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Barbanente A., Selicato F.

in

Camarda D. (ed.), Grassini L. (ed.).
Interdependency between agriculture and urbanization: Conflicts on sustainable use of soil and water

Bari : CIHEAM
Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 44

2001
pages 195-221

POLICY TRENDS IN RURAL/URBAN INTERPLAY IN ITALY. REFLECTIONS ON THE ALTA MURGIA NATIONAL PARK

Angela Barbanente
Institute for Land and Environmental Engineering, Polytechnic of Bari, Italy.

Franco Selicato
Department of Architecture and Town Planning, Polytechnic of Bari, Italy.

Changing roles and dynamics of rural/urban spaces in Italy

The role of agriculture in the production of environment and landscape, and the ways in which it is perceived by scholars, planners, and the public at large, have been changing in Western Europe: from a position of rural spaces as the weak pole in the competition between urban expansion and countryside, or as "open territories", places empty of others, remote from control (Lynch, 1976), to a conception which emphasizes the productive value of agriculture, to a notion of agriculture as a crucial environmental resource and means of protection of territory, to the current more composite images in which the role of agriculture in environmental transformation is considered in its contradictory dimensions (Alexandratos, 1995; Ikerd, 1990) and the interrelations between urban and rural spaces are becoming more articulated.

On the one hand, the rural space can be considered a positive externality, which is assuming a crucial relevance in order to overcome limited interpretations of environmental protection, based on punctiform and circumscribed places to be preserved, and to promote actions aiming at regenerating ecosystems and producing conditions for environmental sustainability. On the other hand, in the recent past the negative effects of intensive agricultural practices on the environment have become to be conceptualized in terms of negative externality (Perrings et al., 1995) as they often involve the loss of functional diversity, the alteration of hydrogeological features, the diffusion of pollutants related with the use of fertilizers, pesticides and herbicides loading local ecosystems with waste and nutrients while consuming natural resources. However, the growing recognition, also in the more developed countries, of the gradual impoverishment of the of natural and cultural local resources coming from the centralized, uniform, productivity oriented control of agriculture, in the sense argued by Shiva (1993), still fails to induce radical changes in the conceptualization of the related social costs and consequently in the design of environmental management policies.

Due to the high level of anthropization of the Italian territory, shape and management of landascape-environment has been to a large extent determined by farmers: the predominant character of Italian environmental heritage is a combination of strictly intertwined natural and cultural factors. Rural landscapes are vital and much valuable environmental features, which are invariably the product of particular patterns and systems of farming.

The progressive reduction of spontaneous vegetation and pastureland in favor of intensive and even industrialized agriculture not only in the more productive plains, but also in some hilly zones, is giving rise to increasing problems of environmental impacts: pollution of soils and water is reaching unsafe levels in some areas, affecting also deeper aquifers with relevant consequences for water quality. In such a situation, it is not easy to find an adequate balance between "nature and culture" in planning and management of rural environment. Setting aside large areas of land in order to preserve their "traditional landscapes" (for example by means of the institution of protected areas), if not accompanied by the propagation of agricultural practices compatible with the environmental conservation but at the same time allowing a sufficient productive efficiency, risks to determine the abandonment of rural land, and thus the degradation of the environment to be preserved or the substitution of the traditional economic activities with new ones, oriented towards the new recreational functions of the environment, and thus the creation of pretty but dead landscapes. The case of "Alta Murgia" National Park discussed below is a good example of such contradictory processes.

In order to deal with the problem of the interrelations between agriculture and urbanization a conceptual model is necessary which distinguishes amongst a number of different situations with reference to both urbanization processes and patterns, and agriculture structure and trends.

It is possible to single out three types of situations which seem increasingly relevant in the Italian context. They all imply processes of agriculture land erosion and deterioration, with considerable environmental consequences.

From suburbanization to spread cities

The first type of situation is related to the urbanization processes in the more dynamic urban areas. As far as the largest urban areas, these processes are still relevant notwithstanding the dramatic reduction of the migration flows attracted by them and the rates of birth in the whole country. In fact, these areas, starting from the 1970s, experienced an increasingly rapid out-flow of population from the core of the agglomerations into the surrounding rings of municipalities which was paralleled by a reduction in land use intensity.

The reasons behind these suburbanization processes – and the dis-urbanization which some works assumed would follow when the population growth in the ring is not

sufficient to compensate the population loss in the core of metropolitan areas or when both decrease (van den Berg et al., 1982; for a critique, see Camagni, 1986) – are different, and to some extent contradictory: on the one hand the rise in housing prizes, the congestion of city centers and the deterioration of environmental conditions induce people to leave large urban areas, on the other hand the improved individual prosperity and the diffusion of cars make it possible for more and more people to realize their housing dreams, following a trend that started long before in the US and in the principal European metropolitan areas (Hall, 1982; 1988), whose result Mumford (1938) stigmatized in a "raw, dissolute environment and a narrow, constricted and baffled social life".

Parallel to this process, also firms and employment belonging to the industrial and service sectors migrated outwards beyond the central city municipal boundaries giving rise to a mix of functional uses and settlement forms often scattered in the countryside, and a huge, costly enlargement of infrastructure networks.

Periurban areas seem still the most fragile contexts in the face of such processes as the productivity of their agricultural exploitation is always less than in case of urbanization (Camagni, 1994). Moreover, the loss of rural values induced by these processes is particularly severe if we think to their increasing importance for the ecological equilibrium of largest urban areas (Tosi, 1999). A research program of national interest on urbanization in Italy (Astengo, Nucci, 1990) provides us with some quantitative indicators on the phenomenon between 1960 and 1980 in a sample of different situations. The yearly variation rate of urbanized surface was in the coastal stream around Palermo 11,9%, in metropolitan area of Naples 7,5%, in the metropolitan area of Milan 5,9%, in that of Rome 5,2%, in the western area of Genova 5,2%. But what is more interesting of the figures coming from this research relates to the rates of urbanization affecting some urban polycentric systems made up by medium-sized towns that experienced from the 1970s a vigorous growth of industrial districts of small and medium businesses (Becattini, 1987) and the deconcentration out of the city of the larger firms: 14,1% in the area around Modena in Emilia-Romagna, 8,9% in the urban system of Florence-Prato-Pistoia. In these areas the urbanization processes assume the form of "spread city" including a mix of settlement forms and functions usually developing along road networks.

The results of another more recent research (Clementi, Dematteis, Palermo, 1996) aiming at investigating the multidimentional relations between settlement forms and socio-economic processes, emphasized the emergence of new settlement organizations spreading in vast territories with extensive and multi-functional urban features. The satellite images of the territory highlighted the formation of wide areas of settlement dispersion, as "layers" of dense urban areas (especially near the metropolitan regions), but also as "autonomous" micro-regions: in the Po plain, the area between Parma and Modena, and the triangle from Modena-Ferrara to Ravenna-

Rimini; in the Northeastern regions, in the wide territories of "spread city" exogenous processes of metropolitan deconcentration and endogenous factors of local contexts interlace; along the Adriatic sea, the fringes of the linear sequence of coastal urban centers up to the boundaries of Apulia region.

The abandonment of agriculture land

The abandonment of agriculture land has different origins and assumes different forms: one of the most relevant causes still consist in the migratory flows, in general directed from Southern to Northern Italy, from internal to coastal areas, from mountain and hill zones to plains, from rural to urban regions. The rates of population variation from the end of 1950s to the end of 1970s confirm that constant depopulation affected essentially internal, mountain or hill regions located in all the three macro-regions, and that the areas which experienced re-population processes during the 1970s largely coincide with the so-called rural-periurban municipalities, in Italy (Cencini, Dematteis, Menegatti, 1986), but also in France (Camagni, 1994). This probably originates a double negative impact on agriculture lands because, on the one hand, the most isolated rural areas continue to loose population due to migration flows and population aging, on the other, those which are nearest to the dynamic regions bear the effects of demographic "dispersion" and economic deconcentration coming from these, usually are accompanied by changes in population socio-economic structure and life styles not compatible with getting back to the agriculture activity.

Contradictory scenarios, again, can be envisaged for internal areas and the preservation of their environmental features: on the one hand, they are becoming more and more attractive due to the absence of settlement pressure and the higher conservation of their natural and cultural resources; on the other, relevant advancements in agricultural technology are allowing the profitable cultivation of hillsides that in the past were too steep for machinery. This favors the care and maintenance of these territories, but also risks to induce uses and practices profoundly contrasting with the saving of the delicate equilibria of those fragile ecosystems.

Farmland abandonment, often as a consequence of the progressive loss of productivity, is also a side effect of urbanization processes: in particular, we refer to the fragmentation of farmlands as a result of building roads, railways, and other sort of infrastructures, ignoring farming organization, as well as the farmers' expectations of land use change or sale of parcels to developers induced by development processes (Maggioli, 1991).

Moreover, rural areas are becoming more and more the places where a number of facilities, such as power plants, landfills, gasoline stations, car-wreckers, generally essential to modern society but undesirable in highly populated areas, are located.

Their impacts on the quality of rural space and on farmlands productivity usually spread much beyond the strict boundaries of the interventions and highly contrast with the new role assigned to rural areas for environmental protection and regeneration.

Lack of infrastructure for agriculture production, inadequate water and waste management, and overexploitation of natural resources, are "internal" sources of degradation of rural environment and factors which nourish the abandonment of agriculture land.

Outdoor recreation

Countryside is also under pressure due to the development of holiday houses and tourist facilities and also of outdoor recreation over recent years. These processes, which often affect fragile ecosystems, bear a rapid acceleration in the depletion of natural resources and environmental deterioration, leading to conflicts and competition in which agriculture is again the loser. Even farm holidays, which is promoted by a number of regional laws and financial support may contrast with its aim of maintaining and sustaining agriculture land when tourist activities end by prevailing over the agriculture ones, and the related interventions of refurbishing and enlarging the farm's buildings damage their productive utilisation.

The figures of non-occupied houses, within which holiday houses predominate, are impressive: 2,1 million in 1971 census, 4,4 in 1981, 5,3 in 1991, mostly concentrated in coastal areas and in inland zones where the two phenomena of holiday and abandoned houses are summed.

In the recent past illegal buildings have been gathering in the holiday houses sector, especially in Southern Italy, where a number of coastal zones are strewn with legal and spontaneous settlements, in some stretch assuming a continuous and rather compact form. This sort of settlements is particularly damaging to the environment as often their disordered form and low density are land and water consuming, their inadequate infrastructure equipment involves dispersion of waste in soil and water, and their location privileges places of priceless environmental, cultural and aesthetic value implies a social.

From urban containment to integrated planning approaches

It is well known that planning is considered an essential environmental policy tool, for its orientation to future thinking and its crucial role in anticipating environmental change (Barbanente et al., 1999), and that the increasing significance of environmental dimensions in planning is enhancing planners' interest in "forward looks" (Marshall, 1999; Khakee, 1999). But planning has been traditionally considered an effective mechanism to determine location and form of new

development and to manage the access to land resources, and this task is clearly recognized in the most important official documents on sustainable development (UN, 1992). Access to land resources is regarded as an essential component of sustainable low-impact lifestyles. On the one hand, in growing urban areas, access to land is rendered increasingly difficult by the conflicting demands of industry, housing, commerce, agriculture, land tenure structures and the need for open spaces also due to the rising costs of urban land. On the other hand, in rural areas, unsustainable practices, such as the exploitation of marginal lands and the encroachment on forests and ecologically fragile areas by commercial interests, together with the abandonment of agriculture, result in environmental degradation, as well as in diminishing returns for impoverished rural population. In this perspective, planning is urged to link its traditional domains with other fields, and to take into consideration the essential objective of promoting "sustainable agriculture" (UN, 1992) as a way not only to increase methods of agricultural production compatibles with the need of environmental protection but also to preserve rural landscapes.

Moreover, focus on the productive dimension of rural land is needed in the Italian context, due to the fact that rural landscapes are produced by particular patterns and structures of farming. And it is not possible to neglect that, also because of agriculture policy EC reforms, the system of farming which lies behind and produces these landscapes may be unsustainable in environmental, economic and technological terms, and that the planning system has inevitably to find ways to interact with that policy.

In the face of the above mentioned challenges, planning approaches for rural areas have been evolving in the last five decades. A possible division into large periods can distinguish a shift from an approach which considers the countryside as a "game preserve" for urban expansion (Campos Venuti, 1985), predominant during the 1950s and early 1960s, to approaches aiming at safeguarding the most productive agriculture soils and focused on urban containment, to the more integrated approaches emerging in the 1990s, oriented towards the conservation of rural landscape and the promotion of different forms of rural space care.

Far from being linear and evolutionary, these general trends hide very differentiated paths in the various local contexts, especially from the beginning of the 1970s, due to the transition from a centralized system of planning organized into the State and the municipal levels to a more decentralized system founded on the 21 Regions to whom the whole responsibility in the field of urban and regional planning was assigned. And it is also worth noting that there was such an operational inertia that the prevalent planning approach to urban/rural conflicts still is one which strains to use development control to preserve rural areas from urbanization, restricting the possibility of building residential units, and supplementing this measure, for the more pressed urban fringes, with some kind of "green belt approach", in the past prevalently conceived as a recreational space rather than a productive one.

In the first period, corresponding with the most intensive building development in Italy, the focus on urban expansion gave rise to devastating effects on agriculture, particularly in terms of: high waste of soil often interesting irrigated and planted lands in plain territories near the large urban areas, exit of vast areas from the agriculture market due to the expected values generated by future urban development provided by land use plans, pollution of various sources due to the location in the countryside of buildings and especially harmful industries. Planning tools for countryside in that period did not differ really from those adopted for urban areas insofar as they applied in both cases so-called "maximum land use intensity" indices, higher in urbanized and to be urbanized areas, lower in countryside, and the predominant view of rural areas is that of a uniform, unarticulated, unvarying space.

In the second period, on the contrary, the necessity to preserve soil resources was acknowledged, using to this purpose restrictions on rural land use for non agriculture settlements (for example, building prohibition or lower intensity indices), progressively supplemented by active policies encouraging rehabilitation of existing buildings for housing needs.

Moreover, the specificity of agricultural land and its productive value were recognized by a number of Regional planning laws as well as regional and municipal plans: a number of measures were introduced to meet farmer needs related to agriculture production. New approaches of analysis and planning were elaborated according to this view. One of the first experiences on this terrain, which is important not only for its objectives and outcomes but also for its methodological implications, was carried out at the middle of the 1970s by Emilia Romagna Region: it introduced an ad hoc method for planning agricultural land in which the evaluation of land uses compatibility and environmentally fragile or disaster-prone areas is founded on a classification of land suitability units built up on the basis of an overlay of systematic information on "intrinsic" altimetric, slope, geomorphologic, pedologic, hydrogeologic features. But, notwithstanding its renown, this experience did not spread throughout the country in any institutionalized form: most of Italian agencies lack of inventories of their land resources which allow to classify them according to their most appropriate uses and to identify those needing special protection measures.

In the third period, the increasing environmental sensitivity and concern has induced theoretical and operational developments in planning, and given rise to a group of national laws aiming at environmental protection and a parallel a relevant effort to renew the 1970s-early 1980s first generation of regional laws. With reference to the issue at hand, shifts in perspectives emerge rather clearly: from a farm-oriented approach to an approach – linked to the environmental sustainability concept – considering the agriculture a system and a part of rural territory, from a focus on productive efficiency to a focus on compatibility of agriculture uses in the light of positive and negative externalities they are able to produce. According to this view,

in some new Regional planning laws (above all the Tuscany experience) rural spaces are interpreted as complex, multi-functional systems, including different, specific features related to an integration of physical characters and stratification of human activities, hinged on the socio-economic structure of farms, which need differentiated forms on intervention. In the face of the ineffectiveness of traditional top-down, hierarchical approaches to planning, based on development and land use control in order to avoid waste of rural territories, different approaches have been experimenting. In general, they distinguish themselves from the traditional sectorial approach, since they are based on the interaction between actors, sectors and projects, and from the traditional development control approach, since they practice active forms of planning. Even if the notion of environmental sustainability has deeply inspired these new approaches, when put into practice they show their still inadequate conceptual and operational tools.

The Alta Murgia national park area: traditional vs. emerging planning practices in a dynamic internal area

In order to analyse the process of transformation and the changing approaches and contents of rural planning, some municipalities included in the Murge highland (the so-called Alta Murgia, 400-700 Mt. a.s.l.) in the province of Bari, Apulia, have been considered as a case of study. The area has been interested in 1998 by the institution of a National Park. The boundaries of the Park, which are still not institutionally defined, should comprehend the extra-urban territories of 13 municipalities (about 100.000 Ha over 250.000 Ha of the 13 municipalities' whole territory).[1] The Alta Murgia population, including the urban centers, is about 500.000 inhabitants, while the area of the Park is largely inhabited (Fig. 1).

The Alta Murgia appears as a wide highland, extended along the direction NW-SE, and delimited by high scarps and slopes with a limited extensions towards SW (the Bradanic valley), NW (the Ofanto river), and NE (the Adriatic sea). The continuity of the highland is interrupted by a dense network of erosive gullies (so-called "lame"), which frequently lie on tectonic shapes, and by hollows due to carsism (so-called "doline"). All the above-mentioned urban centers surround the highland.

Oak forests persist along the highest part of the highland lying on the northern boundary facing the Adriatic Sea. In the other areas the calcareous surface, characterized by a scarce presence of soil adequate for the growth of arboreous species generated a vegetation mainly consisting of grass or undershrub.

[1] Altamura (57.874 inhabitants in 1991), Andria (90.063), Bitonto (53.772), Cassano delle Murge (10.460), Corato (42.750), Gravina in Puglia (39.261), Grumo Appula (12.029), Minervino Murge (10.982), Poggiorsini (1478), Ruvo di Puglia (24.845), Santeramo (24.435), Spinazzola (7.817), Toritto (8.331).

The most of urban centers included in the "Alta Murgia" area, after a long period of decline in population and marginalization typical of internal areas, is recently experiencing deep and surprising changes: starting from the 1980s the rates of population variation are higher than in the whole Province of Bari; notwithstanding the inadequacy of rail and road infrastructures connecting the area to the coastal stream and to the largest centers of the Region, recent years have seen in part of the area the rapid growth of an outline of industrial district based on furniture factories; due to the low settlement density characterizing its heart, the area is becoming more and more attractive for leisure, and a number of farm holidays are rising also thank to the regional financial support.

Periurban settlement growth

The dimension of urban settlements of all the "Alta Murgia" centers expanded relevantly. At the same time the urban density has been reducing, from the consolidated centers towards the countryside, due to housing as well as to some specialized productive activities located in the far peripheries. These suburbanization processes cause high soil consumption in periurban areas and scattered settlements which, near the main roads, become characterised by higher densities and thicker tissues (Borri, 1996).

A communality of these processes of periurban transformation is the use of standardised typologies of buildings, which are usually multilevel and frequently imitate generalised models, both for productive and residential activities.

To give an example linked to a local context, we will analyze in detail the urban development some municipalities of the area.

Relevant processes of urbanisation for productive and residential settlements are in progress in the northern periphery of Ruvo: wide zones are destined to commercial and artisan activities and to low density residential settlements, which surround the existing city along a 2.500 meters arch (Fig. 2). The residential areas initially were sized with a higher density than now, but when the forecast about demographic trend was examined by the city Council, it resulted excessive in comparison with the real demand of housing. It is worth stressing that, in such a situation, in order to decrease the offer of housing, the urban density of future settlements was reduced, rather than reducing the extension of residential zones by keeping the previous density and rather than reducing the consumption of rural soil. This is an approach adopted by many municipalities in Apulia in similar situations, which is currently due to the need of avoiding to break the weak equilibrium which supports the approval of a master plan.

The urbanisation processes which regard the surrounding of Altamura are much more relevant and intensive. The post 1980 expansion of settlements, which is distributed on a belt of 8000 meters around the city, reaches the area of the Park in the northern

side. The municipality of Altamura strongly obstructs the institution of the Park, which is in this case considered a dangerous obstacle to further settlements expansion, and to those economic development processes incompatible with territorial rules coming from environmental concerns (Maciocco, 1995; Magnaghi, 1995; Paba, 1991). In particular, soil consuming elements are represented both by the industrial and artisan settlements and the infrastructure system, made by deviations, roundabouts and complex connections among different built areas (Fig. 3).

Moreover specialized manufacturing activities are located in the peripheries of Santeramo (Fig. 4), which is the seat of an important furniture firm which has actions on sale at the New York Burs. It is located South of Santeramo urban area, and gave rise to a tissue of productive activities which forms, with those of Altamura and Matera, an outline of industrial district.

The alteration of rural landscape features

In any case, periurban settlements contributed largely to modify the original urban/rural relationship: in particular, they modified the shape of historic centres, which are characterised by relevant architectural heritage and connective urban tissues, and which have now lost their original forms. This is a damage not only for the perceptual relationship which was common to the main medium and large-sized urban centres of "Alta Murgia", but for the organisation and the structure of rural activities, as well. The big villages had "a face looking outside and another face looking inside, in order to link and organise the connection with the surroundings" (Salvemini, 1999). There was a strong linkage among environment and buildings which was recognisable in the "heaviness of settlements": instead of wooden materials and bricks, which were typical and common elements for residential and productive rural buildings in Europe, stone as a common element of great cathedrals, rural and urban buildings was dominating in the area (Salvemini, 1999).

The utilisation of simple and economic stone materials and techniques emphasised the expressive character of constructions (Pastore, 1999). Homogeneously sized stone bricks, masonry of wide dimension and the vault made by constructive wisdom made built elements compact consistent and typologically significant. The physical representativity of manufacts (which were organised as referring point of wide parts of the countryside) was complementary to the above described constructive and functional character which have been forgotten in the intervention of refurbishment in the recent past.

Forms of reuse for rural tourism contributed frequently to the alteration of the original characters of historic settlements in rural territory: in the face of similar alterations, we are paradoxically induced to prefer the abandon, hoping that, in the meanwhile, new regulations and management agencies, more effective and environment-oriented, come into play.

New building materials are substituting stone materials; new volumes are added to the existing ones; significant parts of pre-existing architectural bodies are substituted or transformed by structures, materials and elements which are dissonant with the local tradition. Interventions of refurbishment and maintenance show generally that the building activity lost its ancient reference points and rules and that new standardised typological and technological models belonging to other contexts are used for the emerging functional needs (Fig. 5, 6, 7).

The enlargement or the adjustment for agricultural uses are producing new alterations of historical buildings by the addition of new buildings for stockage, and by the use of materials, dimensional proportions, architectural elements lacking of any linkage to the traditional typologies (Fig. 8, 9, 10).

The pressures of recreation and tourism on rural spaces

The strong pressure exerted by the widespread demand for holiday housing areas all over the agricultural territory comes not only from the urban contexts in the "Alta Murgia" area but also from the regional capital city [2]. This kind of demand is, in fact, typical both of those urban situations where very large agricultural areas surround small towns, making it seem very likely that it arises from a desire for greater privacy or from individualistic impulses to break away from the social order, and also of those contexts that trigger the wish to escape from the city, in other words from poor urban quality conditions (Secchi, 1993) and, more generally, from a poor quality of life. In any case, it is reasonable to conclude that a true "individualistic mobilization" has occurred, in which different subjects, individuals, families and enterprises have found their own specific solutions to particular needs, wishes and expectations (Secchi, 1996).

Considerable building activity is therefore ongoing at the present time, aiming to produce second homes for holiday use, which has affected large portions of the territory we are examining in this study. This has given rise to widespread residential agglomerations of extended type, again characterized by standard settlement typologies. It is as if, to echo the metaphor used by Magnaghi (1995), the explosion of new settlement models had scattered fragments everywhere, blurring to a greater or lesser extent the characteristic territorial layout.

The sites of these residential agglomerates are linked to the landscape and environmental characteristics of the area. Some municipal Councils have chosen a slight rise on the nearby hills on the north-west slope of the "Alta Murgia" as the best place for holiday homes and leisure activities, because it has particularly favourable, cooler climatic conditions during the summer, a very panoramic view and thick vegetation with many forest areas.

[2] Bari, 342.309 inhabitants in 1991.

In the territories belonging to the Councils of Grumo (Fig. 11) and Toritto there are extensive settlements that were built for tourist purposes as early as the first half of the 1970s of the last century. The built-up area in the Toritto territory has recently been reproposed in the new urban master plan, that includes further expansion to build tourist hotels, services and facilities, so that it will become an even denser residential nucleus.

The tourist-residential zone around Cassano delle Murge (Fig. 12) has an even greater impact, both as regards size and the strength of the pressure of the built-up area. Here again, as the settlement areas permitted by the old master plan approved in the early 1970s were already overflowing long ago, further expansion is planned in the new plan in the same direction, near the Mercadante forest, to build holiday houses, tourist accomodation structures, commercial and social facilities.

Smaller settlements are being planned by the Ruvo and Andria municipalities, and, more widely, around Bitonto, again in response to pressures in areas that are already affected by these holiday housing phenomena.

Instead, the municipalities facing the Bradano gorge[3], whose centres are located in the valleys below the "Alta Murgia", are not planning any building of tourist or residential settlements in the countryside.

The alteration of morphological and hydro-geological features

Serious environmental alterations, due to the so-called "rock-breaking" phenomenon, are causing profound changes in the morphological features of wide zones of the territory belonging to this park. The destruction of huge rocky masses and breaking up of smaller stones has transformed meadows and permanent fields into cultivated plots. This transformation is due to the incentives and contributions paid out by the European Union to implement policies for upholding cereal prices, which have made it an economically viable proposition to plant this produce even in areas with low agricultural productivity. The economic revenues resulting from sowing in these areas are nevertheless lower than those for the whole district. To increase productivity, lavish use of fertilizers and phytopharmaceutical drugs is made in these areas, including the area being examined in this study. The costs sustained by the farmers of the "Alta Murgia" for these chemical products are, in fact, higher than the mean costs for the region, let alone those for the province (Distaso et al., 1999).

The main consequences of these alterations affect not only the morphological features but also the soil, associated with alterations in the hydrogeological stuctures, now characterized by erosive furrows. The superficial waters run along these, while the same rainwater funnels down into a subterranean hydrographic network.

[3] Altamura, Gravina, Minervino Murge, Poggiorsini, Spinazzola.

Further environmental stresses are caused by the continuing quarrying activities which are provoking devastating effects on wide areas of this park territory. Particularly alarming is the rapidity of the enlargement of quarrying sites or the opening of new ones. Among those considered, this activity probably has the greatest impact on the territory being examined, and this factor is again not sufficiently compensated by an economic balance (Distaso et al., 1999). The demand for employment in the "Alta Murgia" territory, where most of the quarrying companies are based, is in fact very low owing to the low added value of the raw material[4]. Conversely, high added value is supplied by the activities concerned with further processing of the material, cutting, moulding and finishing the stone, which are instead mainly based in the coastal areas of the marble production pole around Trani. Dismissed quarrying activities, rather than claimed, as requested by the regional regulation, become open waste disposal sites nearly everywhere.

Wide "Alta Murgia" territories (about 14.000 Ha.) are occupied by military shooting ranges. It is worth noting that the struggle for the Park institution started, in the 1960s and 1970s, with the opposition of pacifist and environmentalist groups against the militaritarization of the area (Borri, 1999). On the other hand, it is also clear that these practices contributed in some way to preserve the landscape from other massive anthropic pressures.

Some infrastructure works, moreover, have caused important territorial transformations in another area, the hydrographic basin of Capodacqua[5], which is on the southern border of the park territory. This affects some zones - partly marginal but mainly internal – included in municipal boundaries of Gravina in Puglia, Poggiorsini and Spinazzola. These areas have a particular environmental importance owing to their morphology, consisting of the main water supply [6] fed by secondary channels, of forest and important rural settlements of great historical interest. These are located on the highlands of the hills that delimit the hydrographic basin to the east and are richly populated by fauna and many protected species.

Along the main water supply and the many secondary channels, hydraulic engineering works have been carried out, and reinforced concrete embankments built on both sides for a distance of about 55 kilometres, together with many bridges that often involved demolition of older, more modest "walled gangways" and hill lakes. The foundations were waterproofed with an asphalt mantle which was, moreover, later found to be totally useless. In these complex "land reclaiming" operations, yet another opportunity to operate in a less invasive fashion was lost, and virtually no techniques for "naturalist engineering" with a low environmental impact were employed.

[4] People working in this sector between 1951-1991 reduced themselves from 375 to 172, especially due to the introduction of technological innovarions.
[5] It crosses a territory including Gravina, Poggiorsini and Spinazzola.
[6] Capodacqua.

The dominant planning models

The planning system still in force in the area is based on the municipal institutional level and on the traditional tools of development and land use control, in the absence of regional plans in force for landscape and environment protection. The regional planning law n. 56/1980[7] introduced a few substantial innovations into the consolidated planning practice in the region: among others, with respect to the issue at hand are interesting those concerning the need to single out and regulate, within the "agricultural zones", "the soils used or to be used for specialized and/or irrigate cultivations", and to take into account the contents of the sectorial "agriculture zone programs", in the new plans consistent with the law orientation.

Moreover, the law prohibits to build in forest areas and within a stream of 200 Mt. from ravines and water bodies. But, the respect of this regulation implies the possibility for the Region to exert an effective control on land use, based on adequate aero-photogrammetric maps. In the absence of these, this part of the law remained largely ineffective.

Within the "Alta Murgia" territory, Altamura, Andria, Gravina and Ruvo di Puglia in the recent past adopted new master plans (between 1994-1998), while Bitonto and Corato which represent with the above mentioned ones the most populated municipalities, have plans which comes from the 1980s, although they are not upgraded in the light the regional law of 1980. All the other municipalities have still plans of the 1970s.

The use of rural territory suffers generally of this different plans age. Moreover, the common demographic overestimation of the oldest plans represents a stop to the process of plans upgrading.

In the 1970's plans, in particular, countryside is considered a residual space, available for future urban uses. The representation of rural areas is often missing in the oldest plans and, when available, is constituted of cadastral maps, which – as it is well known – lack of information of the morphology of places.

The regulation is based on volumetric parameters without any special indication or limitation about residential or productive uses of buildings and with the possibility to build also in small-sized farmland plots. The urban plans, following the national law of 1977, made ineffective the objective of the previous legislation to privilege agriculture activity. The previous norms, in fact, provided the possibility of building in the countryside only to farmers for uses (both residential and productive) connected to agriculture. Only the most recent plans, therefore, propose some significant innovations about the above-mentioned aspects. Innovation regards, in general, the tendency of norms to assume qualitative parameters which acknowledge the greater complexity of open spaces, to which a role of economic-productive

[7] A comprehensive regional code in the field of urban and regional planning.

resource is recognized. In fact, the plans include references to farms and "agriculture zone programs", in order to allow higher " land use intensity" indices, as well as the acknowledgement to agriculture of a role of essential landscape-environmental resource, especially as far as historical buildings are concerned, which are thus recognized as important elements of rural space (Pace, Selicato, Torre, 1999).

Anyway, they still neglect to a large extent the ecological function of rural spaces and the multifaceted forms of "care" which are necessary to assure systemic environmental preservation and/or regeneration.

Some perspectives for a model of sustainable rural development

A view of sustainability having strong roots in the eco-development tradition (Sachs, 1980), based on the assumption that only a new relationship of co-evolution between local population and the territory is capable, through "caring", of determining suitable balances between human settlement and the environment, contributed to animate a process of decentralisation and subversion of the traditional top-down model of planning to approaches based on local self-government. It is well known that environmental improvement requires active support of people: without a wide consensus policies for sustainable development would not be pursued nor would they be successful. A number of international programs aiming at promoting sustainable development consider capacity building as crucial (Undp, 1996).

According to these views, interest has increased in what is called local knowledge, and participatory approaches in planning are spreading rapidly, revealing values and priorities which cannot be ignored when assuming decisions affecting people's lives, but also showing values conflict with economic goals set internally and externally. These criteria are now being implemented also in Italy in the new regional laws and the elaboration of new plans.

On the institutional level, the process of decentralization is not free from contradictions, since the municipal level of land use planning, which has a strong traditional role in the Italian planning system and is still the only one in force in the «Alta Murgia» area, is mostly inappropriate for confronting environmental issues and it is anything but easy to build cooperative relationships and coordination networks between local municipalities and with superior levels of government (Regions, Provinces) and other public authorities competent to make regional plans as well as plans for specific sectors concerned with environmental protection having noticeable effects on planning and management of rural spaces (eg. plans for landscape, park, waste disposal, energy, river basin).

The above sketched innovations in planning can virtuously interact with a number of new EU policies trying to reconcile the economic functions of rural spaces with environmental protection. Some relevant example of these policies are: the Reg. EU

n. 2078/1992, "Methods of agricultural production compatibles with the necessity of environmental protection and the care of the rural space", which uses the incentives approach to induce farmers to reduce agriculture pollutant effect, to "exstensivate" vegetal productions and cattle and sheep breed, reconvert sowable land in extensive pastures, manage arable land in consistency with the environment, take care of abandoned arable and forest lands, practice environmental set-aside, and the training approach spread eco-compatible production methods; the Reg. EU n. 2080/1992, "Financial support for forestal measures in agriculture", which uses both incentives and direct financial support to farmers to promote afforestation, improve forestal areas and forestal surface management, as well as to compensate income loss because of afforestation of arable land.

Apart the specific contents of these measures and their largely unknown practical impacts on agriculture system, it is worth stressing that their effectiveness largely depends upon the ability to use them in integration with regional and urban planning: in this way it should be possible, in the implementation phase which is managed by the Regions, to direct the interventions towards the more problematic areas, where conflicts between agriculture and urban land uses, agriculture and environment are more acute or, vice versa, where agriculture presents high potentials for being a positive factor for landscape and environment preservation. In the absence of this strategic use by Apulia Region, the application of these measures in the "Alta Murgia" area certainly produced limited outcomes.

Based on a very different approach, "Leader Program" (Liasons Entre Actions de Developpment de l'Economie Rurale) is an European funded community initiative which aiming at helping develop the local economy of rural areas. It is addressed to a number of different situations: from the underdeveloped regions and fragile rural areas to the very low population density territories of the Nordic countries. Designed in the early 1990s, this experience has been imposing itself since the 217 areas involved in Leader I moved up to about 1000 in Leader II (185 in Italy). Three "Local Action Groups" were activated in the “Alta Murgia” area, involving six municipalities together with other public and private partners from different socio-economic sectors.

Its principal objective is to create sustainable economic improvements in rural areas through the promotion of partnerships and community initiatives. "Leader Program" distinguishes itself from the traditional sectorial approach since it is based on an integrated approach, which consists of promoting co-operation between sectors and the development of a territory by co-ordinating different interventions as well as co-operation between territories and networking of local actors. The program places confidence on the creativity and resources of local actors, according to the so-called "local territorial approach" (ECS, 1999) in order to restore vitality to the rural territories, to stimulate the creation and maintenance of activities and hence to increase

their attractiveness: the related projects are conceived and carried out by partnerships on local scale, consequently they are mostly small-size while the absence of standardisation in the approach differentiates them from the traditional interventions.

The most important outcomes of this sort of pilot program have probably to be singled out in the learning processes which it activated, inducing people and organizations to work together, interacting, dialoguing, and actively participating, i.e. doing things that are considered essential parts of the development of sound environmental policies (Daniels and Gregg, 1997). In fact, it is now well known that conflicts arising in environmental management because of the plural values, multiple parties, and limits to the natural world require finding different cognitive frames from which to operate: they should promote interaction among people with different worldviews, articulate values persuasively rather than defensively, generate alternatives and conclusions through a transactive process, and favor processes of mutual learning and reframing (Forester, 1992; Schön and Rein, 1993; a wider discussion on these issues is in Barbanente, Borri, Concilio, 1999).

The possible outcomes of such an approach, anyway, is not exempt from uncertainty in the context at hand: this new integrated approach, which seem to be adequate to introduce innovation in the development practices of fragile rural areas, is probably hardly able to face conflicts and pressures affecting more dynamic contexts like that of «Alta Murgia» discussed above. Moreover, the emphasis put on development, within the couple "sustainable development", risks to put environmental objectives in the shade, in particular in contexts characterized by changing life-styles and cultural models which engrave on uses and transformations of rural spaces (think to space demand induced by industry, but also by tourism and leisure in «Alta Murgia»). And it is not possible to neglect that there is also the other side of the EU agriculture policy, which still promotes agricultural practices producing negative impacts on rural ecosystems. A balance on the relative weights of the two sides is far from being available and, in general, the new environment-oriented policies are still weakly interrelated with regional and local planning. Again, the «Alta Murgia» case is an illuminating example on this subject.

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Tab. 1. Main land-use conflicts in the National Park of Alta Murgia

A. Spresd of periurban settlements	B. Spead of extraurban settlements	C. Degradation of rural buildings of historic interest	D. Degradation of open spaces	E. Alteration of morphological and hydro-geological structur	F. Infrastructures
A1. Residental activities	B1. Seasional residental use in scattered houses or compact nucleus	C1. Degradation due to abandon	D1. Pratices of militarisation of related to the use of open spaces for military shooting	E1 Transformation of mesdows and permanent fields into cultivated plots by “rock_breaking	F1. Invasive hydraulic engineering works using concrete massively
A2. Productive and commercial activities		C2. Dedradation due to reuse (for residential, productive, tourist scope) contrasting the original typological and constructive	Use of dismissed quarriers for waste disposal	E2 Creation of artificials basins (“hill-lakes”) connected to complex hydraulic engineering works	F2. Road construction or enlargement
		C3. Demolition and/or reconstruction		E3. Quarrying activities	F3. Hig voltage electric distribution network faciliticies

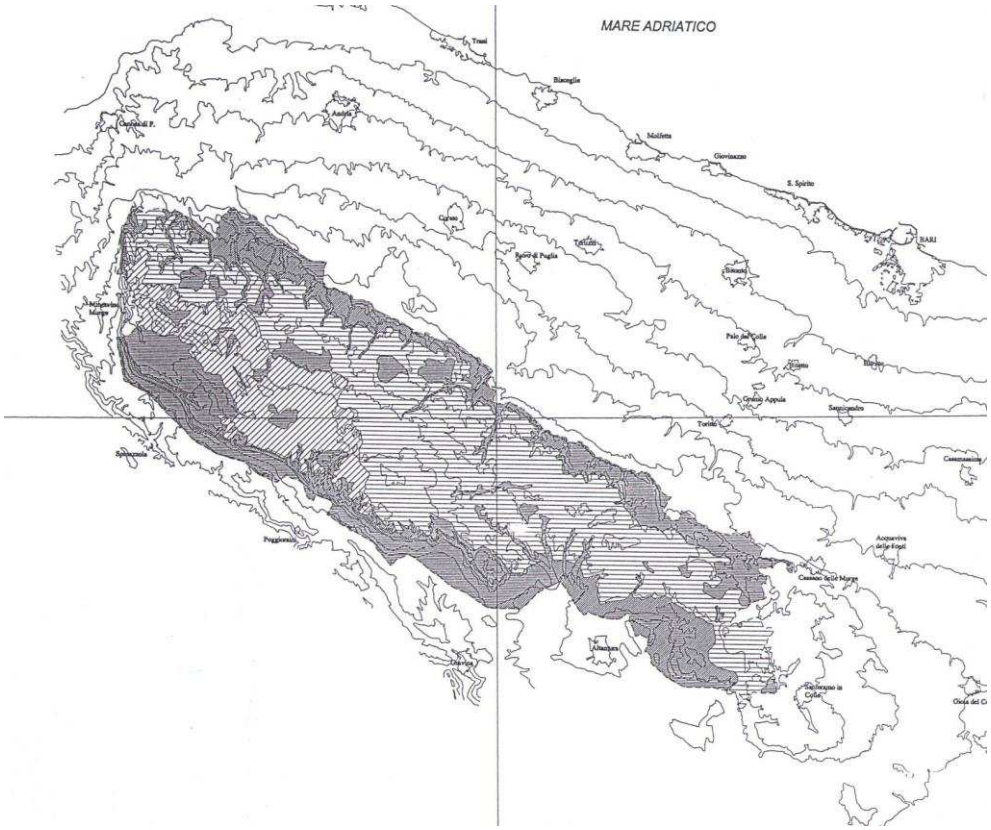

Fig. 1. The Alta Murgia Highland

Fig. 2. Periurban settlements in Ruvo

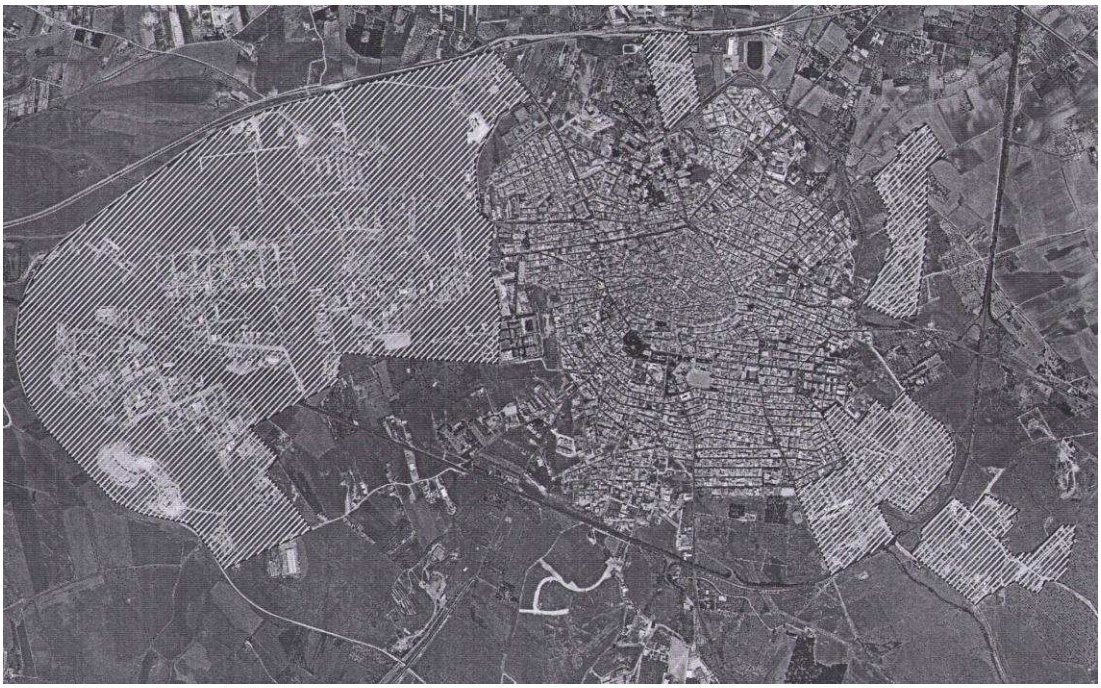

Fig. 3. Periurban settlements in Altamura

Fig. 4. Industrial periurban settlements in Santeramo in Colle

Fig. 5. Tenuta Cocevola in Andria

Fig. 6. Masseria Lo Cuoccio in Gravina in Puglia

Fig. 7. Casa Colacicco in Santeramo in Colle

Fig. 8. Masseria Balestra near county road Cassano-Santeramo

Fig. 9. Casa Primocielo in Cassano

Fig. 10. Masseria Lagrotta near county road Corato-S. Magno

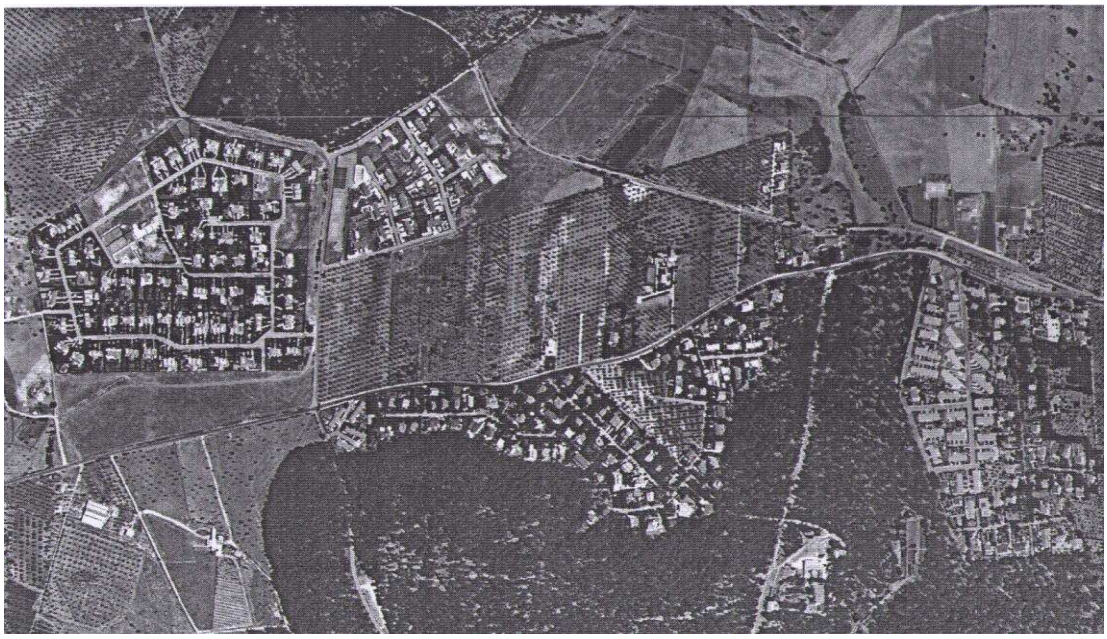

Fig. 11. Holiday housing areas in the agricultural territory of Grumo Appula, near the boundary of the forest

Fig. 12. Holiday housing areas in the agricultural territory of Cassano Murge, near the boundary of the forest