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Protected areas as a chance for the local development. The National Park of "Aigüestortes i Estany de Sant Maurici" as a dynamising element in its area of influence.

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Abstract: Recent times, many countries influenced by its citizens had followed a strategy of create natural or national parks. The overriding motive appears to be the preservation of a recognisable unique area of natural wealth. Nevertheless, recent years have seen a rising demand for wildlife viewing. In this sense, the demand of outdoors recreation in general and wildlife viewing in particular has grown rapidly. The problem is that too many visitors imply that the wilderness aspect of the recreational experience is watered down and second it affects the wildlife itself. The set of problems facing protected areas management has to do with the possibility of harmonising aims; preservation and recreational use. Generally, protected areas are settled on economically slum areas with high ageing rate, with important process of rural depopulation and under-staffed in terms of equipment, services and infrastructures. In this respect, a proper management of these natural areas could imply an economic and social revitalisation of such regions. This paper analyses the social and economic impact of the National Park of *Aigüestortes i Estany de Sant Maurici* on its influence zone. The Park is located in Catalonia in the heart of the Pyrenees and it's the most genuine representation of mountainous area.

Protected areas as a chance for the local development. The National Park of *Aigüestortes i Estany de Sant Maurici* as a dynamising element in its area of influence.

1.- Introduction

In the last years and in a relatively short period of time, a series of changes in the processes of production and consumption have been taking place; these processes have caused intense transformations in the environment. Protected Natural Areas started to appear towards the ends of the last century in the USA in order to protect specific territorial areas from this intense process of environmental transformation. Spain was one of the pioneering countries in this politics of protecting the natural environment. The first natural areas to be protected, as such, date back to 1918¹.

The aim of this protection is to generate a sustained flow of goods and services that allows the basic functions that these areas carry out to develop appropriately. The aim is none other than to guarantee the maximum level of welfare to the population and, at the same time, maintain and increase the productive capacity and the quality of the environment. The aim is, thus, to make it possible for equilibrium between the uses, the exploitation and the enjoyment of the territory and its natural resources to be reached that is compatible with its preservation.

The conceptual idea of these protected areas has evolved rapidly. From a merely aesthetic-cultural focus, there has been a shift towards the assumption of other diverse finalities. Today, the multifunctionality of these areas is openly acknowledged. These are functions that imply great commercial, educational, cultural and recreational benefits for the whole community.

The first function that these protected areas carry out is the *productive* function. From the exploitation of the natural resources contained within (wood, fauna, fish, pastures, etc.), the protected areas contribute to the processes of production and consumption. Most of these natural areas contain renewable resources, and that has brought the necessity to make sure that these resources are used in a sustainable way, and that the right agricultural and forest techniques are employed (i.e. those which are compatible with the preservation of the environment). It must be borne in mind, though, that

depending on the degree of protection applied in each particular area, the exploitation of these resources might be either totally banned or severely limited and, as a consequence, this first function is, at the end of the day, practically non-existent.

Together with this productive function, the natural areas also contribute to increasing one's quality of life, since they offer the individual the possibility of enjoying nature both in an educative and in a recreational way. This *recreational value* has become more and more relevant of late. The declaration of an area as a protected natural site itself has intensified the number of visitors, and this has meant that the areas have increased its value as a destination and an attraction to tourists (Carceller, 1986; Cals, 1989). To some extent, this touristic pressure some areas are subject to becomes a big obstacle to achieving the main aim of conservation and protection.

The recreational use of these natural protected areas directly benefits a certain group of people, while at the same time damages other groups' interests. Amongst those who are benefited we would include the visitors, mostly from urban areas. Amongst those negatively affected we would find the local communities that live in the inner regions or near the parks. On many occasions these people are small farmers living in economically deprived areas, to whom the protection of natural areas translated into a series of limitations and restrictions to their traditional activities.

In this sense, and regardless of the money that visitors might bring into the equation, it is necessary to start distributive measures that, through compensations, contribute to making the affected rural communities more prosper. These mechanisms of compensation should go beyond mere technical and financial aid (creation and improvement of infrastructures (such as roads), rehabilitation of rural housing, water drainage), already contemplated in the legislation, Rather than financial techniques via public expenditure, these should be made to go via public income. Thus, fiscal measures such as tax exemption or tax reductions, rent compensations for the economic losses derived from restrictions in exploiting the natural resources (imposed by the declaration of an area as a protected area), or even sharing the direct benefits of this new protected area with these people who have been negatively affected.

Some measures must be taken to equilibrate the rent transfers that the specific protection of a certain area normally implies. Otherwise, the local population might regard this factor as an element that distorts both their activities and their way of life, rather than an element that contributes to the *socio-economic development of the area of influence*. The chance that protecting natural areas offers of promoting the local economy, of becoming a dynamiting element is, precisely, another function which is normally attributed to them. An efficient management of these areas makes it possible to recover and revitalise areas, that, on many occasions, have very weak economies, depend too much on the primary sector, and have high levels of aging of the population, with marked processes of depopulation and lacking in facilities and infrastructures.

Another function these protected areas carry out is the function derived from its high *educative value*. Firstly, because through these protected areas citizens can become aware and sensitised regarding the importance and preserving and protecting natural areas. And secondly, because it contributes to research and to the obtention of scientific knowledge. The last function to be considered, although probably the most important to the society as a whole, is the *regulating function*. Through the protection of ecosystems and the preservation of their genetic patrimony, the protected areas maintain the biological equilibrium that provide several indirect services, such as maintaining biodiversity, preserving the genetic richness, controlling floods and soil erosion, preserving the purity of the air and the water, regulating the climate and so on. All these ecological services provided by these areas are necessary for the well being of society. As a matter of fact, this biological and regulating element of natural areas is responsible for the preservation of life on our planet.

2.- The National Park of Aigüestortes and Estany de Sant Maurici.

The National Park of *Aigüestortes i Estany de Sant Maurici* is located in the most western side of the Catalan Pyrenees, between the areas of the counties of Pallars Sobirà and Alta Ribagorça. The overall surface of the Park (40.852 ha.) is distributed between four Pyrenean counties, all of them having a rich natural, cultural and architectonic patrimony: Pallars Sobirà, Alta Ribagorça, Pallars Jussà and Val d'Aran. From this extension, 14.119 ha. belong to the National Park properly itself, divided into the two sectors mentioned above.

The reclassification law 7/1988 expressly forbids any type of natural resources exploitation inside the Park which might cause any alteration of its ecological, geomorphological and landscape entity. Nevertheless, it excludes the traditional and agrarian practices already existent, as for example water use and scientific, educational and leisure activities.

The rest of extension of the Park makes up what is called the *peripheral area of protection*, which comprises 26.733 ha. This area forms a continuous circle around the Park with the aim of softening the possible ecological and landscape impact originating outside the Park; it also guarantees full protection of the different resources which have given sense to the establishment of the Park. In this area only traditional use and exploitation activities are allowed when they are compatible with the aim of protecting and preserving the natural environmentⁱⁱ.

In order to compensate rural communities for the different restrictions in traditional activities associated to the declaration of natural protected area affecting the Park, the reclassification laws for natural parks create the *areas of influence* with the aim of fostering their socio-economic development through the promotion of traditional activities compatible with the aim of preserving the Park. At the same time, these laws try to integrate inhabitants in general activities generated by the Park, thus contributing to protecting culture, traditions and the demographic level. The extension of these areas of influence of the National Park of Aigüestortes and Estany de Sant Maurici is 141.132 ha. and encompasses all the villages of the peripheral area of protection. Table 1 shows the distribution of the surface of the Park by counties and their contribution to the protected area.

Table 1.- Surface of the Park by counties

County	National Park (ha.)	Contribution to the park	Park distribution by county
Val d'Aran	6.543	10,54%	16%
Pallars Jussà	4.220	3,27%	10,3%
Pallars Sobirà	14.093	10,40%	34,5%
Alta Ribagorça	15.996	37,47%	39,2%

Source: Elaborated by the authors.

3.- Socio-economic characteristics of the counties around the National Park.

3.1.- The evolution of the population.

The surface area occupied by these counties is of 3.692,3 km², a 1,15% of the whole of Catalonia. In the year 2000, the population of this area was of 29.883 inhabitants, which meant just a 0,48% of the total of the Catalan population. The most extensive of these counties is Pallars Sobirà, and the most populated Pallars Jussà. Alta Ribagorça would be on the other side of the spectrum. Thus, a common characteristic of this area is the low-density rate, 8,1 inhabitants per km², significantly lower than the density rate of the whole of Catalonia, which was 19,6 inhab/km².

The tendency of the population of these counties has been a clear decrease in number of inhabitants between the 60s and beginnings of the 90s. The 90s, though, have witnessed a process of recovery of the population. The data of table 1 reflects, in absolute terms, this tendency. From 43.576 inhabitants in 1960, there is a clear decrease to 27.976 in 1991, but it later goes up to 29.883 inhabitants in the year 2000.

If we are to look at the weight of these counties in relation to the whole of Catalonia, we could see how this weight has also reduced. In the year 1960 they meant a 1,11% of the Catalan population, whereas in the year 1986 they just meant a 0,48% (this percentage has kept stable to the present date). The only county to have registered a positive move between the year 1960 and 2000 has been the Val d'Aran (0,4%), even though its growth has been less important than the average growth of Catalonia (1,2%). It is worth nothing, though, that the increase in population in this county in the last two decades has been greater than that of the other counties and greater than the average increase of the total of the Catalan population.

On the other hand, the county with a greater loss in population is Alta Ribagorça (-1,6%), since the two Pallars (the remaining two counties) suffered a high rate of emigration in the 50s, when many inhabitants of this county moved to the Alta Ribagorça, where a job could easily be found in the electrical sector. In the last 10 years, the Alta Ribagorça has gone through a process of slight recovery as regards number of inhabitants.

Table 1. Evolution of the population. 1960 – 2000.

Counties	1960	1970	1975	1981	1986	1991	1996	2000
Alta Ribagorça	6.826	4.846	5.013	4.549	3.626	3.514	3.542	3.612
Pallars Jussà	19.985	16.450	14.908	14.219	13.817	12.860	12.817	12.442
Pallars Sobirà	10.240	8.000	5.762	5.450	5.464	5.418	5.815	6.050
Val d'Aran	6.525	4.914	5.285	5.808	6.034	6.184	7.130	7.779
Total Counties	43.576	34.210	30.968	30.026	28.941	27.976	29.304	29.883
Catalonia	3925779	5107606	5658563	5956414	5978629	6059494	6090040	6261999
Total counties/ /Catalonia	1,11	0,67	0,55	0,50	0,48	0,46	0,48	0,48

Source: Taken from data available from INE, *Censos de Población, 1900-1991* and IDESCAT .

Another distinctive element of these counties is the rate of growth of people over 65 years old, which is higher than the rate in the whole of Catalonia. Thus, the ageing rateⁱⁱⁱ of these counties has moved up from a 16,8%, in 1981, to a 22,8% in 1996, six percentage points over the Catalan average (11,0% and 16,3%). Another index that complements this one is the relationship of old age^{iv}. In this sense, and as table 2 shows, the results obtained in the four counties from 1981 to 1996, has been one of continued growth and always above the rate corresponding to the whole of Catalonia.

It is clearly observable that the process of inversion of the pyramid of ages is much more accused in these counties than in the rest of Catalonia. Except for the Val d'Aran, where the rate is 0,83, the remaining counties are characterised by the fact that the amount of people over 65 years old is higher than the amount of infants. From all this, it can be concluded that one of the most outstanding characteristics of the counties Alta Ribagorça, Pallars Jussà and Pallars Sobirà is the loss and the ageing of their population, whereas the other county (La Val d'Aran) has followed a different tendency.

Table 2. Ageing rate and relationship of old age.

Counties	Ageing rate			Relationship of old age		
	1981	1991	1996	1981	1991	1996
Alta Ribagorça	10,0	18,2	21,5	0,415	1,238	1,641
Pallars Jussà	20,4	26,3	27,2	1,275	1,992	2,248
Pallars Sobirà	18,8	24,0	24,5	1,221	1,846	2,025
Val d'Aran	11,3	14,4	14,2	0,502	0,746	0,830
Total Counties	16,8	22,2	22,8	0,913	1,511	1,698
Catalonia	11,0	14,3	16,3	0,442	0,803	1,109

Source: Drawn from data taken from IDESCAT.

3.2.- Economic evolution.

The second half of the 90s witnessed a continued growth of the Spanish economy while the foundations for the creation of the common currency were being established. The growth rhythm of the GDP between the years 1995 - 2001 corresponding to Catalonia (3,44%), and to the four counties (2,68%) was lower to the one corresponding to the register for the Spanish economy (3,63%) in the same period of time.

An analysis of the period 1995 – 2001 of the Catalan counties shows that three of the four counties that fall within the area of influence of the National Park are in the group of the ten less dynamic counties of Catalonia. Thus, Alta Ribagorça with a GDP growth of just 1,54% would be last, Pallars Sobirà with 2,46%, the third position coming from behind and Val d'Aran with a GDP growth of 2,51% would have the fourth position. Pallars Jussà would come closer to the Catalan average rate, with an accumulated growth of 21,38 points since 1995, registering a variation rate of 3,28% similar to the Catalan average, 3,44%.

From table 3 it can be established that in 1995 the participation in the Catalan GDP of these mountain counties was of 0,73%; six years later, this percentage has hardly changed - 0,7%. It is clear, then, that there is a decrease until 1998, it recovers in 1999, and it holds for the year 2000, but it never goes back to the registers obtained in 1995. The analysis of this evolution for each county shows that, with the exception of Pallars Jussà, which is the only one to keep its proportion in the Catalan GDP, the other three have lost in relation to the whole of Catalonia, although the losses are not terribly significant.

Table 3. Evolution of the county GDP in relation to the Catalan GDP. 1995-2001.

Counties	1995	1996	1997	1998	1999	2000	2001	Variation rate
Alta Ribagorça	0,09	0,09	0,09	0,08	0,08	0,08	0,08	44,71
Pallars Jussà	0,27	0,27	0,27	0,26	0,27	0,27	0,27	95,39
Pallars Sobirà	0,14	0,14	0,13	0,13	0,13	0,13	0,13	71,59
Val d'Aran	0,23	0,23	0,22	0,22	0,21	0,22	0,22	73,05
Total counties	0,73	0,73	0,71	0,68	0,69	0,70	0,70	77,89
CATALONIA	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00

Source: 'Caixa de Catalunya' 2000, 2001 and elaborated by the authors.

The analysis of the evolution and the weight of the GDP across sectors allow us to determine some of the productive characteristics of these counties. First of all, it is to be found that the service sector is the most important – this is also true for Catalonia as a whole. However, the weight of this sector in the GDP of these counties is lesser than the weight in the Catalan average, with the exception of Val d’Aran. This is due to the fact that Val d’Aran is a county with an extremely consolidated tourist sector that positively influences the hotel activity, trade and repairs and real-estate services and with a public administration with a certain degree of dynamism. The second most important sector in these counties is the industrial sector. Two counties are to be highlighted: Alta Ribagorça and Pallars Jussà. With a percentage higher than the Catalan average, this can be accounted for by the presence in the area of companies linked to the sector of energy, water and extraction. The third sector in importance is the building sector, and the percentages found here are much higher than the Catalan average (sometimes twice as much). This can also be easily accounted for; the expansion of the building of suburban areas due to the good state of being of mountain tourism. The sector that contributes less to the county GDP is the agricultural sector. The four counties have suffered a decrease in the weight of this sector in their overall economy and the losses have been greater than the losses in the Catalan average. The case of the two Pallars is remarkable, in that they have witnessed a seven point decrease in this sector, that has translated into an increase in the building sector.

Table 4. Percentage distribution of the GDP across sectors in the different counties.

Counties	1990				2001			
	Agriculture	Industry	Building	Services	Agriculture	Industry	Building	Services
Alta Ribagorça	5,6	41,3	12,6	40,6	2,1	40,9	12,7	44,2
Pallars Jussà	11,4	32,2	11,1	45,3	4,1	36,7	19,4	39,7
Pallars Sobirà	13,0	26,3	10,8	49,8	4,6	28,7	18,1	48,6
Val d'Aran	2,3	24,6	10,5	62,6	0,9	26,3	11,8	61,0
Catalonia	2,1	34,1	8,1	55,8	1,7	31,3	7,2	59,8

Source: Drawn from data taken from ‘Catalunya Comarcal, 1994 i 2001’.

An analysis of the growth of the GDP of the different counties across sectors makes it possible for us to deepen in the understanding of the dynamism of the different economic sectors. Table 5 shows the very different behaviour of the sectors. Thus, in the 1996-98 period, the agricultural sector shows growth rhythm lower than the Catalan average, except from Pallars Jussà, with a rate of 7,4%. This unequal behaviour in relation to the neighbouring counties can be explained from the different concentration of primary

production, with a more salient role for grain and pigs, both of which went through a more positive trend in this period than sheep and bovine, which are the speciality of the other counties.

In the period 1998-2000, Catalonia had a growth rate of 0,4% while in these counties there is either a maintenance (Val d'Aran) or a negative trend. The downturn of the sector sharpens in the period 2000-2001, mostly in Pallars Jussà with a minus rate (-11,5%) well above the Catalan average. This reduction in the activity of the primary sector derives, above all, from the losses of the cattle sector, brought about by the losses in the bovine, sheep, pig and in milk production. The downturn could have been even greater had it not been for the good behaviour of the forest sub-sector, with a main role in the primary sector^v.

Occupation in the agricultural sector has registered a decrease of 9 percentage points between 1981 and 1996, although it remains (11,1%) high above the Catalan average (3,65%). The two Pallars are the two counties with better occupational percentages (above 15%), whereas Val d'Aran, on the other side of the spectrum, has a mere 2,2%.

The industrial sector has obtained a growth rate below the Catalan average during the period 1996-2000. However, a positive and dynamic trend of growth above the Catalan average has been observed in the last year. The "Informe Comarcal de Catalunya" (report of the Catalan counties) of 2001 shows that the counties of the mountain area around Lleida represent the third pull of industrial growth of Catalonia. Its most remarkable characteristic is its high level of specialisation in energy production together with a certain degree of specialisation in the manufacturing of food or in the treatment of water and its recycling. The reason for the good behaviour of the evolution of the industrial GDP can be found in the increase of other sub-sectors such as the energy, water and extraction ones. They concentrate an 80 % of the total industrial production of these counties^{vi}, whereas they only account for an 11,3 % in the average for the whole of Catalonia. The second industrial sub-sector in importance is that of food, drinks and tobacco, that accounts for a 2,8 % (Alta Ribagorça) and 6 % (Pallars Jussà) of the industrial production, quite below the Catalan average, which is a 10,8 %. The third industrial group includes electrical, electronic and optical equipment, and its percentages

vary from a 2,1 % for Val d'Aran to a 4,9 % corresponding to Alta Ribagorça. Here, again, their rates are lower than the Catalan average, which is 7,9%.

The occupation in the industrial sector has kept with very low percentages in relation to the Catalan average, sometimes with rates lower than half of this average, showing a process of decrease as that of Ribagorça (from a 26% of the total population employed in 1986 to a 17,4% in 1996) and Pallars Jussà (from a 21,1% to a 18,4%, from 1986 to 1996). The other two counties have kept stable percentages, if low (around 13 % of the population has an occupation).

The building sector is a key sector for the economic dynamism of these counties, even if it has not reached the registers for the whole of Catalonia. Pallars Jussà and Pallars Sobirà are responsible for this evolution, with the building and refurbishing of suburban housing. Val d'Aran and Alta Ribagorça, however, show a slowing down in building (both suburban and non-suburban) and a deceleration in public works. An index that tells us much about the building of houses is the amount received as tax on properties. The evolution of this index for each county shows an increase in the weight of these four counties in the total amount received as tax on properties in relation to the whole of Catalonia; from a 0,79 % in 1991 to 1 1,05 % in 1999. Pallars Jussà (from a 0,26% to a 0,35%) and Val d'Aran (from a 0,30% to a 0,36%) should get special mention.

This marked dynamism of the building sector has translated into an increase of employment. Thus, the counties of the area of influence of the National Park have always had percentages clearly above the Catalan average and Pallars Jussà and Val d'Aran in particular have witnessed during the last ten years a spectacular increase. Val d'Aran's employment rate in 1986 was 9,8% but 14,0% in 1996 (twice as much as the Catalan average). Pallars Sobirà, with a slightly slower rhythm went from 11,4% to 12,7%, in the same period of time.

The service sector has also registered positive growth rates in all the counties, although lower than the Catalan average, except for Val d'Aran and Pallars Sobirà, where there has been a growth of the GDP of this sector higher than that of the Catalan average in the last period. This remarkable dynamism of the service sector is due to the increase in tourist activity related to hostelling and building companies, trade and repairs,

entrepreneurial services and the public sector. The most important branches of the service sector in these counties are: hotel management, public administration, state and private education and trade and repairs. The three of them account for a 75% of the total production of the service sector^{vii}. Another piece of data to be highlighted is that in Alta Ribagorça, Pallars Jussà and Val d'Aran, the weight of the hotel management in the GAV (Gross Added Value) is three times its weight in the Catalan average (11,9 %).

In terms of occupation, the service sector is the one that accounts for most of the jobs of the area. In 1996, Val d'Aran had a 71,0% of the total occupation in this sector, Alta Ribagorça a 58,6%, Pallars Sobirà a 59,2% and Pallars Jussà a 55,9%. The first three are above the Catalan average, 57,7 %. Also between 1986 and 1996, this has been the sector that has suffered the greatest variation. While in Catalonia the variation in the rise has been of 12,1 percentage points, in Alta Ribagorça it was of 24,0 p.p., in Pallars Sobirà of 22,2 p.p, and in Pallars Jussà of 16,3 p.p. These data makes it clear that these counties are in a process of tertiarisation of their economy. Val d'Aran in this period has not increased so much (4.5 p.p.), but this is because this process of specialisation took place there during the 80s.

Table 3. County GDP growth across sectors, 1996 - 2000
Real average rate of interannual variation in each period in %

Counties	GDP (primary)			GDP (industry)		
	1996-1998	1998-2000	2000-2001	1996-1998	1998-2000	2000-2001
Alta Ribagorça	1,9	-1,8	-3,0	-0,8	2,8	2,0
Pallars Jussà	7,4	-0,8	-11,5	1,8	2,7	2,2
Pallars Sobirà	0,6	-1,1	-4,1	-0,1	2,8	2,5
Val d'Aran	2,1	0,0	-3,4	0,9	2,8	2,3
CATALONIA	5,7	0,4	-7,5	4,0	4,4	1,4
Counties	GDP (building)			GDP (services)		
	1996-1998	1998-2000	2000-2001	1996-1998	1998-2000	2000-2001
Alta Ribagorça	0,3	6,9	1,9	1,7	2,6	3,1
Pallars Jussà	0,2	3,4	4,3	2,2	2,4	2,1
Pallars Sobirà	0,8	4,5	5,8	1,4	3,2	3,5
Val d'Aran	1,2	3,8	3,3	2,2	3,4	3,4
CATALONIA	3,6	7,4	3,3	3,1	3,3	3,3

Source: Self-drawn taken data from the Catalunya Comarcal, Caixa Catalunya 2000, 2001.

4.- Analysis of the socio-economic effects of the National Park.

The National Park is embedded in an area with specific socio-economic characteristics, which have been described above. In this sense, and as pointed out in the first section above, the National Park fulfils a number of functions, amongst them, contributing to the socio-economic development of the area of influence. This first function carries out a series of requests posited, for the most part, by the local population.

It could be said that the local population did not welcome the declaration of the National Park of *Aigüestortes i Estany de Sant Maurici* as a protected area. Owners of land inside the Park, hunters, fishermen were social agents that showed a markedly reluctant attitude. The limitations and prohibitions, together with the effects this had upon the growth of other activities (such as those of real-estate agencies or ski resorts) originated confronted positions. The population was neither consulted nor indemnified, and this occasioned a refusal and an opposition to the creation of the Park, and caused furtive activities, mostly in the area of Espot.

There has been a change of late, in the attitude towards the National Park. A portion of the population is aware of the advantages that it has brought along and that can bring along in the future. There is, thus, a positive attitude towards the new possibilities that the Park offers, as an element in the development of the local economy. This change of attitude, it must be pointed out, has manifested in those who have benefited from the very existence of the Park, or those who see in the Park a future business opportunity (taxi drivers, hotel managers, tradesmen, real-estate agencies and so on).

There are two municipalities (Espot and la Vall de Boí), both with a natural entrance to the Park, that have most directly benefited from the existence of the Park. For the other municipalities of the area of influence, the impact has been less important and it has been probably limited to the hotel business and to trade.

The declaration of the area as Park meant that activities which were allowed in the past had to stop being carried out. These are for the most irrelevant activities in regard to the overall benefits or in relation to the effect they might have upon other economic activities. There are other activities such as those carried out by ski resorts, hydro

electrical power-stations or real-estate companies, which have not been made to stop, in spite of the fact that they are against the protectionist conception of National Parks, because of the huge benefits they obtain.

On the other hand, the existence of the Park has generated a growth or revitalization of other activities that could bring new resources to the economies of these municipalities. The Park has meant that a series of social agents, mostly residents of the area with different economic and social interests and with different demands, have appeared.

It's not always easy to reach consensus with so many different agents. Making the local economic development compatible with the preservation of the National Park has occasioned some conflicts between the Administration responsible for the management of the park and the different affected groups.

In this sense, the new *Pla Rector d'Ús i Gestió*, which is the new one for the next four years, will aim at establishing some mechanisms to maintain a close relation to the neighbouring communities.

Being able to establish what each one of these social agents interested in the park as a vitalising element of the area of influence, becomes, at times, a terribly complex process. It is always complicated to synthesize the collectivities that take part in this function. Even though, and taking into account the origins, the history and the current characteristics of the National Park, the main social agents to be considered are the following: a) the town halls, as representatives of the local population; b) social agents who, although not directly linked to the park, own part of their economic activity to the very existence of the park. Within this second group, we would find those who provide public transportation into the park, hotel managers, trades people, tourist companies and, to a lesser extent, real-estate agencies.

As regards the first group of agents (town halls with land located within the peripheral area of protection), the National Park has become an important resource for their socio-economic development and, somehow, a source of income for the inhabitants of these municipalities. The existence of this new resource implies the need for a change

of one's value system, attitudes and approaches to the new reality. The municipalities must be prepared and willing to accomplish this process of change.

From this perspective, the National Park is a factor that town halls should know how to take profit from. This change in attitude must go beyond a simple consideration of the park as a tourist attraction or a source of income that pays for the limitations that have been imposed by the administration. It is necessary to be able to acknowledge the park's economically profitable potentiality in contrast with a sustainable development which, at the same time, respects the environment.

The municipalities affected by the National Park are aware of the economic profitability which it directly or indirectly generates; therefore, there are interested in being part of the peripheral area, or of the area of influence. For this very reason some of them, such as the municipalities of Naut Aran or that of Vielha e Mijaran showed their willingness to create a new access to the park through Val d'Aran. Others, such as Vilaller, Torre de Cabdella, Sort, Rialp and Llavorsí, have recently asked for the enlargement of the boundaries of the park so that it reaches their municipalities.

Generally speaking, it might argue that the National Park has had an influence, although probably not with the desired intensity, on the socio-economic development of the area of influence. In the first place, it should be pointed out that the park is a guarantee of sustained tourist attraction in the long run. It is true that the peak in the flow of visitors is reached during the summer months (July and August); it then decreases during spring and autumn (except for the Easter break and long weekends). In the winter, the climatic conditions of the area (snow, frosts, avalanches and so on) make it difficult for people to gain access into the park. In this season the park is mostly visited by mountaineering people (mostly during the weekend), who practise alpine ski or climbing. Lately, the possibility of doing snow racket tours with a guide from the park has become an attraction that has increased the number of visitors during this season. Despite this, the repercussion on the overall number of visitors per year is still scarce. In this sense, then, it is important to take new measures aimed at changing the *seasonal* dependence of the tourist flow.

A second question to be borne in mind has to do with the potential of the park to create direct and indirect occupation. Although the park has obviously fostered the creation of employment for the local population, it is also true that its incidence has been relatively modest. Overall, the workers of the park are fewer than 40^{viii}.

The different tasks these workers are in charge of have to do with management, environmental education, surveillance, maintenance and information. As for indirect occupation, it is hard to make an evaluation of the repercussion of the park upon it. The existence of other tourist attractions in the area, such as the artistic patrimony, the landscape or the opening of ski resorts (Super-Espot in 1968 and Boí-Taüll in 1989) has also contributed to increasing hotel occupation and, therefore, to creating new jobs in this sector. At the same time, the offspring of new tourist companies has been very much linked to the increasing demand for adventure sports rather than to the existence of the park, although this has undoubtedly been a positive influence on tourist flows. Although the number of indirect jobs or the profits generated by the National Park cannot be easily quantified, it can be concluded that tourist attraction is a vector made up of diverse elements related to a territory and a period of the year, in which the park is one of the most influential elements.

A third aspect with which the park contributes to the development of the local economy is the increase of public investment that the area is receiving now and will certainly receive in the future. In relation to the investments carried out with the budget of the park itself, they have been basically addressed at facilitating basic services and facilities of an administrative, reception and information nature (access maintenance, building of the House of the Park, parking areas and so on). Apart from direct investment from the Park in the protected area, funds coming from regional and national administration (given to municipalities within the area of influence of the National Park) also contribute to improving the standard of living in rural areas. The aim of this funding is to compensate these towns and villages for the limitations established by the administration, at the same time that it tries to motivate them to have an active role in the management, protection and improvement of the natural resources. Some of these initiatives have been addressed to the urbanisation and paving of rural villages, to the water drainage and supply or the improvement and installation of public lighting in these areas. Funds have also been granted for

landscape rearrangement in recreational areas and for the refurbishment of public buildings. Other grants have been given for the building of a sport facility, the creation of mountain shelters or the installation of telephone lines.

One of the social agents most affected by the declaration of the National Park have been taxi drivers. Nowadays, two of the main entrances to park (at Sant Maurici and at Aigüestortes) cannot be accessed with private cars. From December 1993 visitors leave their cars in the parking areas located at the entrances and climb on foot, by bike or by taxi. The presence of this new activity has benefited the neighbours from Espot and Vall de Boí and, to a lesser extent, to neighbours from other villages in the area of influence which have the pertinent license. Taxi drivers undoubtedly value positively these restrictions on access. They give two main reasons; firstly, this measure has reduced the pressure to which the park was exposed due to the high number of visitors, and secondly, because it has created several jobs for the local population. All in all, and taking into the account the seasonal nature of the service, most taxi drivers combine this activity with other occupations, mainly cattle breeding and hotel related activities.

This measure has also made it possible to potentiate two main functions of the park: a) the socio-economic promotion of the local economy, in the sense that it has created a monopoly with the potential of creating new jobs and of generating income for the local population in charge of transportation services; and b) the reduction in smoke, lead or bromine emissions and of noise, the packaging of the land, and so on has had a positive influence on the preservation of the ecosystems and in carrying out the main function of the park, the regulatory one.

Finally, another group of people positively affected by the National Park has been that of shopkeepers, hotel managers and tourist companies. During the last century, the only people to walk the mountains and valleys were French, and (to a lesser degree) Catalan tourists. It was not until the 70s that an increase in the number of tourists took place; this made it possible for economy to go through a process of diversification^{ix}.

With the reduction suffered by the primary sector in view, tourism has become a very important and complementary activity for the traditional ones in the majority of

villages located around the National Park. The origins of this tourist exploitation are previous to the declaration of the National Park. Already towards the end of the XIX century there existed hotels with therapeutical and cultural orientations (the health resort of Caldes de Boí and the hotel Saurat in Espot).

Also, this incipient tourist development was pushed forward by the declaration of National Park in 1955. The improvement in the road network, the enlargement of services in public transportation and the generalisation in the use of cars contributed to increasing the number and ease of trips from the main urban areas to the Pyrenees. The opening of the ski resorts in the two villages with direct entrance to the park (Espot and Vall de Boí), and the declaration of Vall de Boí as Human Heritage (November 2000), has come to expand the already important tourist attraction^x. At the same time, the growing interest for adventure sports (rafting, hydro speed, descent of cliffs and so on) has consolidated the importance of this economic sector within the local economy^{xi}.

All in all, the National Park has undoubtedly been one of the key elements in the development of this new productive structure. The specificities of the landscape have generated a flow of visitors of more than 300.000 per year. The majority of visitors spend their holidays in the area, or maybe a long weekend, and generally stay overnight in a hotel, camping-site or rural hostel. Thus, the impact of the park, in this economic sector, is very important (Farré, 1998).

It is very difficult to determine which part of the spending made by the visitors in the Park is due to the very existence of the park or to other attractions offered by the valleys that surround it. Also, the evaluation criteria to be analysed are very diverse in nature. When the park is analysed as a vitalising factor for local economy, reference is being made to questions affecting life quality of the population and, consequently, it is difficult to quantify these questions or to translate them into economic terms. Thus, it is necessary to talk about: a) job creation; b) working stability; c) improvement of rural facilities and infrastructures (such as public lighting, water supply, sport and health facilities and so on.) and d) participation of local population, etc. The Park has contributed considerably (in a direct way or not) in all these aspects, although maybe not in the same degree as other protected areas. The fact that the Park entered the

National Network of Parks has meant a supplementary increase in its budget^{xii}, as well as the possibility to have access to state subsidies from social and economic agents belonging to the area of influence. There is no doubt as to the extent in which becoming part of the National Network has contributed (and will do so in the future) to strengthening the socio-economic promotion of the area.

5. Final considerations.

What can be concluded from the exposed above is that the counties that are in close relation to the National Park of *Aigüestortes i Estany de Sant Maurici*, and independently of the differences amongst them, especially as relates to Val d'Aran, have gone through a process of transformation of their productive activity. There has been, in this respect, a loss of importance of the agricultural sector while at the same time a pattern of economic growth has emerged from the strengthening of the building sector and of the service sector of mountain tourism.

Thus, one of the defining traits of these counties is the fact that they have adopted the tourist sector as a vitalising element of their economic activity. This implies a multiplying effect upon the activities related to hotel management and restaurant business, trade and repairs, spare-time activities, building of holiday houses or apartments and refurbishing of dwellings, real-estate services, extraction industry and so on.

Adopting this model, though, has a severe drawback in the dependency it creates with the tourist sector in the overall economic cycle. It means that the phase in the economic cycle in which the neighbouring economies are (i.e. those of the countries where the tourists come from), will influence, for better or worse, the activities that are articulated in relation to this tourism. In an expansive phase, there is a marked increase in the number of tourists, but in recession the first consumption activity to be abandoned is obviously this one. It is clear that the National Park has contributed to increasing the number of visitors of these counties in widening the tourist diversity that they offer, and more so the most directly affected (Alta Ribagorça and Pallars Sobirà).

A more extensive sort of tourism and, consequently, a less aggressive one with the environment. This is how the Park has become, together with the ski resorts of the adventure sports, an important factor that contributes to the socio-economic development of the area of influence, be it through the creation of new jobs (directly or indirectly), the investment carried out in the area, the effects on the hotel management business, trade, public investment for different activities and for the protection of this area.

6.- References

- BARZETTI,V.(1993). *Parques y Progreso. Áreas Protegidas y desarrollo económico en América Latina y el Caribe* .IUCN, Cambridge.
- BANCA CATALANA (several years). *Evolució econòmica de Catalunya*, Manresa.
- BBVA (1999,2000). *Evolució econòmica de Catalunya*, Manresa.
- CAIXA CATALUNYA (several years). *Anuari Econòmic Comarcal* .Barcelona.
- CALS GUELL, J. (1989). “Reflexiones de un economista sobre la utilización turística y recreativa de los espacios naturales protegidos” in *Coloquio Hispano-Francés: Supervivencia de los espacios naturales*. Casa de Velázquez. MAPA. Madrid, pp.293-296.
- CARCELLER, X.(1986). “Els Parcs naturals com a factor de promoció socio-econòmica”, *Revista Econòmica*, num.79, pp.1-10.
- IDESCAT. www.idescat.es
- INE. Censos de población. www.ine.es
- FARRÉ PERDIGUER, M. (1998). *Economia política dels espais naturals protegits. Estudi d'un cas concret: el Parc nacional d'Aigüestortes i Estany de Sant Maurici*. PhD. Mimeo.
- GONZALEZ HERNANDEZ, J.M. (1988). “Parques nacionales y perspectivas de desarrollo económico” in *Los Parques Nacionales. Aspectos jurídicos y administrativos*, Machado Carrillo, A (ed.) ICONA. MAPA. Madrid, pp.79-91.
- ROSEMBUJ, T (1995). “Compensació i propietat als espais naturals protegits” a *Activitats econòmiques i espais protegits*. Diputació de Barcelona. Servei de Parcs Naturals, Monografies num. 23. Barcelona.

ⁱ Particularly, the National Park of the Valle de Ordesa (Osca) and the one of the Montaña de Covadonga (Astúries, Castella-Lleó)

ⁱⁱ The specification of the uses, activities and exploitations that will be allowed has been drawn from the *Pla Rector d'Ús i Gestió*, passed in 2002 and valid for four years.

ⁱⁱⁱ Relationship between the population over 65 years old and the total population.

^{iv} Relation between the population over 65 years old and the population between 0-14 years old.

^v In 2001 this sector meant a 67,8% in Val d'Aran, a 49,4% in Pallars Sobirà and a 40,4% in Alta Ribagorça.

^{vi} The percentage of this sub-sector in the counties is of 87,1% in Pallars Sobirà, of 86,4% in Alta Ribagorça, of 83,8% in Val d'Aran and of 78,7% in Pallars Jussà.

^{vii} This percentage, in the year 2000, for the whole of Catalonia was of 53,6%.

^{viii} It should be pointed out that 15 of these workers work full-time, whereas the rest are employed only for the periods of maximum activity in the park. This figure has increased considerably since in 1997 there were just 5 full-time employees working for the whole of the year.

^{ix} The higher tourist demand of these areas, responsible for the so-called mass tourism, was much more noticeable in the litoral areas than in the mountain areas.

^x In 2001 the number of visitors to the Romanesque complex at Vall de Boi was of 90.698 people, and during the first nine months of 2002 this number was 93.310.

^{xi} In the two Pallars, firms related to adventure sports generate around 600 jobs (*Diari Segre*, 16/09/02).

^{xii} State contributions to the budget of the Park has been of 0.81, 1.22 and 0.73 million euros during 1999, 2000 and 2001 respectively. On the other hand, the Ministry of Environment and the *Generalitat de Catalunya* have reached an economic agreement by which they commit themselves to make a contribution of 1,1 million euros (respectively) per year. This leaves the annual budget of the park in 2,2 million euros.