

Recovery and Reuse of Rural buildings: the Spread Out Building case

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ABSTRACT

The slow but continuous flight from the countryside leads to the abandonment and consequent deterioration of rural constructions. Therefore the problem of their recovery, also for diversified uses, arises. The reuse problem becomes more heightened in case of small-sized constructions; hence special forms of recovery need to be identified to enable their reuse focused on functional integration.

This paper tackles the problem by illustrating a study case concerning the Gargano, a National Park and tourist area, featuring a high number of spread out houses. We propose aggregating the single building units to form a spread out accommodation facility distributed over various constructions.

To create the above mentioned spread out hotel, an integrated recovery is proposed that contemplates, in addition to the restoration of the buildings, also the redevelopment of the farmland and vegetation surrounding the complex, thus offering the opportunity to recover wide rural spaces together with their buildings and territorial contexts.

Keywords: Spread out rural buildings, rural landscape, recovery and reuse, protected areas, Italy

1. RURAL BUILDINGS

The migration from the countryside to the city was and still is one of the main problems experienced globally and particularly all across the European Union, for the safeguard of agricultural and forest territories. Abandoning cultivations automatically translates into the absence of forms of maintenance for agricultural and forest territories, upsets the rural landscape and leads to the degradation of the agricultural buildings used as houses and as facilities for animal breeding (Kristensen et al. 2004), (Van Der Vaart J.H.P. 2005).

In the last two decades the number of farmers in the European Union as a whole has halved from 12.7 million to just over 6 million (Gambel P. 2004).

Based on these considerations, in the early 90's the European Union started a policy aimed at encouraging the permanence of rural populations in the countryside by providing various forms of incentives for transformations that would develop endogenous resources (Leader Programs). The effects of these policies are still being monitored but in general one may state that the abandonment phenomenon is still under way and its negative results on the territory are becoming clearer and clearer.

Particularly relevant to this scenario is the matter of the recovery of spread out buildings that have lost their close correlation with their productive agricultural context. In the various countries of the European Union the approach to this issue is quite univocal and focuses on forms of tourism aimed at reusing the rural buildings with a view to re-launching the agricultural economy. In Ireland the first farmhouses were set up in the 80s (Scott M. 2004), in Spain the recovered *Paradores* have favored an economic upturn in wide country areas (Bedate et al, 2004), (Canas I, Martin S. 2004).

In Italy many transformations, following the recovery and reuse of rural buildings near big urban centers, tourist areas or marginal locations of significant landscape value, have resulted in the creation of a large network of green tourism facilities across the entire country.

However, this re-launch of the rural economy promoted by the European Union is still a long way from being completed. Indeed, the quantity of rural buildings, their territorial distribution and the correlations to be established with the traditional tourist sector pose not just technical problems associated with the construction recovery, but especially problems relating to the integrated policies to be implemented in the various Member States (Agostini S. 2007) to enable a balanced solution to the problem to be found.

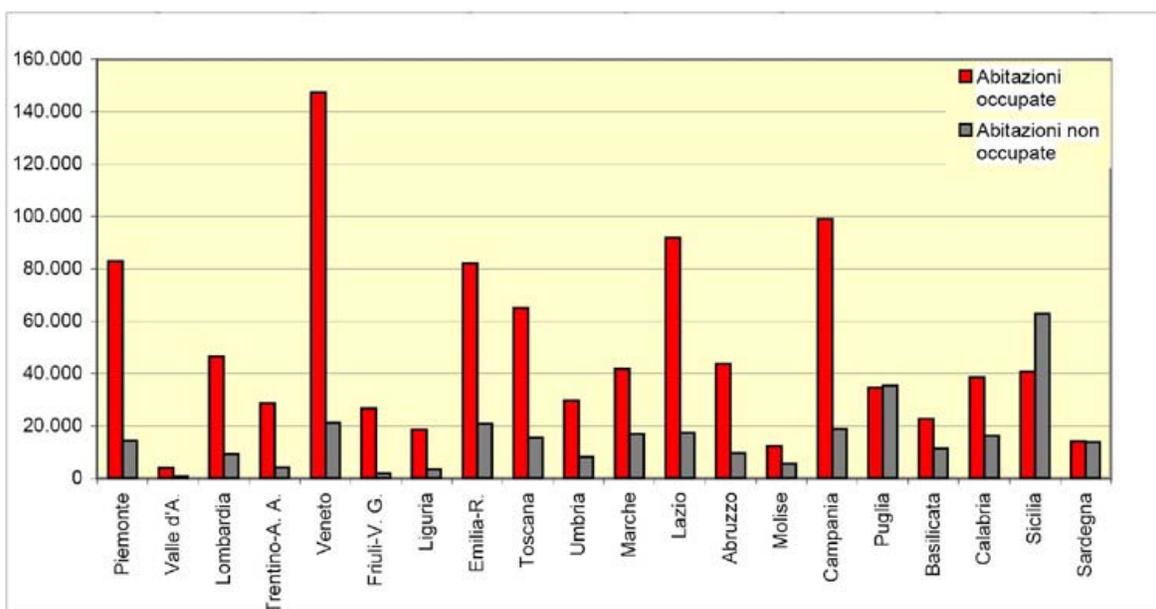


Figure 1. Housing within farms by region.

There is a high quantity of rural buildings at a national level. According to the ISTAT census for the year 2000, there are an impressive 1,376,304 rural buildings used in continuous or seasonal activities, 68% of which are premises to store farm machinery and equipment; 1,084,038 are animal shelters, 45% of which were built or restored before 1970; the stock of housing within farms amounts to a total of 1,460,980, 358,422 of which are unoccupied (fig.1). Therefore, on the whole rural buildings represent an important economic factor. From this the need arises to recover rural buildings in order:

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- Not to dissipate the economic heritage connected to the buildings;
- Avoid the disappearance of evidence of the farming community;
- Protect public investments in the sector, for facilitated and subsidised building;
- Implement the legislative guidance from State Law no. 457/1978 and recent legislation concerning environmental issues, confirming the opportunity provided by the recovery of buildings as an alternative to building new constructions, also to avoid land consumption;
- Revitalise rural spaces.

The main causes for the deterioration of rural buildings may be found in the ever increasing flight from the country by new generations. The number of “occupied” houses within farms has decreased by 40% in thirty years, passing from 1,854,010 in 1970 to 1,102,558 in 2000, while the percentage of employees in the primary sector has dropped by almost 80% from 1961 to 2001, reaching the minimum of 5.5 % of the active population (Tab 1)

The re-usage problem, which arises in general for all the rural buildings, is particularly complex for spread out houses which, due to their limited size and their random territorial dislocation compared to the town and/or main road infrastructure, can hardly be referred to farming only.

These are the issues covered by this paper with the aim to identify alternative and complementary ways of recovering and reusing abandoned spread out rural buildings while respecting the farming areas hosting them.

Table 1. Employees by economic activity group in Italy (source ISTAT).

	agriculture		Industry		Other activities		total
1961	5,692,975	29.05%	7,963,455	40.64%	5,935,622	30.31%	19,592,052
1971	3,242,621	17.21%	8,189,938	43.49%	7,398,568	39.30%	18,831,127
1981	2,240,322	11.06%	8,001,851	39.52%	10,004,164	49.42%	20,246,337
1991	1,402,463	7.13%	6,925,112	35.19%	11,347,394	57.68%	19,674,969
2001	1,153,678	5.50%	7,028,981	33.48%	12,811,073	61.02%	20,993,732

2. DOCUMENTATION CONSULTED AND REFERENCE METHODOLOGY

The territory being studied was analyzed with direct inspections, by consulting the cartographic documentation existing at various scales (Istituto Geografico Militare IGM 1:50,000 and 1:25,000, color orthophotograph Compagnia Generale delle Riprese CGR 1:10.000, air photogrammetry 1:5.000 of the Nation Park of Gargano) as well as by means of studies carried

out on the territory (Framework Plan of the Spread Out Houses in the Territory of the National Park of Gargano) and with the use of information systems. A GIS in particular was implemented in Arcview 3.2 environment, which allowed the geographical localisation of all the buildings present in the Gargano promontory, their numerical determination, the checking of their concentration and state of use. Analyses conducted with the use of distance operators through the extension “Spatial Analyst” allowed the identification of some areas where spread out buildings are more concentrated (fig. 2).

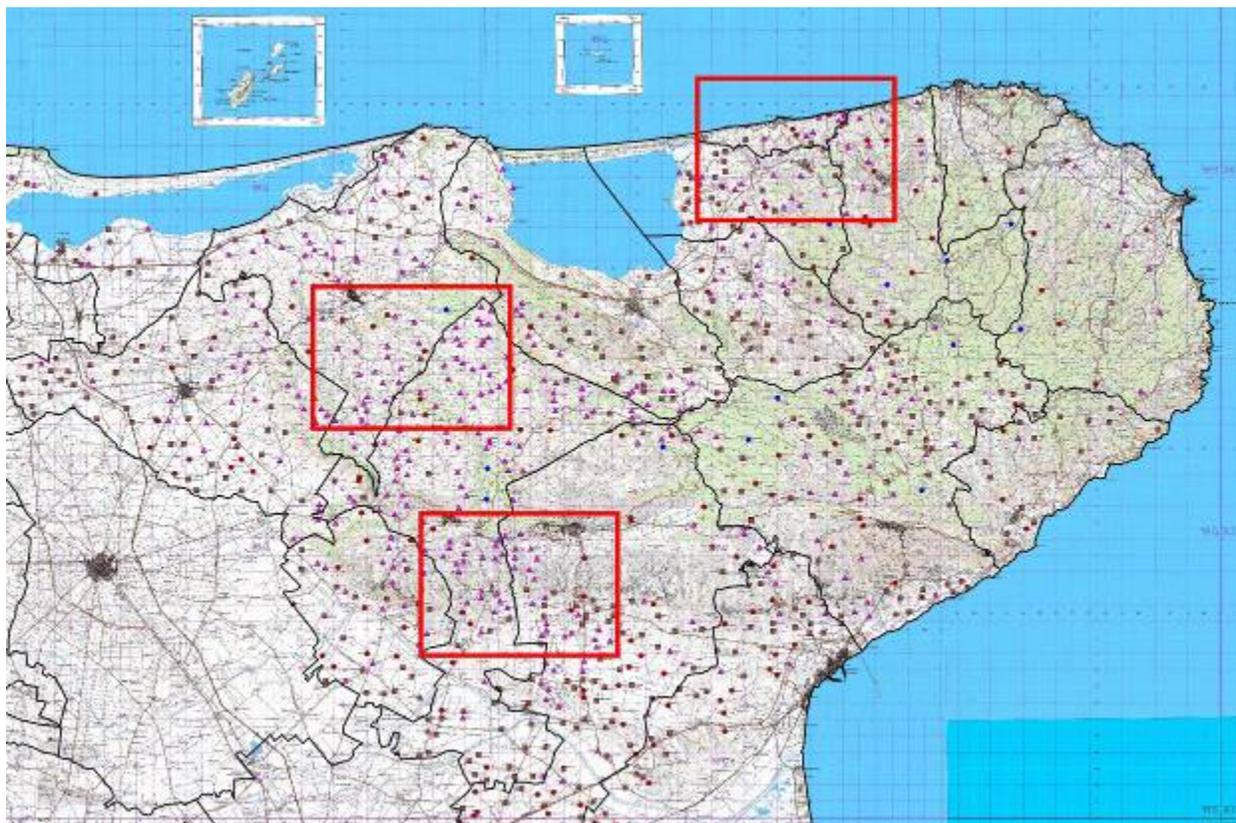


Figure 2. Areas where spread out buildings are more concentrated.

Methodologically speaking, after the reconnaissance of the rural spread out buildings present in the Gargano area, the spots where these are mostly concentrated and featuring characteristic crops of high landscape value were identified by using both the GIS for perimeter definition purposes and suitably overlapped soil use charts (Corine e orthophotograph).

The analysis of the territorial characteristics of the identified areas with regard to the agricultural cultivations present, their landscape value and their tourist potentials, has led to the identification of a sample area for this study.

The phases below were followed:

- Identification of the spread out houses in the Gargano area;
- Identification of the supply of and demand for tourist accommodation;
- Identification of the main agricultural cultivations;

- Choice of the sample area in a setting featuring a high tourist accommodation level, based on the number, concentration and state of use of the spread out houses;
- Choice of the reuse through the volumetric classification (transformation potentials as tourist facility)

For the study of the problems connected to the static and distributive recovery, a specialist bibliography was resorted to (Baglioni A., Guarnerio G., Cigni G., Dal Sasso P., Pallara A. 1986, Mastrodicasa S.), while for the reuse, despite the vast amount of possible solutions, industry journals (Dal Sasso P., Pallara A. 1990) were examined as well as real cases to be considered as positive and negative examples (Tassinari P., Torreggiani D., Paolinelli G., Benni S. 2007). To assess the possible ways of reusing spread out houses in the territory of study, reference was made to the methodological criteria of integrated recovery (Dal Sasso P., Ottolino A. 2006), having preliminarily carried out all the analyses that the same methodology states as indispensable for the proposition of recovery and reuse.

To determine the extent and quality of the rural building heritage, ISTAT files were consulted concerning the population and agriculture census, while for the building types the research activities were limited to the previously chosen study area, coinciding with the Gargano National Park, in Puglia.

In addition to the historical bibliography on spread out rural buildings (Colamonico C. 1970), also recent studies carried out by the Park Body and published in national journals (AA.VV. 1983., Bianchi A., Dal Sasso P. 1990) were examined on this specific subject.

The study area highlights a clear discordance between the thousands of beds devoted to tourist accommodation created in recent years in new hotels along the coast of the Gargano promontory and the total abandonment of thousands of rural houses just a few hundred metres from the coast. Moreover, these spread out houses contribute to characterising, together with the farmlands in which they stand, the landscape which is offered to and acts as an attraction for the tourists staying in new facilities close to the coast.

3. RECOVERY APPLIED TO RURAL BUILDINGS

The recovery of agricultural buildings is closely connected to the farm's managerial needs, the type of buildings and their belonging to aggregated clusters.

In particular, the reasons that lead to the recovery may derive from needs connected to:

- Modifications to the farm's organisation connected to new farming trends
- Optimisation of previous investments through the adaptation and enlargement of interventions in operational structures
- Partial diversification of the farm's activity to include complementary tourist and/or service sector activities, such as farm holiday activities, etc.
- Cultural needs due to the historical, architectonic and environmental features of one or more buildings belonging to the farm.

Concerning the *building types*, rural buildings may be subdivided into:

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- Farm buildings, connected to farming (houses, operations and processing), with planimetric dimensions and distributions that are functional to the activity being carried out.
- Farmsteads/*Masserias*/Villas with high architectural value and representing historical farming periods.
- Houses, used as fixed or temporary residences, or simple equipment deposits to assist farming.

The *Aggregation arrangements* of rural buildings, in addition to spontaneous ones, can be subdivided into:

- Villages, constituting recognised historical aggregations, of spontaneous origin or planned by specific industry legislation.
- Nuclei consisting of “groups of adjacent and close houses, provided that the interval between one house and another does not exceed thirty metres and is in any case less than that existing between the same nucleus and the nearest house manifestly spread out.” (ISTAT)
- Spread out houses “in the municipal territory at such a distance one from the other that they do not constitute an inhabited nucleus” (ISTAT)

The opportunities/needs that recovery interventions offer/impose may be summarised as follows:

- ◆ **Need to recover** abandoned buildings as an alternative to new ones
- ◆ **Quality of the recovery** from a building and philological aspect, in terms of the relation with the hinterland and the landscaping connotations of the surrounding area
- ◆ **Reuse compatible** with the characteristics of the original structure

To encourage the recovery of buildings it is indispensable to limit or block the possibility of new constructions being built, especially in the areas with a high environmental and landscape value; the recovery must be carried out in compliance with the legislative specifications of the industry, making reference to the formal quality and using the materials and technologies that are typical of the geographical and cultural area concerned. Finally, the resulting reuse must be consistent with the characteristics of the original building in a way not to distort its GENETIC meaning.

Furthermore, recovery interventions always require in-depth research to be carried out on the site and a unitary solution to be studied between the building recovery intervention and the conservation, restoration or reconstruction of the immediate surroundings so that no distortion is generated between the building material and the connotation of the intervention area.

In general the recovery must be consistent with the historical building characteristics and the landscape of the geographical area. *Too often models are applied (that also valid in absolute terms) that are alien to the local tradition and landscape.*

4. SPREAD OUT RURAL BUILDINGS AND INTEGRATED RECOVERY

Spread out rural building faces bigger problems than other types of rural buildings especially with regard to the possibility of reuse and the difficulty of reusing small and medium sized buildings sporadically spread about in the rural territory, as mentioned above.

Nevertheless, these location and dimension related obstacles may be overcome in the presence of numerous concentrated spread out houses, in contained territorial settings.

It is in these cases that the methodology of integrated recovery may be applied. This focuses on the close relation existing between a house and its surroundings, where the recovery of the latter may be feasible and successful only if accompanied by the recovery of the "surroundings", as these closely characterise the set "house and neighbouring agricultural areas".

The mentioned methodology originates from the considerations contained in the publication by the CNR (2007) on the "Cultural and material reuse of rural building" – Analysis of the degradation and methods of intervention, as well as from an application made for the Gargano (Dal Sasso P., Ottolino A. 2006). A representation of the methodology is illustrated in the block diagram of figure 3.

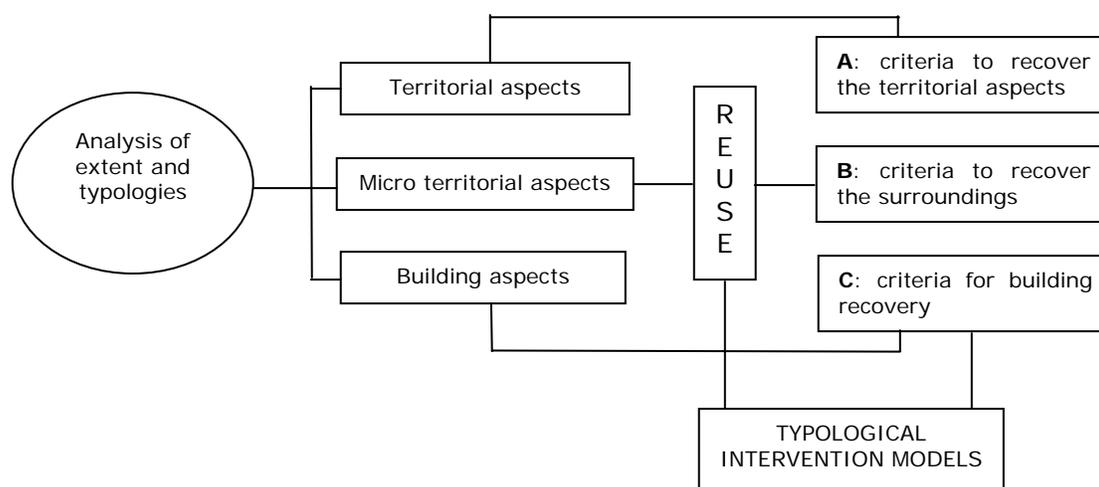


Figure 3. Methodological diagram for integrated recovery.

5. THE AREA OF STUDY

The area being studied is in the Gargano Promontory, mostly belonging to the territory of the National Park bearing with the same name and stretches over approximately 25 km sq. The same, identified through the methodology indicated in paragraph 2 above, concerns the eastern portion of the municipal territory of Rodi Garganico (fig. 3), featuring large citrus groves, now dying out, and spread out houses, which here are much more numerous than in the rest of the promontory. The types of rural buildings in the Northern Gargano area include spread out houses, lodges and farm houses (fig. 5), though prevailing is the concentration of small and

medium sized spread out houses, in the area of the citrus groves between the municipal territories of Rodi and Vico (fig. 6).

The area being studied features an undefined orography ranging from 0 to 200 meters above sea level and including springs, reservoirs, streams, etc. and vegetation (pine forests, olive groves, citrus groves and monumental holm oak wind breakers), which contribute to forming a peculiar landscape even inside a National Park. Citrus groves and their special arrangement play the biggest role in conveying peculiarity to the landscape (fig. 7). The area concerned by citrus fruits, which involves the municipal territories of Rodi, Vico and Ischitella, stretches over 1000 ha, with a density of 625 plants/ha; in 2001 the production was assigned the IGP (Protected Geographical Indication) brand “Citrus fruit oasis of the Gargano”, and is also monitored by the National Association Slow Food.

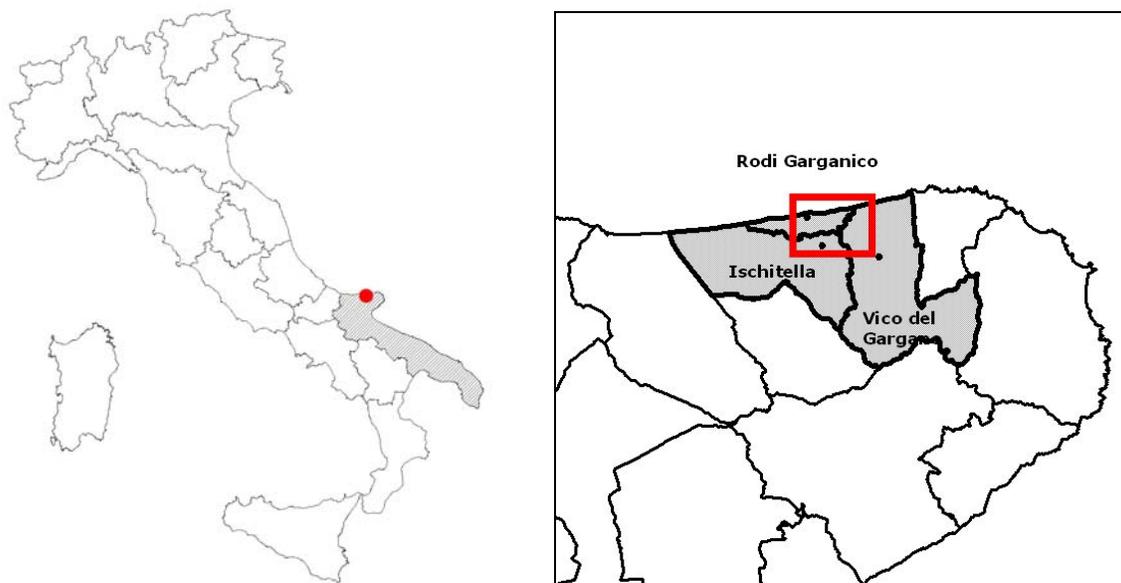


Figure 4. The area of study.

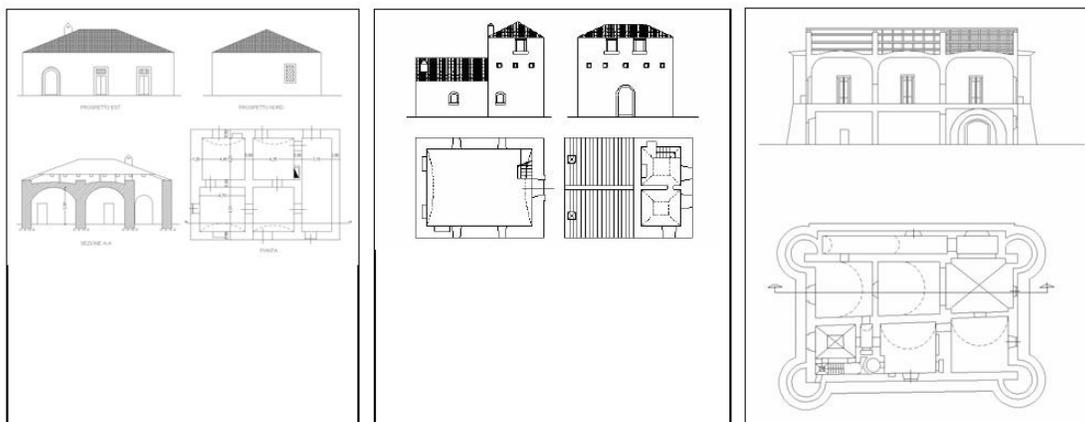


Figure 5. Diagrams of the building types present in the area of study.

However, the highly valuable landscape is counterbalanced by productive criticalities (20/30 Kg per plant) and low profitability (0.35 €/Kg).

The cadastral arrangement is highly fractioned: almost all families in Rodi own a “garden” generally consisting of a 2000 – 2500 m. sq. plot; many of these plots have a house/deposit on them, while the larger ones may host a large-sized lodge with better architectonic features.



Figure 6. Characteristic lodges in the citrus groves of Rodi Garganico.

All of the northern portion of the Gargano receives significant tourist flows and hosts accommodation facilities accordingly. In some cases, such as Peschici and Vieste, the tourist influx on the coast is very high, even exceeding the threshold limit set for the use of the coastal strip, equal to one bed for each linear meter of accessible beach; in other cases, the values are very close to this threshold. Table 2 summarises the main data on the host of spread out houses and the tourist characteristics.

The area being studied hosts approximately 800 spread out houses, 30% of which consist of recently built houses or houses in good state of repair, and are those nearest the coast, while the remaining part, consisting of single cell houses for 60% and lodges for 40%, is in a poor state of repair or in ruins.

If we exclude limited instances of recovery and enlargements of buildings with often disputable and mismatching techniques (fig. 8) which, in any case, have allowed the cultivation of the

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surrounding plot of land, the spread out houses in the study area are in a bad state of deterioration and abandonment, mainly in the area between Rodi and Vico, between località Canneto and ponte Asciatizzo.



Figure 7. Aerial view of the citrus grove landscape.

Table 2. Tourist accommodation facilities in 2006 and length of the coast of Northern Gargano.

	No. of accommodation facilities	No. of beds	No. of spread out houses	Length of the cost by type			
				sandy	gravelly	rocky	rocky accessible
CAGNANO VARANO	6	1799	188	7345			
ISCHITELLA	14	1931	492	6858			
LESINA	5	952	32	25158			
PESCHICI	70	15069	515	3843		5395	4996
RODI GARGANICO	44	5786	517	8808		861	
SAN NICANDRO G.	5	806	101	900			3647

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VICO DEL GARGANO	16	2865	182	4687		242	
VIESTE	205	45245	377	11061	1542	20882	3939



Figure 8. Example of mismatching building recovery.

6. THE CHOICE OF REUSE

The analyses carried out following the methodological criterion stated previously in figure 3 reveal that in the study area, given the quantity of existing spread out houses (fig. 9 and 10), their territorial distribution (fig. 11), the presence of cultivations that risk extinction, as well as the tourist value of the studied territory, the reuse method that is most compatible with the characteristics of the area and which can be applied to the houses to be recovered, is connected to the widespread tourist facilities. The definition of this reasoning is implied in the following consideration: *“There where the territorial density allows it, a widespread accommodation facility (spread out hotel) may be hypothesised, where guestrooms consist of small houses that, therefore, become suites or single rooms, at a distance one from the other but falling in a pseudo-circular space with a radius not exceeding 200÷300 metres. This type of accommodation is very popular with so-called “eco tourists”.*

In the latter scenario, greater care shall be devoted to the recovery as regards the arrangement of the connecting road routes (which would become the “corridors” of the hotel) as well as the

surrounding farmland, which would constitute a common space, in a way to make them more enjoyable for visitors.

This reuse clearly allows articulated and positive results to be achieved concerning both the building recovery of a multitude of constructions and the conservation and redevelopment of farmland and natural areas involved in the total intervention of integrated recovery.



Figure 9. Housing unit of the study area.



Figure 10. Housing unit of the study area and surrounding vegetation.

7. A PROPOSAL FOR A SPREAD OUT HOTEL IN LOCALITÀ CANNETO

A sub-area was chosen, within the study area, in località Canneto, hosting 12 rural houses that are currently unused or are in a more or less serious state of degradation (figure 12). The existing crops, partially directly managed by the landowner, include olives, citrus fruits, almonds and some other fruits. The surroundings feature woods of *Pinus halepensis* and holm oaks especially, used as a windbreak to protect the citrus fruits.



Figure 11. Concentration of spread out houses in the study area.

The set of houses is accessed by a carriageway with a width ranging from 3 to 5 metres, with gravelled or partially cemented surface, except for the main axis that leads to Vico del Gargano; connections between the various units, with a distance between them ranging from 20 to 200 metres, shall be through the carriageway and the footpaths in existence and/or identified during the recovery phase.

In the example considered, the 12 houses are similar in type and constitute the classic rural house defined by Colamonico “single or multi family” (Colamonico C. 1970). Reusing them for accommodation purposes may allow each house to host 4-8 guests, or the creation of suites for 4 guests.

The building recovery of these special types of rural settlements seems to be very similar to urban situations and it partially is. Nevertheless, in addition to the difficulties that may be encountered to access the areas, which are often located further away from the main carriageway, the costs of integrated recovery are higher than those of urban recovery, due to the need of arranging connections between the various buildings (which, as far as supply systems are concerned, may be independent with alternative energy and waste disposal systems) and especially to implement a vegetation recovery of the surrounding area that is closely connected to the integrated recovery of the intervention area.



Figure 12. The intervention area in località Canneto in Rodi Garganico.

In the example provided, an additional charge of 60% has been assessed for this recovery compared to a mere building recovery.

8. FINAL CONSIDERATIONS

The study we conducted has enabled us to identify a recovery solution defined as “integrated” for the restoration of a complex of spread out houses and the revitalisation of a medium sized rural area (about 10 ha). The research carried out on the characteristics of a highly complex area, including wildlife, strong farming and landscape connotations and intense use of the coast for tourist purposes, has allowed us to make considerations on the opportunity of avoiding new accommodation constructions. This approach would be sensible in consideration of both the realisation that, as indicated above, the point of saturation has almost been reached concerning the use of the coast, and the objective dissonance of building new constructions in the presence of a building asset of equal or superior capacity. Furthermore, the complex of spread out houses referred to in the study constitutes the building model for a singular landscape featuring a balanced environment with natural elements (woodland, ilex groves), agriculture (citrus, olives) and the respectful presence of man. This presence is embodied in small houses, just like the plot where they rise, functional to the single parcel and in general built with traditional local materials

and techniques, thereby becoming themselves a physical sign of a historical age lasting more than two centuries with a flourishing farming and commercial economy (D’Amaro S. 2006).



Figure 13. Ruins of an abandoned lodge in a citrus grove.

The result achieved may constitute a reference model for similar situations found in the various areas of the Italian peninsula, especially if the tourist accommodation in the spread out houses is integrated with spread out buildings to be used or confirmed for the production and processing of local products. In this way the set of spread out houses, integrated as so may become a small limited company where the shares correspond to the value of the assets (houses, agricultural land, etc.) that each owner makes available to the company.

The most obvious and important consideration arising from the study concerns the need to stop new buildings for a period not shorter than 5 years. In the area falling within the National Park such a measure can be proposed! Only in this way is it possible to encourage the recovery of an enormous building asset that constitutes a historical document for the farming community and risks disappearing in the short term unless farming the land becomes more profitable (figure 13). Likewise, integrated recovery offers the chance to protect the farms that risk extinction for the reasons mentioned above (figure 14).



Figure 14. An example of an abandoned citrus groves infested by blackberries.

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