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EVALUATION OF ENVIRONMENTAL LOCAL PLANNING PRACTICES IN PROTECTED RURAL AREAS

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Introduction

The object of this paper is to consider an aspect which is peculiar in the field of planning and evaluation, and which is related to the general argument of effectiveness in planning: this aspect is the evaluation of effectiveness of the normative-technical apparatus of local plans, in terms of environmental preservation.

As regards the effectiveness of planning, the scientific literature which has been produced is relevant, and can be roughly classified according to two major general vision of planning. The two visions can roughly be resumed in the following statements:

a) Planning practice is in general terms a process; this means that the emphasis is placed on those co-evolutionary aspects of the plan-construction which refer to analysis on subjects, conflicts, decision-making, negotiation etc.

b) Planning practice produces a plan as an immediate and consequent result, which can be considered a technical-normative instrument In this case the emphasis is placed on technical aspects, on the construction of the regulatory structure of the plan, on analyses, on determination of land-uses etc.

As already affirmed, division into two statements is a simplification, especially when considering that the two aspects which are drawn from the same statements, are often related to each one.

From the visions briefly shown by the two statements above, two different definitions of effectiveness can derive:

- according to statement (a), effectiveness can be considered, but not only in function of the relationship between plan objectives and plan results, which for instance can be carried out with an ex-post evaluation approach. Effectiveness in this vision is related to the interactive aspect, to the changes in the process and to the analysis of social learning issues, of communication, of all forms of rationality applied to the approach. The process, in fact, in a co-evolutionary

vision is characterised by unpredictable consequences, and it is very difficult to derive the effect of the plan as instrument from these consequences. Furthermore, evaluation is applied and is considerably effective in focusing on knowledge construction and exchange and on the social aspect related to the subjects and actors involved.

- According to statement (b), effectiveness can be considered as clarity of the normative structure, clearness of rules, certainty of rights deriving from the plan regulation (Mazza, 1998_b) and reduction of the possibility of misinterpretation of prescription. This vision of effectiveness assumes a peculiar importance in countries where the land use regulation is a major issue for plans. This kind of approach implies attention on ex-ante evaluations about definition of identities and values of resources, response of community to legal restriction of land- use and coherence between normative schemes and results of analyses.

This latter approach is the object of study in the following pages: attention first of all will be posed on the concept of effectiveness, according to the normative vision, and on the peculiarity of this vision when planning practice is aiming at environmental conservation. Consequently an hypothesis of evaluative multicriterial approach for normative effectiveness will be described, and finally an application in a case study.

Normative effectiveness and environmental plans

The normative effectiveness is especially related to a clear recognition of environmental resources and to the definition of several values referring to these resources.

The possibility of environmental damage increases when there is no regulatory clearness and there is no clear distinction about what is negotiable, and what is not negotiable, because of its environmental value. Then it may be possible not to fail in an approach which is necessary ex-ante because of a vicious lack of legitimacy (Millichap, 1998).

The effectiveness which urban planners can measure and which they are responsible is the plan capacity to produce expected effects by a technically satisfying model of plan (Mazza, 1998_a).

But in the Italian context, and in others, the time of implementation is often postponed compared to the moment of decision. For this reason plans have to explicate their effectiveness over several years following the moment of decision, and they are implemented according to the availability of economic resources. It is clear that – given the above consideration – the eventual missing production of "expected effects" has to be assessed in terms of effectiveness.

In other words it seems anyway necessary to refer both to produced exits and to exits which can potentially be produced as desiderable for the community and conform to the plan regulation.

In some relevant cases in literature – such as the Cleveland one – planners obtained several requests which aimed at a major social equity just because the objectives had been defined clearly and effectively (Krumholz, 1998)

But misinterpretation of norms caused conflicts also in countries (like the United Kingdom) where environmental control is usually applied. For instance, during the period of Thatcherism, not only as an effect of Deregulation, the policy in support of industrial redevelopment favoured the realisation of industrial sites even in environmentally sensible areas such as in the Scottish Peak Park, where an insoluble environmental conflict has seen on one hand environmentalists and on the other hand unions, fighting about eliminating a cement factory which is in the middle of the Park.

Another relevant example – this time Italian – is the landscape planning of some regional contexts. Such as in Apulia Region, where the lack unclearness of norms permitting weaker environmental preservation than in the national context, by providing soft regulation which reduces the minimum prescription of integral conservation compared to the national act n. 431/85. This act is a "transitory" regulation which, while waiting for the production of regional environmental plans, has provided a system of rules for environmental preservation. The legislation identifies categories of areas to be protected. The regional system could estabilish more detailed norms for environmental protection. But in the clauses of the national law the detail should strengthen the limitation of use. The Regional legislation does the opposite.

The plan making process has been seen, especially in the 90's as a procedure for consensus building. In this vision, the effectiveness of plans was seen in terms of outcomes. Attention to the plan as a product is limited to seeing it as a reflection of different points of view, interests and voices which are present in the construction process (Healey, 1997; Poxon, 1998). The analysis of planning processes does not focus on norms and rules construction in their formal-semantic aspects, in terms of legal feasibility, technical clearance, quality and clearness of layouts, which interest the character of the plan as an outcome which can establish a state of rights in a effectively clear or -in opposition- a viciously unclear modality. But among "voices" and "interests" to be heard, considered and represented in plan-making, the need of clearness of use of the plan as a normative instrument is present (Stein and Harper, 1998).

Another main point is that the normative ineffectiveness – like the procedural one, and especially as regards environmental planning – is also due to the difficulty in transferring interdisciplinary knowledge to norms. This issue of ineffectiveness is related to the question of resources recognition. Resources are not identified by each discipline in the same way, and are not identified by using expert knowledge in the same way as using shared common knowledge.

This difference of resources identification does not find translation in norms (especially when local plans have to transfer and collect knowledge) and consequently into a regulation of the land use. This also means that there is a real risk that the analytical effort may not find a normative translation.

A possible definition of criteria

Given the need to provide the technical outline of the plan with a precise, clear and usable set of instruments, it is possible to identify a series of criteria to be followed.

Criteria are ordered according to a hierarchy based on the significance of each one criterion (see Figure 1).

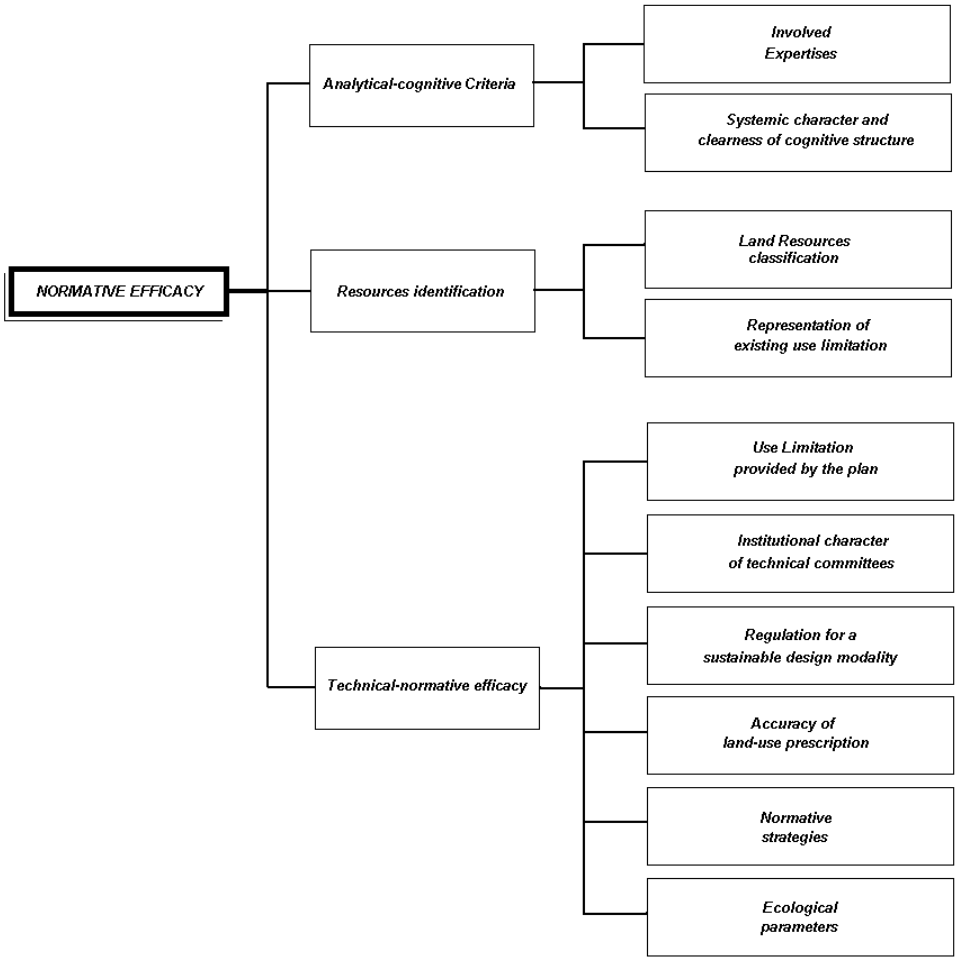

Fig. 1. The hierarchy of criteria.

At the first level, which is general, criteria represent the fundamental phases of plan construction: the cognitive approach, the identification of resources and values and the normative transposition. Each one of these has its role in the instrumental vision of the plan, and represents a phase in its technical construction.

At the second level, detail increases: the criteria refer directly to parts of the normative structure of the plan which should explicate the conceptual need of the plan construction seen at the first level.

The criteria are defined as follows:

At the first level:

1. Analytical-cognitive Criteria. They refer to the knowledge of the environmental context; strategies and action lines will be traced coherent to the cognitive structure. (Patassini, 1996);
2. Resources identification. It refers to modalities of identification, in terms of characters and spatial configuration and consequently in terms of evaluation. The clearness of the representation is crucial in order to avoid misinterpretations (Galuzzi and Vitillo, 1994). In some way representation provides an institutional clearness;
3. Technical-normative effectiveness. This firstly regards the "written rules" belonging to the plan. These rules refer to technical parameters which substantially regulate land-use (Mazza, 1998_b). Furthermore, other normative aspects refer to institutional relationships and procedure to implement the plan;

At the second level, the analytical-cognitive criteria are explicated in:

1.1 Systemic character and clearness of cognitive structure. This means evaluating the complexity of analyses in interdiciplinary terms, in terms of depth of approach to environmental and social questions and in terms of appropriate identification of spatial context (Maciocco, 1989). The criterion can be expressed positively by increasing the number of sectorial analyses carried out, and the presence of combinatory and synthetic methods;

1.2 Involved Expertises. The criterion evaluate positively/negatively the presence/absence of expertise; it is important to evaluate appropriateness both respect to the objects and the number of disciplines involved. Among the disciplines involved are both those which refer to scientific-technical knowledge and those which refer to common knowledge.

At the second level, the resources identification can be specified by:

2.1 Representation of existing use limitation. This refers to higher legal constrains, like limitation of use provided by legislation.

2.2 Land resources classification. Unlike and in addition to the previous point, this criterion refers to non- identified resources, in terms of spatial definition and identification of values. The criterion evaluates positively/negatively the presence/absence and the quality of the graphic representation.

At the second level, technical-normative effectiveness is explained by:

3.1 Use limitation provided by the plan. The plan can provide different degrees of intervention in the regulation of use. Major constrains can refer to environmentally sensible areas. The criterion attributes a positive value when the plan explicates existing limitations (derived from upper level of planning) or introduces new limitations in order to pursue environmental safeguard strategies

3.2. Accuracy of land-use prescriptions. Internal coherence (to written and graphic representations), degree of detail, clearness of definition about negotiability and non-negotiability of actions and interventions.

3.3 Ecological parameters. The plan can provide parameters which have an ecological character, and which can be various and be derived from practices (density of artificial vegetation, type of vegetation, impervious surface coverage, etc.), due to the absence of institutional reference (Maclaren, 1996).

The criterion attributes a positive value when these parameters are present in the plan structure.

3.4 Regulation for a sustainable design modality. There are norms which are oriented to pursue sustainable objectives, like design regulations aiming to rationalisation of soil consumption, energetic containment by using alternative sources, limitation of pollution activities, etc. The criterion gives positive/negative value in terms of presence/absence of those prescriptions;

3.5 Normative strategies. The plan can provide economic or procedural incentives/disincentives to favour sustainable actions (Selman, 1992). Like the previous one, this criterion gives a positive/negative value in terms of presence/absence of these prescriptions;

3.6 Institutional character of technical committees for control and management. As regards some particular environmental questions, and referring to the managerial phase, the plan can provide the institution of technical/expert committees oriented to evaluating environmental compatibility, providing the composition of the committees in terms of number and kind of expertise as well. The criterion evaluates positively/negatively the presence/absence of committees and the presence/absence of expertise.

Case study

Area of study

Alta Murgia is the central Area of Apulia, in the southern part of Italy. The area represents the core of a wider region, represented by a circumference of fifteen cities of various dimensions, varying form 90.000 to 1500 inhabitants (Table 1).

In physical terms Alta Murgia is a carsic highland prevalently covered by grasslands and uncultivated areas, by scarcity of vegetation and scarcity of intensive agricultural

uses. The carsic nature strongly affects the surface (carsic basins and depressions) and the underground morphology (caves, underground hydric systems and the typology of construction (stonewalls, rural houses, agricultural buildings, etc.)

In the productive structure of the area despite the abandon of rural settlements, which are used only in some periods of the agriculturally productive cycle, agriculture and pastoral activities are relevant sectors.

Traditional forms of zootechnology still exist in the area, accompanied by forms of track-raising in non cultivable zones; land property is not shared, (45% of cropland is belonging to large farms – more than 50 hectares) and crops are directly cultivated by the owners. The particularity of the Park seems to be in its rural connotation, but at the same time there exist a relevant relationship with modern productive centres (Figure 2 shows the Alta Murgia area in proximity of Metropolitan Area of Bari) which are characterised by manufacture and advanced tertiary activities, the overcoming of conflicts which involved communities and the overcoming of the same marginality of the area.

This represent a certain anomaly, compared to areas which are involved in sectoral planning and are characterised by demographic decline and weakness of productive systems.

In fact the area is considered marginal in regional policies and by settled communities. Ten years ago, due to the activity of scholars and environmentalist associations, the image of the area began to be modified, and consequently it has obtained a specific identity and institutional recognition at the regional and national level. It has been listed as an area of interest by the National Act on Protected Areas, (n.394/1990), and only one year ago it was declared a National Protected Area.

Tab. 1. The municipalities of the Park

	Municipalities	**Surface extension (Hectares)**
1	Altamura	42.783
2	Andria	39.981
3	Bitonto	17.280
4	Cassano Murge	8.936
5	Corato	16.773
6	Gravina di Puglia	38.117
7	Grumo Appula	8.060
8	Minervino Murge	25.538
9	Ruvo di Puglia	22.202
10	Santeramo	14.335
11	Spinazzola	18.262
12	Toritto	7.457
13	Poggiorsini	4.314
Total		**264.038**

The proximity of the Park to urbanised areas, the internal relevance of economic activities which are landscape detractors (quarries, waste disposal, stone flaying of lands for agricultural purposes) gives an idea of the characteristchs and the questions related to regional planning and management, and leads to conflicts between use of territory and environmental compatibility.

The preliminary study for the redaction of the plan was carried out by a interdisciplinary team which will deal with four different issues: environment, communication and sustainability, human settlements and infrastructures, GIS construction.

The hierarchy of criteria above described has been applied to compare the different plans of cities belonging to the Park Area.

The analysis has concerned territory belonging to ten of the 13 towns in the area of the park (see figure 2), looking at the provision of urban plans in force and from the relative land-use regulations.

In this place a particular attention was paid to open territory, to zoning modality and to the norms concerning the various possibilities of changing the land-use and existing constructions.

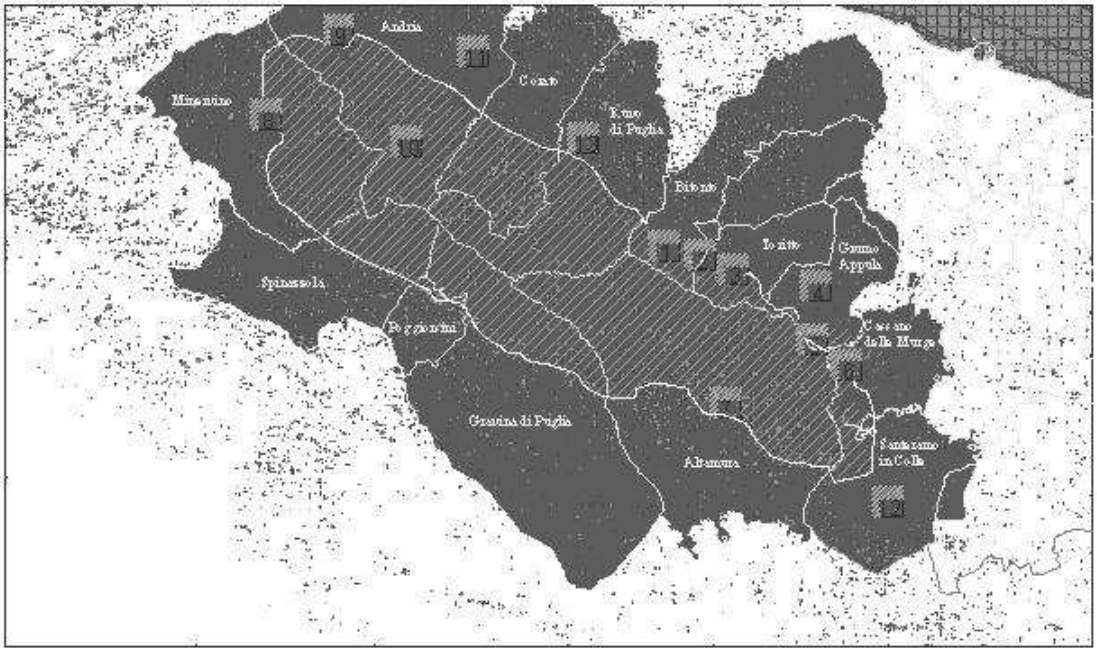

Fig. 2: The Alta Murgia Park

The zoning of the urban centres has not been taken into consideration, except in some cases where they are adjacent to possible delimitation of the park (Minervino). Moreover settlement forms, prevalently residential, have been analysed where they are inside the boundary of the area under study, and constitute real or potential point of conflict between provisions of the urban norms in force and possible future safeguard policies. Among the town under observation, there emerges, firstly, a difference between the large urban centres, which have general more recent urban plans, and the small sized centres, less active socially and economically which still maintain simplified plans belonging to the '70s.

As regards the towns with the highest number of inhabitants, some plans (Andria, Altamura, Gravina and Ruvo) have recently been approved (1997-1998), others (Bitonto e Corato) although not conformed to the regional planning regulations (1980), are contemporary or later then them.

Some of the remaining towns are about to substitute their urban plans of the '70s with new others, in conformity with the regional law (Santeramo, Cassano, Toritto and Spinazzola). The norms in rural areas, altogether reflect those different periods. On the other hand, persistence of old plans in some town, is the demonstration of a modest pressure towards transformation, manageable in a simplified manner following few, well-consolidated rules.

Localization of rural settlements is tied to the environmental landscape characteristics of the places. The first rise of the Murgia towards the North East, infact, for some towns, represents a panoramic area used for leisure, given of the height of the territory and the particular environmental and morphological conditions (like the presence of woods and a rich vegetation). Within the territory of two municipalities (Grumo e Toritto) there really are tourist settlements in the rural areas which have been functioning for some time. The first one was proposed in 1970; the second, larger one already considered in the 1976 plan as a rural settlement, is considerably expanded in the recent plan, with public services and hotels. A third one (in Cassano), already individuated by in the plan of 1970, is expanded by the more recent plan, which provides an expansion towards a Forest for tourist inhabitation, reception areas, commercial, social areas, etc. More limited settlements in the rural areas are planned by other Municipalities.

Looking onto the Basin of river Bradano, whose centres are situated in the valley of the Murgian Highland, do not provide any tourist residential settlements in agricultural areas, but sometimes urban expansion are inside the area of the Park. (Minervino, Altamura).

Constructing knowledge about the local planning

A systematic survey of current local planning instruments of municipalities was necessary to set the evaluation. This phase evidenced several difficulties due to the

collection and the structuring of data referring to the real planning system of the area. The need to compare plans mainly influenced the choice of parameters: all of them should be decodified by the same interpretative modality.

Collected data was utilised to carry out a comparative analysis. Therefore some normative elements were individuated, when they are helpful to define rural policies and when they are available for each plan. The attention was posed on building regulations, on areas which are treated with special norms, in order to put in evidence the possible existence of a general coherence regards to planning policies.

A great difficulty was due to the fact that technical agencies of municipalities do not consider the recognition, the organisation and the diffusion of information as a priority task. This is for the lack of using direct connection with the local community, in spite of the early norms which oblige technical public structures to make planning instruments available and readable for the public. Moreover an objective difficulty in re-organising structures exists, because of the lack of the support which comes from opportune technologies, such as databases, geographic information systems etc.

Frequently the right stimulation to promote innovation is missing. The layouts of old instruments – and sometimes of the earliest ones – are not available in digital format. Finally, when the opportune technology is available, the risk of missing upgrades of information exists.

The same local political vision about the relationship participation/planning can favour (or can not) the effort aiming at improving the availability of information. "Metadata" – that is to say knowledge about sources of information" are missing as well. Each technical public agency suffers of a deficit of knowledge about what information on the park area the other institutional bodies are collecting.

These elements represent the main difficulty to create easy archives to upgrade and especially oriented to the public.

As regards layout of plans, they are quite inhomogeneous. There are not common language terms and approaches. These difference make the comparison and the decodification difficult.

This is due not only to the different date of plans, but mainly to the variousness of planning thoughts, in terms of interdisciplinarity and in terms of use of technology, which lead the responsible of the different plans to provide incomparable instruments.

In conclusion, the data collection, which should represent a routine, in this case becomes a new stimulation to think about the need of a real knowledge of plans and land policies. The culture of network which improves exchange of knowledge is missing, This lack may be a symbol of ineffectiveness, but it may hide the will of some local authorities of not sharing knowledge, making representation and bottom – up policies difficult.

Evaluation

Final evaluation has been applied by using the Najade multicriterial approach (Munda, 1995). Najade is a fuzzy multicriteria method, and is thus characterised by all the basic aspects of multicirteria approaches. It has been chosen for its specific particularity in operating in context of high level of uncerytainty.

The method is based on the definition of fuzzy (qualitative or quali-quantitative) variables which expresses the judgement of value for each criterion (Table 2). By using a fuzzy clustering procedures, the method provides the ranking of alternatives in terms of values of membership functions.

A main aspect of the used method is the possibility to take in consideration the fuzziness of this evaluation. The uncertainty generally regards:

- the definition of criteria. In our case the judgement according to a given criterion does not completely express the meaning of the criterion;
- the comparison of alternatives according to a criterion; the preference or the indifference of an alternative compared to another has a degree of uncertainty;
- the construction of scale of values; the determination of he highest value, the lowest value, the better ay to rank the scale etc.

The judgements expressed by experts in this case are based on considerations coming from their own experience, from the knowledge of the context, etc.

Moreover, the judgement regarding conformance and clarity of plans represents a very subtle and implicit form of attribution of value, and affects the uncertainty of the degree of preference.

In this case judgement are expressed by a linguistic value.

Tab. 2. Values of plans according to the defined criteria

Municipality	Involved Expertises	Systemic character and ckearness of cognitive structure	Land resources classification	Representation of existing use limitation	Use limitation provided by the plan	Institutional committee	Regulation for a sustainable design modality	Accuracy of land use prescription	Normative strategies	Ecological parameters
ALTAMURA	Medium	medium	Low	Medium	Low	Medium	Low	Moderately high	low	low
ANDRIA	Moderately high	Moderately high	Medium	High	Low	Medium	Medium	Moderately low	Medium	low
BITONTO	Medium	medium	Medium	Moderately high	Medium	Low	Low	Medium	medium	low
CASSANO DELLE MURGE	Low	medium	Medium	Low	Low	Low	Low	Moderately high	low	low
GRAVINA DI PUGLIA	Moderately low	medium	Moderately high	Moderately high	Medium	Low	Low	Medium	low	Medium
GRUMO APPULA	Low	Low	Moderately low	Low	Low	Low	Low	Low	Low	Medium
MINERVINO MURGE	Low	Low	Low	Low	Low	Low	Low	Low	Low	
RUVO DI PUGLIA	Medium	Moderately high	High	High	Moderately High	Medium	Moderately high	Moderately high	medium	Medium
SANTERAMO IN COLLE	Low	Low	Low	Low	Low	Low	low	Medium	Low	low
SPINAZZOLA	Medium	Moderately high	Moderately high	Moderately high	Medium	Moderately high	High	Medium	Moderately high	low
TORITTO	Medium	Moderately high	Moderately high	Moderately high	Moderately high	Low	High	Moderately high	Low	low

The fuzzy clustering gives to an element X of a cluster U a degree of membership which is different to the traditional statistic ones. In a traditional approach the membership of an element X to a cluster U can only assume the value 1 (the element X belongs to the cluster U) or the value 0 (the element X does not belong to the cluster U). If the membership function is referring to a judgement (good, bad, more or less good etc) in a fuzzy approach it is possible to draw a function that measures the possibility that an element X belong to the fuzzy clusters good, bad, more or less good, etc, which correspond to different degrees of judgement. If two different elements X and Y belong whit a certain degree of membership to the clusters good, bad etc, it is possible to make a fuzzy comparison and to construct a degree of truth regarding the judgement "X is better than Y", "X is more or less better than Y", "Y is more or less better than X", etc, for each pair wise comparison between alternatives.

The used method is based on a comparison which derives from the determination of the degree of truth of the form of judgement of above.

The final ranking is expressed by two membership function Φ^- and Φ^+. In this function the alternatives are ordered by a ranking which expresses the membership to the fuzzy variables "favourable solution" (Φ^+) or "not favourable solution" (Φ^-).

The method has been used because of the great degree of uncertainty which characterises the judgement expressed by experts. The experts involved belong to the research team which should provide the environmental analyses on the area object of the case study, regarding the redaction of a Plan of the Park for the same area.

The expertises are: civil engineering, geology, anthropology, agronomics, landscape architecture, geography, ecology, settlements history and planning.

The approach provides a useful tool for a comparative analysis. The comparison can be carried out on the plans of the Municipalities of the Park. The approach follows a general tendency to give more useful information to the experts involved by the use of evaluation. Regarding the structuring of information, this accentuates the role of decision support by comparative multicriterial analysis. The analysis, as a table of discussion, creates a shared consciousness of the character of local planning in the area.

This approach is not new and has been applied in different situation and by using different kinds of decision supports systems, such as the expert systems when they have been utilised to produce a judgement about normative questions related to planning practices (Borri et al. 1994).

The result of the analysis should represent a ranking of the plans in terms of normative effectiveness (Table 3).

Tab. 3. Ranking of of plans according to values of functions Φ^+ *and* Φ^-

	Φ^+	Φ^-
RUVO	0.44	0.00
SPINAZZOLA	0.35	0.01
ANDRIA	0.30	0.06
TORITTO	0.29	0.05
GRAVINA DI PUGLIA	0.20	0.08
BITONTO	0.19	0.07
ALTAMURA	0.10	0.18
CASSANO MURGE	0.04	0.26
GRUMO APPULA	0.03	0.43
SANTERAMO	0.01	0.41
MINERVINO MURGE	0.00	0.49

Final Remarks

Innovation, in the case of study, generally concerns a tendency in the land use regulations in rural zones to increase contents which are the proof of the recognition of greater complexity of the open territory. It is given a role of a productive economic resource. In fact we see the references to farming and to development plans for rural areas used as criteria to allow increase in building volumes, besides a role of environmental/landscape resource; above all as far as historical constructions are concerned which constitute an important element of agricultural landscape. This greater complexity, however, means a more varied use of the open territory, not always environmentally compatible, such as in the case of harmful activity "which can not find a place in industrial areas" (as norms affirm) or of works and plants with infrastructures for which there are no provision for particular localisation criteria or ways to mitigate their impact (on the environment).

In particular, as far as the rural land is concerned, it seems possible to trace some lines of evolution which overall concern:

i. Articulation of areas subject of homogeneous use.

In the old plans the whole extra-urban territory is destined for agricultural use, and is shown as a unique homogeneous area, defined by few normative parameters concerned with the discipline of rural buildings. In the plans of later dates there is an attempt to classify the territory, though based on criteria which were not always founded on thoroughly accurate analysis or in any case, not very clearly defined. At times the discriminating criteria are proximity to the urban centre (Altamura, Spinazzola) the presence of special constraints belonging to the regional landscape plan (Andria, Ruvo), the presence of a particular morphology (erosive valleys in Bitonto, Gravina) or wooded area and in reference to a presumed greater productivity, even if not really justified by an appropriate cognitive analysis.

ii. Differentiation of normative parameters which allow to build.

In the old plans realization of new volumes is above all tied to parameters of volumetric density without specific indication or limitation of their use for residential or productive activities.

The more recent plans sometimes provide a large case history even within areas with the same land-use, or, for certain constructions, reference back to the Town Council or the specific regional agency. The normative parameters about construction become functional according how the building will be utilized.

Conclusions

Conflicts in spatial planning arise when a contradiction exists among community perceived values, institutional guidelines of using the territory and actual uses of territory. The current uses have a more contingent dimension than community values, because they are due to economic needs.

The overlay of information referring to land use, of information referring to institutional limitations of use and information referring to cultural-environmental values can be helpful for mapping spatial conflicts (Torre and Selicato, 1998).

The evaluation of normative effectiveness could be compared with the result of a community impact evaluation of the same plans (Lichfield, 1998_a).

The Cie Approach, when integrated to evaluation of effectiveness, should provide a supplementary information about the possible conflict between the community aspirations respect to environmental questions and the planning prescription, according to recent legislative trends.

These trends, following suggestions of literature on urban sustainability (Blowers, 1993), invite considerations of the impact of plan decision on the community, and are extended to various legislative planning systems like the Italian one (Provincia di Firenze, 1998), the British (Lichfield 1998_b) or the French (Motte, 1997). The Italian system, in some regional laws has provided obligation to produce an impact evaluation of plans, and to assess social, economic and environmental impacts. The same trend is a practice in England, and in a different form, is applied in the experimentation of Strategic Impact Assessment in other European countries.

Impacts can be evaluated by using not only a Cie approach. It is possible to merge objectives by communicative approaches, or by a retrospective sociological analysis of community-relevant environmental conflicts in the area. The analysis of the concordance between the plan priority and the community needs gives a supplementary information about the possible ineffectiveness – this time procedural – of plans.

Generally speaking, the evaluation of plans can be utilised to build useful criteria for elaborating future strategies to shape new plans. The evaluation, when the analyst interrogates expert and common people, and when he makes those reflecting about plans may become a useful table for discussion, by creating more informational framework and leading debates to results.

This means not making the analytical effort unusable because it has not found a normative translation and "the product is not well-prepared". And plans, which have a social character and a technical character, when considered in their technical aspect should be checked and controlled in terms of quality in their layouts.

According to the subsidiary principle this evaluation can be useful in transferring some questions to be solved from a local level to a more general level. This is particularly true in the case of Italian protected areas, where the Plan of the Park can have the character of land-use plan, like the local ones. The internal comparison of local plans gives, in this case, an information about the inhomogeneity to be dealt with when facing the land use question to an upper level.

Notes

* The paper is the result of a common effort. Paragraphs titled "Introduction", "Evaluation" and "Conclusions" are written by C. Torre.

Paragraphs titled "Normative effectiveness and environmental plans" and "A Possible Definition of Criteria" are written by F. Selicato; paragraphs titled "Area of study" and "Final Remarks" are written by F. Pace; paragraph titled "Evaluation" is written by N. Fuzio. It has been presented in a modified version at the Fourth International Workshop on Evaluation in Planning, Groningen December 11-12, 1998.

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