



*Research article*

## Belice Valley: from earthquake to local development perspectives

Giovanni Messina\*

Department of Cultures and Societies, University of Palermo, Palermo, Italy

\* **Correspondence:** Email: [giovanni.messina01@unipa.it](mailto:giovanni.messina01@unipa.it).

**Abstract:** This paper aims to retrace, through a critic study of the scientific debate, the Belice Valley's territorial context after the 1968 violent earthquake and to identify the actual development perspectives of the area. By using official dataset and consolidated bibliography we identify the peculiar weakness of the socio-economical structure of Belice Valley, a marginal territory of Sicily (Italy), when the earthquake stroke, but also the start of a local identity building process in the aftermath of the seism. We also recognize, in the LAG—Local Action Group—strategy, a possibility to strenghten, nowadays, the local development of the area through the utilization of its *milieu* and its own potentialities.

**Keywords:** local development; LEADER; marginality; milieu

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### 1. Introduction

The Belice Valley lies in Western Sicily, among the Provinces of Agrigento, Palermo and Trapani. In January 1968 a violent and tragic earthquake shook the area killing people and destroying private and public estates and infrastructures.

This paper moves from a geographical approach and it has a descriptive interpreting intent: we do not propose any new interpreting model but we describe, according to a critical comparison between 1968 status and the actual one, how the rural dimension is still playing a role on the the local development and on the identity-building process of the area. In fact, it aims to make a comparison between the socio-economical context just after the shock and the newer development perspectives.

## 2. Methods

In this paper we gather and discuss official dataset from the Seventies, we propose a critical review of the scientific literature and, in conclusion, find in the LAG—Local Action Group—Valle del Belice's experience and strategy a possibility to drive the area finally out from the marginal condition where it lies since and even prior the earthquake. According to the references (3.2 paragraph), in this paper we refer to the LEADER/CLLD (Community Led Local Development) methodological approach to study the local development of rural or marginal territories.

## 3. Discussion

### 3.1. The 1968 earthquake: a socio-geographical reading

In Costantino Caldo's analysis, the seismic phenomenon assumes the peculiar connotation of the tragic moment in which the fragility and/or solidity of a territorial system are made clear [1–2].

The impacts and outcomes of the catastrophe vary together with the economic, organizational, cultural strength of a territory; Caldo, in fact, closely collects the earthquake event to the development status of the considered region. The resilience, the reactivity of the territorial systems to the shock of the catastrophe is grafted on its own cultural, economic and productive strength.

The Belice case represented a contradictory contoured evidence with lengthy reconstruction process [3] which we believe should be, also for signs, retraced to frame the development attempts identified in the present.

As Guarrasi notes, the earthquake, with an action that seems to respect a sequence linked to the *mythos*, which upsets plots to solve them [4] has been a catastrophe to be taken as *terminus post quem* in the construction, already also onomastic, of the sense of where and of the processes of local identity.

The magnitude 6.0, and IX Mercalli's scale tremor hit the area in which the two branches of the Belice river converge with a swarm of shocks that according to the chart elaborated by Caldo [2], based on the seismographic data, had the main and most violent episodes on the 15th, 16th and 25th of January 1968.

As the ideal lines that connect the homogeneously damaged centers show, the disruptive effects of the catastrophe have caused greater damage in the proximity of the epicentres that, as Caldo says, are contained within an area of about 550 km<sup>2</sup> and at the most distant 25 km. Some are near the destroyed centers. The shock of 3:01 am of the 15th January is in the triangle Gibellina, Salaparuta, Poggioreale, the shock of 11:19 pm is even with epicenter inside the village of Santa Margherita and another is 3 km from Montevago [2].

Although the echo and effects of the shocks were marginally registered up to Agrigento, Palermo and Trapani, fourteen municipalities were mainly affected. Within Valle del Belice region: Gibellina, Poggioreale, Salaparuta and Montevago were completely razed to the ground, Santa Margherita di Belice and Santa Ninfa were partially razed to the ground and Sambuca di Sicilia, Calatafimi, Salemi, Vita, Camporeale, Contessa Entellina, Menfi and Roccamena were severely damaged [4].

The effect for the community was terrible: 296 people died. The structures and building materials weakness contributed to make more than fifty thousand people homeless.

At the time of the first tents, followed by the slums, in a total area of 360 hectares, duly expropriated in the emergency plans, began the slow and contradictory reconstruction path.

It is not the intent of this paper to precisely discuss the reconstruction process (which, by the way, to date is not yet fully completed) and the great social movement developed by Belice communities, inspired by Danilo Dolci and Lorenzo Barbera, in asking for their development plans during the late fifties.

For the analysis of the complex legislative-bureaucratic mechanisms we refer to the many detailed urban and sociological analysis available in the relevant scientific literature.

The reconstruction master plan seems to be consolidated, together with the actual rebuilding activities, in two crucial and agreed steps:

- the up to date unfinished road infrastructure which should reduce the marginality of the Belice region with the effect of assisting the agricultural market development by making the region a transit and interexchange area on the North-South (Highway A29 and SS624 Palermo-Sciacca) and East-West directions (through the proposed and never built road link between Marsala and Highway A19 through Corleone's territory) [5–6].
- the development of industrial businesses, through investments funding both the small reconstruction processes and the heavy ones such as the never built 4000 jobs electric-siderurgical plan in Capo Granitola [5–7].

The earthquake started as well a rebonding process of the sense of place of a territory.

From a demographic perspective the tremor increased but do not determined the progressive fleeing of people from the Belice region, especially from the innermost towns.

Caldo notes an overall population decline of 11% within the Belice region from the analysis of the censuses made between the 1951 and 1971 [2]. An important role played, even with respect to the crisis of the local economic system based on agriculture, the migratory phenomenon. Between 1963 and 1972 over 35,000 names were removed from the registry offices, of these 20,000 after 1968.

Agriculture, according to the conclusions of the 1968 Democratic Development Plan [8] represents, as mentioned, the leading sector of the economy of the Belice region, although the backwardness of the structures and minimum income yield denote all unexploited and anachronistic potentialities: to large areas in which cultivation dedicated to self-consumption is practiced, there is also the absence of networks and hubs for marketing and companies engaged (with the exception of the wine sector) in the transformation of agricultural products.

The lands, cultivated only for 37% by direct farmers, are managed under the emphyteusis regime. Compared to the Used Agricultural Area -UAA-, Caldo [2] identifies the percentage of land used for arable crops in 54%. The woody crops, vines and olive trees essentially, occupy 31% of the UAA. Interesting data on the average age of the vineyards of Belice: about 60% of the plants have, in the '70s around 1 to 10 years.

Significant in this sense is the lack of access to irrigation sources and the scarce infrastructure of this sector, which is crucial for the development prospects, especially in an area with an agricultural vocation [2,8].

The industrial system of Belice is elementary, concentrated, as mentioned, more than anything else on the building industry and mechanical movement or, pending large industrial plants planned and never realized, at least completely, in the planning of reconstruction [2,7]. It is precisely in the absence of a pre-eminent business and industrial fabric and especially in the many missed opportunities to deepen the reconstruction to a building industrial culture that Caldo, together with the demographic exodus and the often evoked tension generated by hypertrophy and slowness of bureaucratic and administrative processes, identifies the figure of the margins of Belice and the cause of a much slower development compared to the magnitude of allocations made.

### 3.2. *The LAG Valle del Belice's strategy*

Nowadays, among the many experiences of collaboration between the Belice territories—aimed at enhancing the cultural and food and wine heritage, the most ambitious, for resources and planning and large-scale planning skills is that of the LAG Valle del Belice. For the first time in the history of LEADER programming [9–13], Belice—especially in its southern territorial structure, which was the most exposed to the earthquake of 1968—presented itself together with a proposal by the Local Action Group to best represent the territorial identity, cultural and social that began to define itself as such by the 1968 earthquake<sup>1</sup>.

The LAG Valle del Belice partnership consists of 12 municipalities straddling the provinces of Agrigento, Palermo and Trapani (Caltabellotta, Contessa Entellina, Gibellina, Menfi, Montevago, Partanna, Poggioreale, Salaparuta, Salemi, Sambuca di Sicilia, Santa Margherita di Belice and Santa Ninfa), 7 between Departments and Public Research Institutes, 4 Cultural Institutions and 88 private subjects representing the main productive, social, services and voluntary sectors of the territory [15].

The data returned by the ISPRA survey, related to 2009, characterize the territory of Belice as distinguished by low or very low anthropogenic pressure, with the macroscopic exception, beyond the urban system Castelvetrano-Campobello di Mazara, Menfi and Partanna and the Santa Margherita-Montevago and Santa Ninfa-Gibellina-Salemi settlement systems [16].

The most significant economic sector of Belice, in terms of the number of companies within the supply chain, continues to be that of the agro-food one. On the other hand, the secondary sector, which distinguishes itself in certain bordering areas for the production of ceramics -Sciacca, Burgio-, is of little relevance and, in any case, is of major interest in manufacturing and construction as well as the tertiary sector [15].

This is what emerges from the survey on supply chains conducted, on a municipal basis, by the Statistical Service and Economic Analysis of the Department of Economy of the Sicilian Region and published in 2015. In a territory voted primarily to the primary sector, with a very high concentration of enterprises of the agricultural supply chain (over thirteen thousand according to the Sixth Census of Agriculture published by the Sicilian Region and by SISTAN in 2016 [17]), stand out among the top ten municipalities, in descending order by number of companies, Salemi, Menfi, Vita and Poggioreale—all doing part of the LAG Valle del Belice—which, together with Roccamena—is not

<sup>1</sup> Alta Irpinia, struck by an earthquake in 1980, represents an other interesting case study that shows how the Italian rural and marginal territories can implement an identity-building process and a bottom-up local development project [14].

part of the partnership, but included in the Alto Belice area, in Palermo, express 3% of the total number of companies in the regional agri-food chain [15].

With the exception of Menfi, which is counted as a rural area with intensive and specialized agriculture, the rest of the LAG's territories are codified as rural areas with overall development problems or intermediate rural areas [18].

Compared to the overall destination of Sicilian agricultural land (49% arable land, 27.6% woody cultivation and 23% pasture), the UAA of the LAG's territories, depending on the type of rural area to which they belong, is more arable land, except for areas with greater agricultural specialization where wood, vine and olive crops reach 60% of land use.

In addition, to provide a picture of the state of employment in Sicilian rural areas, compatible with the territory in question, we refer to the ISTAT data published in the Sixth Sicilian Agriculture Census in 2016. It shows that the agricultural sector represents a strategic occupational sector compared to urban areas. With regard to the other two sectors, despite employment rates that are close to those of the primary sector, there is a widespread commercial activity and industrial employment which, as previously mentioned, is linked to commercial activities, manufacturing, mechanical movement or most related to construction.

In this general framework, the LAG, based on a bottom-up approach and choral planning, has identified its local development strategy. It has as its main goal declared “By 2020 to improve the quality of life in the Valle del Belice, through participation, innovation, networking between the various strategic sectors of the territory and the connection with other national and international territories” the LAG intends to pursue it by planning actions that encourage development in three macro areas: Development and innovation of local production chains and systems, Sustainable tourism and Enhancement of cultural heritage and artistic heritage linked to the territory [15].

### *3.3. Tourism as a development possibility*

In this paragraph we will therefore focus on the tourist aspects to analyze the context of the offer, considered strategic for the overall development of the area. In this section we will present the main data of 2017 (Table 1) on the receptive system and on the tourist flows entering the LAG's territories in order to acquire a complete and adequate quantitative framework to support reflections and development projects that certainly are outside the horizon of this contribution. The data, some of which aggregated to respect statistical confidentiality, have been kindly provided by the Tourism Department of the Sicilian Region [19].

The Valle del Belice has in Menfi the only outlet on the sea. Menfi represents an example to follow to implement—when not to create—the valorisation policies of the local tourist system. Menfi [20,21] is a marginal Sicilian destination that has gradually built a successful offer rooted on the coast, food and wine quality and rurality that has gradually opposed a rigorous seasonal flows. It is the dimension of rurality, together with that of flavors of excellence and environmental integrity, the number on which to focus, in a systemic way, the organizational efforts of local governance to create a supply system that can present itself as distinctive in the competitive area. of destinations. It would be necessary to build vision synergies before strategies, Menfi did it and the market responded. In this sense, the LAG can be a useful tool to find a synthesis and to favor initiatives.

**Table 1.** Data on the tourist flow and the accommodation capacity of the municipalities of the Valle del Belice LAG.

City	Arrivals 2017	Nights 2017	Beds available	Area km <sup>2</sup>
Caltabellotta	36	155	37	124
Contessa Entellina/Partanna/Poggioreale	147	264	96	257
Gibellina	152	531	38	47
Menfi	9.298	28.925	1.151	114
Montevago	56	75	16	33
Salaparuta	22	50	8	41
Salemi	1.508	2.129	59	182
Sambuca di Sicilia	831	2.294	91	96
Santa Margherita di Belice	nd	nd	9	67
Santa Ninfa	971	2.052	51	61
Vita	nd	nd	nd	9
Totale	13.021	36.475	1.556	1031

On the other hand, the fields of application of the local development strategy seem to have perfectly identified areas that do not correspond to the local milieu: agri-food valorization, insertion of the Belice territory in the areas of cultural heritage (Selinunte and Segesta to the west, Palermo to the north, Agrigento to the east), strengthening the internal heritage (think of Gibellina and the post-earthquake architectural and artistic interventions, or Sambuca, the recent Borgo dei Borghi italiani). Sustainable tourism in this sense would be the natural outlet for possible development, and Belice has an internal best practice in Menfi.

#### 4. Conclusions

The 1968 earthquake, breaking into an area essentially linked to subsistence agriculture, or in any case self-referential, and economically and socially marginal, triggered a process of territorial aggregation and sense of community that found extrinsecation in the Valle del Belice name and of its related social question. The earthquake was therefore, for hyperbole, a catalyst of identity processes. We retraced the history of the territory and its reconstruction relying on the studies of Constantine Caldo and the contemporary scientific literature that saw in the underdevelopment the crucial element for such dramatic consequences derived from the earthquake. Having identified the primary sector as the most historically representative of the area, we framed the prospects that today move the Valle del Belice LAG (the first experience of Lower Belice local governance) around a local development strategy that has in the enhancement of agriculture, tourism and cultural heritage its

main goals. The LAG, however, is experiencing significant delays in operations but is undoubtedly an instrument of local policy that can direct, or at least trigger, concrete development energies. Finally, we presented the main data on tourism in 2017, which shows a clear imbalance of the Belice territorial offer: Menfi is a whole other story, the towns inland plod along or cannot compete with it. It is in our opinion necessary for Belice to accept, in a systemic way and without self-interests, the challenge for the creation of a unique supply system, focusing on the elements that constitute the pillars of its own natural and cultural landscape. The history of Belice's development is yet to be written.

### Conflict of interest

The author declares that there is no conflict of interest associated with this research.

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