

# GETTING INVOLVED. PRIORITISING LOCAL AGENDA 21 PROGRAMMES WITH ANALYTIC NETWORK PROCESS

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## ABSTRACT

Provided that prioritisation of programmes is a key concern in Local Agenda 21 processes, the aim of this paper is to explore how the Analytic Network Process (ANP) can provide greater consistency and legitimacy to prioritisation of local action plans. Through the analysis of an experience in the municipality of Benetusser in Spain, the study shows how ANP, by modelling reality as a network of multiple and mutual interrelations, embraces complexity and translates it into a set of operational questionnaires that help participants to reflect on their preferences and deeply think on real implications of programmes. That way, the ANP procedure not only allows dealing with prioritisation in an organized and systematic way, but also enables reflective thinking on sustainable development and the role of Local Agenda 21 itself.

## INTRODUCTION

Local Agenda 21 (LA21) was originally born at the United Nations Conference on Environment and Development held in Rio in 1992, where local authorities were encouraged to '*enter into a dialogue with its citizens, local organisations and private enterprises and adopt a local Agenda 21*' (UNCED, 1992) in order to collectively contribute to the goals of sustainable development.

With a key role for Local Governments, LA21 is a strategic planning process to define long-term strategies, key programmes and priority actions to drive local sustainable development (ICLEI, 1997). Remarkably, it tackles sustainable development from an integrative and cross-cutting perspective by considering environmental, economic and social issues in an interdependent way (Hewitt, 1995; Selman & Parker, 1997; Lafferty, 2001) and bringing about new forms of participation and cooperation amongst public administration and civil society (ICLEI, 1997; UN-HABITAT & UNEP, 2004a).

However, more than '*fifteen years later, the Local Government response to the United Nation's proposal is far from generalized*' (Echebarria *et al.*, 2009: 980) and, in many cases, results have not met original expectations not only in relation to its contribution to civic awareness but also concerning real impact on sustainability (Geissel, 2009).

In that sense, analysis of the different factors influencing LA21 development has been undertaken by many different studies which have focused on organisational structures and governance institutional system (Fidelis & Moreno, 2009), operational capacity and need for technical and economic support (Garcia-Sanchez & Prado-Lorenzo, 2007), interconnection and integration into wider networks (Echebarria *et al.*, 2009) or interrelation amongst actors and triggering learning processes (Calabuig *et al.*, 2009).

In addition, prioritisation and focalisation of actions is assumed to be *'the most realistic and effective approach for dealing with the very complex problems of urban development and environment at a manageable scale and scope'* (UN-HABITAT & UNEP, 2004b: 16). In fact, UN-HABITAT and UNEP recommend to apply an objective set of criteria for prioritising issues and to limit the number of actions to be addressed at one time, so that focus can be maintained and resources concentrated. For that reason, with all the voices at stake the main priority becomes to agree on common priorities (Peris, 2008: 58).

However, *'broad based consultation processes tend to generate long lists of actions'* (Tuts, 1998: 186) whose inclusion in the action plan usually lacks appropriate prioritisation (Garcia-Sanchez & Prado-Lorenzo, 2009). For that reason, once action plans have been agreed, their practical implementation tends to remain at Local Council discretionality according to dynamics which remain on the sidelines of the LA21 process itself.

In that sense, Fidelis and Moreno (2009: 515) highlight the *'poor levels of engagement using innovative ways of identifying major priorities and actions for qualified development'*, what has a direct influence not only on effectiveness but also on decisions legitimacy as *'initial ideas and plans often get lost in the arena of interests and lobbies'* (Fidelis & Moreno, 2009: 515).

It is vital therefore, to explore new tools for prioritisation that contribute to provide LA21 processes with greater consistency when it comes to select and publicly justify the actions to be undertaken. To this end several issues have to be carefully considered.

Firstly, prioritisation for LA21 based development planning has to be considered as multidimensional in nature including a broad range of social, economic and environmental goals (Reed *et al.*, 2006) and incorporating the complex and diverse interactions amongst all the elements of the problem.

Secondly, sustainable development planning depends upon how policymakers and other stakeholders involved understand and interpret the process. Gathering and considering their different opinions and judgments is a difficult task intrinsic to these processes (Arvai & Gregory, 2003; Sheppard, 2005). While the literature deals extensively with the issues of sustainable development, it lacks a prescription of an easy-to-use, yet rigorous, methodology for it (Quaddus, 2001).

Thirdly, when the information available is biased and uncertain, as it is the case of development planning (Turner, 2005), it is necessary to make estimates. In such cases, experience and knowledge of the problem are more important than the prioritisation model itself. Therefore, it is preferable to focus the efforts on finding a renowned group of experts and get them involved in the process.

And fourthly, for a model to be accepted, it has to arise from a consensus among the stakeholders as much as possible. Otherwise some of the development agents may feel the assessment is biased. Thus, they may not support the decisions or strategies selected according to the model (Geissel, 2009). Therefore, as some authors conclude, decision making in the field of sustainable planning means building consensus about sustainability models and, also, asking the main stakeholders to assess strategies and discuss them together (Videira *et al.*, 2003).

Bearing all this in mind, the aim of this article is to assess the Analytic Network Process (ANP) as a new multicriteria technique for prioritising programmes within LA21 processes. A case study from the municipality of Benetusser in Spain is carried out with the participation of a group of citizens, politicians, technical staff and experts in order to test the appropriateness of the tool in practice and draw some conclusions concerning its potentialities and limitations.

## THE USE OF MULTICRITERIA DECISION-AID TECHNIQUES FOR SUSTAINABLE DEVELOPMENT PLANNING

Some authors (see Reed *et al.*, 2006) have indicated the importance of accurately modelling reality when making decisions on projects that may make society more sustainable. Therefore, the selection and interpretation of sustainability indicators, which will act as *criteria*, and how they are assessed and clustered to calculate the global sustainability index should be done carefully to maximize the correlation between the index values obtained and the quality to be measured.

Multicriteria Decision-Aid (MCDA) techniques are very appropriate to solve this type of problems. The expression MCDA is used as an umbrella term to describe a number of formal approaches which seek to take explicit account of multiple criteria in helping individuals or groups explore decisions that matter (Belton & Stewart, 2002). More information about MCDA can be found in Barba-Romero & Pomerol (1997) and Belton & Stewart (2002).

Several authors introduce the use of MCDA techniques for Sustainability Assessment. Many of them focus on the use of the Analytic Hierarchy Process (Saaty, 1996) which has been accepted as a leading multi-criteria decision model (Leskinen, 2007; Sólnes, 2003) to assign priorities to the criteria or indicators involved. Others introduce the use of outranking techniques such as Electre and Promethee in order to avoid the compensation problem of the traditional methods (Beccali *et al.*, 2003; Georgopoulou *et al.*, 2003). All these MCDA techniques work well under the assumption of the independence of criteria. However, this assumption is not always realistic, and for sure not in the field of Sustainable Planning. Thus, bias can occur when using any of these methods and this can lead to non-optimal evaluations. For that, the Analytic Network Process is chosen as it takes into account the interdependence among criteria and avoids to a great extent the problem of compensation.

The Analytic Network Process (ANP) is a method proposed by Saaty (Saaty, 2001). It provides a framework for dealing with decision making or evaluation problems. It presents its strengths when working in scenarios with scarce information. It is based on deriving ratio-scale measurements to be used to allocate resources according to their ratio-scale priorities, whereas ratio-scale assessments, in turn, enable considerations based on trade-offs (Keeney & Raiffa, 1976). ANP generalises the problem modelling process using a network of criteria and alternatives (all called *elements*), grouped into clusters. All the elements in the network can be related in any possible way, i.e. a network can incorporate feedback and interdependence relationships within and between clusters. This provides an accurate modelling of complex settings and allows handling the usual situation of interdependence among elements in Sustainable Planning Scenarios (Bottero & Mondini, 2008; Saaty, 2001).

Although no application of ANP to the field of Local Agenda 21 has been found, some of the recent applications involving ANP are found in sustainable urban planning (Gómez-Navarro *et al.*, 2009); sustainable tourism development (Chen *et al.*, 2009); strategic policy planning (Erdoğmuş *et al.*, 2006); sustainable forest management (Wolfslehner & Vacik, 2008); regional sustainability assessment (Bottero & Mondini, 2008); sustainable development of housing community (Wei-Ming *et al.*, 2010); or farmland appraisal (García-Melón *et al.*, 2008).

## THEORETICAL BACKGROUND OF THE ANP MODEL

Details on the Analytic Network Process (ANP) can be found in Saaty (1996), however, the main steps are summarized here for completeness.

### *Pairwise comparisons on the elements and relative weight estimation*

The determination of relative weights in ANP is based on the pairwise comparison of the elements in each level. These pairwise comparisons are conducted with respect to their relative importance towards their control criterion based on the principle of AHP and measured using Saaty's 1-to-9 scale (see Table 1). The score of  $a_{ij}$  in the pairwise comparison matrix represents the relative importance of the element on row (i) over the element on column (j), i.e.,  $a_{ij} = w_i/w_j$  where  $w_i$  is the weight of the element (i).

**Table 1.** Saaty's 1-to-9 scale

With respect to any criterion, pairwise comparisons are performed in two levels, i.e. the element level and the cluster level comparison. If there are n elements to be compared, the comparison matrix A is defined as Figure 1 shows:

**Figure 1.** The comparison matrix A

After all pairwise comparisons are completed the priority weight vector ( $w$ ) is computed as the unique solution of  $A \cdot w = \lambda_{max} \cdot w$ , where  $\lambda_{max}$  is the largest eigenvalue of matrix A and  $w$  is its eigenvector.

### *Construction of the original supermatrix (unweighted supermatrix).*

The resulting relative importance weights (eigenvectors) in pairwise comparison matrices are placed within a supermatrix that represents the interrelationships of all elements in the system.

### *Constructing the weighted supermatrix*

The following step consists of the weighting of the blocks of the unweighted supermatrix, by the corresponding priorities of the clusters, so that it can be column stochastic (weighted supermatrix).

### *Calculation of the global priority weights*

Raising the weighted supermatrix to limiting powers until the weights converge and remain stable the limit supermatrix will be obtained. In this matrix, the elements of each column represent the final weights of the different elements considered. The weights for the alternatives

show the priority of each alternative with of a non-dimensional value. In this particular case, these values will be considered the Committee Preference Index.

## CASE STUDY: BENETUSSER LA21 PROCESS

### *Description of the case*

The municipality of Benetusser has 15426 inhabitants (INE, 2009) and almost borders the city of Valencia to the South. Eminently urban in character, the district has a surface area of 0.76 km<sup>2</sup>, with virtually no land left for private use or public equipments. From being an eminently rural municipality, Benetusser went through a period of strong industrial development in the 1960s and 1970s. Since the end of the 20th Century the local economy has concentrated in the service sector, due to two main factors: the lack of land for further industrial development and population growth due to that industrial development. Currently most of its inhabitants work in one of the neighbouring municipalities.

In 1993 Benetusser began various actions which can be considered as the background to the current Local Agenda 21 process: promotion of an environmental education programme for educational centres, creation of a Municipal Department for Environment and a Diagnostic of the municipality intended to promote environmental health.

On 31 January 2002, the Benetusser local government signed the Aalborg Charter at a Plenary meeting of the council (Forum A21L de Benetusser, 2007). This commitment to begin a Local Agenda 21 programme also means that the municipality has joined the *Red de Municipios Valencianos hacia la sostenibilidad* (network of Valencian municipalities for sustainability) which has brought together most of the municipalities in the Province of Valencia with a public commitment to Local Agenda 21.

The project to introduce Agenda 21 in Benetusser did not begin until 2006 with the tender for a consultancy firm specialised in environmental matters. First, an Environmental Audit was carried out, including a socio-environmental diagnostic at municipal level using qualitative analytical techniques based on the perceptions of the general public and certain strategic actors (surveys, interviews and future workshop). In addition to the qualitative diagnostic, a technical diagnostic was produced by the technical planning team.

The Forum for Citizen Participation was created in November 2006 as a body for citizen participation. This forum meets periodically and comprises residents in the area, political representatives, municipal experts, companies, shops, sector boards, the ombudsman, representatives from associations and other bodies in Benetusser. After five meetings of the Forum (November 2006-July 2007), directed at validating the global strategy and proposing possible action, plus the corresponding work by the technical team to reorganise and summarise the information, a Local Action Plan (LAP) was approved in July 2007 with five strategic lines according to the needs detected in the municipality.

The Forum delegates the day-to-day management of the LA21 process to the Benetusser LA21 Committee which is made up of ten members with representatives of the working groups for the

five strategic lines of action defined in the LAP: (1) Citizens participation; (2) Educating and integrative town; (3) Sustainable mobility and accessibility; (4) Quality in services and (5) Sustainable urban space. As the Forum is 'a complementary body to the town council intended to foster co-responsibility and public participation in municipal life' (Forum A21L de Benetusser, 2007: Preamble), it becomes particularly relevant for legitimating the prioritisation of LAP programmemes.

The main objectives of the Plan are to: (i) Establish a reference framework for sustainable development in the area, integrating the principles and criteria reflected in the various international documents on the matter; (ii) Establish integrated strategies to enable compliance with the objectives in a programmed, positive way; (iii) Foster public participation and involvement of local socio-economic agents in the local Agenda 21 programme; (iv) Create a useful work tool for municipal leaders; and (v) Establish action priorities for ongoing improvements in quality of life for the citizens.

As the document itself indicates, the Benetusser Local Action Plan is regarded as a planning tool for the next 10-15 years. It has 53 actions included in the following 13 programmes:

- ✓ Programme 1: Promoting associationism
- ✓ Programme 2: Supporting participation and access to local council information
- ✓ Programme 3: Educating town
- ✓ Programme 4: Social integration
- ✓ Programme 5: Improving mobility
- ✓ Programme 6: Improving accessibility
- ✓ Programme 7: High quality and modern local administration
- ✓ Programme 8: Sustainable waste management
- ✓ Programme 9: Street cleaning
- ✓ Programme 10: Promoting local business
- ✓ Programme 11: Housing availability
- ✓ Programme 12: Public areas
- ✓ Programme 13: Urban environment

Before this research task was carried out, programmes and actions had not yet been prioritised, except through some Participative Budgets which, in a limited way, selected some actions for implementation. In general, the working groups were starting the actions according to their own concerns and capabilities. This lack of definition of the Action Plan is one of the main factors favouring the use of multi-criteria prioritisation techniques.

#### *Methodology for the prioritisation process*

The action programmes have to be prioritised. For that the whole process has to be carried out with the help of two different groups of stakeholders:

- Experts: two academic specialists in LA21 implementation processes
- Benetusser LA21 Committee members: a group of 10 people described previously.

The procedure is shown in Figure 2 and, at the beginning, it makes use of the experts to model the problem of prioritising programmes within LA21 processes. For the model, Committee members are demanded to think in terms of criteria to assess these programmes.

**Figure 2.** General assessment procedure.

Afterwards, the procedure is presented to the stakeholders, the Benetusser LA21 Committee members, who may make some suggestions on the experts' model in order to rearrange some of the criteria. They all have to work in a face-to-face meeting in order to find a consensus. Once the evaluation model is fixed, the Committee is asked to prioritise the elements of the model. This prioritisation is necessary as criteria are not of equal importance.

For that, the Committee members are asked to answer some questionnaires about comparisons among criteria, following the ANP procedure. The questionnaires are sent per mail. Every stakeholder obtains a different prioritisation, according to his/her preferences as explained in the discussion of the results. In order to obtain the global prioritisation, as suggested by Saaty (Saaty, 2001), the aggregation of all the individual judgments by means of the geometric mean is proposed. Once the final results are achieved the facilitators inform all the stakeholders about the global and the individual ranking of LA21 programmes obtained.

*The criteria for prioritisation: impact, participation and engagement.*

The set of criteria must accomplish the following requirements: to be related to sustainable development planning, to be structured in clusters and complete in terms of their preferences, to be non-redundant and to be easy to understand for the different stakeholders.

The criteria were defined in a participatory workshop held at Benetusser municipality in which during more than three hours, the 10 members of the Benetusser A21L Committee discussed and agreed on six criteria to assess the importance of each different programme included in the LAP. As the Table 2 shows, the criteria are clearly linked to the goals of the Local Action Plan of Benetusser.

**Table 2:** Goals of the Local Action Plan and Prioritisation criteria

*Representation of the evaluation problem as a network model*

The complex task of representing the evaluation problem as a network of interdependent elements distributed into clusters can be broken down into the following steps:

- (i) the Committee members identify the criteria
- (ii) the Committee members group them into clusters
- (iii) the experts determine the influences on each other.

For our case study the following network with three clusters showed in Figure 3 was built with the consensus of the Benetusser LA21 Committee:

**Figure 3.** Network model for the case study.

The two-way arrows indicate bi-directional influences between clusters, i.e. the criteria of one cluster ( $i$ ) exert some influence on the ones of another cluster ( $j$ ) so that the criteria  $i$  have to be weighted in order to estimate their contribution to the criteria  $j$ . Feedback means that there is influence among the criteria within a cluster.

### *Prioritising the LA21 programmes*

The aim of this step is to obtain an Index for each programme which indicates the degree of achievement of the LA21 objectives regarding all the criteria considered. The higher the value of the index the better prioritisation for the proposal.

All the members of the Committee were interviewed and they were informed on the ANP methodology and its applications in criteria and alternatives' prioritisation. An example of the questionnaire designed to allow for the comparison analysis is shown in Table 3:

#### **Figure 4.** Sample of questionnaire used for alternatives' comparison

In order to alleviate the mathematical burden the following calculations were implemented through the software Superdecisions © (Superdecisions, 2009). The following results obtained correspond to the global judgements, that means, the aggregation of all the individual judgements. Upon completion of all pairwise comparison matrices, the unweighted matrix was built (see Figure 5).

#### **Figure 5.** Unweighted matrix for the global judgments

The corresponding priorities of the clusters were afterwards obtained and used to weight this matrix. That way the weighted matrix was obtained (see Figure 6).

#### **Figure 6.** Weighted matrix for the global judgments

Raising the weighted matrix to limiting powers until the weights converged and remained stable the limit matrix was achieved (see Figure 7).

#### **Figure 7.** Limit matrix for the global judgments

### *Analysis and discussion*

The priority obtained in the limit matrix for each criterion is a non-dimensional value that can be considered their relative importance according to the Committee in this case. Thus, the priorities obtained for the alternatives can be considered their Committee Preference Index (CPI). These priorities can be obtained from the values in any of the columns of the limit matrix. Since ten people from the Committee were interviewed, a total amount of ten individual limit matrices were obtained, each of which shows the preference index according to the opinion of one particular member. However due to space constraints in this paper only three different groups of people have been analysed:

1. The whole Committee (politician + technical staff + citizens)
2. The local politician (councilman of social affairs and responsible for LA21 development)
3. The technical staff of LA21

The results of the analysis for the three groups are summarised in Tables 3 and 4.

**Table 3.** Final criteria relative importance obtained according to the different groups of people analyzed.

**Table 4.** Final programmes' priorities obtained according to the different groups of people analyzed.

*Regarding the results obtained for the criteria.*

The global results show that according to the Committee the most important criterion is to satisfy the *urgency of the need* with almost 25% of the weight, followed by *social impact* (20%), *participation* (18%) and *environmental sustainability* (18%). The two less important criteria resulted to be *public satisfaction* (12%) and *economic impact* (7%).

Besides, the results show that there is a strong concordance in the assessment of relative importance of the criteria among the different stakeholders analysed. The three plots in the graph of figure 8 are almost identical, especially the ones obtained by the local politician and the whole committee. This means that the local politician (and somehow the technical staff) aligns with the opinion of the citizens. However, the results obtained by the technicians show some differences with the global results. According to them, the most important criterion is *social impact* (23%) closely followed by *urgency of the need* (21,5%) and *participation* (20%). In the last positions and far from the rest they also locate *economic impact* (5%).

**Figure 8.** Results obtained for the criteria

The importance of criterion *urgency of the need* is unexpected as Local Agenda 21 is intended for medium-to-long term sustainability objectives. That is to say, LA21 should neither be expected to address the urgent problems nor the urgent problems can be solved easily with LA21 activities, tools and resources. It can be argued the local politician and the technical staff know this and, therefore, when assessing the criteria they were thinking in the citizens' preferences more than their own preferences. On the other hand, citizens have assessed criteria according to their preferences and qualms more than according to LA21 objectives or characteristics.

*Regarding the results obtained for the programmes (alternatives).*

In this case the results show (see Figure 9) that there is a certain concordance in the assessment of relative importance of the alternatives between the Committee and the technical staff, who seems to represent the opinion of the citizens again. However, the local politician seems to have focused in their own preferences contrary to what he apparently did with the criteria.

**Figure 9.** Results obtained for the programmes

The global results show that according to the Committee the most important programme is *improving mobility* with 19 % of the weight, followed by *improving public areas* (14 %). The rest of the alternatives achieve less than 10 % of the importance. The least important action is *promoting associationism* with a 2% of the weight. Coherently results show citizens (the majority of the Committee members) give priority to programmes less strategic but more directly connected to immediate problems like *improving mobility* or *improving the public areas*.

The results obtained by the technical staff are in a certain way aligned with the global results, although there are some remarkable differences. According to them, the best ranked alternative is *modern local administration* (17%) followed by *supporting participation* (15,3%). The rest of the alternatives achieve 10% or less of the importance. The least important action is in his opinion *housing availability* with a 2% of the weight. As mentioned before, there was agreement on the criteria importance. This means the local politician believes achieving a modern local administration or supporting participation fulfils better the main criteria: urgency, social impact and participation than improving mobility or the public areas. But the Committee thinks all the way round and this is a very interesting finding. The discrepancy seems to appear in the programmes, the means, but not in the criteria, the objectives.

Finally, the results obtained by the technical staff show such a concordance with the Committee than it suggests they were thinking in the citizens' preferences while assessing the programmes, contrary to what the politician did. Again this is a very interesting finding because is allowing realizing up to what level the technical staff know the citizens' demands and preferences and, also, what is the technicians' attitude towards the LA21 process.

## CONCLUSIONS

Through the use of ANP for prioritising Benetusser Local Action Plan some conclusions are reached concerning both Benetusser Local Agenda 21 and the appropriateness of ANP itself as a tool for prioritisation.

Concerning Benetusser Local Agenda 21, criteria weighting provides some important insights on the overall philosophy and underlying participant's conception of what a Local Agenda 21 is. The results of this paper show that this conception is broadly shared by participants in Benetusser as they coincided not only in the definition of the criteria, which were agreed in an initial meeting with a clear consensus, but also in the weights of the criteria, which were assigned individually through the questionnaire. It is particularly important that politicians, citizens and technical staff fully match in their assessments.

In this regard, the low weight assigned to the *environmental sustainability* criterion shows that Benetusser LA21 is not environmentally biased. On the contrary it is mainly conceived as a way of facing *social* problems in the town. *Participation* is also acknowledged as important, which shows that the LA21 provides a new understanding of local governance of sustainable development and the role to be played by citizens. Surprisingly, the highest ranking is assigned to the *urgency of the need*, what shows that LA21 is not understood as a process to address long term sustainability problems, but immediate ones. This clearly confronts some of Benetusser official statement on what LA21 is expected to be. Finally, although the context in Spain is clearly determined by a strong economic crisis, *economic impact* receives the lowest recognition, so LA21 in Benetusser is clearly not considered as a tool for promoting economic development of the town.

Concerning the prioritisation of the programmes, technicians fully coincide in their assessment with citizens, while politician over score those programmes related with local administration, modernization and transparency. This suggests that day-to-day work between citizens and technicians through the LA21 process has led to a common understanding of problems of the town.

Concerning the use of ANP as a tool for prioritisation in LA21 processes, participants state that the first meeting for defining and agreeing the criteria was fruitful as it let them think about what they were really expecting from the LA21. Despite the extension of the questionnaire (more than 150 questions which required more than two hours to be answered individually), participants considered that it was neither difficult nor tedious to be filled in. On the contrary, once the logic of the questioning was grasped through the first group of questions, they were able to proceed straightforwardly. By doing that, they reflected on their preferences and deeply think on the programmes and their real implications. Members of the committee feel that the ANP procedure has allowed them to deal with prioritisation in an organized and systematic way.

Finally, there are two research issues that would require further exploration. The first one would consist on aggregating priorities instead of judgments and then using a participative approach to solve discrepancy amongst participants. Properly linking ANP to participatory methods would not only increase the number of participants in prioritisation tasks but also the quality of the deliberation itself. In relation to that, the second one would consist on aggregating preferences by stakeholders in order to set preferences by different interest groups of the town. That would be useful to surface underlying conflicts and then tackle them openly.

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**Table 1.** Saaty's 1-to-9 scale

Degree of importance	Definition	Explanation
1	equal important	the two elements contribute equally to the objective
2	weak	
3	moderate important	experience and judgment slightly favor one element over another
4	moderate plus	
5	strong important	experience and judgments strongly favor one element over another
6	strong plus	
7	very strong or demonstrated Importance	an element is favored very strongly over another; its dominance is demonstrated in practice
8	very, very strong	
9	extreme important	the evidence favoring one element over another is of the highest possible order of affirmation
Reciprocals of above	If the element i has one of the above nonzero numbers assigned to it when compared with the element j, then j has the reciprocal value when compared with element i	a reasonable assumption

**Table 2:** Goals of the Local Action Plan and Prioritisation criteria

GOALS OF THE LOCAL ACTION PLAN FOR BENETUSSER	PRIORITISATION CRITERIA
Establish a reference framework for sustainable development in the area, integrating principles and criteria contained in the various international documents on the matter.	<p><b>SOCIAL IMPACT</b>, understood as changes “for the better” in the life of the citizens of Benetusser both in terms of quantity (of population) and quality.</p> <p><b>ECONOMIC IMPACT</b>, understood as the economic benefits for Benetusser in relation, for example, to increased GDP, increased income, boosting local businesses....</p> <p><b>ENVIRONMENTAL SUSTAINABILITY</b>, as improvements in the municipality's environmental quality (atmosphere, water, land, landscape...).</p>
Foster citizen participation and involvement of local socio-economic agents in the Local Agenda 21 process.	<p><b>URGENCY OF THE NEED</b> to which the programme responds.</p> <p><b>PUBLIC SATISFACTION</b>: the public's general perception of the benefits provided by the programme.</p> <p><b>PARTICIPATION</b>, or capacity to trigger and sustain civic organisations and citizens participation.</p>

**Table 3.** Final criteria relative importance obtained according to the different groups of people analyzed.

CRITERIA	Relative importances		
	Committee	Politician	Tech staff
C1. Urgency of the need	0,244	0,256	0,214
C2. Public satisfaction	0,119	0,082	0,138
C3. Participation	0,182	0,216	0,198
C4. Social impact	0,201	0,217	0,232
C5. Economic impact	0,070	0,046	0,060
C6. Environmental sustainability	0,184	0,184	0,159

**Table 4.** Final programmes' priorities obtained according to the different groups of people analyzed.

PROGRAMMES	CPI		
	Committee	Politician	Tech staff
P1. Promoting associationism	0,021	0,026	0,044
P2. Supporting particip. and access to local c	0,058	0,153	0,061
P3. Educating city	0,073	0,100	0,068
P4. Social integration	0,040	0,048	0,066
P5. Improving mobility	0,191	0,123	0,207
P6. Improving accessibility	0,087	0,056	0,070
P7. High quality and modern local adm.	0,073	0,172	0,057
P8. Sustainable waste management	0,051	0,061	0,043
P9. Street cleaning	0,066	0,047	0,076
P10. Promoting local business	0,042	0,028	0,025
P11. Housing availability	0,066	0,020	0,087
P12. Public areas	0,135	0,099	0,139
P13. Urban environment	0,097	0,068	0,057

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