PROBLEMS AND CRITERIA FOR RECUPERATING PERIPHERAL URBAN AREAS: THE CASE OF THE APPIA-PIGNATELLI AREA

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ABSTRACT In the last decade a growing number of areas have formed on the outskirts of cities where farms, residential estates and industrial areas are combined and are often the source of environmental degradation and unauthorized house building. This research focuses on the problems and the difficulties farms face in carrying out their daily tasks concerning both production and how to safeguard the surrounding landscape and environment. These areas can only be salvaged socially and environmentally by using farming to advantage but farming activity will have to be restructured in order to make good use of the opportunities that the proximity with the urban areas offers. For this reason some guidelines were determined to aid the relaunching and utilization of farming in these areas aimed at the recovery of the landscape and environment. A suburban district of the city of Rome including the archaeological park of the ancient Appia Roman road was analyzed for this study and these guidelines were used for elaborating a retraining project based on the relaunching of agriculture. An economic analysis showed that there were good prospects for economic gain in outlining a policy for the safeguard and utilization of this territory based on these principles.

Keywords: Suburban districts, agriculture, environment.

INTRODUCTION An urban phenomenon which has come about over the last decennia is the overflowing of cities into the surrounding suburban areas which has been favoured by the lack of valid projects for territorial planning, by widespread private motorization and the pressing demand for areas to be used for other activities.

In Italy the division of municipal territory into homogeneous areas has not always been adequate for meeting the social and demographic requirements of the population and for the evolution of production and infrastructures. Very often the actions of private citizens have prevailed; private citizens who try to satisfy their own needs by unloading a series of their problems onto the whole community which have complicated the management and the control of the territory.

There has been a true attack on agricultural land with a “hidden lotting of the territory”
lacking in any sort of logic except that of speculation. The areas mostly affected by this phenomenon are obviously those situated near roads and other transportation infrastructures which provide the necessary connections to the various areas of the town. By observing this territory from above one cannot help noticing a nebulisation of the city which becomes more and more frayed and untidy as one proceeds from the suburb towards the countryside. The farming activities are pushed further and further out due to lack of open spaces and to the inevitable clash between farming requirements and the other activities and enterprises which develop nearby.

In this context two kinds of landscape can be found or better two kinds of no landscape – urban and agricultural landscape, both of which have lost their initial features without acquiring new ones. A farsighted planning policy should have planned an adequate increase in the perimeter of the city in order to be able to meet the society’s requirements as time went on while preserving the farming areas outside the urban perimeter at the same time. It would have been better if these planning policies had foreseen “filtering zones” between the urban and agricultural areas in the manner of a green belt in order to attenuate the risks of violating limits and to create green lungs. Therefore in place of the agricultural landscape there would be a new type of landscape whose aspect would depend exclusively on the ability of the town planners.

Instead, the situation today sees an agricultural territory which is imprisoned in a semi-urbanized context and is therefore suffocated. It also takes away the traditional physical and social environment to which it was accustomed and the disappearance of farming can lead to the neglect lands where it is easy the degradation of the territory.

These are the so-called “periferal urban” belts or areas meaning areas where urban building development is chaotically mixed with the residual farming activity.

Can’t anything be done to try to control this continual uncontrolled erosion of agricultural land which causes the loss of unity and identity of the landscape? How can we find a remedy for these territorial situations?

1. THE PROBLEMS The suburban areas are under a lot of pressure such that can be summarized as:
   - economic pressure (high price of building land, etc.);
   - social pressure (demand for residential, public buildings, etc.);
   - infrastructure pressure (demand for space required for new infrastructures; etc.);
   - In our opinion, these pressures are more than enough to give the upper hand of the residual resistances of the agricultural world affected by the proverbial problems such as:
     - economic problems (lack of financial resources, low value of PLV, high cost of means of production, etc.),
     - social problems (ageing of agricultural population, low level of agricultural wages, scarce interest for agricultural jobs, etc.);
     - structural problems (lack of suitable supporting agricultural structures, etc.).

For these reasons traditional agriculture will hardly be able to survive long in these areas without restructuring itself in different ways, taking advantage of the opportunities that this new environment offers and pressing for effective public instruments both on a
2. THE OPPORTUNITIES OFFERED TO AGRICULTURE IN THESE AREAS

What opportunities can these areas offer to agriculture?

The first opportunity is to shorten the commercial chain. In fact, one of the problems is the distance between the place of production and the markets and not even modern logistics have been able to solve the problem and whenever it was possible, the costs were very high. The distance of the place of production from the markets causes:

- loss of freshness of the farm produces;
- loss of identity of farm produce;
- competition of produce coming from other areas even when distant favoured by the globalization of markets;
- the increase in consumer prices due to multiple commercial movements;
- the decrease in the contractual ability of the farmers in the grip of the commercial intermediary structures.

Neighbouring or “suburban” agriculture can play a role in overcoming these problems because it drastically shortens the commercial and distribution chain. Real “city-farms” could be created where the consumer could buy very fresh produce directly from the farmer guaranteeing originality and integrity.

Another reason for abandoning of agricultural activity is the physical isolation of the rural population who are often confined to areas without facilities and services or modern and efficient infrastructures. The phenomenon of displacement from the countryside to the cities of the agricultural class has been the answer to these shortages but the consequence was the denaturalization of the population and the refusal to work in the fields above all by young people (non-renewal of generations). In the actual suburban areas and those at risk of becoming so, farmers and their families are less isolated and are therefore able to make use of all the essential social services (schools, health service, etc.), the economic and recreational services as well as the infrastructural networks which are seldom available in the open countryside.

Another opportunity open to the farmer is the possibility of farm holidays in much more favourable conditions. In fact one of the worst inconveniences of farm holidays is to be far away from the tourist facilities of the cities and from tourist attractions. The farm holidays available in the suburban areas could benefit from the tourist attractions in the city offering the tourist a farming experience very close to the city.

3 THE NEED FOR EXPLOITING THE AGRICULTURAL PERIPHERAL URBAN AREAS

Apart from these opportunities which farmers should take advantage of, farming has other valid reasons for continuing to exist in these areas in better conditions. If these remaining agricultural areas are well-kept, they can be considered natural green belts between the various areas of the territory and they help to break the monotony of the urban network with green spaces with the advantage of a cost of maintenance at the expense of the farmer rather than the community. The quality of the air around these areas in would certainly benefit: just think how much CO₂ is absorbed by plants.

A modern territorial planning should now allow for protected farming areas on the outskirts of cities which would act as green belts for safeguarding the cities from the...
intrusion of other incompatible activities and, above all, from uncivilized construction in the territory and force us to recovery degraded urban areas that are being abandoned. Just think about the degradation of some old city centres that have been abandoned by the population which prefers to reside in new and more comfortable areas but not always on a human.

What can we ask the farmers in these areas to do?

Firstly, we ask them to use farming methods which have no or a low impact on the environment in order to avoid conflict with the needs of the residents because even if they enjoy the aesthetical aspects of the countryside, they find it hard to bear the disadvantages of various nature that farming can create (dust, noise, nasty smells, etc.). It is certainly not difficult to achieve this aim with the new sustainable farming techniques or even through true “organic farming” whose produce have an interesting market.

Secondly we can ask farmers to manage the fields with care in order to guarantee an accurate cleaning of ditches and slopes, of boundaries, etc. and above all the elimination of deposits, even temporary, of farming material which would give a neglected appearance to the area and therefore be a cause of rejection by the inhabitants of the neighbourhood.

4 PERIPHERAL URBAN AREAS INTO PARKS AND PROTECTED AREAS The problems concerning suburban areas become even more complicated whenever these areas are part of territories with particular planning restrictions (archaeological parks, etc.). Unfortunately the regulations in force find it hard to avoid the invasion of building and other activities on the farm land situated inside the protected areas and they cannot guarantee that the farm land will be put to good and economical agricultural use.

These agricultural areas are nearly always considered by town planners to be “naturalistic gardens” or “green oasis” by town planners whose purpose is to safeguard a landscape which actually has nothing naturalistic about it in a large number of cases having been formed by mankind over the centuries through a masterly economic exploitation of its natural sources. Expecting to be able to transform these agricultural areas into naturalistic areas at all costs without any economic profit is wishful thinking or at least a false historical. Much of what exists has been brought by mankind from far-off environments.

If private citizens have no more economic interest in managing these lands, public institutions must assume the management, but the public management of these green suburban areas is difficult and full of risks such as environmental degradation and social due to lack of maintenance and surveillance.

On the other hand entrusting the management of these areas to private citizens for carrying out compatible and economically convenient activities could be a good solution for the safeguard and revaluation of these areas.

5 THE APPIA PIGNATELLI AREA OF ROME On the outskirts of Rome there is a periferal urban area inside the Appia Antica Regional Park very close to the city (11 km from Piazza del Popolo and 6 Km from Piazza San Giovanni in Laterano) which is
surrounded by residential settlements which house about 150,000 inhabitants. Close by there are historical and architectural places of great value dating back to more than 2000 years ago first among which the initial stretch of the Via Appia Antica called the “regina viarum”.

This area, named Appia Pignatelli, which has a total surface of around 450 ha, is circumscribed by the Via Appia Antica, Via Latina and Via Appia Nuova and can be divided into three homogenous zones (Fig. 1), which are:

- Valle della Caffarella
- Acqua Santa
- Olivetaccio

5.1. PRESENT CONDITION OF:

5.1.1. THE CAFFARELLA VALLEY At present it is the only area used principally by the public with a network of well-developed paths which joins the main places of historical, archaeological and naturalistic interest of this valley.

The Almone river, which divides the valley in two, is an element of serious environmental degradation due to its high degree of pollution which is not caused by farming. The only farming activity which has survived is a dairy sheep farm whose grazing keeps the grassy surface well-clipped. The sheep farm is situated in an old crumbling farmhouse where there is a cheese factory which sells cheese directly

The existing farm buildings are in an advanced state of deterioration and are occupied by unauthorized residents who have completed the structural and environmental degradation of the surrounding area as well. The land no longer used for farming is now occupied by unauthorized sports centers and vegetable gardens.

5.1.2. ACQUA SANTA This area is used for two purposes, a sports centre in the north (Acqua Santa Golf Club) and farming in the south.

The farming area (57 ha) is cultivated with sowables and forage.

On the abandoned land along the boundaries of the Via Appia Nuova road there are some settlements of great visual impact which are not always compatible with the Park such as: unauthorized urban vegetable gardens, demolition-shop and football grounds which only goes to show how these suburban areas can attract all types of degrading activities.

5.1.3. THE OLIVETACCIO AREA This is the most panoramic part of the territory
today, is characterized by:

- Pasture for about 150 sheep kept in a semi-wild state in an adjacent areas to Via Appia Pignatelli;
- Sowable land in the areas next to the Via Appia Antica and the district of Quarto Miglio;
- Abandoned and deteriorated olive groves in the central area;
- also natural vegetation covering the area below the olive groves.

The state of all these areas clearly indicates what happens when agriculture disappears. The areas are no longer controlled by farmers and social and environmental degradation easily comes about especially around the big cities.

6 THE PLANNING REGULATIONS Today the area of the “Regional Park of Appia Antica” is governed by three town-planning schemes: the P.R.G. of the city of Roma, the Landscape Territorial Planning and the Park Planning Scheme.

The urban general plan of the city of Rome does not foresee any particular regulations for the park area and, particularly, for this area subject of study even if it acknowledges the importance inside an ecological corridor and classifies the Roman plain as homogeneous area E (agricultural area) without referring explicitly to this park.

On the other hand the P.T.P (landscape territorial plan) imposes a series of obligations as: integral protection, landscape protection and protection orientated over various small parts of the study area with different provisions among them. These areas even when they have a surface area less than 0.5 ha create a muddled mosaic which is difficult to carry out and control. (Fig. 2).

One gets the sensation of being in the presence of an immense “garden” where the chromatic association – the aesthetics of the shrubby or arboreal species - seems to be more important than the botanical or agro-forestry characteristics. An example of this aspect which happens frequently in the PTP is when rows of arboreal species are placed as protection of the plateaus but the most commonly recommended species are not always suitable for the pedo-climatic conditions of the territory.

![Fig. 2 Landscape Territorial Plan](image)
The plan for the utilization of the park, most valid, (Fig 3) determines four types of areas to be used in different ways in accordance with the existing regulations, the instructions for use and the type of operations:

- **Areas equipped archaeological for fruition (coloured green)** with: reception areas, areas for information or guided tours for visitors, control and facility areas;
- **Rest and recreation areas, (coloured dark green)** where works are foreseen for eliminating the degrading factors and visual disturbance, no vegetable gardens are permitted also if it is temporary only supervised sheep grazing is allowed;
- **Areas for agricultural-historical fruition, (coloured yellow)** to be used for preserving and increasing the value of agricultural-historical landscape where access to the public is only allowed in periods when people’s presence does not hinder the farming operations underway in the valley. In this area the use of the farm-houses is allowed for agricultural use, retail outlets for farm produces and cafeterias and refreshment facilities;
- **Recreation and sports areas (coloured sky-blue)** where there are not elements of historical or landscape value, they are situated near the main road networks with limited surface areas and situated so that they do not interfere with the real values of the Park. Only the already existing buildings can be used for inside facilities which have been restored for this purpose.

Despite these many regulations one must acknowledge that the only areas that appear to be in good condition are those used for sheep rearing and the Park areas with paths. The rest of the park as already mentioned is used for unauthorized and degrading activities.

7. REDEVELOPMENT OF THE TERRITORY AND SUSTAINABLE FARMING

In our opinion, in order to save and give value to this important periferal urban areas, it is necessary to intervene with sustainable working programs where farming and other uses of the territory must “co-habit” and create the necessary conditions for the safeguard of the environment and the historical and architectural monuments. Therefore we believe that it is a priority to redevelop and give value to the farming activities whose main aims must be to:

- To integrate stock farming with crops;
- To arrange the land with the least possible work;
• To use crop rotation methods and the consociation of crops;
• To use resistant farming genotypes;
• To use organic farming methods or at least sustainable farming methods;
• To protect the landscape, the flora and fauna;
• To create areas and structures for public use;
• To create tourist facilities in order to integrate the farming profits.

In the respect of the pre-existing previsions and the regulations of the planning schemes in force, the re-structuring of farming, environmental and naturalistic practices is proposed for the following area.

7.1 Valle della Caffarella (Valley of the Caffarella) This is the most complex area from a regulation point of view due to the presence of several archaeological remains. The only solution, which would guarantee the maintenance of the buffer strips of landscape and archaeological remains, a low impact on the territory and free usage of the area without requiring fencing for protecting the crops, would be to maintain and improve the existing pastures over a surface area of 110 ha.

In the areas on which the landscape planning scheme foresees an arboreal coverage of the soil either by preserving of the natural phytocenoses present or by planting ligneous fruit plants, we suggest planting olive trees with annual self-seeding legumes in the subsoil.

7.2 Olivetaccio According to the regulations established by the P.T.P, farming can be carried out in this area on a surface of about 24 ha, divided in the following way:
• Grassland : 13 ha (indicated in green in figure 2);
• Olive groves: 11,7 ha (indicated in yellow in figure 2) with grass planted in the subsoil.

7.3 Acqua Santa The planning of the Park classifies this area as farm land and this area has the least number of regulations of the Landscape Territorial Planning. Considering the soil and climatic conditions and the possibility of cultivating well-irrigated crops, the type of crop could be chosen among the species suitable for integrating the alimentation of the sheep reared. On the surface area set apart for soling (38,6 ha) there could be a biennial rotation of the following crops:
• Barley (Hordeum vulgare)
• Ryegrass pasture (Lolium multiflorum) and clover (Trifolium sp.)

The area devoted to tree crops can be revitalized by planting Kiwi. By analyzing the situation exclusively from an aesthetical point of view (like the PTP) for a minor visual impact it is necessary to guarantee the grassing of the land, the supporting posts of the plants must be made of wood and the culture system must be of the pergola type.

8 FARM HOLIDAYS AND TOURISM In the area of study there are numerous farmhouses which have either been abandoned or occupied illegally and are therefore in the phase of further deterioration. By restoring these structures it would be possible to put up n° 44 guests and provide from 40 to 80 meals per day for a total of 270 days per year of hotelier farming activity. In these farmhouse hotels recreation, cultural and teaching activities can be organized as well as excursions and horse-riding even outside the property aimed at getting acquainted with the territory and making better use of it. The maximum hour/year requirements needed for carrying out the farming activities inside the farmhouse of Bagni in the district of Acqua Santa appears to be slightly over 2,000
d/year while for farming the requirements are equal to 5.910 d/year and therefore the farming activity is amply in accordance with the regional regulations.

The agricultural tourism carried out in such a prestigious park, connected to the city of Rome by numerous means of public transport can only be a success commercially speaking and will be an incentive for all farming activity and an important source of income.

9 THE USABILITY OF THE AREA Concerning the activities which characterize the management of a protected area, apart from the fundamental aspect of protecting the environment in a strongly anthropised territory, the interaction with the population of the territory is also very important (control of the territory, environmental education, sustainable development of the territory etc). In the management and the planning of the services and facilities of a protected area it is necessary to define the users and their needs so that the largest number of people can carry out the same activities and have the same experience in safety.

The valley of the Caffarella is the most subject to a great influx of people because it is considered to be a public park rather than a real protected area. Moreover it can easily be accessed due to its vicinity to the city and the availability of public transport. It is necessary to foresee equipped areas for the use of the park and suitable paths which wind through the different areas thus connecting the historical and archaeological ruins, the restored historical farmhouses, the farmhouse hotels and the most important landscapes (Fig. 4).

CONCLUSION The recovery and exploitation of the areas of the city wedged between the farm land and where social and environmental degradation can easily happen, can only be carried out by strengthening and restructuring farming the activities.

Agriculture in these areas must not disappear but it must find incentives for its relaunching by taking advantage of all the opportunities that the adjacent urban world can offer from the immediate marketing of the produce to the farmhouse hotels.

With the revaluation of farming it is possible to reconstruct a landscape which is no longer anonymous provided that one is not tempted to transform the farm land into naturalistic areas of no historical or environmental interest and which are costly and difficult to keep up. Let us leave sustainable farming to do the job of creating the
landscape as it always has done in the past.

The valley of the Caffarella, Acqua Santa, and Olivetaccio in the heart of the Appia Antica Park represent an unusual form of agricultural landscape immersed in frenetic urban life. Here farming and history form an indissoluble marriage where one is linked to the other.

The degradation of this area which is full of historical and artistic value has been caused by the abandonment of farming for lack of valid initiatives.

The Plan for Re-qualification of this territory which reconciles the provisions of the Landscape Territorial Plan, the Planning regulations of the Park, the management requirements and the territorial reality has complex because very often these requirements do not come to an agreement.

The PTP binds the territory and planning focuses on the aesthetical aspect and without accounting for what the territory really is: farm land. Plan of the Park, instead, considers all aspects of the area, trying to bring together the historical necessities with agriculture.

The problem begins with the application of the Cultural Assets and Landscape Code which obliges the managing bodies of the natural protected areas to comply to the previsions of the PTP; the territory of the valley of the Caffarella, Acqua Santa and Olivetaccio would therefore become a large “protected garden”.

The keystone, on which the whole planning and sustainability hypothesis is placed, is the Sustainability which has allowed the integration between the preservation of nature and other activities in the territory. Agriculture and biological stock farming can guarantee the maintenance and increase in biodiversities of the protected area and therefore give quality to the Park. In fact today the purpose of a protected area concerns the whole system which is different from the past when only few aspects were taken into consideration.

Therefore it is necessary to set up a strategy to get the consent of the habitual users and residents of the neighbouring areas, which will be crucial for carrying out an effective action preservation and development of the territory.

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