

GEOSITES AND PARKS FOR THE SUSTAINABLE DEVELOPMENT OF INNER AREAS: THE MATESE MOUNTAIN (ITALY)

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Abstract: The paper focuses on the potentiality of geosites valorisation in supporting a sustainable rural development strategy. An inner area in Southern Italy with a valuable naturalistic and geological, heritage is considered. The area is analysed under demographic, economic, environmental, agricultural and tourism profiles to bring out limits and strengths that a strategy of geological valorisation can meet. Results highlighted the fragility of the Mountain -in terms of depopulation, ageing, unemployment and low firm density, that has not been affected by a proper tourism development. The valorisation of geosites can achieve its potential if all components of local heritage are reinforced and built around common peculiarities.

Key words: Geosites, protected areas, tourism, inner areas, Italy

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GEOSITES AND PARKS IN RURAL INNER AREAS

Starting from the 90s, rural areas in Europe were affected by a transformation process that involved both socio-demographic, economic and environmental spheres in the framework of sustainable development paths. Rural amenities are crucial resources

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for the revitalization of rural areas, especially in territories where there is a demand of good and services linked to the local environmental, cultural and gastronomic heritage.

Natural resources have an important role for the sustainable development of inner areas. Besides contributing to the conservation of biodiversity, natural resources have gained various functions such as educational and cultural, scientific and recreational functions that go beyond the necessity to preserve nature (Pletsch et al., 2014). A high environmental quality is a necessary base for many tourism activities (Mastronardi & Cipollina, 2009). These activities, while supporting the economic growth, on the other hand they should protect the natural resource on which they base their existence. At this regard, the institution of a natural park is the assignment of an “environmental quality label” that could attract the ecotourism market (Ceballos-Lascurain, 1996; Marangon et al., 2002). As part of the natural heritage, an increasing attention is paid to geological resources and to their protection and valorisation.

At international level, in 2015, 195 Member States of UNESCO have ratified the creation of a new label, the UNESCO Global Geoparks (UNESCO, 2016). This label expresses governmental recognition of the importance of managing outstanding geological sites and landscapes in a holistic manner. Together with World Heritage sites and Biosphere Reserves, the UNESCO Global Geoparks label adds another sustainable development tool that may contribute to the realization of the 2030 Sustainable Development Goals. 120 UNESCO Global Geoparks in 33 countries are actually recognized. At European level, the Geoparks Network comprises 69 Geoparks from 23 European Countries, of which ten Geoparks are located in Italy (<http://www.isprambiente.gov.it/it>). In all these experiences, a common challenge is the ability to create a strong connection among Geoparks, tourism and rural development, in order to contribute to the accomplishment of the European Strategy 2020 goals in terms of an intelligent, sustainable and inclusive growth.

Due to the multiple profiles involved, the valorisation and management of Geoparks require the use of multidisciplinary, integrated and locally rooted approaches. The contribution of economic and managerial disciplines is essential both from a supply perspective, e.g. when assessing if geosites in their environmental landscape and cultural values could create favorable conditions for developing an offer of good and services in rural and inner areas (Forleo et al., 2017); and from a demand perspective, for example, by analyzing current and potential tourist flows and the experiential characterizations that the local heritage could evoke in visitors (Palmieri & Forleo, 2015; Štrba, 2015).

Geosites can stimulate the birth of new economic activities based on the geological environment through the implementation of conservation, management and development strategies (Lena & Carbone, 2016). Geoparks can favour a sustainable growth and the geotourism development, and create socio-economic benefits for the local communities (Cucuzza, 2016). Among the socio-economic benefits, the increase in the direct and indirect employment rate (Aloia & Burlando, 2013) may be a positive externality of Geoparks. The indirect effects of a Geopark are in the job opportunities offered by tourism firms, small hotels, bed & breakfast, restaurants and other activities connected to the increase of tourist flows (Pforr & Megerl, 2006). Even the production of local handicrafts, if directly linked to the peculiarity of local areas, should be strongly connected with the Geopark and its geological resources. Moreover, agritourism and agricultural sectors offer to visitors the possibility to appreciate local resources and to buy high quality food productions (Cianflone & Cardile, 2014).

Anyway, the reliance upon the tourism potential of geosites requires many efforts to realise its benefits and multiplying effects and must be locally proven. The valorization of the geological heritage in a tourism and multisectorial perspectives is a topic on which

territorial planning and management policies should focus more (Miccadei et al., 2014). In Italy, a not so active integrated approach and the museological vision with which geological heritage has been perceived so far, both by users and institutions, have strongly limited geosites potentialities (Coccioni, 2009).

This paper aims to bring some contributions to the debate of geosites potentialities in supporting an integrated strategy of rural development. A systematic approach that links resources, actors and activities, within the rural *puzzle* is proposed and referred to an inner rural area. This approach is framed in the Italian strategy for inner areas (Barca et al., 2014) that fosters a more sustainable and inclusive national growth. A case study of the inner area of the Matese Massif, Italy, is the context for paper analysis.

MATERIALS AND METHODS

The Matese Massif (Figure 1) is an interesting case study concerning a mountainous area located in Southern Italy. Due to the high value of its environmental heritage, this area was declared a priority in the National Biodiversity Plan. In fact, the Matese mountain is has an abundance of biodiversity, of plant (anemone, grape hyacinth, wild orchid; elms and beeches) and animals species (wolves, foxes, salamanders, owls and other precious birds). The Massif is one of the most important mountain of the Southern Apennines, whose morphology is typical of a vast karst plateau divided lengthwise into two ridges that fall into two different regions, and a central crack. Due to this morphology, the Matese area is a “broken” mountain located between Molise and Campania regions and runs across four provinces (Caserta and Benevento in Campania region; Isernia and Campobasso in Molise region). This area includes a total of 37 municipalities (of which 22 are located in Campania and 15 in Molise).



Figure 1. The studied area of Molisian Matese (in red) in the national context and in Molise Region (in green)

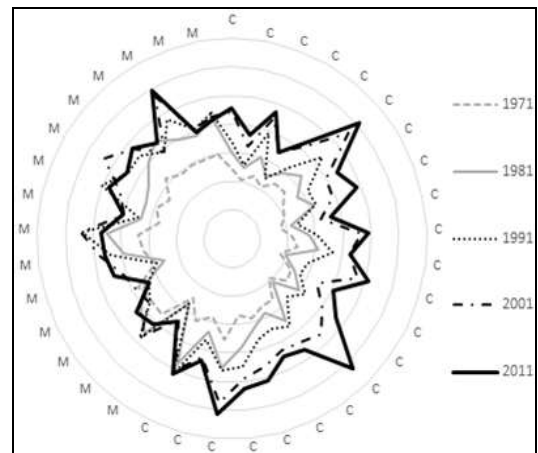


Figure 2. The old age index in the municipalities of Matese, 1971-2011. The C and M letters refer to the 37 municipalities of Matese area respectively located in Campania and Molise regions.

Each circle measures a rate of 5% from 0 up to 35% (Source: ISTAT data)

From North to South, the Massif has an extension of about 60 km, while from East to West it is about 25 km; the highest peaks reach 2000 meters above sea level. In the Matese area, there are many archaeological sites of the ancient Sannio that make this territory very interesting even under paleontological and historical profiles.

Based on the study case, paper aims to analyze the multiple profiles of territorial contexts, in order to give cues for discussion about opportunities and obstacles that a tourism valorization of geosites in rural area may face in local contexts. Paper approach and findings may give insights regarding actions and tools needed for an integrated assessment and valorization of the territorial heritage that moves from its natural and geological resources. The analysis begins by presenting the demographic and economic profiles that characterize the whole mountain area. Subsequently, the study focuses on the Molisian slope of the Matese Massif and to its natural and geological heritage together with agricultural and tourism profiles. The attention devoted to the Molisian slope of the Massif has two reasons. The first reason is that the Campanian slope is a Regional Park since 2002, while the Molisian area has never received a similar protection status. Currently, the Italian Parliament is discussing a law on the establishment of the National Park of Matese, including both areas of Campania and Molise.

In addition, the Molisian slope of Matese area has been selected by Italian institutions as one of pilot areas for the implementation of National Strategy for Inner areas (SNAI). Within this National framework, this study could be useful to understand the potentiality of development and critical issues. The different profiles of the study area are analyzed in terms of weakness and strength factors. Finally, paper findings are discussed by focusing on the potentiality of such factors in creating obstacles or providing opportunities for local sustainable development paths and for a valorization strategy based on the geologic resources of the area. The following analyses give a descriptive picture of the study area. In particular, indicators for the different profiles have been developed in order to analyze their dynamics using both census data (from 1971 to 2011) and cyclical data (from 2002 to 2014) of the National Institute of Statistics-ISTAT which offers a data source comparable in time and detailed at municipal level.

THE VULNERABILITY OF MATESE AREA: POPULATION AND ECONOMIC ACTIVITIES

In order to describe the territorial system of Matese area, it is important to begin by drawing attention to its demographic and economic characteristics. The main demographic and socio-economic indicators show that the Matese system presents many vulnerable characters. Strong processes of depopulation happened in the last forty years, from 1971 to 2011. Overall, the representation of the demographic profile on the map gives back an image of the Massif that is composed of three transversal bands crossing Molise and Campania regions, of which the central band showed an intermediate situation (Forleo et al., 2017). Throughout the period, the annual variation of population was from -12/1000 inhabitants to a maximum value of 7/1000 (Table 1). The "less critical" group of municipalities (one-third of towns) had a population growth per year with a negative value (-1‰ to the maximum of 7‰). Furthermore, rural settlements are very small and are located in the valley zone of the Massif where there is a high concentration of human activities. The depopulation process of the mountain area was coupled with an increase in the aging population that in 2011 was between 17.3% and 31.3% of total population in the municipalities of Campania region, and between 16.8% and 29.6% in the Molise municipalities. Looking at the dynamics of elder people in Figure 2, two aspects may be underlined. Firstly, it emerged that the radial design is quite similar over the four decades, so indicating that the overall profile

of the area has not significantly changed over the years. On the other hand, the distance between the area referred to year 1971 (inner circle) and the area for year 2011 (outer circle) expanded in the decades. In other words, the old-age index in the Matese municipalities increased between 1971 and 2011 (especially in the Campania towns, showed in the right hand side of Figure 2), while it decreased just in few municipalities (mainly located in Molise Region, with a decreasing rate ranging from -0.8% to -4.7%).

Table 1. Annual population change rate in Matese area
(Data source: ISTAT Italian Institute of Statistics - Census Data)

Towns- Campania Region	Province	Annual variation rate/ 1000 inab.	Towns- Molise Region	Province	Annual variation rate/ 1000 inab.
Ailano	Caserta	-6,5	Bojano	Campobasso	2,3
Alife	Caserta	4,6	Campochiaro	Campobasso	-0,8
Capriati a Volturno	Caserta	-2,9	Guardiaregia	Campobasso	-5,6
Castello del Matese	Caserta	4,0	San Massimo	Campobasso	3,9
Fontegreca	Caserta	-3,5	S. Polo Matese	Campobasso	-0,3
Gallo Matese	Caserta	-11,6	Sepino	Campobasso	-4,9
Gioia Sannitica	Caserta	-0,9	Cantalupo nel S.	Isernia	-3,5
Letino	Caserta	-5,8	Castelpetroso	Isernia	-1,8
Piedimonte Matese	Caserta	1,0	Castelpizzuto	Isernia	-3,8
Prata Sannita	Caserta	-4,7	Longano	Isernia	-9,3
Raviscanina	Caserta	-2,1	Monteroduni	Isernia	-1,2
S. Gregorio M.	Caserta	-5,1	Pettoranello del M.	Isernia	6,6
S. Potito S.co	Caserta	3,8	Roccamandolfi	Isernia	-6,4
Sant'Angelo d'Alife	Caserta	-2,7	Sant'Agapito	Isernia	6,7
Valle Agricola	Caserta	-11,5	S. Maria del M.	Isernia	0,1
Cerreto S.ta	Benevento	-1,5			
Cusano Mutri	Benevento	-1,0			
	Benevent				
Faicchio	o	-1,2			
Morcone	Benevento	-10,0			
Pietraroja	Benevento	-5,6			
San Lorenzello	Benevento	2,1			
Sassinoro	Benevento	-3,6			
MATESE AREA		Minimum value	-11,56		
		Maximum value	6,72		
		Media	-2,24		
		33% threshold	-3,89		
		66%= threshold	-0,93		

The economic profile, based on the entrepreneurial density (Figure 3a) and the employment rate (Figure 3b), shows other vulnerability factors of Matese area. Compared with the demographic trend, the economic indexes return a more articulate representations, where the most critical situations are located in the Northern part of Molise area. Finally, small sized enterprises prevail in the local production system. This situation, when coupled with the absence of any phenomena of aggregation and cooperation, limits the availability of human, financial and technological resources that are essential factors for any innovation and development process.

THE STREIGHT FACTORS OF THE MOLISIAN MATESE: THE QUALITY OF THE ENVIRONMENT AND OF FOOD PRODUCTS

The territory of Molise region is highly heterogeneous and vary from mostly hilly to mountainous inland, to plain and low hills in coastal areas; this strong environmental gradient gives different natural landscapes, types of cultivation and land uses, moving from the inner side of the region to the Adriatic coast. From a naturalistic point of view, in the Molisian Matese is located a Site of Community Importance (SIC) – named “La

Gallinola-Miletto Mountain-Matiese Mountain” (IT7222287)- that is the largest in Molise Region (25 thousand ha). This area is characterized by a high integrity of natural environments: the variety and the extension of habitat of Community interest, large forests of beech, high pastures, protected wildlife areas, the survival of the wolf and several species of prey birds, are some important natural assets of the Matiese. In addition, 61.6% of “Matiese-Bojano Valley – Sepino” hosts protected areas (Table 2), such as natural reserves and Special Protection Areas (SPA).

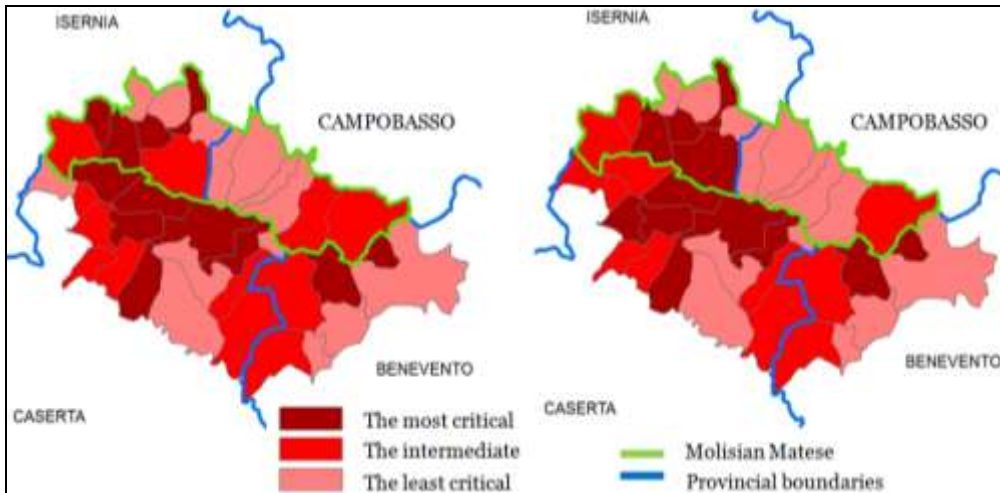


Figure 3. Firm’s density and employment rate in the municipalities of Matiese area, 2011
 Entrepreneurial density index (n. of firms/Population), (left), and Employment rate (right)

From environmental and cultural points of view, area is particularly interesting for the existence of the Royal Tratturo "Pescasseroli-Candela", an ancient transhumant tracks that are still preserved in many parts. At this regard, a reconsideration of the conservation and management policies implemented in the past is urgent both to recover what remains unchanged over time and to promote responsible uses (Paone, 2001). Finally, many areas of historical interest were discovered in Matiese, among which a particular mention is deserved to the archaeological site of “Altilia” and to the “Santuario Italico d’Ercole Quirino” related to the Samnite period and subsequent Roman domination. With reference to the geological heritage, a recent survey (Roskopf, 2014) has identified 99 geosites in Molise Region that are mainly concentrated in the study area, namely in the “Matiese-Bojano Valley-Sepino” (32%), (Table 2).

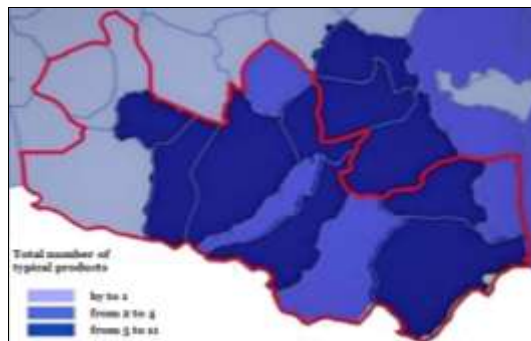


Figure 4. Typical food products in Matiese area (Source: Genovese, 2014)

Table 2. Geosites in Molise Region

Areas	Areas (km ²)	Protected sites (in km ²)	Protected sites (in %)	Geosites (in %)	Geosites density (N. Geosites/km ²)
High Molise	452.02	142.04	31	17	0.038
Mainarde- Venafro	559.20	139.12	35	16	0.029
Montagna of Frosolone	245.38	95.66	39	7	0.028
Matese- Bojano Valley_Sepino	411.89	253.38	62	32	0.075
Molise central	1499.06	243.78	16	16	0.011
Sourthen Molise	672.97	242.93	36	5	0.007
Shoreline	598.26	85.02	14	7	0.012
Molise Total	4438.82	1201.95	27	100	0.022

Other strength points of the Matese territorial system are in some elements of the local agricultural system. This system counts 1,196 farms for 14,258 hectares of utilized agricultural area and about 24,353 hectares of total agricultural area (ISTAT, 2010). The local agriculture has a strong specialization on forage crops, meadows and permanent pasture and woods. The livestock sector is based on dairy (Palmieri et al., 2017) and sheep cattle. In the study site, there are many wild truffle areas. The structure of farms' system registers a percentage of young farmers (15.0%) that is higher than the percentages in regional and national inner areas (10.1% and 10.4% respectively) (Molise Region, 2014). Local food production has a high quality level that is strongly linked to the environmental context and that dates back to the cultural heritage of the territories. Within the regional framework, the study area is characterized by the abundance of traditional food products (Figure 4) that are an expression of established secular traditions (ARSIAM, 2001).

In conclusion, on the one hand, Matese area shows a weak demographic and socio-economic framework; on the other hand, it has many strength elements both in the agri-food system and in the environmental, geological and archeological heritage. Vulnerability and strength points can represent constraints and opportunities to consider in the definition of strategies and approaches for a local development based on the tourism valorization of geosites and other natural resources.

THE MATESE MASSIF IN MOLISE REGION: TOURISM AND PROTECTED AREAS

Within an integrated approach towards a sustainable local development, tourism may interact with the natural system in many ways and its development may be driven by the environmental heritage. Tourism can play a central role in revitalizing rural development (Briedenhann & Wickens, 2004; European Commission, 2007), especially in areas where the demand for tourism is linked to the environmental and agro-food production. In order to develop a geologic tourism it is essential to move from the situation of tourism offer in the area. Secondly, in order to assess this tourism potential, a comparison between geologic and environmental resources (i.e. Geoparks and Natural Parks) may be useful to investigate the connection between the establishment of protected areas, and the size and dynamics of the local accommodation offer. Although based on a preliminary descriptive approach, results of the analysis could suggest in-depth studies to verify if the environmental and geological context is able to positively impact on local tourism sectors and dynamics.

In this regard, within the territory of Molisian slope of Matese Mountain there are two protected areas. The first area is the Regional Natural Reserve of Guardiaregia-Campochiaro, established in 1997 as a WWF Oasis, that is largest peninsular protected areas by the WWF Italy with a total of 3,135 hectares. The second area is the Natural

Reserve of Callora creek, covering 50 hectares, that is managed by the environmental Italia Nostra Association. The first area is mainly characterized by natural attractors (craters and forests, caves of speleological interest), while the second area has mixed attractions (canyons, ancient ruins, ski tracks).

The tourism offer in Matese territory was measured by the number of beds in accommodation facilities per Km², by distinguishing between different types of hotels and lodging options (Table 3). The main reason for this distinction is related to the different characteristics of the two types of accommodation. The hotel-style accommodation is usually associated with traditional forms of tourism, often in urban areas. Other lodging options (i.e. farmhouses, bed & breakfast, camping and mountain retreats) are usually disseminated in areas with a low anthropic pressure; these accommodation types are associated with a tourism demand sensitive to sports and activities in the rural open air, such as hiking, horseback riding, inland fishing (UNEP, 2005; Kachniewska, 2015). Among the types of rural tourism, it has to be mentioned the agro-tourism that, besides being an interesting economic opportunity for agricultural farms, has a low environmental impact on biodiversity, landscape and natural resources (Giaccio & Mastronardi, 2011; Mastronardi et al., 2015). In view of the different characterization of tourism supply, it is expected that the institution of protected areas could promote more lodging options than hotels. In the study case, tourism accommodation facilities in the protected sites and in the rest of the Matese area are few in number, if not completely absent. Data in Table 3 clearly shows that accommodation facilities and lodging options are very scarce in the protected areas.

Furthermore, tourism settlements are concentrated in few specific locations. In this territorial system, the municipality of San Massimo stands out as a winter tourism and skiing area, with a significant presence of hotel capacity to which other lodging options were added in recent years. The winter tourism in this area is predominantly of commuting type. It is a form of tourism that normally does not create a positive interaction with the natural environment; moreover, it has low spillover effects and only marginally it has boosted other sectors, such as handicraft and typical food production. Other municipalities with hotel facilities are some small towns (i.e. Bojano) and religious centers (i.e. Castelpetroso).

Absolute changes in the number of beds per unit area were measured from 2002 (the base year; three years interval) to 2014 in order to highlight the dynamic of tourism accommodation over time. Results are represented in Figure 5. Municipalities within the protected areas have registered both an increase of lodging offer (i.e. farmhouses, bed & breakfast, camping and mountain retreats) in the Regional Reserve of Guardiaregia-Campochiaro, and an increase of hotel accommodation in the Natural Reserve of the Callora creek. In the Callora protected area, the presence of hotels does not contrasted the initial hypothesis because the area has mixed attractive factors that can explain the existence of hotels accommodation. In the municipalities outside protected areas, the number of hotels declined, while the number of other lodging options increased (especially in winter ski municipalities). Data analysis, although of exploratory nature, suggests a deeper investigation in order to verify if the institution of protected areas is positively associated with the development of tourism offer.

In particular, the Guardiaregia-Campochiaro Reserve may have acted as a driving factor for the development of sustainable tourism both within the protected area and in the surrounding territories. Here, the naturalistic attractor in the Reserve added to historical and archaeological assets and to religious attractors inside the area, helping to promote the localization of new tourism settlements. The above results about the scarcity of tourist offer and the slow dynamics of the sector in the Matese Mountain and in

protected areas should be strongly considered before defining any strategy of tourism promotion based on geological resources and Geoparks. Finally, in order for this strategy to be successful, an assessment of the tourism demand is a necessary precondition.

Table 3. Tourism offer by type of attractiveness and accommodation (number of beds / 10 km²) in the protected areas and in the rest of Molisan Matese (Data source: ISTAT data)

AREA	Type of Attractiveness	Surface (Km ²)	Beds / 10 km ²																	
			2002		2005		2008		2011		2014									
			H	L	H	L	H	L	H	L	H	L								
<i>RN Guardiaregia-Campochiaro (1997-2000)</i>																				
Guardiaregia	N	43,7	0	0	0	5	0	4	0	4	0	4	0	10						
Campochiaro	N	35,7	0	0	0	0	0	0	0	0	0	0	0	1						
RGC Total		79,4	0	0	0	3	0	2	0	2	0	2	0	6						
<i>RN Callora Creek (2003)</i>																				
Roccamandolfi	M	53,7	0	1	0	1	3	0	3	0	3	0	3	0						
RTC Total		53,7	0	1	0	1	3	0	3	0	3	0	3	0						
<i>Remainder of Matese</i>																				
Bojano	M	52,6	35	0	40	0	37	0	33	0	33	0	33	0						
Cercepiccola		16,8	0	0	0	5	0	9	5	9	0	14	0	14						
Colle d'Anchise		15,7	0	0	0	0	0	0	0	20	0	17	0	17						
San Giuliano del S.		24,0	0	10	0	10	0	9	0	9	0	11	0	11						
San Massimo	I	27,3	175	8	175	8	175	16	175	46	175	46	175	46						
San Polo Matese		15,3	0	0	0	0	0	0	0	0	0	0	0	0						
Sepino	S	61,4	17	4	17	4	0	8	0	13	0	13	0	13						
Spinete		17,8	0	0	0	0	0	0	0	0	0	0	0	0						
Cantalupo nel Sannio		15,6	0	0	0	0	0	0	0	0	0	0	0	0						
Castelpetroso	R	22,7	32	0	32	0	32	0	48	0	48	0	48	0						
Santa Maria del Molise		17,2	0	0	0	0	0	0	0	3	0	3	0	3						
Remainder of Matese (RDM) Total		286,5	29	0	30	3	26	5	27	10	27	10	27	10						
Matese Total (MAT)		419,6	20	2	21	3	18	4	19	7	19	8	19	8						

Legend: Type of attractiveness: N= naturalistic; S=cultural-historic; I= winter sports; R= religious; M=mixed; Type of accommodation: H=hotel; L= other lodging options; RN= natural reserve

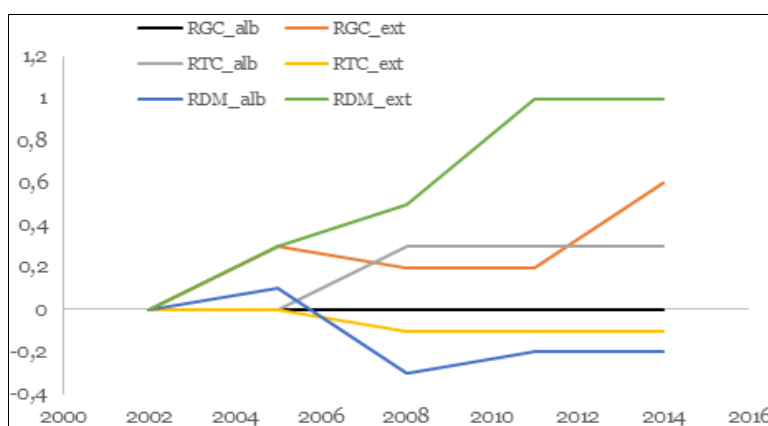


Figure 5. Absolute variation in tourism settlements in the municipalities within and outside the protected areas of the Molisan Matese (period 2002-2014), (RGC RNR Guardiaregia-Campochiaro; RTC RN Callora Creek; RDM rest of the Matese; MAT Matese Total; H_hotel; L_lodging options), (Source: ISTAT data)

DISCUSSION

The safeguard and valorization of the geological heritage it is highly recognized at international and national level as an important driver of local development. Geosites are

resources with a strong regional identity and could represent a competitive lever for a sustainable spatial development (Lazzari & Aloia, 2014). In this perspective, development strategies and approaches should be properly defined and implemented on a solid scientific basis in order to realize expectations and potentialities of geotourism.

The richness of geosites in the territorial context of the Molisian Matese measures the potentiality of geological resources in driving the development of the local system. A tourism based on geosites could increase the degree of attractiveness of a territory and retain the "geological memory" of a non-renewable natural resource (Lena & Carbone, 2016). Within the study area, the abundance of geosites should be combined with the richness in other natural resources, with the quality of cultural heritage and of local food productions; all these strength factors should be linked in the framework of a sustainable local development project. On the other hand, the study area has many vulnerable elements, such as in the demographic and the economic systems, whose roots date back in time (Forleo et al., 2007) and may obstacle development processes.

The analyses carried out suggests that in order to get positive externalities and foster local development, the valorization of the geological and natural heritage may face some obstacles. Removing these obstacles may require the support of structural measures (public spending, legal and institutional regulatory framework) that simulate people to reside, to work and to stay in inner areas. It is clear that the institutional recognition of a protected area it is not sufficient to trigger development processes, as other studies reported (Burlando et al., 2011). Furthermore, paper findings are in line with several case studies that highlight the need to activate synergies between local resources, for example between protected areas and Geoparks (Errami et al., 2015; Cucuzza, 2016) in order to develop territorial systems. In the study area, the design and implementation of natural itineraries and guided tours in the geosites locations might be based on a "common theme" where the conservation of the geological heritage of the Apennines is linked with the valorization of its environmental resources and with other territorial peculiarities. This common theme may have the strength to develop the tourism sector and other related economic activities in the local context (Bentivenga et al., 2015). In this respect, useful insights come from the development of the agriculture sector that has taken on a new and multifunctional role in responding to a globalization that eliminates any territorial peculiarities and productive diversity (Van der Ploeg, 2009) and in supporting the sustainability of rural areas (Forleo et al., 2015; Garrod et al., 2006). These synergies are more important in an inner area rich of geologic, natural and cultural resources, but fragile in its demographic and economic activities, as in the case of the investigated area.

Paper findings lead to in-depth investigation to highlight the potential role of geological resources in enhancing the degree of attraction of rural areas (Cawley & Gillmor, 2008; Forleo & Mastronardi, 2008). The integration of different tourism drivers, such as the cultural heritage (Gregori & Piccinini, 2004) and the geosites resources (Tapiador, 2008), is critical. This integration seems very weak in the study area that, despite being characterized by many natural assets, has an overall inadequate receptivity index and tourism supply. In other words, in the Matese area a tourism development based on geological resources appears be more a potential opportunity than a concrete reality. The environmental and geological richness of the area by itself does not represent a driver able to activate economic development paths. Few exceptions were in some limited areas where the environmental quality has a complementary role and it is associated to recreational uses, to winter sports, or to religious attractors. This exploratory analysis underlines the need to scientifically support any strategy of local development and confirm the expectations assigned to the establishment of Matese National Park, under discussion in the Italian Parliament.

Finally, the valorization of geosites requires a new economic and cultural approach, from -programming-protection-management, to programming-knowledge-valorization-development, through an augmented awareness, not only among scientists and institutions, but also within the whole society (Coccioni, 2009).

CONCLUSION

Development strategies for the inner Matese area may undoubtedly leverage on the promotion of geological resources. These strategies may be useful to spread the environmental and geological culture through an emotional experience and a conscious knowledge of the values of natural goods. Within an integrated framework of measures and instruments, the geosites may have all potentialities to support the development of the study area and to organize a tourism offer that attracts visitors driven by the interest in geology and in other local resources. The Matese area is suitable for an integrated supply of multiple tourism types (geological, *en plein air*, sport, gastronomic, cultural, thermal and religious). In order to realize all these potentialities, the feasibility, complementarity and congruence of different forms of tourism should be assessed by focusing on a set of strong and identitarian attractors. The unique environmental characteristics of the Matese Massif just led in the late 70s and early 80s to debate about the establishment of a regional park and to formulate projects designed to enhance the economic development of the most disadvantaged inner areas in Molise Region.

In 2015, a renewed attention to the study area was stimulated by a law proposal for a Matese National Park and by the National Strategy for Inner Areas that selected the Matese Mountain as the first pilot area in Molise region. Both the Park and the Strategy may focus on geosites and on their valorization. Anyway, weaknesses in the socio-demographic and economic systems must be faced in order to activate a development process. Furthermore, measures and actions must be integrated and placed along a process of sustainable rural development spread over a long-term period and shared among local stakeholders. Nowadays, there are not enough human, financial and technological resources to allow interventions that overlap according to a fragmentary list of tools, that refer to a wide and repeated measure's implementation, and, finally, that occur on an occasional base.

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