



Local people's perceptions of sustainable tourism development in protected mountain areas: the case of Mount Olympus, Greece

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Abstract

This paper examines local peoples' perceptions of sustainable tourism development in Mount Olympus National Park, the sacred mountain of ancient Greece. Nature-oriented tourism is currently viewed as an environmentally friendly way to revitalize distressed mountain communities. Tourism, however, carries a number of negative social and environmental consequences, once developed beyond the capacity of the environment and the local population to sustain it. Sustainable tourism planning therefore requires an in-depth analysis of existing resources and an understanding of local communities' attitudes towards development characteristics. Perceptions of the study area's inhabitants about the necessity for recreation facilities and technical works improvement, tourism development and economic impacts on the local economy, were studied by means of a questionnaire survey. The study investigated the relationship between local people's attitudes towards tourism development, and independent variables such as occupation and age of the respondents. Such information can help regional planners, national park managers and local development agencies to resolve arising conflicts, balancing the needs of local communities, recreationists and environmental conservation.

1 Introduction

Mountains, home to some of the world's most fragile ecosystems, have always been important for human livelihoods, in terms of agriculture and livestock raising as well as transport and trading of goods. During the 20th century, because

of the world economy's industrialization and technological progress, mountain communities have experienced drastic declines and became economically disadvantaged marginal areas where few investments are made and natural resources are being overused and thus, degraded [1], [2].

Yet, in the current rapidly urbanized world, the amenity values of mountains, like scenic beauty and recreational value, have become increasingly significant, offering a wide range of economic and social benefits to mountain communities. In recent decades mountain areas became important tourist destinations not only because of their beauty and natural and cultural diversity, but also because they provide opportunities to escape from the stresses of modern life in urban societies. Tourism became an alternative source for regional economic development in many mountain communities, providing a rare opportunity for mountain people to participate directly in the global economy [3]. According to the World Tourism Organization, about 15-20% of the world's tourist industry, or US\$ 70-90 billion per year, is accounted for by mountain tourism. In contrast to the generally small contribution of mountain regions to national economies, the value of mountains to tourism is thus significant.

The development of mountain tourism is based on special attractive features like clean air, varied topography, scenic beauty, diversity of natural landscapes and resources, local traditions, and simple lifestyles, as well as particularly challenging mountain arenas for special sports and leisure activities. Recreational activities specific to mountain areas, include walking, bird-watching, visiting villages and national parks, skiing, snowboarding, swimming and a number of extreme sport activities such as bungee jumping, river rafting, paragliding, and mountaineering. The global spread of these new trend sports is facilitated by the rapid development and marketing of new technologies by sports companies and the expansion of transport networks that gave access to locations that could previously be reached only by walking for many days or even weeks [3]. Furthermore, mountains have specific qualities that are conducive to health and wellness tourism and activities that focus on contemplation and meditation.

Tourism affected mountain regions in many ways, carrying a number of economic, social and environmental consequences. Tourism has provided farmers with additional income and employment, opened new career opportunities, and created markets for both high-quality traditional products and local products from mountain areas. Tourism has greatly improved access, communication and infrastructure in previously remote, resource-poor peripheral areas. Tourism has also opened mountain communities to new ideas, new modes of production, and cultural exchange.

Yet, direct and indirect economic and social benefits are only part of tourism significance for mountain areas. Over-crowding and misuse of natural resources produce negative impacts both in the physical and the cultural environment [4]. As Butler [5] concludes "... if developed beyond the capacity of the environment, the resource base and the local population to sustain it, tourism ceases to be a renewable industry".

Mountains, as natural landscapes that have attractive resources, are subjected to environmental stress, exploitation and degradation, since tourism tends to

destroy the foundations of its own development. Facilities developed to service the needs of visitors may impact air and water quality; visitors themselves may be the source of traffic or scenic areas congestion. The accelerated growth of resource-consuming forms of tourism like adventure and leisure or theme parks, golf courses and winter sports, typically practiced in areas that have already been mechanically and technically prepared, may have serious environmental impacts, especially on rare species and habitats. Tourist skyline roads, paths and ski runs may modify sensitive alpine areas and affect wildlife by cutting-up and fracturing wildlife habitat and sealing off animal sub-populations from one another [6]. Road widening itself can lead to considerable forest clearance, while the new roads are said to undermine the scenic beauty of many remote spots.

On the social and cultural side, visitors may be perceived by residents as intruding into the local quality of life, disrupting traditions by their lifestyles [7]. The loss of social integrity and cultural authenticity, resulting from the rapid expansion of tourism, may be irreversible. On the economic side, the cost of public services needed to provide the needs of visitors, such as sewer and water treatment, police and fire services, roads and trails, must be paid for by someone. Ultimately, a mountain region may become so overcrowded that it will lose its attractiveness for tourism.

So, in the long term, the diversity and attractiveness of the mountains will depend on careful and far-sighted management of the resources where negative impacts have to be counterbalanced against positive influences [3]. Development strategies should therefore seek to balance conservation and recreational use, preserving the ecological integrity of sensitive natural ecosystems and caring for the demand of recreational activities [4].

The creation of national parks has been the most universally adopted means of conserving a natural ecosystem and/or relevant cultural heritage for a broad range of human values. The IVth World Congress on National Parks and Protected Areas defined national parks as natural areas to protect the ecological integrity of ecosystems and provide a foundation for spiritual, scientific, educational recreational, and visitor opportunities [8].

Mountain national parks and other protected areas, as recreation sites providing a wide range of outdoor leisure opportunities for urban populations, have strategic competitive advantages in tourism that can be maintained based on concepts of sustainable development. Sustainable development has been defined by the World Commission on the Environment [9], as “a process that meets the needs of the present without compromising the ability of future generations to meet their own needs”. If this is respected as a basic planning principle, tourism can provide significant opportunities to maintain the diversity of the mountains and their role as natural monuments of global heritage [3].

As stated in Chapter 13 of Agenda 21 "Managing Fragile Ecosystems: Sustainable Mountain Development", adopted by the UN Conference on Environment and Development in Rio de Janeiro in 1992 [10], “the fate of the mountains may affect more than half of the world's population”, and thus “particular attention should be paid to mountain resources”. Responsible integrated planning and sustainable tourism management of mountain protected

areas, could help to foster local and regional development, giving balanced consideration to the protection of natural resources, the needs of the local population and the interests of tourists.

2 Sustainability and tourism: a precarious balance

Even though the idea of sustainable tourism has been quickly adopted worldwide, there are still many questions about what the concept means. The literature suggests that sustainable tourism, also termed as “green” or “eco”-tourism, is generally smaller in scale, more environmentally sensitive and socially aware than the traditional “mass” tourism [7]. Many authors emphasize the relationship between tourism and the natural environment as the basis for many questions about sustainability. Other authors suggest that sustainability is the condition where actions are socially desirable, economically feasible and ecologically viable.

Yet, the concept of sustainable tourism remains somewhat elusive and still in its infancy. This results from various and sometimes contradictory statements, reflecting particular philosophical perspectives. For example, McKercher [11] states that the concept of sustainability is itself a threat to the longevity of the tourism industry because, moving toward an ecological definition of sustainability may reduce access to the natural resources upon which the industry depends. Aronsson [12] suggests that it is important to recognize limits in tourism development as a key component of sustainability: development beyond these limits leads to over exploitation.

Tourism sustainability literature focuses on access to natural capital represented primarily in wild lands, such as national parks and forests, wilderness and wild rivers, and undeveloped prairies. While natural capital is important, it has little practical use for tourism without the social capital needed to add value [7]. Social capital deals with the skills, knowledge, leadership and abilities of people and provides the foundation needed not only for visitors to understand and appreciate what they see, but to develop planning skills needed to protect natural assets and to develop a tourism industry that is sensitive to those assets.

Mountain communities, confronting major social and economic changes (for example, relatively high rates of immigration, loss of their traditional resource commodity economic base), are increasingly turning to tourism as a means of complementing their economic base. Many of these communities are located in relatively isolated, but resource rich settings, that provide outstanding amenity backdrops [7]. Especially communities, situated in and around protected areas, are often strongly related with or even depended on these areas for their livelihood and cultural survival.

In these mountain areas, where recreation industry relies extensively on the natural and cultural heritage, there is growing interest in protecting and managing this product base to ensure that tourism is indeed sustainable. While scientific views may play an important role in identifying impacts and consequences of tourism development, how much tourism is acceptable, and under what conditions, remains a social and political decision. Mountain tourism

management thus encounters a range of different problems, concerning both tourist perceptions of the protected areas and local perceptions of the tourists [6].

The relevant literature at the national level is rather limited and focused on research about visitors of protected areas [4], [13], [14], [15], [16], [17]. Trakolis investigated local people's perceptions of planning and management issues in Prespes Lakes National Park [18] and in Vikos-Aoos National Park [19], Greece, studying the knowledge and source of information of the aims of the parks, the necessity for infrastructure, the attitudes toward certain policies and the effectiveness of administration and management schemes. At the international level, Allen et al. [20] examined the impact of tourism development on residents' perceptions of community life in twenty rural communities that varied with respect to the amount of tourism development. Johnson et al. [21] examined resident perceptions of tourism development in a rural area investigating community sentiment over the development of a new year-round ski area. This paper is connected with the perceptions and preferences of the local population affected by tourism development in one of the most prominent mountainous areas of Greece: Mount Olympus.

3 Survey area

The study area of the present research is Mount Olympus National Park, in the boundary between Macedonia and Thessaly regions in Greece. Mount Olympus, is the highest mountain of Greece (summit: 2918 m) and constitutes the symbol of modern European culture. The imagination of ancient Greeks placed the home of their twelve mythological deities on its summits. The Olympic Dodekatheon religion allowed the formation of free thought to which humanity owes its greatest spiritual achievements. Below the Olympic summits, on Mt. Pieria, was the home of the nine Muses that were worshipped as patrons of the Arts, highly developed in the Pierian shores. Ancient Greek written sources mention many cities on or around Mount Olympus, such as Leivethra (Orpheus's home), Pytheion (sacred site of Apollo) and the Macedonian dynasty's sacred city, Dion. The term "Olympos", known since Homeric times, means, "all-shining, sparkling", apparently because its summits are always covered by snow except for a short time in the summer. Even then, the mountain literally shines during the moonlight nights, and figures as a monument of nature.

In 1981, UNESCO included Mount Olympus National Park in its international network of Biosphere Reserves. In 1985 Olympus has been declared "archaeological-historical site" as its natural environment is directly linked to important historical and congenial anthropogenic activity.

The Greek government declared Mount Olympus a National Park, in 1938. Greece has 10 national parks, designated between the years 1938 and 1974 after suggestions made by the State Forest Service and under the pressure and recommendations of non-governmental organizations, national or international. The first law on national parks was put in force in 1937, and it was first amended 32 years later in 1969, and then in 1971, without, however, any provision for local community participation [18]. A reform of this law has recently (October

1999) introduced the participation of local population in the management of protected areas, following the French example of “regional parks” [22].

According to Greek legislation, national parks are protected areas with the following aims: the protection of the natural environment; the promotion of scientific research and environmental education; the provision of recreational opportunities the improvement of social and economic status of local people, by promoting the development of ecotourism and encouraging traditional patterns of land use and traditional occupations.

Mount Olympus National Park, with a total area of 23841 ha, consists of a core area (7150 ha) of strict conservation importance, and a peripheral zone (16691 ha). In the core area of national parks the law demands expropriation of private property and allows only scientific research and environmental education; forestry activities, grazing, hunting and fishing are prohibited. In the peripheral zone there are no such restrictions but the Forest Service can take any necessary measure for the realization of the aims of the park [19].

The Olympic range is a massive mountainous ridge containing many summits over 2000 m (Mytikas, 2918m; Skolio, 2911m; Stefani, 2909m; Aghios Antonios, 2817m; Prophetes Elias, 2803m; Toumba, 2801m; Kalogeros, 2701m). In terms of flora, it is divided in three zones: the first zone includes its lower piedmonts with olive groves and vineyards, many fruit trees and evergreens such as oaks, chestnuts and arbutus. The second zone from 800m to 1800m is purely forestall, subdivided into birch, fir and mountain coniferous tree zone; and a cold-living coniferous tree zone. The third alpic zone over 1800m, is characterized by scarce poan vegetation and contains rare plant species of which 23 are found exclusively on Mount Olympus. All three zones contain important faunal habitats with rare species of reptiles’ birds and wildlife mammals. In terms of environmental protection, there are five zones: of absolute protection, high protection, natural environment, religious-archaeological interest and controlled intervention.

Climbing Olympus from its eastern side, which is more interesting in view of beauty and natural diversity, starts at Litochoro, a small traditional town at 400m altitude, five kilometers west of the Olympic Bay in the Northern Aegean Sea, on the main road and rail axis between the capital city Athens and Thessaloniki, the major urban center of Northern Greece. Inhabitants have been traditionally relied on productive activities like farming, timber harvesting and navigation. Litochoro provides tourists with hotels restaurants, taverns, and summer camps. A health center/hospital, post office, banks, a convention center and tourist information center provide information necessary to all visitors. Litochoro is the base of the Hellenic Climbing Association, which provides every information and assistance relative to climbing, such as finding a local guide.

Starting from Litochoro on foot, the visitors can follow the international track E4 that starts from the Pyreneans and, after crossing through European mountains’ most important landscapes, reaches the Peloponnesian Taygetos and the Cretan ridges. E4 crosses Litochoro through the Enipeas canyon, and reaches Prionia (1100m), also accessible by car, where there is a small restaurant. After Prionia visitors enter the National Park where no flower picking is allowed.

There are four refuges in the National Park area: "Stavros" (altitude 945m) opened throughout the year, providing food and shelter; "Spilios Agapitos" (2100m), opened from May to October, offering shelter, food and drinks to a capacity of 100 people; "Christos Kakalos" (2650m) that can shelter 18 persons and has a water cistern; "Yossos Apostolides" (2760m), open in the summer months, can provide food and shelter to 80 persons.

Even Hough the first refuge was built in 1930, climbing activities in Mount Olympus started only after the Second World War. The number of visitors continuously rising during the decades 1960-1980, started to slightly decline during the '90s [23].

4 Methodology

Data were collected by means of a questionnaire, administered through personal interviews and carried out in weekdays of winter 2003. Litchoro and neighboring communities (Leptokarya, Dion), with a total population of approximately 10.000 inhabitants, were selected as the survey sites, being the closest and more easily accessible human settlements around Mount Olympus National Park and essentially representing the starting points of most recreational activities. The surveyed population included local people from 15 to 65 years old, living all year in the area. For the purpose of the study, 3.5 % of the population was targeted for the sample, proportionally distributed among various profession and age groups. The inhabitants for the survey were selected with stratified sampling, where employment sectors were considered as strata. Finally there was a sample of 230 people, which was proportionally allocated to each strata according to National Census of Population 1991 [24].

The purpose of the questionnaire was to assess local people's perceptions and preferences concerning issues related to sustainable tourism development policies. Policy decisions are still being taken by local and national park authorities, without the legal involvement of the local population in the designation process. Therefore, information about the perceptions and potential reactions of locals towards various tourism policy orientations could be useful to regional planning and park management authorities. Thus, the main objectives of the research were: a) to collect information on the local people's understanding of the major tourist attraction characteristics of the Mount Olympus National Park. b) to identify the need for further tourism infrastructure improvement c) to examine local people's views about the economic significance of tourism development for the local community.

The pre-coded questionnaire consisted of 10 questions classified in three groups: the first group included questions about the respondent's understanding of the basic reasons why visitors come to Olympus mountain protected area (scenic beauty, historical, bio-physical interests). The second group included questions about the needs and priorities concerning recreation facilities and technical works to be planned and constructed in and around the national park. (roads, refuges, alpine centers, winter sport resorts etc.) The third group included questions on the impact of the national park originated tourist flows on the local

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economy (tourism volume, future development, influence to local economic activities). Two questions (on profession and age) were open and the answers were written in the corresponding space of the questionnaire. Questions used a multiple-choice format, where only one choice was to be made, except for one sub-question where more choices were possible.

Statistical analysis was carried out with the aid of the Statistical Package for the Social Sciences (SPSS-ver. 10) computer programme and the variation in response among the different groups was investigated by cross tabulating the relevant variables and conducting chi-square (X^2) test of independence. The chi-square tests used to establish statistical difference across the two groups were at a 95% level of confidence. Bivariate statistical methods were used and Pearson's coefficient was calculated to assess relationship between local people's attitudes towards sustainable tourism development and independent variables.

5 Results

5.1 Social characteristics of the local people

Information about local people was based on two characteristics namely, profession (variable V_1) and age group (variable V_2). Regarding professional status, 19.9% were employed in the primary sector (farming, forestry etc.), 29.9% in the secondary sector (trade, manufacture etc.), 35.1% in the tertiary sector (service industry, hotels, restaurants, shops etc.) and 15.2% were unemployed or students or had retired. With regard to age, 33.8% of the respondents were in the 15-29 age group, 30.3% in the 30-44 group, and 35.9% in the 45-65 group. Regarding sex, the largest group of the sample population were male (63.6%) and 36.4% females.

5.2 Perception of major tourist attraction of the National Park

Respondents were asked about the major reason why visitors are attracted to Mount Olympus National Park (variable V_3). The majority of the people (40.7%) consider the fact that this is the highest mountain of Greece, a substantial percentage (32.4%) consider the role of Mount Olympus in Greek history and mythology, 15.6% consider the scenic beauty and rich natural environment and only 9.5% the biological and geological interest of the area.

5.3 Perception of necessity for tourism infrastructure improvement

Respondents were asked to mention whether existing technical works like roads, refuges etc. (variable V_4) were satisfactory, the needs and priorities for further improvement (variable V_5) and the impact of infrastructure improvement upon tourist development (variable V_6).

A relatively low percentage (25.5%) mentioned that existing technical works (variable V_4) were not satisfactory, whereas 51.5% mentioned that these were satisfactory and 22.9% that they were even overdone.

Regarding infrastructure improvement (variable V_5), 42% of the respondents suggested the construction of new technical works, 45% suggested the improvement of existing infrastructure, and only 13% asked for a reduction of existing infrastructure. Respondents were asked to mention out of a list of technical works and recreational facilities, what they considered necessary in terms of tourism infrastructure development. The majority of the respondents (75.9%) mentioned the provision of recreational facilities (29% alpine centers, 21.6% refuges, 14.9% ski centers, 10.4% lifts to ski centers), 16.7% the construction or improvement of footpaths (10% construction of new footpaths, 6.7% improvement of existing footpaths) and only 7.4% the construction of new road networks.

In relation to the impact of the construction of new technical works and facilities on tourist volume (variable V_6), the results show that the number of those who think that this is positive (39.4%) equals the number of those who think that this is negative (39.4%), with 7.4% having no preference.

5.4 Perception of the economic impact of tourism development

Respondents were asked to mention whether the existing tourism volume is satisfactory (variable V_7), whether further increase is needed (variable V_8) and to express their assessment about the economic effects of tourism development on local society (variable V_9). The results show that, the majority (52.4%) found existing tourism volume not satisfactory, either completely unsatisfactory (27.7%) or partially satisfactory (24.7%). 32.9% found it satisfactory, only 3.9% think that it is more than fulfilled and 10.8% did not answer. In connection with the need for further increase of tourism volume, 12.1% of the respondents did not answer. From the respondents that answered, 74.9% were in favor of further increase of tourism volume, whereas 25.1% prefer that tourism volume should remain stable and even reduced. Finally, regarding the impact of tourism development on local economy, a significant percentage (46.7%) responded that the economic status was very much influenced, 31.1% that it was adequately influenced, 22.2% responded that there was no influence and 8.2% answered that they did not know.

Cross-tabulating social characteristics of local people (variables V_1 and V_2 : profession and age groups respectively) with the responses given to questions concerning variables V_3 , V_4 , V_5 , V_6 , V_7 , V_8 , V_9 , and conducting chi-square test, showed association only between variables V_1 and V_7 , that is profession and residents' perception about the existing tourism volume (Table 1). This finding could be explained by the fact that, only residents involved in the local tourism industry are in favor of further tourism development.

Table 1. Chi-square tests of independence

Variables		Pearson Chi-square X^2	Degrees of freedom	$X^2_{v,0.05}$	Significance level
V ₁	V ₃	14.357	9	16.919	0.110
V ₂	V ₃	5.272	6	12.592	0.509
V ₁	V ₄	5.197	12	21.026	0.951
V ₂	V ₄	13.603	8	15.507	0.093
V ₁	V ₅	3.718	6	12.592	0.715
V ₂	V ₅	8.395	4	9.488	0.078
V ₁	V ₆	6.401	3	7.815	0.094
V ₂	V ₆	1.356	2	5.991	0.508
V ₁	V ₇	30.206	12	21.026	0.003
V ₂	V ₇	5.236	8	15.507	0.732
V ₁	V ₈	7.368	3	7.815	0.061
V ₂	V ₈	0.378	2	5.991	0.828
V ₁	V ₉	0.223	6	12.592	1.000
V ₂	V ₉	12.762	4	9.488	0.012

6 Conclusions

The results of this research revealed that identification of local people's perceptions towards sustainable tourism development in mountain protected areas can provide useful information to regional planners, national park managers and local development agencies to resolve arising conflicts, balancing the needs of local communities, recreationists and environmental conservation.

The results indicate that local population perceive tourism development in a positive way, and assess tourism infrastructure improvement, like recreation facilities and technical works, as efficient tools for such development. These findings could help local and national park management authorities in setting priorities concerning tourism investments to be made and infrastructure works to be constructed in the area.

In an evolving era of change, sustainable tourism development of mountain regions confronts many challenges and opportunities in balancing the local conditions of mountain communities with the demands of tourism. Sustainable land use planning requires an in depth analysis of the existing resources and an understanding of development characteristics in order to identify any use for the natural resources that will prejudice future development.

The results of this and other studies on sustainability and tourism in mountain protected areas, suggest that further discussion and long-term multi-disciplinary studies, based on the collaboration of researchers with regional planners, national park authorities and members of mountain communities, are required in order to develop a better understanding of sustainable tourism concepts, and gain more knowledge about the perceptions of all parts involved, namely visitors, local communities' residents and decision making authorities.

References

- [1] Kostopoulou, S., Disadvantaged mountain and insular areas: The problem of isolation, *Proceedings of the International Conference for the Establishment of Policy Development for Mountainous Areas: The Balkan Mountains*, National Institute of Agricultural Research, Athens, pp. 28-41, 1999.
- [2] Kostopoulou, S. & Kyritsis, I., Mountain mainland and island areas: The problem of marginalization. *Proceedings of the 1st Symposium on Regional Development*, eds. A.Argyris & S. Kostopoulou, Aristotle University of Thessaloniki, pp. 169-184, 2001.
- [3] Mountain Agenda, *Mountains of the World: Tourism and Sustainable Mountain Development*, prepared for the United Nations Commission on Sustainable Development. Institute of Geography, University of Berne (Center for Development and Environment) and Swiss Agency for Development and Cooperation, 1999.
- [4] Papageorgiou, K., A combined park management framework based on regulatory and behavioral strategies: use of visitor's knowledge to assess effectiveness. *Environmental Management*, **28(1)**, pp. 61-73, 2001.
- [5] Butler, R. W., Alternative tourism: Pious hope or Trojan Horse? *Journal of Travel Research*, **3**, pp. 40-45, 1990.
- [6] Knight, J., From Timber to tourism: Re-commoditizing the Japanese forest. *Development and Change*, **31**, pp. 341-359, 2000.
- [7] McCool, S.F., Burgess, C. & Nickerson N., *Toward a Sustainable Tourism and Recreation Industry in Montana: An Examination of Concepts and Industry Perceptions*. Institute for Tourism and Recreation Research, The University of Montana, Research Report 54, February 1998.
- [8] McNeely, J.A., Protected areas for the 21st century: Working to provide benefits to society. *Biodiversity and Conservation*, **3**, pp. 390-405, 1994.
- [9] World Commission on Environment and Development, *Our Common Future*. Oxford, UK, Oxford University Press, 1987.
- [10] *Earth Summit '92*, UN Conference on Environment and Development: Agenda 21, Rio Declaration, Rio de Janeiro, 1992.
- [11] Mc Kercher, R., The unrecognized threat: Can tourism survive 'sustainability'? *Tourism Management*, **14(April)**, pp. 85-90, 1993.
- [12] Aronsson, L., Sustainable tourism systems: the example of sustainable rural tourism in Sweden. *Journal of Sustainable Tourism*, **2(1,2)**, pp.77-92, 1994.
- [13] Kyritsis, I., Papastavrou, A. & Karameris, A., Visitors' perceptions of tourism development and environmental protection issues in Mount Olympus. *Scientific Annals of the Department of Forestry and Natural Environment*, Aristotle University of Thessaloniki, **37(2)**, pp.665-689, 2001.
- [14] Makrodimos. N., Tziolas, M. & Vokou, D., Visitors' perceptions of Mount Olympus National Park. *Proceedings of the 2nd International Symposium on the Protection and Development of Mount Olympus*, pp. 126-130, 1995.
- [15] Vakrou, A., *A Study on the Economic Valuation and Management of Recreation at Mount Olympus National Park, Greece*. Ph.D. thesis. Aberdeen University, Aberdeen, UK, 1993.



- [16] Malamidis, G., Elefteriadis, N. & Aidinidis, E., *Olympos National Park: A Research for its Social Role*, Special Issue 3, Kavala Polytechnic, Department of Forestry, pp. 55, 1992.
- [17] Kyritsis, I. & Farmakis, N., *Greek and foreigner visitors' perceptions of Mount Olympus National Park*. Hellenic Association of Climbing, 1987.
- [18] Trakolis, D., Local people's perceptions of planning and management issues in Prespes Lakes National Park, Greece. *Journal of Environmental Management*, **61**, pp. 227-241, 2001.
- [19] Trakolis, D., Perceptions, preferences, and reaction of local inhabitants in Vikos-Aoos National Park, Greece. *Environmental Management*, **28(5)**, pp. 665-676, 2001.
- [20] Allen, L.R., Hafer, H.R., Long, P.T. & Perdue, R.R., Rural residents' attitudes toward recreation and tourism development. *Journal of Travel Research*, **31(4)**, pp. 27-33, 1993.
- [21] Johnson, J.D., Snepenger, D.J. & Akis, S., Residents' perceptions of tourism development. *Annals of Tourism Research*, **21(3)**, pp. 629-642, 1994.
- [22] Regional Park of Haut-Jura, France. *Leader Magazine*, **6**, pp. 20-22, 1994.
- [23] Zacharopoulou, C. & Kyritsis, I, Forecasting of the number of visitors in Mount Olympus". *Proceedings of the 9th Hellenic Congress of Statistics*, Hellenic Statistical Institute, University of Thrace, 1996.
- [24] NSSG (National Statistical Service of Greece), *The population of Greece on the national census of 7th March 1991*, NSSG, Athens, pp. 108-116, 1994