The Role of Cultural and Natural Heritage in a Place-Based Strategy for Inner Peripheries

Priscilla Sofia Dastoli(✉) and Francesco Scorza

School of Engineering, Laboratory of Urban and Regional Systems Engineering, University of Basilicata, 10, Viale dell'Ateneo Lucano, 85100 Potenza, Italy
{priscillasofia.dastoli,francesco.scorza}@unibas.it

Abstract. There is an increasing tendency to promote a locality as a tourist destination, focusing on the widespread wealth of cultural and natural heritage, without considering local development integrated with priority aspects such as essential services. The study illustrates how the Objective of enhancing the cultural and natural heritage of the medio Agri area (Basilicata region-Italy) has been articulated within a sustainable development strategy. The area belongs to the inner peripheries according to the classification carried out at European level by the ESPON PROFECY project [1, 2] and is made up of six municipalities classified as ultra-peripheral by the National Strategy for Inner Areas (SNAI). In the preliminary stages of implementing the place-based strategy, the main weaknesses of the area were identified, as well as the priority objectives to address them. Having promoted advanced forms of governance in the area and improved the network of essential services for residents, the focus can now turn to enhancing the considerable heritage that has been identified. This has been done by designing a tourist itinerary that is set up to promote the natural, scenic and architectural attractions of the area. The itinerary links the municipalities in the area and those nearby, focusing on slow mobility, eco-sustainable tourism, the gastronomic and wine sectors, and social and economic development projects. The aim is to increase the attractiveness of the area through a widespread network of hubs and services that can jointly meet the needs of residents and tourists.

Keywords: Inner peripheries · Natural and cultural heritage · Place-based sustainable strategy

1 Introduction

In recent years, the enhancement of cultural and natural heritage and its link with tourism has been widely seen as a solution for development, especially at the local level. Following some successful experiences, many development policies have focused exclusively on tourist attractions, with the aim of turning them into launch pads for local growth [3–5].

In the case of the inner peripheries [1], i.e. areas far from the main centres that provide essential services (education, health and mobility), this trend is taken to extremes and

© The Author(s), under exclusive license to Springer Nature Switzerland AG 2026
O. Gervasi et al. (Eds.): ICCSA 2025 Workshops, LNCS 15889, pp. 161–176, 2026.
https://doi.org/10.1007/978-3-031-97603-2_11

becomes a simplistic solution to complex problems, usually caused by demographic decline.

In Italy, inner peripheries have important environmental resources (water resources, agricultural systems, forests, natural and human landscapes) and cultural resources (archaeological heritage, monuments, historical settlements, abbeys, small museums). In 2013, the Italian government promoted the National Strategy for Inner Areas (SNAI) [6–10]. It is an economic development strategy for inner areas based on the currently unexploited 'territorial capital' available in these areas, including natural, cultural and cognitive capital, the social energy of the local population and potential residents [11].

In Italy, the term '*inner areas'* is currently widely used and, as stated in the Partnership Agreement of the National Strategy for Inner Areas, it refers to '*those areas that are significantly distant from centres providing essential services (education, health and mobility), rich in important environmental and cultural resources, highly diversified as a result of centuries of anthropisation and by nature'. About a quarter of Italy's population lives in these areas, which cover more than sixty per cent of the country's territory and are organised into more than four thousand municipalities'* [11].

In the European panorama, numerous expressions used in the scientific debate on the subject emerge which, even if with different meanings, refer to the concept of Italian inner areas: *inner peripheries* [12–15]; *peripheral area* [16, 17]; *marginal area* [18, 19]*; inner areas* [10, 14, 20, 21]*; internal areas* [19, 22–24]; *inland area* [25–28]; *low dynamic area* [12]; *sparsely populated area* [29–32]*; rural areas* [33]; *lagging regions* [34, 35].

The ESPON PROFECY project (update 2022) has led to the unification of the term "inner peripheries" with the themes of "inner areas" as understood in the Italian context; however, there is still some confusion about the most correct terminology to use in order to unambiguously identify these areas beyond national borders. The question of the definition and classification of inner areas is a topic that is still being debated today. Therefore, in this research the term inner peripheries will be used to refer to the issues of inner areas in the European panorama; instead, the term inner areas [7, 20, 36, 37] will be used to refer to the specific Italian inner areas, using a similar literal translation used in the definition of the National Strategy for Inner Areas (SNAI) [38].

With regard to the develop of the SNAI, according to the 2020 report of the Italian Agency for Territorial Cohesion, a total amount of 1.14 million euros has been allocated to the inner areas. Looking at the distribution of these funds between the different areas of SNAI intervention, two main categories were considered: services and local development (Table 1). Within these, the two sectors most covered are mobility/transport, with 22% of the total, and cultural and environmental heritage, with 18% (Fig. 1).

The multi-level character of SNAI has been implemented at a local level, involving the community in the specific and unique definition of economic development strategies in 72 project areas. Local communities have developed integrated strategies based on their territorial capital, including cultural and landscape assets in an ecosystem linked to other territorial resources. The present study has been carried out in the same way, defining a sustainable and resilient development strategy for the medio Agri, in the Basilicata region. This study was conducted as part of the Italian project RI.P.R.O.VA.RE (Re-inhabiting Countries. Operational Strategies for the Enhancement and Resilience of

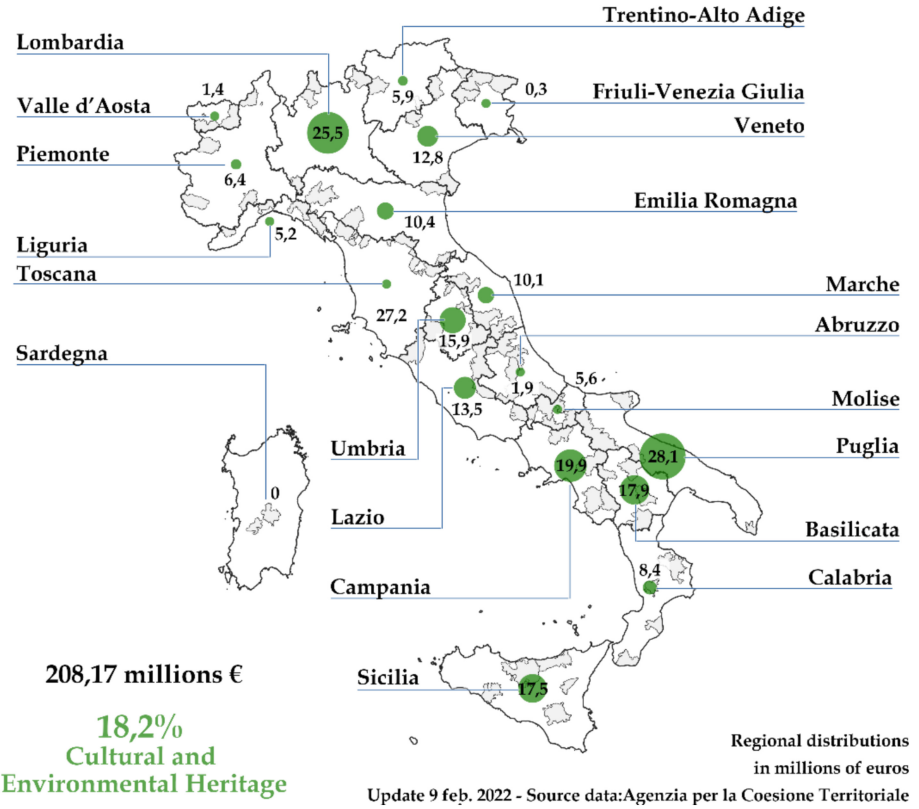


Fig. 1. Cultural and Environmental Heritage sector funding of the SNAI. Regional distributions in millions of euros for the 2014–2020 programming cycle

Table 1. Funds sector of the National Strategy for Inner Areas (2014–2020 programming cycle).

Sector	Euro (million)
Health	137 (12%)
Education	116 (10%)
Mobility/Transport	255 (22%)
Cultural and environmental heritage	208 (18%)
Agriculture	106 (9%)
Energy	88 (8%)
Digital services and infrastructures	62 (5%)
Other	190 (16%)

Inner Areas) [10, 39], which has seen experimentation in two southern regions, Campania

and Basilicata. A particular emphasis has been placed on the active involvement of decision makers and local communities in the project.

The integrated sustainable development strategy of medio Agri pursues five General Objectives, composed of one or more strategic lines, to which policies and actions correspond:

1. To promote advanced forms of governance and widespread and stable participation of citizens in decision-making processes;
2. To set up a network organisation of the most important essential services for the population and businesses, to be provided also through the new information technologies;
3. The enhancement of the natural and cultural heritage, the promotion of the tourism development and the support of urban regeneration projects;
4. Strengthening the economic system through interventions in the key sectors of agriculture and handicrafts;
5. Improve safety and practicality of existing infrastructure**.**

Objective III, entitled 'Enhancing the Natural and Cultural Heritage', constitutes an element of an integrated strategy within which the promotion of advanced forms of governance and the reorganisation of essential services are prioritised. The definition of Objective III has been influenced by initiatives to promote cycle tourism in Italy and abroad, which has a strong cultural and economic impact [40–44]. The enhancement of inner areas through sustainable tourism opportunities requires the planning of innovative services, which must be organised in such a way as to improve the sustainable mobility of the area's inhabitants [45].

A significant effort to promote sustainable tourism and slow mobility has been made in the nearby region of Calabria with the development of the 'Ciclovia dei Parchi' (Park Cycle Route), which has been awarded the Italian Oscar for Cycle Tourism 2021. In a similar vein, Basilicata is making slow progress, with two major projects that involve the region and reconnect it with Apulia, Campania and Calabria. The first of these is the 'Ciclovia dell'Acquedotto Pugliese' (Apulian Aqueduct Cycle Route), which connects Apulia and Campania, crossing the territory of Basilicata. The second is the 'Ciclovia della Magna Grecia' (Magna Graecia Cycle Route), which is approximately 1,130 kms in length and crosses Basilicata, Calabria and Sicily. Another noteworthy initiative is the route entitled 'the Sacred Woods Cycle Route from Pescopagano to Castrovillari', which crosses the western part of the Potenza province from the border with Campania to the border with Calabria. This final itinerary also crosses the Val d'Agri with the Calvello-Sarconi and Sarconi-Castelsaraceno sections (through Spinoso, San Martino d'Agri and San Chirico Raparo).

In light of the considerations outlined above, the proposal for the medio Agri is to link up with initiatives already underway and to promote the development of sustainable tourism and slow mobility in an even more significant way. In order to achieve this, a reconfiguration of the slow mobility system is proposed; said reconfiguration will be implemented through a widespread network of nodes and services which will jointly respond to the needs of the local population and visitors to the area.

2 A Methodological Approach Based on Three Pillars: Context Analysis, Participation (Living Lab) and Territorial Strategy (Place-Based Design)

The methodology adopted for strategy implementation in the medio Agri pilot area (Fig. 2) stems from the Logical Framework Approach (LFA). This is a logical ordering procedure, which is part of Project Cycle Management (PCM). The LFA refers to the cyclical nature of planning. It is divided into an analysis phase and a synthesis phase [46–48]. The Logical Framework is presented as a tool for implementing and controlling the design process and for evaluating decisions.

The first activity is to organise and plan all activities. Each context is different and requires a specific strategic plan. Through an internal and external diagnosis, a second activity focuses on the evaluation of the context. In particular, a context analysis was carried out through desk research (information in open access databases, public reports, websites, publications, scientific publications. Participatory activities and interaction with stakeholders also deepened our knowledge of the medio Agri pilot area.

In the third part, the strategic objectives are defined as strong ideas to be used to found the intervention plan and to derive the corresponding strategic lines to be adopted. This stage uses problem and objective tree techniques to organise problems from causes to effects and objectives from means to ends. The focus of the participatory process, in particular the Living Lab [49–51], was concentrated on this phase of the LFA, applying the Analytic Hierarchy Process (AHP) to the selection of priority objectives for the study area.

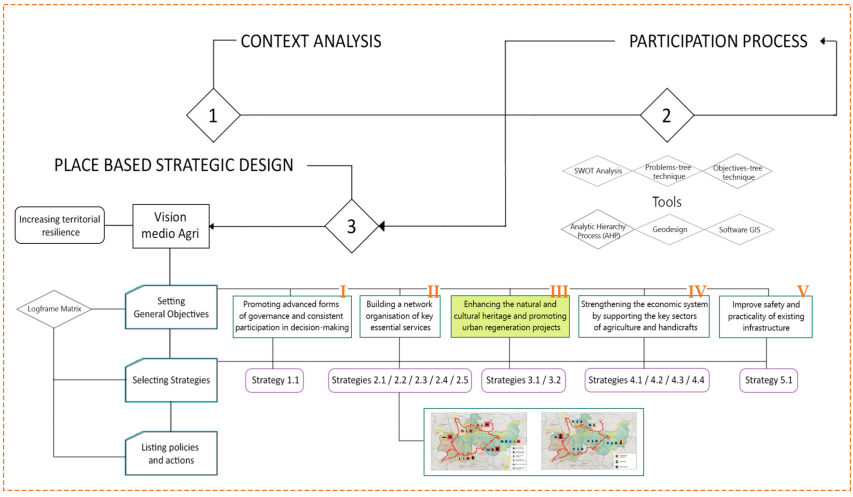


Fig. 2. Flow-chart of the methodology adopted in developing the medio Agri area strategy.

The final activity, which belongs to the Synthesis phase, is to define the objectives for each strategic theme and identify the actions to be developed [27]. In particular, this coincided with the development of the medio Agri area strategy.

The logframe matrix is usually used for the synthesis phase of the LFA, which is concerned with breaking down the project idea into operational details and ensuring the feasibility and sustainability of the project. This is a method for presenting the overall picture of an operation. It includes the following elements:

- the general objective: this includes the long-term benefits for society, the ultimate aim of the project and its purpose;
- the specific objective (or strategy): this defines the basic stages of the project;
- the Target Results: which coincide with the services made available to the project's target audience;
- the Actions (or activities): which represent the means to pursue the specific objectives and obtain the target results.

A number of well-known tools, particularly in the participatory process, are used in such a methodological approach: SWOT Analysis, Heritage walk, Problems tree and Objectives tree techniques, Geodesign tool [52–56].

3 The Val d'Agri Area Context

The medio Agri area covers the central sector of the Agri river basin (Fig. 3), one of the five rivers that cross Basilicata and flow into the Ionian Sea. The area is predominantly mountainous in its western part, with the Monte Raparo Site of Community Interest (SCI); most of the remaining area is hilly, with sandy and conglomeratic hills, which characterise it for its high hydrogeological risk.

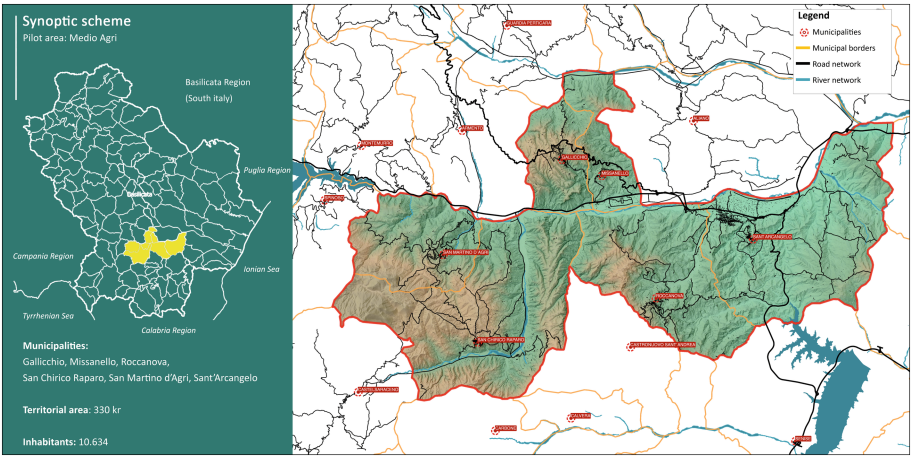


Fig. 3. Location of the medio Agri pilot area in Basilicata Region.

Moreover, the Val d'Agri's largest territorial unit is specialised in oil extraction activities due to the presence of Europe's largest onshore oil field [57, 58]. This generates major conflicts between oil resource industrial exploitation and environmental protection issues.

According to the SNAI classification, the six municipalities that are part of the survey group (Gallicchio, Missanello, Roccanova, San Chirico Raparo, San Martino d'Agri and Sant'Arcangelo) fall within class F - ultra-peripheral, i.e. those municipalities in the inland areas that are more than 70 min away from a pole that simultaneously has a complete upper secondary school offer, at least one hospital with a level I d.e.a. and at least one silver railway station. An evident migration phenomenon in the sample area leads to progressive depopulation. In the last decade, almost a thousand people have left the area; approximately 8% of the population currently stands at 10,634.

Mainly to overcome the lack of services, which compounds the marginal character of the area, the medio Agri municipalities Union (Missanello, Roccanova, San Chirico Raparo, and Sant'Arcangelo) was established in 2017, recently expanded with the inclusion of the municipalities of Gallicchio and Armento. This Union aims to face up jointly to the difficulties affecting the area, starting with accessibility to essential services (education, health, transport). The setting up of the Union of municipalities affected the choice of the area to be researched because it is believed that the smaller centers should join institutional forms of association between municipalities, both to ensure sustainable management of services and functions and to guarantee more opportunities for citizens.

The medio Agri area has significant potential, especially in cultural and natural heritage, with a high ecological value of the ecosystems [59–61]. In particular, the area is affected by the perimeter of the 'Appennino Lucano Val d'Agri-Lagonegrese National Park', by a ZSC 'Murge di S. Oronzo', by a ZPS 'Lucano Apennines, Agri Valley, Monte Sirino, Monte Raparo' and by two SIC 'Lago Pertusillo' and 'Monte Raparo' [49].

The objects subject to landscape protection are those covered by a specific protection decree and those 'ope legis' according to Legislative Decree 42/2004 'Code of Cultural Heritage and Landscape'. This information has been obtained from the Basilicata Region portal dedicated to the Regional Landscape Plan (PPR).

There are 22 sites protected under art. 10 of the Code in the medio Agri area (Table 2). The municipality with the highest number of assets is Sant'Arcangelo, followed by Gallicchio.

The medio Agri area is also rich in archaeological heritage in the form of ancient tracks, of which a total of twelve have been identified (Table 3).

4 Objective III: Enhancing Natural and Cultural Heritage

The medio Agri strategy has been carried out through a number of activities that follow the methodology stages. Here special attention is given to the way in which Objective III "Enhance the natural and cultural heritage and promote urban regenerations projects" of the overall strategy was formulated.

Encouraging the use of the natural and cultural heritage is of great value both to the inhabitants, for whom the quality of life is improved by the provision of more services, and to tourists, due to the presence of natural and cultural resources scattered throughout the medio Agri area. In particular, in order to promote the enjoyment of the natural, scenic and architectural beauty of the area, the development of a tourist itinerary is planned (Fig. 4) [47, 62].

This route can be accessed in different ways, either via the existing road network or by creating safer cycle and footpaths to link the municipalities in the medio Agri

Table 2. Monumental heritage under protection (art. 10 Legislative Decree 42/2004)

Municipality	PPR Code	Monumental heritage
Aliano	BCM_010d	Palazzo Caporale
San Martino d'Agri	BCM_383d - BCM_384d	Palazzo Sifola - Palazzo Manzone
Sant' Arcangelo	BCM_397d - BCM_398d - BCM_402d - BCM_403d - BCM_404d - BCM_399d - BCM_400d - BCM_401d	Palazzo Molfese - Masseria Molfese - Ruderi della Cavallerizza - Masseria Difesa Monte Scardaccione - Torre Molfese e Cappella S. Croce - Palazzo Scardaccione - Palazzo di Gese - Chiesa e Convento di S. Maria d'Orsoleo
Gallicchio	BCM_110d - BCM_109d	Ex Palazzo Baronale - Cappella Madonna del Carmine
Missanello	BCM_239d - BCM_240d	Palazzo Castiglione - Chiesa e Convento S. Maria delle Grazie
Roccanova	BCM_365d - BCM_366d	Palazzo Fortunato - Palazzo Mendaia
San Chirico Raparo	BCM_375d - BCM_376d	Palazzo Barletta - Abbazia S. Angelo
Armento	BCM_011d	Monastero di Santa Maria

area. In addition to the six municipalities specifically involved in the experimentation and research, the municipalities of Armento, Castelsaraceno and Aliano have also been considered, as they represent significant strengths and attractions for the promotion of strategies for the development of tourism in the area. The neighbouring municipalities are characterised by the presence of important tourist attractions, as in the case of Aliano and Castelsaraceno.

The idea is to reorganise the mobility around intermodal hubs equipped and supplied with a minimum (but variable) number of low-emission vehicles (cars and bicycles, including electric ones) for the transport of residents and visitors, depending on the population and services present. These vehicles can be used on a shared basis and interact with an on-demand transport and carpooling system.

Linked to the proposal to create a new tourist route in the area is the recent promotion of the "Raparello MTB" route, about 30 kms long, which crosses the municipalities of San Chirico Raparo, San Martino d'Agri and Castelsaraceno.

The management of the service and the supply of equipment to the municipalities will be the responsibility of the Municipalities Union and will be determined by the seasons, customs and needs that may arise. The equipment will be organised in intermodal areas (16) located in residential areas, near rest areas and supra-local connection infrastructures. In this respect, it is planned to provide safe crossings of the Fondovalle dell'Agri near the Armento, Gallicchio-Missanello and Roccanova-San Brancato junctions.

Starting from the main tourist itinerary, it is planned to adapt the signposting, reorganise the network of paths and existing itineraries according to a network of cultural and

Table 3. Archaeologically assets under protection (art. 10 Legislative Decree 42/2004)

Municipality	PPR Code	Archeologically assets
Sant' Arcangelo	BCT_332	nr 336 -PZ Tratturo Comunale di Rosano
Aliano	BCT_043/BCT_044/	nr 074 -MT Tratturo Comunale di Aliano-Montalbano/nr 075 -MT Tratturo Aliano-Montalbano
Armento	BCT_053	nr 325bis -PZ Tratturo Comunale S. Biagio
Castelsaraceno	BCT_123/BCT_159/BCT_160	nr 332 -PZ Tratturo Comunale della Serra/nr 331 -PZ Tratturo Comunale San Lorenzo/nr 333 -PZ Tratturo Comunale Favino
San Chirico Raparo, Calvera	BCT_124/BCT_328	nr 330 -PZ Tratturo Comunale della serra/nr 328 -PZ Tratturo Comunale Le Mattine
Roccanova	BCT_313/BCT_314	nr 335 -PZ Strada Comunale detta Regio Tratturo di Roccanova/nr 334 -PZ Strada Comunale detta Regio Tratturo di Roccanova

naturalistic destinations that can be enjoyed (in different ways). In this sense, it is necessary to promote and coordinate existing projects, such as the itineraries linked to the network of nature trails (e.g. Parco dei Calanchi, Murgia di Sant'Oronzo, Tibetan Bridge), food and wine production (see the section on strengthening the relationship between agriculture and tourism), archaeological heritage, historical-religious and historical-artistic itineraries (routes and monasteries of the Byzantine monks).

Special rest areas have been identified at strategic points along the routes (at the beginning, end or in between) in order to better organise the use of the routes, arrival by public transport and car parking in suitably equipped and signposted areas, which may be subject to surveillance.

Within the framework of this line of action, different methods of intervention in the natural heritage are possible, with the aim of creating, adapting and improving structures and infrastructures in order to promote better exploitation and use of resources and the spread of environmentally sustainable tourism. In particular, in order to promote the protection and development of areas of particular environmental value (e.g. Natura 2000 sites and other areas of natural interest), provision can be made for:

- specific works to recover the physical and natural environment for social and economic development projects;
- works to adapt, create and improve infrastructures connected to their usability (paths, visitor centres, etc.);

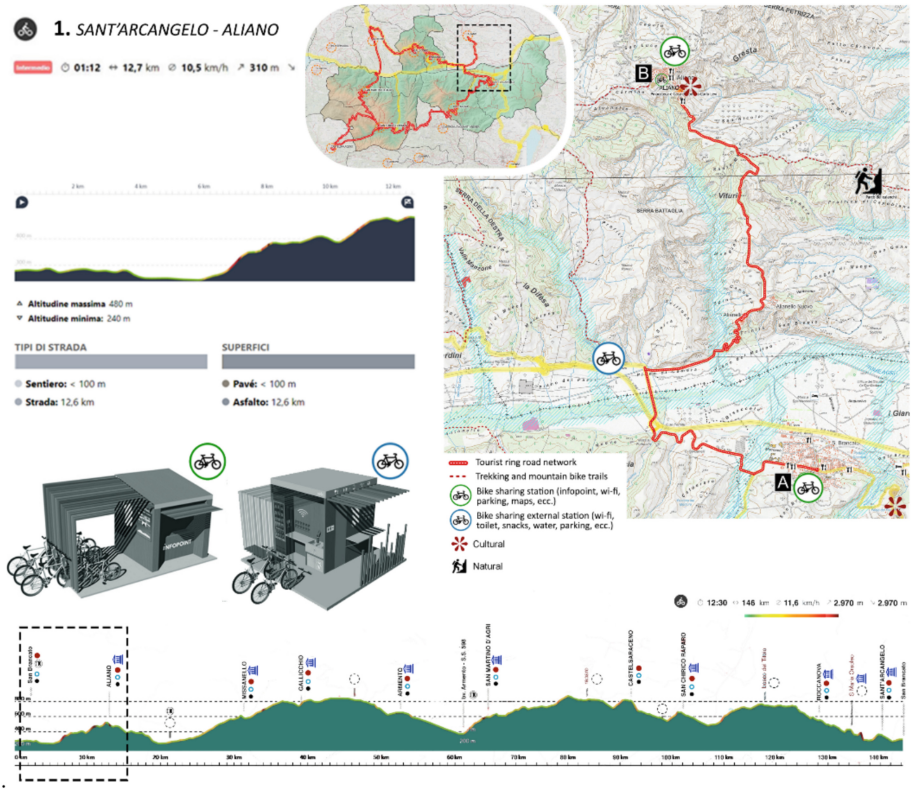


Fig. 4. The first stage of the tourist enhancement itinerary to reach the area's cultural and naturalistic attractions, with an intermodal system of sustainable mobility.

– thematic installations, also with the aim of developing innovative forms of eco-sustainable tourism.

With regard to cultural heritage, on the other hand, the interventions are aimed at its protection and enhancement. In particular, the following may be envisaged: interventions aimed at the recovery, adaptation and enhancement of cultural heritage in its various forms (tangible and intangible), including:

– making the sites safe;
– setting up service facilities;
– placing signs and posters;
– creating specific websites;
– creating a 'local museum system.

These interventions aim at the creation and enhancement of thematic itineraries aimed at promoting the knowledge and tourist use of sites of cultural identity and historical-artistic interest, in order to create a "territorial network" that favours economic development. In this sense, it is necessary to use the available resources and a renewed planning capacity of the local authorities to trigger virtuous processes of enhancement.

It is necessary to take as a starting point the 'good project practices' already existing in the territory, with the aim of generating replicable models in relation to the individual specificities that the territory offers, and of promoting strong synergetic initiatives at supra-municipal level. Aliano and Castelsaraceno, with their different offers, already represent a very attractive context for tourists, also from other regions and foreign countries. Armento, the third municipality considered in the context of a broad territory classification, is an area with great potential for the enhancement of natural and cultural resources. In particular, projects such as the recovery and re-use of the historic village of Casale and the development of a cycle path are important opportunities for the enhancement of the medio Agri area.

The three municipalities surrounding the area in which the six municipalities specifically considered are located play a strategic role in the promotion of the innermost area of the medio Agri; these municipalities are, in fact, the outpost connecting the area of Lagonegrese (Castelsaraceno), the Matera mountains (Aliano) and the inner area of Camastra-Alto Sauro (Armento). The proposal for a tourist itinerary linking and networking the nine territorial realities of the participating municipalities is a development of a proposal put forward by the Gallicchio participants in the Living Lab and concerns the "Tourist Project" promoted by the Municipal Administration.

5 Conclusions

The scientific literature, the proposed methodology and the results of the experiments carried out in the Medio Agri region confirm that it is not necessary to impose ready-made solutions from above, but rather to design the planning process on the basis of the unexploited territorial capital of the inner peripheries. The National Strategy for Inner Areas (SNAI) has tried to follow this path, considering it to be the only valid one, but not without difficulties. In fact, place-based local development strategies require a set of tailor-made approaches, models and tools capable of transforming local characteristics into engines of sustainable development. In activating an area with the characteristics of the medio Agri, the participatory process is the most demanding phase, both in terms of the preliminary activities designed to obtain a specific result from the participatory process, and in terms of the meetings with stakeholders [63].

The proposed integrated strategy is based primarily on strengthening territorial governance and raising awareness of sustainable development issues. Specific strategies are related to a significant improvement in the quality of life in the area concerned (in particular, the reorganisation of basic services) and to the economic development of the sectors that best interpret the potential and identity values available in the area (in particular, agriculture and tourism). If achieved, these objectives would increase the overall resilience of the communities and territories concerned.

Objective III of the strategy aims to promote the territory and its cultural and natural resources through a series of measures (both tangible and intangible) intended to develop a well-equipped tourist itinerary. This includes: exploiting natural resources by reactivating tourist routes and trails; creating an integrated system of sustainable mobility and car-pooling; using old buildings in the historic centre to offer hospitality to visitors; setting up special information points. In this case, too, the initiative must be

integrated with other interventions and placed in a cycle of territorial development. The general objective is to promote the management, protection and enhancement of the natural heritage in order to support socio-economic development and sustainable tourism [64]. With regard to the cultural heritage, the interventions are aimed at the protection, recovery, adaptation and valorisation of the monumental heritage. The itinerary, which crosses the area's most valued cultivations (olive groves and vineyards) and places of transformation (cellars, oil mills, etc.), allows for the marketing of local quality products [65].

The definition of the objective is not exhaustive, as there are many actions to be carried out, but the strategy has provided an initial reference on which to integrate effective and innovative actions.

References

1. ESPON: PROFECY (Inner Peripheries in Europe) - Final Report (2017). https://archive.espon.eu/sites/default/files/attachments/D5FinalReportPROFECY.pdf
2. PROFECY. https://archive.espon.eu/inner-peripheries. Accessed 30 May 2023
3. Blair, H., Bosak, K., Gale, T.: Protected areas, tourism, and rural transition in Aysén, Chile. Sustainability **11**(24), 1–22 (2019). https://doi.org/10.3390/su11247087
4. Azevedo, P.: The ways of Saint James in Trás -os-montes and Alto Douro as an example of soft tourism in rural areas. Countrys. Eur. **13**(2), 314–329 (2021). https://doi.org/10.2478/euco-2021-0020
5. Kouřilová, J., Pělucha, M.: Economic and social impacts of promoting cultural heritage protection by the Czech rural development programme 2007–2013. Eur. Countrys. **9**(3), 486–503 (2017). https://doi.org/10.1515/euco-2017-0029
6. Barca, F.: Disuguaglianze territoriali e bisogno sociale. La sfida delle 'Aree Interne'. In: Lettura annuale Ermanno Gorrieri, Modena: Stampa Grafiche TEM, pp. 31–33 (2016). http://www.irpais.it/disuguaglianze-territoriali-bisogno-sociale/
7. Punziano, G.: Health, mobility, education: strategies for inner areas. Sci. Reg. **18**(1), 65–92 (2019). https://doi.org/10.14650/92353
8. Moscarelli, R., Fera, A.: National strategy for inner areas 10 years later: a proposal of comparative analysis between the phases 2014–2020 and 2021–2027. Contemporanea **24**(1), 101–120 (2024). https://doi.org/10.14650/108247
9. Di Giusy, P., Laura, S.: Toward an Italian national strategy for inner areas 2.0, as an opportunity of institutional learning. Lessons from an action-research process. Archivio di Studi Urbani e Regionali (129), 47–70 (2020). https://doi.org/10.3280/ASUR2020-129003
10. Galderisi, A., Fiore, P., Pontrandolfi, P.: Strategie Operative per la valorizzazione e la resilienza delle Aree Interne: il progetto RI.P.R.O.VA.RE. BDC. Boll. Del Cent. Calza Bini **20**(2), 297–316 (2020). https://doi.org/10.6092/2284-4732/7557
11. Accordo di Partenariato 2014–2020: Strategia nazionale per le Aree interne: definizione, obiettivi, strumenti e governance. Aedon, Riv. di arti e Dirit. line (3/2018), 1–69 (2018). https://doi.org/10.7390/92260
12. ESPON GEOSPECS: Inner Peripheries : a socio-economic territorial specificity (2013). https://archive.espon.eu/sites/default/files/attachments/GEOSPECS_Final_Report_inner_peripheries_v14.pdf
13. ESPON: PROFECY – Processes , Features and Cycles of Inner Peripheries in Europe - Handbook, December 2017. https://archive.espon.eu/sites/default/files/attachments/D5HandbookPROFECY_0.pdf

14. Servillo, L., Russo, A., Barbera, F., Carrosio, G.: Inner peripheries: towards an EU place-based agenda on territorial peripherality. Ital. J. Plan. Pract. **VI**(1), 42–75 (2016)
15. Copus, A., Noguera, J.: Inner peripheries: what are they? What policies do they need? Agriregionieuropa **12**(45), 1–6 (2016)
16. Pezzi, M.G., Urso, G.: Peripheral areas: conceptualizations and policies. Introduction and editorial note. Ital. J. Plan. Pract. **6**(1), 1–19 (2016)
17. Pileček, J., Jančák, V.: Theoretical and methodological aspects of the identification and delimitation of peripheral areas. Acta Univ. Carolinae, Geogr. **46**(1), 43–52 (2011) https://doi.org/10.14712/23361980.2015.41
18. Cialdea, D., Cervelli, E., Pindozzi, S.: Land development support in marginal areas: an opportunity of environmental quality implementation, April 2019 (2018)
19. Cervelli, E., di Perta, E.S., Pindozzi, S.: Identification of marginal landscapes as support for sustainable development: GIS-based analysis and landscape metrics assessment in Southern Italy areas. Sustainability **12**(13) (2020). https://doi.org/10.3390/su12135400
20. Blečić, I., Saiu, V., Cecchini, A., Trunfio, G.: Decision-support tools for territorial regeneration: a GIS-based multi-criteria evaluation utilizing the territorial capital framework (2024). https://doi.org/10.1007/978-3-031-54096-7_32.
21. Dastoli, P.S., Scorza, F., Murgante, B.: Impact evaluation: an experiment on development policies in Agri Valley (Basilicata, Italy) compared with new urban agenda themes. In: Gervasi, O., et al. (eds.) ICCSA 2021. LNCS, vol. 12957, pp. 621–633. Springer, Cham (2021). https://doi.org/10.1007/978-3-030-87013-3_48
22. Gola, M., Fior, M., Arruzzoli, S., Galuzzi, P., Capolongo, S., Buffoli, M.: A research method for locating community healthcare facilities in Italy: how to guarantee healthcare for all. J. Integr. Care (2023). https://doi.org/10.1108/JICA-05-2023-0034
23. Bovis, C.: The role and function of structural and cohesion funds and the interaction of the EU regional policy with the internal market policies - chapter 4. In: The Role of the Regions in EU Governance, pp. 81–108 (2011). https://doi.org/10.1007/978-3-642-11903-3_4
24. Pilogallo, A., Saganeiti, L., Scorza, F., Murgante, B.: Assessing the impact of land use changes on ecosystem services value. In: Gervasi, O., et al. (eds.) ICCSA 2020. LNCS, vol. 12253, pp. 606–616. Springer, Cham (2020). https://doi.org/10.1007/978-3-030-58814-4_47
25. Ruiz-Martínez, I., Esparcia, J.: Internet access in rural areas: brake or stimulus as post-covid-19 opportunity? Sustainability **12**(22), 1–17 (2020). https://doi.org/10.3390/su12229619
26. González, J.J.C., Herrero, J.A.R., Aboitiz, R.J.: Residential aspirations and perception of rural youth of the opportunities offered by their environment: the case of a Spanish inland rural area. Eur. Countrys. **13**(4), 785–805 (2021). https://doi.org/10.2478/euco-2021-0042
27. Dastoli, P.S., Pontrandolfi, P.: Strategic guidelines to increase the resilience of inland areas: the case of the Alta Val d'Agri (Basilicata-Italy). In: Gervasi, O., et al. (eds.) ICCSA 2021. LNCS, vol. 12958, pp. 119–130. Springer, Cham (2021). https://doi.org/10.1007/978-3-030-87016-4_9
28. Scrofani, L., Novembre, C.: The inland areas of Sicily. From rural development to territorial reorganization. Semest. di Stud. e Ric. di Geogr., 113–121 (2015). http://semestrale-geografia.org/index.php/sdg/article/view/72
29. Karacsonyi, D., Taylor, A.: Understanding demographic and economic patterns in sparsely populated areas–a global typology approach. Geogr. Ann. Ser. B Hum. Geogr. **105**(3), 228–247 (2023). https://doi.org/10.1080/04353684.2022.2103445
30. Muilu, T.: Rural policies for sparsely populated areas in Finland - old problems, new challenges and future opportunities. Eur. Countrys. **13**(2), 479–491 (2021). https://doi.org/10.2478/euco-2021-0028

31. Carson, D.A., Carson, D.B., Argent, N.: Cities, hinterlands and disconnected urban-rural development: perspectives from sparsely populated areas. J. Rural. Stud. **93**, 104–111 (2022). https://doi.org/10.1016/j.jrurstud.2022.05.012
32. Lehtonen, O.: Population grid-based assessment of the impact of broadband expansion on population development in rural areas. Telecomm. Policy **44**(10), 102028 (2020). https://doi.org/10.1016/j.telpol.2020.102028
33. Ciommi, M., Egidi, G., Salvia, R., Cividino, S., Rontos, K., Salvati, L.: Population dynamics and agglomeration factors: a non-linear threshold estimation of density effects. Sustainability **12**(6) (2020). https://doi.org/10.3390/su12062257
34. Hansmeier, H., Koschatzky, K.: Lagging regions between economic restructuring and addressing societal challenges (2025). https://doi.org/10.1007/s10037-025-00222-6
35. S. Republic and C. Republic: Development and causes of migration in lagging regions in the years 2017 – 2021: a case study of the Slovak republic, pp. 53–64 (2024)
36. Bertolini, P., Pagliacci, F.: Quality of life and territorial imbalances. A focus on Italian inner and rural areas. Bio-Based Appl. Econ. **6**(2), 183–208 (2017). https://doi.org/10.13128/BAE-18518
37. Rizzo, A.: Disaster management in the inner areas: a window of opportunity for national strategy (SNAI). In: Calabrò, F., Della Spina, L., Bevilacqua, C. (eds.) ISHT 2018. SIST, vol. 101, pp. 13–21. Springer, Cham (2019). https://doi.org/10.1007/978-3-319-92102-0_2
38. Agenzia per la Coesione Territoriale. https://www.agenziacoesione.gov.it/?lang=en
39. D'Andria, E., Fiore, P.: The RI.P.R.O.VA.RE. project for the regeneration of inland areas: a focus on the Ufita area in the Campania region (Italy). Buildings **13**(2) (2023). https://doi.org/10.3390/buildings13020336
40. Fortunato, G., Scorza, F., Murgante, B., Dastoli, P.S.: The Lagonegro-Rotonda cycle path, a community-based management model: ECO-CICLE perspectives. LaborEst **24**, 45–49 (2022). https://doi.org/10.19254/LaborEst.24.07
41. Fortunato, G., Scorza, F., Murgante, B.: Hybrid oriented sustainable urban development: a pattern of low-carbon access to schools in the City of Potenza. In: Gervasi, O., et al. (eds.) ICCSA 2020. LNCS, vol. 12255, pp. 193–205. Springer, Cham. https://doi.org/10.1007/978-3-030-58820-5_15
42. Carbone, R., et al.: Using open data and open tools in defining strategies for the enhancement of Basilicata region. In: Gervasi, O., et al. (eds.) ICCSA 2018. LNCS, vol. 10964, pp. 725–733. Springer, Cham (2018). https://doi.org/10.1007/978-3-319-95174-4_55
43. Scorza, F., Fortunato, G.: Cyclable cities: building feasible scenario through urban space-morphology assessment. J. Urban Plan. Dev. (2021). https://doi.org/10.1061/(ASCE)UP.1943-5444.0000713
44. Fortunato, G., Scorza, F., Murgante, B.: Cyclable city: a territorial assessment procedure for disruptive policy-making on urban mobility. In: Misra, S., et al. (eds.) ICCSA 2019. LNCS, vol. 11624, pp. 291–307. Springer, Cham (2019). https://doi.org/10.1007/978-3-030-24311-1_21
45. Murgante, B., Scorza, F., Fortunato, G., Dastoli, P.S.: A place syntax approach to fifteen minutes cities. In: Proceedings 13th International Space Syntax Symposium, SSS 2022, University of Basilicata, School of Engineering, Potenza, Italy (2022). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85145612362&partnerID=40&md5=e9f3cde33d94ccb9c2b4f6f1add2aaec
46. Las Casas, G., Sansone, A.: Un approccio rinnovato alla razionalità nel piano. In: Politiche e strumenti per il recupero urbano, Monfalcone (GO): Edicomedizioni (2004)
47. Scorza, F., Pilogallo, A., Las Casas, G.: Investigating tourism attractiveness in inland areas: ecosystem services, open data and smart specializations. In: Calabrò, F., Della Spina, L., Bevilacqua, C. (eds.) ISHT 2018. SIST, vol. 100, pp. 30–38. Springer, Cham (2019). https://doi.org/10.1007/978-3-319-92099-3_4

48. Scorza, F., Casas, G.L., Murgante, B.: Overcoming interoperability weaknesses in e-government processes: organizing and sharing knowledge in regional development programs using ontologies. In: Lytras, M.D., Ordonez de Pablos, P., Ziderman, A., Roulstone, A., Maurer, H., Imber, J.B. (eds.) WSKS 2010. CCIS, vol. 112, pp. 243–253. Springer Heidelberg (2010). https://doi.org/10.1007/978-3-642-16324-1_26
49. Dastoli, P.S., Pontrandolfi, P.: Methods and tools for a participatory local development strategy. In: Calabrò, F., Della Spina, L., Piñeira Mantiñán, M.J. (eds.) NMP 2022. LNNS, vol. 482, pp. 2112–2121. Springer, Cham (2022). https://doi.org/10.1007/978-3-031-06825-6_203
50. Scorza, F., Casas, G.B.L., Murgante, B.: That's ReDO: ontologies and regional development planning. In: Murgante, B., et al. (eds.) ICCSA 2012. LNCS, vol. 7334, pp. 640–652. Springer, Heidelberg (2012). https://doi.org/10.1007/978-3-642-31075-1_48
51. Soligno, R., Scorza, F., Amato, F., Casas, G.L., Murgante, B.: Citizens participation in improving rural communities quality of life. In: Gervasi, O., et al. (eds.) ICCSA 2015. LNCS, vol. 9156, pp. 731–746. Springer, Cham (2015). https://doi.org/10.1007/978-3-319-21407-8_52
52. Dastoli, P.S., Pontrandolfi, P., Scorza, F., Corrado, S., Azzato, A.: Applying geodesign towards an integrated local development strategy: the Val d'Agri case (Italy). In: Gervasi, O., Murgante, B., Misra, S., Rocha, A.M.A.C., Garau, C. (eds.) ICCSA 2022. LNCS, vol. 13379, pp. 253–262. Springer, Cham (2022). https://doi.org/10.1007/978-3-031-10545-6_18
53. Scorza, F.: Training decision-makers: GEODESIGN workshop paving the way for new urban agenda. In: Gervasi, O., et al. (eds.) ICCSA 2020. LNCS, vol. 12252, pp. 310–316. Springer, Cham (2020). https://doi.org/10.1007/978-3-030-58811-3_22
54. Steinitz, C., Orland, B., Fisher, T., Campagna, M.: Geodesign to address global change (2022). https://doi.org/10.1016/B978-0-12-820247-0.00016-3
55. Campagna, M.: Geodesign: (a personal) retrospective, and perspectives. In: Marucci, A., Zullo, F., Fiorini, L., Saganeiti, L. (eds.) INPUT 2023. LNCE, vol. 467, pp. 114–121. Springer, Cham (2024). https://doi.org/10.1007/978-3-031-54118-6_11
56. Steinitz, C.: On change and geodesign. Landsc. Urban Plan. **156**, 23–25 (2016). https://doi.org/10.1016/j.landurbplan.2016.09.023
57. Las Casas, G., Scorza, F., Murgante, B.: Conflicts and sustainable planning: peculiar instances coming from Val D'agri structural inter-municipal plan. In: Papa, R., Fistola, R., Gargiulo, C. (eds.) Smart Planning: Sustainability and Mobility in the Age of Change. GET, pp. 163–177. Springer, Cham (2018). https://doi.org/10.1007/978-3-319-77682-8_10
58. Scorza, F.: Towards self energy-management and sustainable citizens' engagement in local energy efficiency agenda. Int. J. Agric. Environ. Inf. Syst. **7**(1), 44–53 (2016). https://doi.org/10.4018/ijaeis.2016010103
59. Saganeiti, L., Pilogallo, A., Faruolo, G., Scorza, F., Murgante, B.: Territorial fragmentation and renewable energy source plants: which relationship? Sustainability **12**(5), 1828 (2020). https://doi.org/10.3390/SU12051828
60. Las Casas, G., Murgante, B., Scorza, F.: Regional local development strategies benefiting from open data and open tools and an outlook on the renewable energy sources contribution. Green Energy Technol., 275–290 (2016). https://doi.org/10.1007/978-3-319-31157-9_14
61. Pilogallo, A., Scorza, F.: Mapping regulation ecosystem services (ReMES) specialization in Italy. J. Urban Plan. Dev. (2021)
62. Dastoli, P.S., Scorza, F.: Geodesign in the strategic planning track: a participatory itinerary. J. Digit. Landsc. Archit. **2023**(8), 400–408 (2023). https://doi.org/10.14627/537740043
63. Pontrandolfi, P., Scorza, F.: Making urban regeneration feasible: tools and procedures to integrate urban agenda and UE cohesion regional programs. In: Gervasi, O., et al. (eds.) ICCSA 2017. LNCS, vol. 10409. Springer, Cham(2017). https://doi.org/10.1007/978-3-319-62407-5_40

64. Gatto, R.V., Corrado, S., Scorza, F.: Towards a definition of tourism ecosystem. In: 18th International Forum on Knowledge Asset Dynamics (IFKAD) - Managing Knowledge for Sustainability (2023)
65. Saganeiti, L., Pilogallo, A., Izzo, C., Piro, R., Scorza, F., Murgante, B.: Development strategies of agro-food sector in Basilicata region (Italy): evidence from INNOVAGRO project. In: Misra, S., et al. (eds.) ICCSA 2019. LNCS, vol. 11624, pp. 347–356. Springer, Cham. https://doi.org/10.1007/978-3-030-24311-1_25