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VALUING RECREATIONAL USE AND SUSTAINABLE TOURISM PLANNING OF NATIONAL PARK SYSTEM IN CALABRIA REGION, ITALY (assigned to session **24**)

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ABSTRACT

An essential point in the valuation of natural resources is the application of validity tests for verifying the quality of the economic value estimates obtained. Convergent validity tests are a type of validity tests that are based on the comparison of the estimates obtained by applying different valuation methods in order to test that they are consistent. The objective of this study is the comparison of the recreational use value of the System of Calabria National Park using the Travel Cost Method (TCM) and the Contingent Valuation Method (CVM) for to develop a support scheme for an efficient democratic decision making process and sustainable development at the local level. This pilot study completed in National Parks of Calabria in the Italy, is the first attempt at a complex approach to environmental valuation and decision making process in this region. It focuses on environmental valuation with special emphasis on non use values and a combination of complex and interdisciplinary methods. The study is based on survey research where stakeholders preferences were taken into an account in the initial phase of the planning process. Based on the values covered from the various stakeholders (visitors, residents, local enterprises, municipalities, state administration and others) alternative scenarios of the future development were derived. The results show that communication and a democratic approach to the planning process play key roles in efficient decision making. In addition, environmental valuation based on both conventional and alternative methods with monetary as well as non monetary interpretation form crucial elements of a successful planning process especially when dealing with intrinsic and philanthropic values associated with sustainable development.

INTRODUCTION

Environmental protection, in the past, was not a major interest of society in Italy. Additionally, economic development focused on material values and consumption hinder the public's recognition of environmental protection as an important element of society. Hence, the successful transformation of environmental policy should focus not only on the legal and technical aspects but also on changing public perception, understanding priorities, values and awareness building.

1.1. Environmental Decision Making

Citizens as individuals are not very active in environmental decision making. Generally there is a lack of interest in public matters and apathy towards getting involved in community life. Not only the average citizen, but also those who are more environmentally concerned are not fully aware of the value of their natural heritage (*Zylicz 1995*). The relationship between the government and NGOs in general has been contradictory during recent years, (in all parks where there have been this experiences of collaboration) which is far from satisfactory. Access to the information is not transparent either for the public or for non governmental organisations or research institutions. Decisions are usually based on the administrative principles without sufficient involvement of all involved parties. Any involvement of the public or other interested parties occurs in the late phases of the planning process when the detailed proposal already exists and it is too late to affect meaningful change.

1.2. Nature Protection in the Calabria Region

Calabria Region geographically is located in the south of Italy. It is on the boundary of the Basilicata Region with her mountains and possesses lowlands areas which allows for a rich diversity of flora and fauna. The biodiversity of Calabria includes several plant species and several very rare animals.

Calabria has three National Parks: Calabria National Park which has an area equal to 15,892 ha., Aspromonte National Park which has an area equals to 36,259 ha., and Pollino National Park which has an area equals to 196, 437 ha., of which 93,500 ha belong to Basilicata Region and 102,937 ha to Calabria (it is the greatest National Park in Italy). So the protected territory of Calabria Region is equal to 135,175 ha., Calabria, thus, has the largest protected territory in Italy.

Calabria National Park was established by the Law of April 2, 1968 n.503. The park's delimitation has been established by Ministerial Decree of December 29,1978, while the

Ministerial Decrees of June 20,1982 and August 8,1985 have determined the enlargement of the area.

Its area is equal to 15,892 ha.. It belongs to the mountainous group of Southern Apennine. It is formed by three great areas; including the "Sila Grande" (7,000 ha.), and "Sila Piccola" (5,203 ha.). The Calabria National Park includes some of the most impressive and wildest areas of Calabria.

The areas of "Sila Grande" are characterized by slight slopes and softened shapes. The protected area of "Sila Grande" is equal to 7,000 ha. The altitude varies between 1,300 m. and 1,680 meters above sea level. This environment constitutes the natural habitat of "Pino Lancio" (*Pinus Nigra Calabrica*). In this zone are present also many other trees (Turkey oak, Aspen, *Acer montano*, *Nigrus black Alder*, and the "*Genista Anglica*").

In some areas the arboreous vegetation is interrupted and during the spring the meadows are totally covered with primroses, asphodels, eldering orchids and narcissus.

The wolf is the most representative mammal in this area, but, unfortunately, there are only a few specimens left because in the past it underwent ruthless hunting.

The most inaccessible and less anthropized forests of the "Sila Grande", constitute the habitat of the royal eagle and very rare black woodpecker.

The area of "Sila Piccola" is equal to 5,688.50 ha. with a variable altitude between 700 and 1,700 meters. The "Sila Piccola" has a temperate-cold climate. The watercourses are numerous. The most important is the "Tacina" river which flows in the National Park's northern areas and in some stretchy areas constitutes a natural border.

The "Sila Piccola" is characterized by a great variety of both arboreous and exceptional flowering of the primrose, orchids, asphodelis, narcissus,crocus, and violets. During the fall, the landscape is wonderful. The dark green colour of "*Pinus Nigra Calabrica*" and fir mingle with the yellow colour of beech and aspen and with the red colour of *acero*.

The black squirrel (*Sciurus Meridionalis*), native to Calabria, the wild boar, the fox, badger and "driomio" are very widespread. There are numerous protected birds: the black woodpecker, the chief-cowherd, the buzzard, the goshawk, the pilgrim hawk, and the lambs' vulture.

Pollino National Park has been established recently by a Ministerial Decree December 31,1990 n. 26. It is the largest park in Italy. Thirty two communes belong to Calabrian territory and twenty-one to Basilicata's territory. Inside the park, many built-up areas stand. Altogether, the Calabrian side includes 100,000 inhabitants and Basilicata's side about 50,000 inhabitants. The Pollino National Park represents the natura habitat of rare animal specimens:

the autochthonous Roe-deer, the Apennine's Wolf, the Royal Owl, the Coturnix, the Pilgrim Hawk, the Royal Eagle, the Black Woodpecker the Imperial Crow, the Badger, and the Porcupine. The main types of trees are: Pinus leucodermis, Black Pinus, the Holm-oak, Black Alder, Neapolitan Alder.

The most important element of the arboreous species is Pinus Leucodermis, which by now represents a botanical rarity.

1.3. Problem Identification

- Nature Protection - Economic Benefit

Nature is a typical example of a public good where the market does not cover the true environmental costs. Therefore, investors in order to generate economic profit within the shortest time period are making enormous effort to introduce economic e.g timber, intensive tourism, etc. with the resulting emphasis on natural resource exploitation and over land use.

- Lack of communication and co-operation among nature protection administration, enterprises, residents, municipalities and other interested parties

In 1991, a new law regarding territorial parks structure and local government took effect. Accordingly, the political power was moved from the central government to locally elected authorities (Comunità del Parco e Enti parco) where most first hand knowledge and the needs of local communities are concentrated. Since then, most decisions affecting national parks are made by state administration and municipalities, although the professional experience and skills are concentrated within the Enti Parco. In addition, personal interests of local decision makers and radical approach of nature protection authorities creates tension which leads to certain difficulties in communication and decision making at the local level.

1.4 The Case of The Aspromonte National Park

1.4.1. Description of the territory

The Aspromonte National Park is located in the southern strip of Apennine mountains in Calabria. This section of the mountain range is made up of cristaline granite and resembles a gigantic pyramid. The area is near the sea and reaches heights of 2000 meters with numerous mountain peaks and plateaus made up of marine sediment from thousands of years ago. The park territory, deeply marked by many rivers, is also home to numerous species, such as, the

wolf, the pellegrine falcon and the royal owl. Covered by vast stretches of forest (beech, white firs, black pines and chestnuts), as well as, the typical mediterranean vegetation. A couple of rarities: the Bonelli eagle and tropical Woodwardia radican plants.

The Aspromonte National Park has an area with an altitude between 900 and 1,955 meters (Mount Montalto) above the sea level. The park's area includes Thirty six communes belong to Calabrian territory. In the area, there are several buildings that are used for a conference hall, a visitors information center, and mountain refuge.

The park's zone is in the middle of the Aspromonte and includes the forests of Nardello, Menta Cavaliere and Cavaliere, Juncari, Montalto, and Ferraghena.

The "Aspromonte" area has a semicircular shape and is crossed by the "Placa" torrent, "Fiumara Menta" and "Fiumara Ferraina". This area is rich in water allowance for the presence of numerous fishes and wallons. The phytoclimatic areas are Castanetum (up to 1,300 meters above the sea level) and Fagetum.

Surrounded by the Mediterranean sea, the park is host to numerous historical sites of artistic and archaeological interest, testaments to a deep seated culture: greek, classic, medieval and modern.

The economy of these areas is largely based on agriculture, but this sector based on family and, for this reason not very productive even if there are some zootechnical farms which are quite efficient. There are also some modern farms for biological agriculture and this is a growing sector. The industrial sector is almost completely absent except for the presence of some preserved food-firms which process local products (tomatoes, mushrooms, honey, strawberries, apples, cherries, mulberries, and eggplants). The handicraft is very diffused. People work by hand the wood, textiles, iron, and ceramics. Tourism is an important sector even if the infrastructure system actually is not well developed to support an expansion of tourism. In any case the "Ente Parco" has promoted some initiatives to improve the actual set of structures and to create others.

1.4.2 Human Influence

The ecosystem incorporating the Aspromonte National Park has been strongly influenced by human activities. Today, several high-density recreational facilities are located within the park, often on the most sensitive sites. These facilities have caused significant impacts on the native vegetation, soil and wildlife. High levels of visitors are also likely to adversely affect wildlife as well, primarily eagles, wolves and bear. The ski area within the park, expanding the period of high visitor use include the winter months.

1.4.3 Property rights issues

Property issues play a key role in the quality of nature protection in the Calabria Region.

Private ownership is predominant in the Aspromonte National Park. In addition, about 10% of the park land belongs to one individual private owner. Thus the conflict between nature protection and economic benefit became more significant. However, it cannot be solved simply by compensating the owners. The key question is who will control the local assets, which can generate decent revenues in long term if managed in sustainable way or much greater short term benefits based on natural resource exploitation.

Because of these conditions and circumstances, ecological stability, biodiversity, and visitors' experiences are in jeopardy. An additional concern is the sustainability of the local economy which is largely based on tourist-based income.

The main objective of this study was to develop a support scheme for efficient and democratic decision making in Aspromonte National park in the Calabria Region.

The challenge facing this project is to convince policy and decision makers and the community of Aspromonte National park in the Calabria Region that protection of the National Park makes sound economic sense. Finally to show, that the major problem is lack of communication between "conservationists" and "developers" rather than limitation of financial resources.

2. Methodology

2.1. General approach

Historically environmental decision making has been generally limited to supplementing planning documentation. Although the previous top-down system has been dramatically changed, some practices of the CAC approach are still used, particularly when dealing with public involvement, transparency and consensus building. Therefore, any traditional research method, where results are given by a team of experts without public discussion and decisions are made on administrative principles, has very limited chance of successful application. In this scenario a multi - criteria approach based on experts as well as public opinions can have political and economic advantages.

There is no universal methodology that could be potentially applied for such a complex issue. For the purpose of this project it was decided to use a combination of several methods that

already have been successfully used in other parts of the world. There are two key methods: contingent valuation (CV) and positional analysis (PA), that will be discussed in this paper.

2.2. Contingent valuation (CV)

Contingent Valuation represents one of the most popular research methods for environmental valuation. Numerous biases are associated with the CV and its administration. The approach used in this study differed from a standard CV because the goal was not only to derive financial values but to show the importance of the various benefits. The population of the Calabria Region is not skilled in answering a survey questions and therefore traditionally formulated willingness to pay (WTP) question could lead to certain strategic bias. Therefore direct open WTP question was used for the purpose of this study.

2.3. Positional Analysis (PA)

Positional analysis was presented for the first time in 1973 by Peter Soderbaum (Edlung J, Quintero R, 1995). It is a decision making instrument based on the holistic conception of economics. The main idea of PA is that decisions should be taken according to a matching procedure, where a specific set of chosen alternatives represents the starting point for the process. PA procedure is composed of several steps, e.g. description of the decision situation, identification of the problem and interested parties, design of alternatives, identification of potentially affected, systems and effects, analysis of irreversible effects and the interests of stakeholders and conditional conclusions. The main task of the survey, derived from the concept of PA was to identify preferences over all stakeholders groups and to compare scenarios of future development with respect to impact and conflicts of interests (enclosed in the appendix).

2.4. Involved Parties -stakeholders

The stakeholders of the Aspromonte National Park in Calabria Region range from residents, local enterprises, municipalities to state administration and state organisations, and across domestic and interregional and international visitors. The selection of the stakeholders group was an open process based on a preliminary analysis of the conflicts in the region and consultations with park managers. The following section focus on a short description of the stakeholders.

Visitors:

Altogether 184 interview were collected, from which 51.1% were domestic visitors. Most of

the respondents were in the age range of 19-29 (40%), males represented 60% of the sample. The most frequent profession was white collar (30.8%). Up to 79% of respondents indicated, that the Aspromonte National Park was the main destination of their trip and 67.9% of the respondents had already visited the Aspromonte National Park previously. Occasional visitors represented 61.6%, regular, visiting the park at least once a year 18,4% and 20% of the visitors visit the park at least 3 times a year. The average duration of a trip amounted to 4.82 days. The most favourite activities of visitors included hiking (47%) and visiting natural monuments (21%)

Residents:

The respondents represented the population of the several municipalities surrounding the park and small villages and municipality located directly in the national park. All together 33 interviews were collected, 55% females. More than 30% of the residents represented the age group 30-39, 25% were in the group 19-29 and the rest were divided among three age groups over 40. Completed secondary education was the predominant educational level, while basic education represented 10% and university less than 6 % of the sample. Almost 70% of the respondents indicated the main source of their income - full time employment contract, 21% self employed and the rest retired.

Entrepreneurs - landowners

Eleven representatives from local businesses were interviewed for the study. Each respondent from a sample was a land owners except for one. Most of them represented the tourism sector. Others were from a timber production company, a co-operative and a supermarket.

Municipalities

The mayors of six municipalities were interviewed.

State administration and state organisations:

The state administration (an actor in decision making) was represented by sindaci of municipalities contacted and presidents of comunità montana offices. In addition to that, the Aspromonte National Park Ente Parco was contacted. Unfortunately the response rate was very low and it was decided exclude this sample from most of the analysis.

2.5 *The Survey*

2.5.1. Contingent valuation

Questionnaires for both visitors and local communities were developed for the purpose of this part of the survey. Direct open WTP question was used for the purpose of this study. Values were given by users in the form as recreational services, living or working environment, etc. (see questions number 9, 10 in the appendix) Both proposed management improvements correspond with two most significant negative impacts of the human activity on the park. An open ended question was added in order to offer more space for those who wish to allocate their money to different areas as proposed. In addition to WTP and questions related to the future economic development versus environmental protection of the park, the respondents were asked several demographic questions e.g. gender, age, profession, etc. Finally, a few questions to investigate the respondents knowledge of the local situation and problem areas, was developed separately for both visitors and local communities. Three probe questions for the interviewers were added in order to minimalise interviewer bias. These focus on respondents confidence and understanding of the questions. A copy of the questionnaire for visitors is included in the Appendix. The questionnaire for local communities was modified. The majority of questions analysed in this paper, e.g. personal characteristic, WTP, etc. remained the same. In addition a few questions associated with income, limits from park existence and future development options were added.

2.5.2. Matrix of Physical Effects and Future Development Scenarios

The second part of the survey is associated with development scenarios and a matrix of physical effects and activities important for the future development of the region in relation to the park.

The scenarios were designed with regard to the present situation and conflicts in the region. Each scenario follows three main ideas. First, decision making that predominantly focuses on the role of National Parks System of Calabria Region, that is one of the most controversial part of present decision making structure. Secondly, the negative impacts to the natural environment and visitor's services, last but not least the economic activities in the region. Three scenarios offer three different possibilities from which

A0 - *Non Action* : current uses would continue without any change in decision making, management and nature conservation practices.

Second A₁ - *Development scenario*: no major changes in decision making process, which could be understood as a compromise, where a certain level of development is allowed but it should follow the conditions of sustainable development.

Finally A₂ represents a rather strict conservation oriented scenario. Respondents were

informed that the scenarios should be understood as pre-conditions for future development that have to be given now in order to secure certain development in the future. It does not mean that no physical change occurs in the future and that the description of the scenarios refers to the certain state of the same matters in future. Copies can be find in the appendix.

Matrix of 15 potential effects and activities serves as social, economic or environmental indicators of the quality of the environment in the region. Effects/activities has been selected according to the problem description and the potential consequences for the environment. Four groups and one single indicator were identified. Environmental indicators: *biodiversity and landscape scenery* because of the primary objective of the park and as qualitative environmental measures. *Erosion* was chosen because of its significant impact on karst topography where thin soils are present, *appennine vegetation* because it is very sensitive and easy to destroy by over visitation and overgrazing. General management problems: *Waste minimalisation and traffic regulation and economic activities* e. g. *tourism, timber, agriculture, hunting, local industry* represent the most significant human influence within the area, *employment, economic profit or wages* important indicators of local socio-economic development. The single indicator is *cultural values*, that in the context of The Aspromonte National Park represent not only traditional life style, folklore and housing but, also sheep farming with several traditional products made of sheep milk and wool. Respondents were asked to rate on scale from 1 to 15 their personal opinion about the importance of listed effects/activities in order to secure the future positive development of the Aspromonte National Park. It was not the purpose to specify the criteria for "securing positive development". The idea was to obtain respondents real preferences rather than "advice" on what should be done. The matrix form is enclosed in the appendix.

2.5.3. Interview schedule

In order to receive the most accurate data and minimise the non response rate, *face to face interview and self administrative interviews* were selected as a survey methods. For the group of visitors the interviewers were university students in science, predominantly geography and environmental sciences. They had been trained by the author. Other stakeholders group were interviewed by the author. Before the survey a pilot survey was conducted, the sample size of 25 respondents. The opinion leader approach was used for selection of the representatives of municipalities, enterprises and state administration while the random sample method was used for the selection of visitors and residents (interval 3 or 5 persons).

2.5.4. Data processing

Analysis of collected data was carried out at the level of stakeholders without any other aggregation, using SPSS and Microsoft Excell statistical software. Frequency analysis, mean, mode, minimum and maximum values were calculated.

In addition to the methods described in the previous section, the survey was completed by other methods, e.g. the travel cost method for visitors and hedonic pricing for other stakeholders groups.

3. Results

All together 255 respondents were contacted and 240 interviews completed (5.8% refusal). The number of respondents varies in each group. Compared to the visitors and residents, mayors and state administration or entrepreneurs represents rather smaller groups (in number of respondents).

3.1. *Contingent valuation*

To generate numerical values of WTP was not the main purpose of this study this section should be understood only as approximate numbers. For the calculation of the mean WTP the approach that takes into the consideration just positive bids (based on Langford, 1993 and others) was used. From the total of 240 completed interviews there were "no response" answers, 82% were willing to pay a certain amount of money, just 8% were unwilling to pay any money and 10% did not know. 32 respondents estimates were not included. The first state administration due to the lack of data (5), some respondents did not specify a bid although they indicated positive WTP (21), 3 bids were given in the form of material compensation and finally two were excluded because of overestimation and one because of instrument bias. All together 165 bids were included in the calculation of the WTP. The group of local stakeholders includes residents, entrepreneur-landowners, municipality.

The highest WTP showed the group of municipality representatives 100%, enterprises 90.9%, visitors 85.3% and residents only 57.6%. From 165 non zero responses 42% would allocate money into a proper trail system, 35% to improve the information system in the park and 23% for other purposes, from which 23% would support non use values directly (wildlife, protected plants, etc.). The rest was spread over several improvements in management e.g. baskets for litter, picnic areas, etc. The local community would prefer investment into the water treatment and sewage system. Respondents that refused to pay for park protection (8%), mostly think that the National government should pay. Some consider it as a duty of those who generate profit from the park, and just few indicated an inability to pay.

3.2. Positional Analysis

The purpose of the analysis of activities is to identify interests and preferences of the stakeholders in order address the conflicts systematically. All together 42 respondents participated on this part of the survey. The first part of this chapter illustrates the respondents interests and preferences in selected effects and activities compared across the selected stakeholder groups.

3.2.1. Interests and preferences in the Aspromonte National Park. Breakdown by stakeholder groups

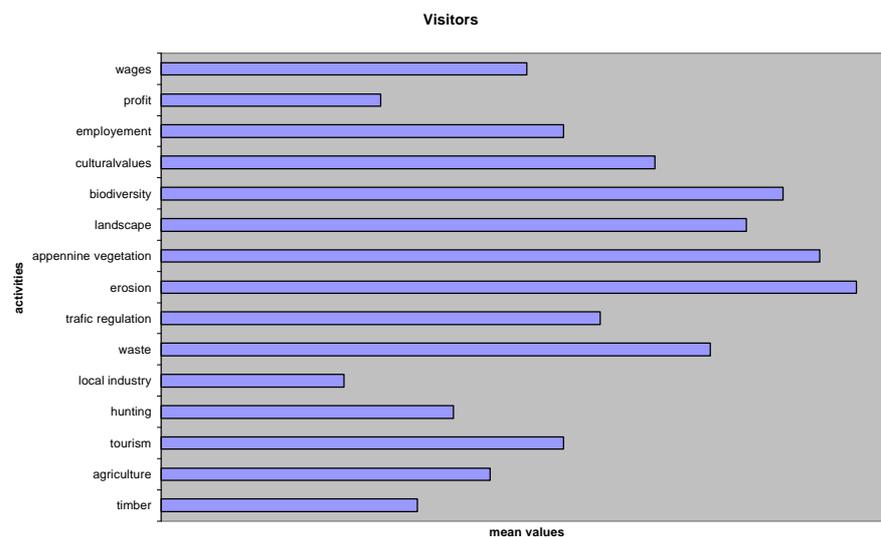


Fig.1

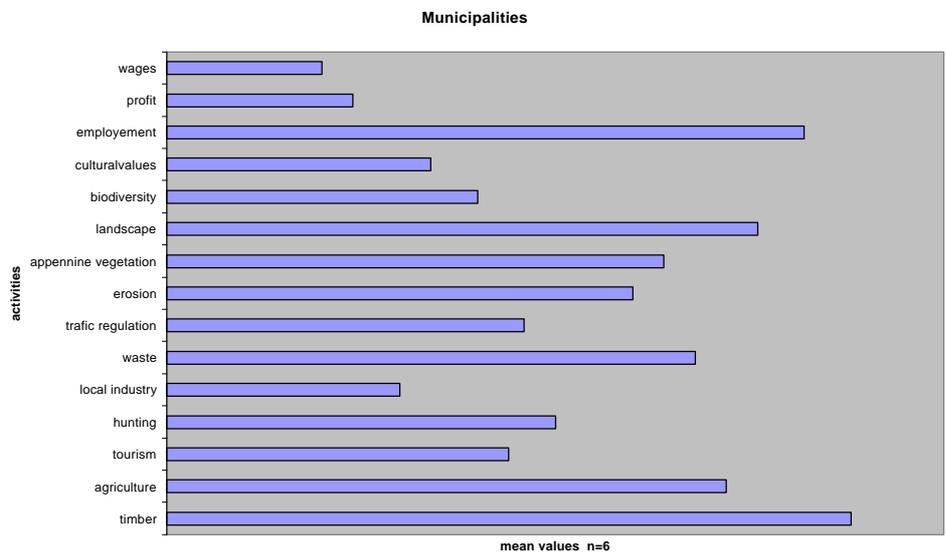


Fig.2

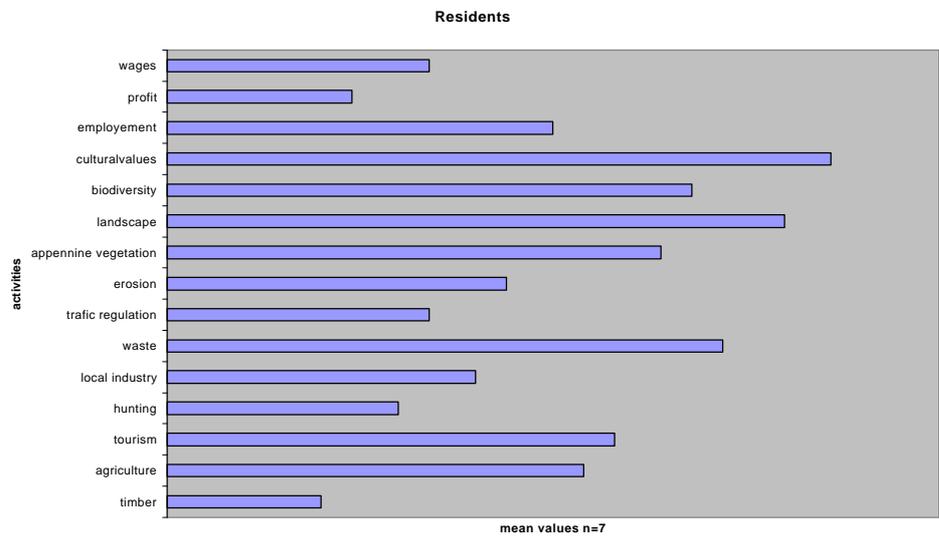
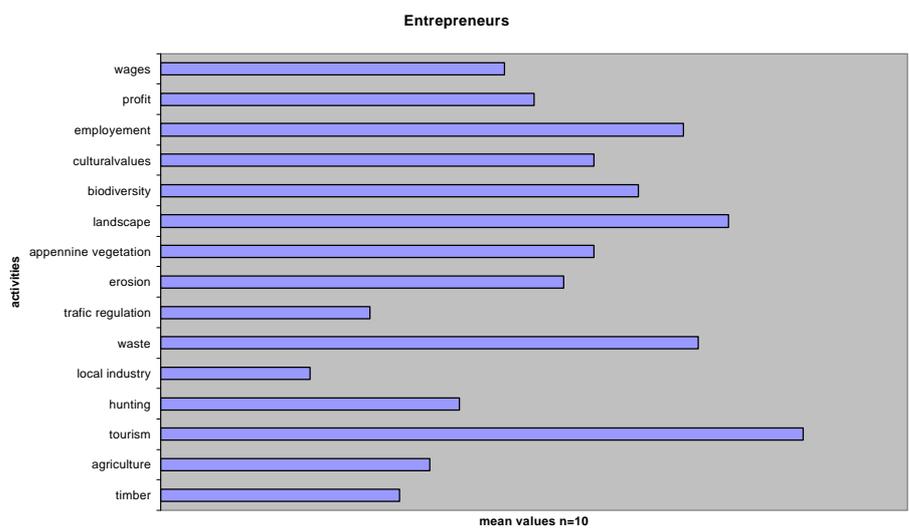


Fig.3

Fig.4



Figures 1 -4 show that there are no major disparities in stakeholders preferences. Most of the stakeholders indicated at least some of environmental indicators (erosion, appennine vegetation, landscape scenery) as being of very high importance, while NO was given to timber production, hunting or local industry. On the other hand, tourism represented the top economic interests over all groups. It was surprising, that there was an extremely low level of interest in the profit and the income of local communities by all groups. Especially for municipalities and residents it could be a great source of benefit. Nevertheless, there were some differences. First of all the indicator cultural values was given high importance by most of the groups (the highest by residents) received lowest value from representatives of municipalities. On the other hand the same group valued timber and agriculture higher compare to the other groups. The whole group of the Aspromonte National Park respondents valued selected effects /activities in the following order (from the top down):

cultural values → *landscape scenery* → *tourism* → *appennine vegetation*
employment → *biodiversity* → *erosion* → *agriculture* → *traffic regulation*
 → *hunting* → *wages* → *economic profit* → *timber* → *local industry*.

3.2.2. Scenarios for future development.

All together 52 individuals were asked to express their opinion on scenarios for future development. The refusals amounted to 19.8%. By groups the lowest was observed in the municipality (0%), the highest in residents (50%). The most frequent reason was lack of time. The results in total and by stakeholder groups are shown in the table below.

Table 1 Scenarios- of Future Development of the Aspromonte National Park in Calabria Region - Stakeholders Preferences

<i>Group</i>	<i>Total</i>	<i>Refusal</i>	<i>A0</i>	<i>A1</i>	<i>A2</i>	<i>Combination</i>
<i>Residents</i>	<i>14</i>	<i>7</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>3</i>
<i>Municipalities</i>	<i>6</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>5</i>
<i>Entrepreneurs</i>	<i>12</i>	<i>2</i>	<i>0</i>	<i>5</i>	<i>0</i>	<i>5</i>
<i>Visitors</i>	<i>20</i>	<i>1</i>	<i>0</i>	<i>16</i>	<i>1</i>	<i>2</i>
<i>Total</i>	<i>52</i>	<i>10</i>	<i>0</i>	<i>26</i>	<i>1</i>	<i>15</i>

* Respondents were allowed to combine a particular point from any scenario or to add new idea in order to design the scenario that would fit into the respondent's view.

The majority of respondents gave priority to scenario A1 (50%), development based on sustainability. Several respondents proposed a combination of scenarios (29%), in most cases associated with the decision making described in point 1 of each scenario. As seen from the table above the most creative in this context were entrepreneurs and municipalities. From a total number of 15 modifications, 14 respondents indicated that decision making should not ever be under the responsibility of national park service but rather under the municipality or state administration - (13) or shared together with National park service (1). A few other changes were emphasised in order to demonstrate interests in future orientation towards tourism with respect to sustainable development. One respondent proposed exclusion of individual transport to be included into scenario A1.

4. Discussion and Conclusions

4.1. Contingent valuation

The respondents of the survey showed high willingness to pay for nature conservation in the park (zero non response rate) and that there is positive shift in the way of thinking and environmental awareness of the citizens. The survey also showed that the face to face interview, with direct open WTP question is an effective survey method for the conditions found. In economies in transition on average local respondents were more aware of the park values although their estimates often referred to investment costs. This is probably due to the fact, that they are more informed with respect to the present situation and more aware of the fact, that their future directly depends on present development. A relatively high difference was measured between visitor's and local community WTP estimates. The difference can be explained by the fact that WTP for Aspromonte National Park is most likely the function of individual's preferences and experience rather than respondent's personal characteristics, income level or other characteristics. In this context visitors bids reflect their interests in natural assets, recreation, residents and other local stakeholders bids were investment oriented and therefore much higher than bids of visitors.

From all possible biases only information bias was significantly present. Several visitors had a tendency to interpret WTP as a challenge to propose an entrance fee to the park and some local stakeholders as possible investment to the environmental services in order to increase their use value. However several misunderstandings have been observed. The most common was respondent's low trust in the public financing, e.g. very frequent misuse of public collections, charities and other forms of public funds.

4.2. Positional analysis

The results given in the matrix of effects/activities showed that there are no major discrepancies across the stakeholders groups. Most of the respondents values selected Indicators in a very similar way. The general link is that cultural resources, most of environmental indicators, tourism and employment are the highest of importance across all stakeholder groups. On the other hand local industry, timber production, hunting, wages and economic profit of local community were of lowest importance. The fact that respondents valued lower economic profit and wages for the local community clearly indicate that they are not fully aware of the link between financial resources generated from profit, social welfare given by wage rate and possibilities to improve local development, nature protection included and or that the co-operation between profit generators and local stakeholders is not satisfactory.

In a part of the scenarios respondents clearly declared preferences for the development scenario that would secure a sustainable future. No one chose the non action scenario and only one response was targeted at the nature conservation oriented scenario. At the same time the majority of respondents were not satisfied with the description of the scenarios, they rather preferred a combination of at least two scenarios. Among the three main ideas that were followed in the development scenarios e.g. decision making, negative impacts to the environment and future economic development, the first Is seen to be most crucial for the majority of respondents.

4.3 General concluding comments

Most of the respondents do not wish NPS to be a major decision maker, many think that they should not participate at all. Face to face interviews disclosed that, there is general opinion to associate most of the restrictive and unpopular regulations In the park with the N'PS under the present decision making pattern they only serve as the advisory body to the state administration. This is probably due to the fact, that even with very limited competence in decision making NPS is very active in local conflicts related to the illegal construction or small violations of the nature protection law. On the other hand they do not provide sufficient environmental education and widely accessible information about the parks importance and benefits nor do they have enough power to stop bigger and more harmful activities. This leads to the situation that generally the park administration has very low respect across the region and some opinions are that there is no need for a national park. It is very difficult to sustain the present system of park management provided exclusively by NPS and oriented to

strict protection. The budgetary resources allocated for such management are insufficient to do the job.

The NPS will have to change its approach to the management from strict conservation towards modern management based on programs for protection that would follow research arguments as well as realistic economic dimension and that would be able to attract local stakeholders, in order to involve them into the planning process as both actors and fund raisers. Presently local investors are not very flexible and innovative in creating new visitors services. Visitors in the questions related to the spending per day in the park circled *either* no money spent for entertainment or the lowest bid. It is very likely that they would spend more, if they had enough variety of spending possibilities in the region.

The study also showed, that the problem is rather in effective communication and information exchange between „nature conservationists" on one side and „developers" on the other side.

Without constructive and continuous communication, the most powerful stakeholders are trying to impose their own interests in the power game and thus main orientation of their policies is often changed in the opposite direction just in order to maintain control of the conflict. In such a scenario individuals e.g. residents, visitors, etc. are left „outside" unless one side provides them with enough information in order to make them support their position in the conflict.

The study also showed that the value of the park indicated by various stakeholders (not only mean WTP) is a clear signal to decision makers to develop a pattern for efficient management practice. Respondents opinions showed that environmental indicators e.g. landscape scenery, biodiversity, alpine zone etc. have preferences for future development. In addition, tourism based on sustainable development was selected by majority of stakeholders as most preferable economic activity. The fact that visitors, as the only source of income for tourism, are coming to the region because of the park, gives protection of the park economic sense.

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APPENDIXES:

1. Scenarios of future development

The idea of this section is to identify the preferences and interests of different stakeholders groups. Please read carefully description of possible scenarios for future development and try to answer the following questions.

SCENARIO-A0 NON ACTION;

Current uses would continue without any change in decision making, management and nature conservation practices. Development would follow:

1. *The National Park Service would remain in its current capacity of primarily being an advisory and consulting body.*
2. *Tourist trails would stay without any protection. Neither visitors carrying capacity regulation nor guided tours or interpretations would be carried by NPS. Soil erosion, degradation of vegetation and wildlife would continue.*
3. *Present economic activities (timber, agriculture, others) would continue without any control.*

SCENARIO - A1

No major changes in decision making process, concept of sustainable tourism would be implemented. Changes in following areas:

1. *The National Park Service would be given direct decision making competence in resource management, trails management, fees and fines for nature conservation.*
2. *Visitation based on carrying capacity plan, emphasis would be made on: guided tours provided by NPS. Several most damaged tourist trails would be regularly or temporally closed to the public.*
3. *Economic development would only focus on tourism with emphasis on the quality of existing and developing missing services (sport, entertainment, restaurants, etc.).*
4. *New lodging to be moved out of the territory of the NP, focus on agri tourism and traditional Calabrie culture, architecture and way of life. In order to support local economy and development. This would also create several new job opportunities in the region..*

SCENARIO - A2

Management change towards strict nature protection:

1. **The whole territory** of the National Park under the responsibility and authority of the National Park Service.
2. *Park would primarily focus on educational activities organised at the Visitors centre.*
3. Visitation based on guided tours, individual visitation would be limited to the visitors centre and selected areas. Private and commercial vehicles would be excluded from the park. *Lodging and other services strictly restricted.*
4. *Economy restricted to tourism based on visitors carrying capacity.*

2. Matrix of physical effects

1. Which from the development scenario would you prefer and why?

2. Could you please rate on scale from 1 to 15 your personal opinion about future need (importance) of the following effects /activities in order to secure positive development of the Aspromonte National Park?

Scale **1 -15**

1 = least important; **15** = **the** most important

USE EACH NUMERIC VALUE JUST ONCE PLEASE and fill your answers to the table bellow.

Effect/activities	rating 1 - 15
Timber production	
Agriculture production	
Hunting	
Tourism	
Local industry	
Waste minimalisation	
Traffic regulation	
Soil erosion protection	
Appennine vegetation protection	
Landscape scenery	
Biodiversity (wildlife)	
Cultural and folklore resources	
Employment	
Economic profit	
Wage grow	

3. Questionnaire for visitors

Dear Visitor of the Aspromonte National Park, Please circle one option or write your answer in the space provided.
Your participation is very important, it should only take few minutes and your responses will be kept confidential.

From where have you travelled (please specify also city or county)

Is Aspromonte National Park the main destination of your trip? Yes No

not list other destinations of your trip, that you have already visited.....

and/or will visit afterwards.....

What kind of transport did you use to come here?

car how many persons in one car

regular scheduled bus c: organised bus tour

train e: other, please specify

Could you please estimate the costs you incurred in travelling to the park?

Please indicate clearly the currency that you have used for estimation

Do you think that the priority should be given to the nature protection of the park compared with economic benefit?

Do you think that there has been enough progress in nature protection of the park so far?

Do you think that it is possible to generate economic profit and to maintain environmental protection at the same time?

If present management practices in the park were to continue, how would you describe the future of the park?

Such a scenario would seriously reduce the attractiveness of the region.

Attractiveness of the region would not be damaged

I do not know.

Would you be willing to pay a certain amount of money, if it would be used to improve nature protection and park management?

If your answer to the previous question was YES, Would you agree to allocate the money to: (choose one only please)

build a proper trail system

improve the information system, education and interpretations

other purposes, please specify it.....

If your answer to the previous question was NO, why are you not willing to pay for preservation?

