

EVALUATION OF URBAN-RURAL AREAS

GIOVANNA DE FANO - GIOVANNI GRITTANI (*)

1. Introduction

There is general consensus in both the scientific community and the collectivity in general that the rural areas of the urban fringe play a strategic role in regional planning.

Terms like *sustainable development*, *better quality of life*, *exc.*, which have become widely used, show a growing concern for the preservation of environmental resources and for the pressing decisions about regional planning and management.

Everybody is aware of the negative impacts that the consumption and conflictual uses of land have caused on peri-urban areas where the economic and social structure has been jeopardized and the other environmental functions lost.

Thinking of a well-known rural landscape, it is easy to focus on why it should be preserved. First of all it actually represents the land where agricultural activities are carried out. Obviously such activities are usually connected with some specific social, historical and cultural elements, tangible evidences of models of life and, therefore, significant symbols for the historical heritage of future generations. If such a context is located in an area which is easily accessible to citizens, as is the case for urban-rural areas, its value is even greater.

Consequently, it is important with regard to farmland and, in particular to urban-rural areas, to adopt a kind of planning strategy geared towards the preservation of the rural and environmental features of the land.

The continuous and chaotic spread of urban centres has largely affected farmland which has suffered from an indiscriminate subtraction of areas. In Italy, planners have not taken account of the productive and environmental features of periurban agricultural areas ⁽¹⁾ in their actions.

(*) Istituto di Estimo e pianificazione rurale, Università di Bari.

(1) Cf. Brugnoli A. (1990), «Valutazione dell'impatto urbano sulla struttura produttiva agricola», in *Genio Rurale* n.4, pp. 52-64; Toccolini A. (1990) «Agricoltura periurbana e governo del territorio nel sistema metropolitano milanese», in *Genio Rurale* n. 12, pp. 35-47; Zappavigna P., Tagliavini I. (1990) «Politiche di piano e trasformazioni territoriali nella fascia periurbana parmense», in *Genio Rurale* n. 4, pp. 65-73.

(2) Lockeretz W. (1989), «Secondary effects on Midwestern agriculture of metropolitan development and decreases in farmland», in *Land Economics*, vol. 65 n. 3, pp. 205-216.

Abstract

The continuous and chaotic spread of urban centres has largely affected farmland which has suffered from an indiscriminate losses of areas. In Italy, planners have not taken account of the productive and environmental features of periurban agricultural areas in their actions.

A priority point in planning is to value a rural periurban area as a common good.

The professional operators continue evaluating rural peri-urban areas in private terms, assessing a higher value to favourable locations, in the case of farmland, or a lower value in the case of an area to be built, based on its peripheral location.

By contrast, in the broader planning framework, considering that the plan typically has a public connotation, evaluation should take account of public aspects.

Planners and evaluators should not only consider the needs of some social groups, but of the whole collectivity.

Résumé

La diffusion continue et chaotique des centres urbains a grandement affecté les régions rurales qui ont assisté à une perte continue de leurs superficies. En Italie, les planificateurs n'ont pas tenu compte dans leurs actions des aspects productifs et environnementaux des aires agricoles péri-urbaines.

Un point prioritaire de la planification est l'évaluation d'une aire péri-urbaine en tant que bien public.

Les opérateurs professionnels continuent à évaluer les aires péri-urbaines en termes privés, en assignant une valeur supérieure aux localités plus favorisées, dans le cas des régions rurales, ou une valeur inférieure dans le cas d'une aire à bâtir, sur la base de sa position périphérique.

Par contre, dans le contexte plus vaste de la planification, compte tenu que le plan a en principe une connotation publique, l'évaluation devrait tenir compte des aspects publics.

Les planificateurs et les économistes devraient tenir compte non seulement des besoins de quelques groupes sociaux, mais de la collectivité dans son ensemble.

2. The functions of peri-urban farming

In most cases the production structure of farming in the fringe urban areas is very weak. While in the areas far from the city, productivity is the main reason for continuing agricultural activity, in areas near the city the farmers' attitude is usually to wait for building plans to upgrade their lands: this is called the «impermanence syndrome» ⁽²⁾. A symptom is that farmers tend to reduce their investments in farming, which concurs to make the future of agriculture uncertain in these areas. This situation is the last step before idling of land.

The future of agriculture seems even more uncertain when one considers the impact of generation changes which quicken the idling phenomenon.

Given the weakness of agrarian production processes, regional and sectorial planning should focus on actions which limit and compensate for the causes of impermanence in agriculture, in order not to break the connections between the city and the countryside and to maintain an acceptable quality of life in cities and in urban-rural areas.

Generally, near the city the farmer is considered only a producer of foodstuffs, and only rarely is he thought to have the indirect function of stemming environmental degradation.

There are various levels of analysis of urban-rural land. The point of view of those who are not directly involved in farming should be considered, as well. Some groups of the collectivity are concerned either with the preservation of rural spaces or with the conversion of farmland to non-agricultural uses.

Citizens tend to consider peri-urban agriculture as an activity generating mainly recreational and aesthetic externalities. In their imagination the countryside offers what the city does not: clean air, beautiful landscape, a quiet life, genuine products. They tend to emphasize the positive aspects of the countryside, as opposed to the negative aspects of the city. In general they tend to support the preservation of peri-urban farming.

There is a part of the collectivity, consisting of real estate agents, building contractors and landowners themselves, who considers these lands as the basis for urban development.

These groups are strongly interested in a rapid spread of the urban area and obviously in the lucrose rentals which could be obtained through urban development of the land.

In this conflict decision makers should play the role of arbitrator, of Judge of Peace, helped by the planner's technical support. Obviously their role should be neutral because of the different interests involved. However, observing what has happened in

our country, it should be noted that decision makers have not played a neutral role in planning choices at all. Their behaviour has been favoured by the lack of autonomy of urban planners and by an urban-focused view of city development. The reasons of this way of acting are still unclear: it may be attributed to a lack of technical and cultural experience or to money-making tactics.

In urban plans there has been a waste of rural areas because of an overestimation of spatial needs. Overdimensioning plans means to create «empty» spaces: they are not likely to become part of the «city», rather they end up fostering the «impermanence syndrome».

Decision makers have not actually been able to grasp the productive and environmental value of rural areas near the city.

Agricultural activities practised in the urban fringe are a sort of «connective tissue» joining the city with the countryside. In this particular spatial context, a definite and net demarcation between urban and rural areas cannot be traced.

Hence, when planners and decision makers readily assert that they are able to clearly separate the «city» from the «countryside», their position may be defined as overtly ambitious.

3. The evaluation approach

Revision of planning approach is as definitely the most important issue among those concerning the development and proper use of urban-rural areas. A more coherent understanding of peri-urban agriculture represents the first essential step in this direction.

New town-planning «rules» should be sought which consider that, in those areas, agriculture means production, landscape, and recreation. As long as agricultural space is considered a residual area, a very poor service will be provided to the city: green areas (and many other «signs») will be subtracted instead of preserved and a negative impact will affect the productive and social structure of peri-urban rural areas.

A concrete analysis of agriculture near the city, calls for a careful classification of rural areas.

This classification should include the variety of functions carried out by peri-urban farming.

It is advisable to map the various typologies of urban and rural land uses in order to assess their productive, recreational and landscape-values.

Firstly, a set of indicators should be established which express the various functions attributed to rural areas.

Secondly, the different aspects of evaluation concerning the interactions between planning actions and the agricultural setting should be investigated. This is done

by means of a descriptive analysis as defined by the indicator.

Because of the manifold levels of value attributed to fringe rural areas, decisions concerning the conversion of land and regional management should take into account the often complex and contrasting effects which may ensue.

The evaluation of these effects should be made following a procedural model which accounts for all the elements involved in the processes of regional transformation, both globally and according to their priority.

The evaluation methods which meet such requirements are the multicriteria techniques. All these procedures rationalize the decision making process where choices are conditioned by a number of heterogeneous and contrasting objectives⁽³⁾.

As already stated, in the first step of the evaluation process it is essential to determine some indicators expressing the various levels of value of the rural areas being examined.

In particular, the aspects concerning production may be expressed by means of an indicator including all the incomes generated by the production factors: this indicator is an *added value*, or it can be called «*regional macroincome*» («*macroreddito territoriale*»)⁽⁴⁾. It consists of the sum of labour, capital and enterprise incomes, namely, of the overall wealth produced by the resource: «*agricultural lands*».

As far as the landscape-values of the urban-rural areas are concerned, it is important to clarify the meaning of «landscape», since different analytical and evaluation approaches can be chosen.

Landscape is the combination of various interacting environmental components. Its analysis and evaluation should be very coherent and exhaustive with special regard to what «landscape» means. When evaluating aspects of the landscape, it is important to surmount the static concept of landscape which considers merely aesthetic values.

As a consequence, the use of indicators emphasizing only these aspects is restrictive. However, it would be practical to analyze aesthetic aspects of the landscape by resorting to indicators which characterize some important features of the peri-urban rural spaces.

To this purpose some appropriate indicators would be *the time and the length of bloom* and *the period for reconstituting vegetable species*.

The first indicator has an obvious meaning as it refers to the importance of flowering in characterizing a landscape. Flowers not only exalt the aesthetic qualities of a landscape but they are also one of the most impressive semeiotic features in the language of natural signs.

The indicator *period for reconstituting vegetable species* considers vegetable species as an environmental asset which takes decades or even centuries to grow and to reach a definite shape. Thus, their destruc-

tion is surely a considerable damage.

As an alternative another indicator could be used which expresses a monetary value: the *cost of reconstituting of destroyed species*, supposing that the area were to be restored to its previous conditions.

It has been said that rural peri-urban areas can also be used as green areas for outdoor recreation. Some rural extra-urban parks could be created to form a green belt around cities where the peculiar rural features of the land as well as the traits of certain landscapes would be safeguarded and developed.

With regard to this, it could be very interesting to establish an indicator which quantitates the amount of farmland to be preserved also in relation to the degree of antropic pressure exerted on rural areas by urban spread.

The *location index* could be assumed to express the amount of farmland to preserve within a given area (for example, in communes or bigger districts) and in relation to its resident population and its density.

Moreover, another indicator could be thought to express the accessibility of farmland in the urban fringe or interposed in the builtup areas.

The following paragraphs will describe the case of the city of Bari⁽⁵⁾. A classification has been made of non builtup areas with an indication of the varying degrees of conservation to be implemented. The purpose of the study has been to show that, even in the most densely builtup areas of Bari, there are still some plots of farmland which could be preserved. Their conservation would satisfy the need to increase the number and extent of parks and gardens, as residents in Bari have no more than 1 mq of green space per capita.

The survey has regarded more urban land than rural land, even though, as already mentioned, some non-builtup spaces are still used for farming. The location and the uses of these areas have been identified. The following types of uses have been considered in the classification: vegetable garden, combined garden, vineyard, olive grove, combined olive grove, and non-cultivated land.

Afterwards, the areas have been classified by means of the following indicators: 1) period for reconstituting vegetable species, expressed in years; 2) length and type of bloom; 3) cost of restoration of one sqm

⁽³⁾ Nijkamp P., Voogd H. (1989), «Classificazione dei metodi di valutazione multidimensionali», in Girard L. F. (a cura di), *Conservazione e sviluppo: la valutazione nella pianificazione fisica*, Franco Angeli, Milano, pp. 96-117.

⁽⁴⁾ Grittani G. (1988), «La valutazione monetaria del territorio rurale nei processi di pianificazione urbana e regionale», in Barbanente A. (a cura di), *Metodi di valutazione nella pianificazione urbana e territoriale. Teoria e casi di studio*, Atti del colloquio internazionale, Capri-Napoli, CNR-IRIS, Bari.

⁽⁵⁾ The study is included in Roberta Sisto's graduation thesis, «La valutazione delle aree di frangia: il caso di Bari», Facoltà di Agraria, anno accademico 1992-93, Università di Bari.

of the previous green area; 4) location index expressed as a function of the area's physical and visual accessibility, of its extension and distance from the builtup area. The degree of conservation to be implemented in the areas considered has been assessed by giving a score to each indicator class. Three different degrees of conservation have been established (low, medium, high).

In particular, the non-builtup areas surveyed cover approximately 1000 ha: 15.5% accounts for vegetable crops, 48% for tree crops (with a net prevalence of olives, sp. *Olea europea*) sometimes grown together with some herbaceous species, and 36.6% for non-cultivated land. Vegetable gardens are mostly located along the coast, to the south of the town, trees, and in particular olive groves, are present in the hinterland (north west- south west of the town). The non-cultivated areas are the sites the Master Plan (PRG Piano Regolatore Generale) has reserved for urban spread. The analysis of different land uses and the different degrees of conservation shows that the areas with the highest degree of conservation are mostly the olive groves. A high degree of conservation is considered also for most non-cultivated areas, in relation to the importance of their location index.

An analysis of areas to be preserved shows that: the highest degree of conservation has been set for 17.8% (189 ha), a medium degree for 42.5% (452 ha), and a low degree for 31.7% (337 ha).

According to the land uses envisaged in the Master Plan (PRG), 50% of these areas would be reserved for parks and gardens (6), slightly less than 10% for mining, agriculture and animal-farming, and the remaining 40% for industry and service sector (17,5%), for public facilities (15,5%), and for road-infrastructure (7%).

The results of the study indicate that there is little green space in the city of Bari, though the possibility exists that some cultivated and non-cultivated areas may be adequately equipped to meet citizens' outdoor recreational needs. It should also be noted that in this context the Public Administration would only carry out what is indicated in the Master Plan (PRG). Indeed, half of the examined area, 500 ha, is already reserved for urban parks and gardens.

What should not be underestimated is the need for a careful planning of these areas in order to develop both the existing natural resources and the activities of people who still farm these lands. Such considerations should be also extended to include all the areas which have not been affected by urban transformations and which will not be used according to the Master Plan (PRG) in the near future. In



the light of the new environmental requirements, the decisions and the choices of the plan should be reconsidered: Bari is still in time to adopt new projects to face the problems of urban degradation and of the suburban areas, also through a better understanding of the role that rural peri-urban areas could play.

4. Conclusions

The «regional macroincome» («macroredito territoriale»), the period for reconstituting vegetable species, the type and the length of bloom, the cost of reconstituting vegetable species and the location indicators cannot fully express the value of urban-rural areas. They do, however, offer some very pragmatic indications within a setting that ignores them completely.

Planners should give concrete and practical suggestions.

Even a correct urban plan can fail if researchers do not co-operate with the planners that actually work in this field.

The gap between theory and practice sets the stage for some «eccentric» applications which are totally unrelated to theoretical principles. Planning theories - like the other practical disciplines - have to be tested to understand whether something is wrong.

In Italy, for a long time, urban planners and professional operators have spoken a different language mainly because no radical revision of the discipline had been made, even when environmental emergencies imposed a new planning approach.

The same remark could be made about evaluators. While new and more sophisticated evaluation methods are continuously proposed, the evaluators' value judgements have less and less bearing on theory. For urban-rural areas, evaluators are not

able to catch the public value of such areas. They continue evaluating rural peri-urban areas in private terms, assessing a higher value to favourable locations, in the case of farmland, or a lower value in the case of an area to be built, based on its peripheral location. Their scope of evaluation continues to be private, thus, a peri-urban area can either be an excellent farmland or a very unpleasant urban area. In both city planners and evaluators' view there is a continuum between urban and rural areas. An area can be either urban or rural: there is no intermediate condition.

Hence, the value of a peri-urban area can either be much greater than the value of an urban area or much lower than that of a building area in the inner city.

As may easily be inferred, the spatial ambiguity affects the evaluation process, as well. An urban area is always treated as a private area.

By contrast, in a broader planning framework, considering that the plan typically has a public connotation, evaluation should take account of public aspects. Planners and evaluators should not only consider the needs of some social groups, but of the whole collectivity. From this point of view, a rural land - albeit private property - must be considered a public resource generating positive externalities which everyone can enjoy.

Thus, a priority point in planning, is to value a rural peri-urban area as a public good.

At this point the question shifts to another level: the choice of the method to be used. Some evaluators argue that only monetary procedures are able to fully express the value of public goods; others, instead, believe that monetary techniques do not internalize the various functions of a public resource. There is only a clear duality, no intermediate position.

In order not to show an ecumenical attitude, it is important to reject a priori positions.

A multicriteria procedure is undoubtedly more flexible and, thus, more appropriate to evaluate such a complex resource like peri-urban farmland. On the other hand, it should be noted that the value obtained by means of monetary methods is undoubtedly more immediately perceivable, and for this reason, it can be easily accepted or refused.

Methods should be chosen according to the context, starting from a basic assumption: whenever the evaluator can adopt monetary methods, he has the «moral duty» to do it. Now, this is true not so much because Estimo has always provided monetary expression of value (traditions can be changed as well), but mainly because monetary methods are easy to understand, which is essential in evaluation. Neither method can be accepted or refused a priori; the important thing is that the evaluator succeeds in carrying out the process of evaluation by means of objective hypotheses. ●

(6) The terms urban parks and gardens include open spaces in neighbourhood, gardens for the residents, and the parks and the gardens in the strict sense of the word, envisaged in the Master Plan (PRG).