establishment of forms of agreements between communities and policy makers, able to highlight the territorial values represented by the main environmental invariants of the context. In this sense, bio-districts, multifunctional agricultural parks, River Contracts and Lagoon Contracts - the last two governed by a recent regional regulatory provision by the Basin Authority⁴ - represent the most advanced tools.

⁴Del. n. 2/2018 by the Institutional Committee of the Regional Basin Authority. Online: https://www.regione.sardegna.it/documenti/1_617_20190109155046.pdf [last accessed: 11/03/2019].

The agricultural sector is a central element in Ogliastra economy; local product promotion strategies should be based on encouraging organic production, creating quality certification systems, creating multi-sectoral networks integrated with tourism, catering and trade supply chains. In this sense, the establishment of a “bio-district” of Ogliastra region along the lines of recent national and regional initiatives⁵ could constitute a winning prospect.

This is also due to the specificity of Ogliastra context, in which there is a great wealth of land for civic use in a state of non-use that could be enhanced through the strengthening of agroforestry production chains. The bio-district could also accommodate and integrate in a unitary project all those ephemeral experiences related to Alternative Food Networks and multi-functionality initiatives of agricultural practice. The analysis carried out in this paper has shown that the total number of experiences resulting from the establishment of educational farms and social farms is quite small, so it is difficult at present to imagine a significant impact outside an integrated and multi-scale project.

The most urbanized contexts of the Ogliastra, thanks to the bio-district, could somehow restructure the relationship between city and country, with a view to contrasting the soil consumption. In the end, the structuring of a Lagoon Contract for the wetlands of the Tortoli Pond and the hydrographic basin that feeds it and of a River contract for the Rio Pardu basin, would make it possible to integrate the bio-district production strategies with the need for protection and valorization of environmental resources, operating an overall reconnection between the mountain-hill and coastal centers.

Also in this case the virtuous examples are not lacking, both at national and regional level: in Sardinia there are already the River Contract of the Coghinas valley, the River Contract of the Temo valley and the Calich Lagoon Contract. Still from a bioregion perspective, it is finally possible to outline some of the future perspectives on the basis of the seven constructive elements elaborated by Alberto Magnaghi, in terms of development of territorial information systems about the paths, agricultural and gastronomic productions, civic uses and archaeological preexistences, reconnection of the polycentric settlement network through cycle and pedestrian and equestrian excursion routes, restoration interventions of the historical centers and of the architectural elements characteristic of the rural landscape, marketing of typical products, landscape and tourist-accommodation in multi-functional farms, use of forest biomass in the energy field and the local closure of the waste cycle through its unified and integrated management, enhancement of educational and multi-purpose farms,

⁵ The “Bio-district of Parks in Sardinia” is an initiative created by the Managing Entity of Porto Conte Park, that elaborated a framework agreement between the Municipality of Alghero, the Natural Regional Park of Porto Conte, COPAGRI Sardegna (Confederation of Agricultural Producers), ASAB Sardegna (Sardinian Association for biological agriculture), Legambiente and Biocertifica – ICEA Sardegna.

self-produced laboratory initiatives, strengthen of the participatory dimension of the communities in local decision-making processes.

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