
How Educational Planning Can Contribute Sustainable Development and Shape Attitudes. Case Study of an Ecotourism Framework in a Greek Environmentally Sensitive Area

Mylona Levanta and Dr. Moustakas Loukas

Corresponding author email id: lmoustakas@rhodes.aegean.gr

Date of publication (dd/mm/yyyy): 07/02/2019

Abstract – The aim of this research is to assess and present an extended definition of the concept of ecotourism and how this sustainable and alternative kind of tourism can be developed on the small island of Leros. The conclusions, based on opinions and beliefs of the tourists suggest appropriate measures which will help improve infrastructure, the proper promotion of the area and advancement of soft tourism, with the goal not only being the protection of biodiversity action but also environmental protection, conservation and enhancement of cultural heritage which improves the lives of the local community. Ecotourism is not nature tourism or adventure tourism, but a unique form of tourism that has become very popular, increasing the knowledge of the fragility of the environment, encouraging better informed authorities and visitors.

Recognition that there is a close relationship between good ecology and good economy is key. Ecotourism must be sustainable and four central groups of sectors have to co-operate; the local community, the authorities, visitors and the companies involved with tourism. However, instead of the main environment of the island and the social characteristics of the community, an effort has been made to find out to what extent the educational level can help in this endeavor; how Educational planning can leverage sustainable growth and shape attitudes. The main research questions the attitudes of visitors, on the island of Leros, their thoughts on sustainable tourism development is gathered. For the collection of data, valid and reliable tools have been developed.

Keywords – Ecotourism, Environment and Culture, Education, Local Community, Sustainability.

I. INTRODUCTION

Over the last decades, through the various discussions that have been developed around the subject of tourism evolution that has emerged as an activity that involves many aspects of everyday life of the host societies and has various implications such as environmental, social, cultural and financial. Some of these impacts are defined subjectively and depend on how they are perceived by societies, groups or individuals. The social, economic, environmental and cultural impacts, whether negative or positive, significantly affect the way of life of the local communities and operators that constitute the management of tourism and shape their attitude towards tourist and their activities. On the other hand, the quality of tourist experience and the satisfaction of tourists is influenced by the objective existence of negative impressions, but also by the perceptions and opinions of the tourists themselves.

The knowledge of the tourists' views on the effect of tourism development, discloses their needs, their problems, and the elements that must be strengthened, supporting tourism sustainability. Social values and, more generally, the crisis and the perception of visitors are important issues to understand for the future progress of tourism evolution in every place, as it can affect the general image of the destination and therefore its tourist management.

The involvements of local communities in tourism decision-making processes as well as the need for cooperation between local players and local communities are important elements of the sustainable tourism

strategy as it communicates their desire for the development of tourism and growth as well as for the general progress of their region.

II. THEORETICAL CONTEXT

A. Sustainable Tourism - Ecotourism

Sustainable tourism is the form of tourism that allows the sustainability of a region for "indefinite time" [1]. The guidelines for ecotourism reflecting the real concept of sustainable tourism progress were developed by Blangy and Wood [2] and in terms of sustainable tourism management by Bramwell et al. [3].

"Ecotourism is the environmentally responsible route and excursions in relatively intact natural areas, for the enjoyment and appreciation of nature and any cultural elements, past and present, promotes nature protection, minimizes negative impacts on the environment from visitors and brings active socio-economic involvement of local populations." [4].

The great difference that distinguishes ecotourism from alternative forms of tourism is that the parties involved in this must co-operate, focus on sustainability [5] and manage the educational dimension [6]. It seeks to protect the environment, ecosystems and biodiversity, while at the same time considering ecological ideas and positions, the proper use of education, offering alternative employment and income opportunities to the local community. Ecotourism is an alternative form of tourism that promotes the development of its areas of application it consists of three axes that define [7]:

- A. Environmental protection
- B. Environmental education
- C. The empowerment of the local community.



Fig. 1. Ecotourism Development Framework.

According to a report by Mowforth [8], it is believed that ecotourism was developed in an effort to prevent the problems and negative impacts of mass tourism.

Divided into five categories / criteria:

- i) Sustainability criteria for achieving environmental, social, cultural and economic development, with corresponding avoidance of environmental negative impacts, elimination of social divisions, preservation of local culture without ruination by tourists, financial support of the local community, minimization of negative environmental impacts [9].
- ii) Educational criteria, with the aim of understanding on the part of visitors and the local society the value and functioning of the natural environment.

- iii) Local Participation Criteria, indicating the need to involve the local community in the whole development process and addressing the management and control of ecotourism products and activities.
- iv) Cultural criteria, in order to avoid harmful influences from visitors making them responsible in their behaviour by not changing the local culture.
- v) Financial criteria, with a focus on developing levels of economic return capable of covering the costs of ecotourism development, contributing to the income of the local population without significant environmental costs.

III. METHODOLOGY

A. Purpose and Objectives of this Work

This research was aimed at detecting the prospect of the development of ecotourism on the island of Leros, based on visitors' views and beliefs, as well as its impact on important developmental sectors such as economy, environment, culture, social characteristics and infrastructure.

Because the research of this study concerns the tourist viability of a small island, it is worth mentioning that the development of small islands has so far been the result of improvisations and anarchic initiatives that are never based on a strategy with objectives and perspectives based on the principles of sustainable tourism. By extension they are not based on a tourism that exploits, promotes and protects the natural, cultural and built environment of the island and will shape the islands' tourism model according to its specificities and the principles of sustainable development. The tourism model of every island is obviously supportive of local production and professional activities that are designed to meet the consumer and cultural needs of tourists as well as the construction and other needs of the tourist circuit. For one to achieve this, it is necessary "to adopt proper planning and specific policies" in order to effectively address the problems that the island maintains in geographic and socio-economic isolation and "will lead to the creation and efficient operation of the direct stakeholders with tourism, of the local society" [10].



Fig. 2. Map of Dodecanese Greek Islands.

The aim of the research is to provide a knowledge of the characteristics of the tourist, his habits, trends, beliefs, needs and ambitions [11], as well as the distinction between the following study levels and their promotion:

- Promotion of sustainable tourism development through ecotourism.
- Conditions for the development of ecotourism on the island of Leros.
- Highlighting the importance of ecotourism operation for the protection of natural areas.
- Emphasis on the views, beliefs and desires of visitors on environmental and cultural issues concerning the island
- Understand the contribution of ecotourism in solving many of the conflicts related to the tension between exploiting resources and preserving them.
- Exploitation of this alternative form of tourism as an instrument-tool by the educational community for environmental education and training for Sustainable Development,
- The role of education in the development of ecotourism.

The present study is an attempt to show which element is more important - and for what reasons:

- Understanding the role of ecotourism on the island
- The long-term benefits
- The importance of co-operation between all parties involved
- The educational need of the local community and tourists.

B. *The Methodological Framework*

In this paper the scientific way of approaching and exploring an alternative tourism model is presented, it aims to highlight the value that this could bring to the island of Leros and to examine the views, attitudes and perceptions of the visitors of Leros regarding the development of ecotourism.

Visitors have different places of origin, social, cultural and economic characteristics, but also different expectations, requirements, reasons for travel, an attempt is made to detect how environmentally sensitive they are to the place they are visiting, and how important they consider the educational process for raising awareness and creating consciousness in order to ensure the proper functioning of the ecotourism model.

The aim of the research is to provide a knowledge of the characteristics of the tourist, his habits, attitudes, beliefs, needs and ambitions [11]. It was considered important to obtain a view of the perspective of visitors on all the questions directly related to sustainable tourism development.

Quantitative research based on statistical analysis was used. Numerous mathematical methods were used to draw conclusions about a population of visitors without considering the viewpoint of all people. For this reason a selected part of the sample, which are the tourists of Leros, was examined. Through analyzes of visitors' answers, an attempt is made to highlight those points that demonstrate significant statistical differences between our samples.

The questionnaires were processed using the SPSS statistical program. After the data was input from the questionnaires, crosstabulations were then made between questions that were supposed to provide the information most closely related to the affairs of the work. Percentages were requested, on the total sample, and percentages derived from the creation of some groups (e.g. Greeks, foreigners) where it was deemed necessary. The interpretation of these percentages followed, which led to conclusions.

The analysis was developed on two levels. Firstly, a descriptive analysis of the answers given in relation to the tourist activity of the island was made and it was correlated at the level of the groups and at a second and final level, between the demographic characteristics of the visitors and the characteristics of the island, as to make visible similarities or differences in their views. The aim was to make the fullest possible analysis between the types of questions and the views regarding the possibility of ecotourism development on the island.

The questions were linked to the extent to which visitors perceive sustainable ecotourism development for the island of Leros and whether their responses are consistent with the criteria and principles of this form of tourism, as well as issues arising from their implementation in practice. It is also interesting to highlight the expectations of visitors as well as their concerns and fears from tourism development.

An expectation was to identify those points where visitors seek and wish to discover, enjoy and why not to visit their place of choice. In the above, the originality of this research is also found. The results and conclusions that have emerged are likely to contribute, to the extent that they are appropriate, to the further development of this issue.

In particular, analyses were made on the perceptions of foreign and domestic tourists on the island, but emphasis was also placed on the frequency of traffic. Some questions that were attempted were whether domestic tourists have similar views with foreign visitors if the frequency of trafficking predisposes to more positive perceptions, as the frequency of visit means better awareness of the positive or negative impact of tourism, leading respectively to more positive or negative perceptions of the tourist activity of the island.

In total, 149 questionnaires, which were formatted and sent via Google Drive form, were completed to approximately 300 visitors to the island.

1. *Investigate Questionnaire Questions*

The exploratory questions that the present research focuses on are the following:

- Are the views of visitors different in terms of gender, origin, educational level, and the negative consequences and problems of tourism on the island of Leros?
- Are the visitors differentiated and at what level and how do they perceive any positive tourist contribution and the tourist "life cycle" on the island?
- Are the views of visitors different and at what level, depending on their degree of awareness of the institutional framework of ecotourism?
- Are the views of visitors different and at what level, in terms of the criteria and factors to be considered, to achieve the ecotourism model on the island of Leros?
- Do visitors' views differ and at what level, according to their knowledge, what they consider to be ecotourism advantages that will bring sustainable development to the island?
- Do visitors' opinions differ, and to what extent do they agree or disagree on the necessity of the educational process for positive approach and attitudes to contribute to the development of the island?
- Are the opinions of the visitors different and to what extent do they agree or disagree about the local community's involvement in the tourist's field?

- Are the outlooks of the visitors of Leros different in their personal desire to participate in sustainable actions and tourist activities, which also contribute to the protection of the environment?

2. *Analysis and Evaluation of the results of the questionnaires*

In this section we present the statistically significant differences that appear in the views and beliefs of the visitors, depending on their degree of agreement with the tourist activity of the island and their desire for further improvements. Initially, a regularity check was performed on the likert values using the Kolmogorov - Smirnov criterion and found that their values did not follow a normal distribution (sig. <.05).

Selection of Statistical Criteria

In the case that we have an independent variable with two categories and our dependent variable - measurement variable is: a) categorical then we are to choose the statistical criterion χ^2 b) quantitative or qualitative on a likert scale, then we will choose the non-parametric Mann-Whitney criterion. In the case that we have an independent variable with more than two categories and our dependent variable - measurement variable is quantitative or qualitative on a likert scale, then we will choose the non-parametric Kruskal-Wallis criterion. [12]

Finally, it is worth adding that in all cases of statistical control $p=.05$ was adopted as a minimum level of statistical significance.

IV. RESULTS

There was a statistically significant difference in visitors' perceptions of tourist development relative to their origin, where, $\chi^2 = 55,149$, $p < .001$. The 94,4% of Greek visitors, as opposed to 34,7% of foreigners, claim that the island of Leros has room for further development, as opposed to 64,2% of foreigners who believe that the tourist activity of the island should be maintained at the current levels. It is concluded that foreign visitors wish to maintain on the island the small tourist development that distinguishes it so far, to preserve its cultural and environmental identity, avoiding the alteration of its natural environment and unwilling to further tourism development.

In the question concerning the information on alternative forms of tourism and especially for ecotourism, statistically significant difference is presented regarding the origin of visitors, where $\chi^2 = 8,573$, $p = .003$ it is noted that Greeks 76,4% are informed in terms of ecotourism, compared with 52,1% of the answers of the sample of foreign visitors.

A. Negative tourist impact in relation to Gender, Origin and Educational Level

In order to control the existence of statistically significant differences between a categorical variable with two categories and a classification, the non-parametric Mann-Whitney criterion was used. Analyzing the visitors' environmental responses regarding the hitherto negative tourist impact and the problems encountered on the island, there is a small statistical difference with men considering the inadequate training of human resources as a negative impact of tourism on the island, $U = -2167$, $p = .030$ with an average response of 2,65 vs. women (average = 2,27).

On the other hand, there is a statistically significant difference in the perception of foreign visitors with the average of 3,83 vs. 2,62 of Greek visitors, where they claim as negative effects and problems the alteration of the

natural environment, with $U = -4.946$, $p < .001$, the removal of the local community from local traditions and customs $U = -4.245$, $p < .001$, with the average of 3,54 vs. 2,51 of Greek visitors, from the traditional occupations $U = -3.203$, $p = .001$, as well as the erosion of local cohesion $U = -3.715$, $p < .001$, the $U = -3,236$, $p = .001$ which means that the sample does not understand the existence of cooperation between the local community and the local actors, which is a fundamental principle for the operation of the ecotourism model. They also recognize as a negative effect the inadequate training of human resources where, $U = -4,864$, $p < .001$, with the average of 2,86 of foreigners versus the average of 1,80 of Greek visitors, lack of infrastructure, where $U = -4,263$, $p < .001$, low quality of services offered, where $U = -3,015$, $p = .003$, $U = -5,388$, $p < .001$ point indicating a lack of integrated and crucial education, as well as intense competition from other neighbouring countries and regions with $U = -5,388$, $p < .001$, $U = -4.559$, $p < .001$.

On the other hand, Greek visitors perceive the existence of the Leros State Health and Psychiatric Diseases, where $U = -2,724$, $p = .006$ with an average of 2,91 in a sample of 54 respondents versus the average of 2,27 of foreigners, which is an institution that may have stigmatized Greek society in previous years.

B. The reasons for the Development of Ecotourism

Investigating the views of the sample on the reasons why the ecotourism model can be developed on the island, there are not particularly statistically significant differences between the two genders. Men and women agree that there is respect for the environment on the island through the recycling and installation of drinking water appliances with $U = -2,430$, $p = .015$, so you recognize that there is great environmental sensitivity and action, but also why a variety of cultural events take place during the summer.

Investigating the views of the sample for the reasons why the ecotourism model can be developed on the island, there are no statistically significant differences between the two leaves and the origin. Both sides contend that the island has a beautiful natural environment, intense and interesting cultural heritage, and they see positively that a variety of cultural events take place during the summer. The other reasons that support the development of ecotourism are, on the one hand, the fact that the island offers scenic beaches and many walking routes, respect for the environment through recycling and installation of drinking water and because it is an island with a great history that has a lot to show with Greek visitors to show a higher average of views on the reasons for the development of ecotourism.

C. The desire to take part in the Protection of the Environment

Looking at the desire for personal involvement in the protection of the island's environment, there is no particular statistical difference between the sample men and women, nor in terms of their educational level. However, there is a significant statistical difference with respect to the origin and the greatest desire of foreign visitors with an average of 2.96 compared to the average of 2,64 of the Greeks for their participation in coastal cleaning where $U = -2,214$, $p = .027$, as well as a higher degree of desire of Greek visitors with an average of 3,53 compared to the average of 2,67 of the foreigners for the use of renewable energy sources (e.g. solar water heater), where $U = -4,393$, $p < .001$.

D. The advantages of developing Ecotourism on the Island of Leros.

When investigating the existence of significant statistical differences in gender association with the views on

the advantages that ecotourism can bring to the island of Leros, there is some statistical difference with $U = -2,318$, $p = .020$ with the more supportive men (2,38) in the proposal adopts as an advantage of the ecotourism model the restraint of the population on the island, compared with 1,94 of the women.

Table I. Average and standard deviation about the benefits of ecotourism development.

ADVANTAGES OF ECOTOURISM DEVELOPMENT	Gender				Statistical significant	
	Male N (78)		Female N (71)			
	mean	s.d.	mean	s.d.	U	p
Restraining the population on the island	2,38	1,176	1,94	1,013	-2,318	.020

Then the statistical correlation to the origin appears several significant statistical differences on the advantages brought about by the development of ecotourism model. One of them is the increase in competitiveness $U = -3,616$, $p < .001$, the rational tourist development without exceeding the carrying capacity of the island where $U = -3,153$, $p = .002$, attracting customers of high economic level where, $U = -3.884$, $p < .001$, entrance into new markets where, $U = -2.822$, $p = .005$, the prolongation of the tourist season where $U = -3.887$, $p < .001$, the revival of customs and the delivery of the place where $U = 2.210$, $p = .027$, the retention of the population on the island of $U = -5.562$, $p < .001$, and the financial support of the local community $U = -3.860$, $p < .001$, with foreign visitors are more supportive of the above positions than the Greeks.

From the study of the average is expected that foreign visitors are more aware than Greek visitors and support most of the above principles and the benefits that can be derived from the development of this type of tourism, showing a more positive attitude to ecotourism and supporting more positions related to its principles.

Table II. Average and standard deviation about the benefits of ecotourism development.

ADVANTAGES OF ECOTOURISM DEVELOPMENT	Gender				Statistical significant report	
	Male N (78)		Female N (71)			
	mean	s.d.	mean	s.d.	U	p
Increasing competitiveness	2,31	1,016	1,73	0,781	-3,616	.000
Qualitative upgrading of the tourism product	1,86	0,875	1,56	0,660	-1,957	.050
Restrict visitor numbers to a sustainable level	2,30	1,106	1,73	0,804	-3,153	.002
Attracting high spending visitors	2,73	1,184	1,96	0,999	-3,884	.000
Penetrating new markets	2,31	1,107	1,80	0,803	-2,822	.005
Elongation of the season	2,11	1,092	1,47	0,790	-3,887	.000
Revival customs / tradition	1,96	0,915	1,65	0,886	-2,210	.027
Containment of the population on the island	2,53	1,075	1,56	0,918	-5,562	.000
Sustainability of the area	1,71	0,838	1,45	0,689	-1,969	.049
Financial support of the local community	1,96	1,004	1,36	0,704	-3,860	.000

E. The Contribution of Education to Attitudes

Significant differentiation in attitudes and behaviours through the educational process is not presented in an average in relation to the origin of the sample with $U = -4,152$, $p < .001$, where Greek visitors with an average of 4,93 and foreign visitors with an average of 4,54 support the contribution of education to the ecotourism process. And here it concludes that Greeks strongly support the positive contribution of education to the formation of attitudes, consciences and attitudes.

Then a small statistical difference with $U = -2,234$, $p = .026$, is observed between the sample's views relative to their educational level, whether education can contribute to the formation of attitudes and behaviours. Visitors with a higher education level are the ones who support this view more strongly 4,74 versus the less educated with an average of 4,40.

This is consistent with the fact that the sample with a higher educational level agrees with the literature and previous research that the environmental knowledge and value of learning is linked to its ability to promote change of attitudes towards more positive environmental behaviour and identifies those authors who support the positive relationship between the cognitive area of environmental education and positive environmental behaviour [13] [14].

F. *The Involvement of the Local Community in the Tourist development of the Island*

Presenting the views of the sample, regarding the ways in which local society can be involved in the tourist development of the site, it appears that there is no statistically significant difference in the sample's responses to gender and educational level. Investigating these two parameters of the sample, there is complete agreement on the involvement of the local community in decision-making, participation in actions and the implementation of any new policy and tourism plan, but also in the supervision of this, as defined by the authorities of ecotourism.

Also, with respect to origin, there is no statistically significant difference with $U = -2,181$, $p = .029$ between Greeks (4,31) and foreigners (4,03) visitors who support the need for the local community to participate in the implementation of the tourist plan. On the other hand, Greek visitors do not support the involvement of the local community in decision-making or co-management, and it is conjectured that they need further information and education.

G. *Visitors' participation in Sustainable Tourism activities.*

Many people who travel to natural areas seek to indulge in experiences with nature. Assessing the exploratory question about the interest of visitors to participate in sustainable actions on the island of Leros, there is a minimal statistical difference in sex in the proposal to learn Folk Art where $U = -2,318$, $p = .020$, with men being the ones of greatest interest, and so on. 3,04 vs. 2,49 of women, while in the other proposed actions there is the same degree of agreement between men and women.

Continuing the correlation based on the origin of the sample, there is a significant statistical difference in the degree of agreement with $U = -2,606$, $p = .009$, with respect to the variable expressing the desire of mainly foreign visitors to the sample to participate in activities in an environmental park (orienteeing etc), and so on replies 2,64 versus of the average of 2,07 of Greek visitors. It is also evident the desire of foreign visitors to participate in recycling and environmental protection actions, with $U = -2,718$, $p = .007$ with an average of 2.46 versus of the average of 1.87 of Greek visitors.

The analysis of these parameters reveals the different attitudes and behaviours of foreign visitors, a growing awareness of their contribution to environmental protection and their participation in actions that promote quality of life.

H. *Check for Statistically Significant differences in Visit Frequency*

The non-parametric criterion Kruskal-Wallis was used to test the existence of statistically significant differences between a categorical variable with more than two categories and a rating one. When investigating the

views of the sample on the island of Leros, there is no statistically significant difference between those who visited the island for the first time with $H(3) = 8,908$, $p = 0,31$ and an average of 3,82 vs. 3,50 of those who have visited it for more than ten (10) times, also support the positive contribution of tourism to the place.

It is also noted that visitors coming to the island very often (> 10 times) consider illegal immigration with $H(3) = 12,352$, $p = .006$ and with a negative impact on tourism, with an average of 3,64, who have perceived their negative impact on tourism development and local society, comparing it to the present day. On the other hand, as a problem of the tourist product, the lack of tourist education (3,92), where $H(3) = 10,743$, $p = .013$ and the lack of cooperation of the bodies where $H(3) = 13.301$, $p = .004$ with an average of 4,11, advocating that it is a reality that appears to exist on the island and is opposed to the context of ecotourism operation.

The variation of the sample in relation to the reasons that they believe in the development of ecotourism, is that the island performs a variety of cultural events during the summer with $H(3) = 9,333$, $p = .025$.

There is a statistically significant difference between the desire of those who frequently visit the island of Leros and their participation in sustainable actions such as the cleanliness of beaches where, $H(3) = 9,845$, $p = .020$ and tree planting $H(3) = 9,845$, $p = .020$ and tree planting $H(3) = 9.226$, $p = .026$.

From the above results it can be seen that the portion of the sample, which regularly visits the island and is the majority, recognizes the negative effects of tourism that do not follow the ecotourism development framework, characterized by cooperation between the operators and tour operators with the local society, so that local cohesion and tourism education for the people involved in tourism are present, characteristics that are equally linked to the empowerment of the local community [15].

V. CONCLUSIONS

The conclusions drawn from this study are analyzed taking into account the responses and positions of the sample used. These Greeks and foreign visitors to the island, whose views, positions and attitudes are to be respected by the island's tourist makers, since most of them show a frequent visit to the place, they know well, and they are people who support it financially.

Because this research is a case study, conclusions cannot be generalized for other similar sites. However, the results that are elicited are quite encouraging for its specific location, its potential and the prospect of implementing sustainable development programs.

Tourists appear to be particularly well informed about alternative forms of tourism and ecotourism, as well as the negative impact of tourism, especially those that emphasize the environment, but wish to continue to visit destinations that are environmentally and culturally intact, such as Leros, so there is a high frequency of traffic. Tourists are keen to take part in environmental protection actions and take advantage of alternative forms of energy, and it is noted that Greek visitors have become more aware in recent years and feel they can contribute to environmental protection.

The perceptions of the sample are approached, highlighting the prominent importance of the negative impacts of tourism on the natural and man-made environment. The correlations between the groups lead to the discovery of differences and similarities that are being interpreted, underlining the need for more research on issues that relate to factors that influence and shape perceptions of tourism impacts, whether positive or negative, there is a

wide variety of destinations, host societies, tourists, and forms of tourism development. The positive and negative aspects of tourism development are understandable, as less mature tourist destinations, such as the island of Leros, are more enthusiastic about the benefits of tourism development. Among foreign and domestic tourists, there are differences in the way of perceiving the characteristics of the society and the place of reception, but which do not differ greatly.

The reference to social and cultural impacts is small. The significance of the quality of the environment and the cultural identity of the place is underlined by the overwhelming majority intention, so as not to exacerbate elements of the natural and man-made environment but also of the culture that the island has to show.

On the other hand, the satisfaction of tourists from their stay on the island is high, as the frequency of their visit is very high. The increased level of satisfaction of the two groups is related to the low intensity of the negative tourist impact and the general picture that tourism and tourists are helping local development and economy. Nevertheless, the forecast for the future of this tourist destination, although optimistic, raises concerns as the emergence of environmental problems, from the increase of tourist numbers, if the appropriate decisions and measures are not taken, under the umbrella of cooperation of all the interested tourist managers, local community, visitors and the state. Particular care should be given by the directors of the site as regards to the proper management of the immigration issue that exists on the island. Since it is perceived by the visitors as a negative effect (3,42) and most probable a further research could clarify the degree of adverse effect caused by this phenomenon.

It turns out that the cooperation and participation of all parts in the process of tourism is almost non-existent. Visitors recognize the need for local community involvement in tourism management and decision-making. In fact, local involvement is defined by Drake [16] as "the ability of local communities to influence the outcome of development projects such as ecotourism that have an impact on them." Its role in decisions concerning the design, management and benefits of the development of ecotourism is widely emphasized in the relevant literature [17], [18]. The involvement of local society is presented as an instrument that can overturn the dominant model of tourism development, where others decide on local communities and try to make them dominant by aiming at their self-determination. According to Ceballos -Laskurain, [4], under the auspices of an ecotourism-oriented community, local society is strengthened economically, socially, psychologically and politically. A prerequisite for achieving the above is the active role of the local community in planning, decision making, implementation and benefits consistent with ecotourism development [15]. In order to limit the hazards of the tourism development of a place, the involvement of local communities is essential. It is the local society that will first protect the environment and the natural resources that flow, since their development benefits, but the economic profits that move into the place depend on its preservation [23]. As the sustainable success of Community programs for participation in tourism programs seems to be, it can be threatened by a lack of resources, both financially and humanly - a lack of skills and experience. Involvement of residents must happen as long as residents are fully aware of the positive and negative aspects of tourism so that they can make a productive contribution to the decision-making process.

It has been noticed that if local people are not actively involved and do not benefit from the eco-tourism business, then there is a negative predisposition, it can even undermine the operation of ecotourism and, possibly, seek other, less sustainable, developmental patterns. Therefore, local participation can be considered as a

prerequisite for the development of ecotourism as it is an extremely effective tool that can positively contribute both to the protection of the environment and to the empowerment of local populations [24]. In order to learn more about the way in which the local community of Leros participates and the desire to participate in the island's tourism development, perhaps further research will have to be carried out with questions that will be raised in the local community itself. Consideration must be given to the existence of the Leros State Cure and the way the local society of the island has been nurtured to this day.

Visitors understand the necessity of the educational process and its contribution to the sustainable management of the whole project. It is understood by respondents' replies that educational planning can exploit the sustainable development of ecotourism and shape attitudes and behaviours of the authorities, local community and visitors. They consider that the educational process, which is also called for the field of tourism development, should play the regulatory role in shaping environmental consciousness, local society, local authorities and visitors, as well as the creation of environmentally sensible and responsible citizens; who will understand the functions of the environment, will be sensitive to environmental issues and will actively participate in their solution, [18]. Through learning experience, greater environmental and cultural sensitization, appreciation and respect for nature and culture of the site can be created.

Assessing the desire of visitors to participate in actions aimed at protecting the environment and the cultural promotion of the site, it is conjectured that it is the responsibility of the institutions and the local host society to ensure the quality of the available natural and cultural experiences and to work towards the direction of instillation of values. If a place wishes for sustainable tourism development, it must be redefined to redesign its core principles.

This means that care must be taken to ensure that the objectives of tourism development do not interfere with the objectives of protecting natural areas and biodiversity. In addition, it must operate under such conditions that the assessment and protection of natural resources are strengthened through education, as well as the presence of additional sources in the income of the local community to encourage residents to become co-managers of their environment. The development of ecotourism must be dictated by the need to protect nature and the restoration or preservation of a healthy society and economy. The perceptions of tourists are of great value for environmental and tourism planning as they "warn" about issues related to tourism development, which can affect its course.

Considering the above and given the inhabitants' love for their place, which is also pointed out by the visitors' opinions, it is perceived that it could achieve the ecotourism model and become a miracle. Leros does not need and does not fit into an idyllic resort, but remains true, authentic and not at all beautified. She must maintain her identity, and attributes that have made her a place of worship and love for the thousands of visitors who return over and over and at the same time consider her "part of their soul".

REFERENCES

- [1] R. Butler, "Tourism - an evolutionary perspective" in Nelson, J., Butler, R. and Wall, G. (Editors), "Tourism and Sustainable Development: Monitoring, Planning, Managing". Waterloo: Heritage Resource Centre, University of Waterloo, 1993, pp. 26-43.
- [2] S. Blangy, & M.E. Wood, "Developing and implementing ecotourism guidelines for wildlands and neighbouring communities", The Ecotourism Society Document USA, 1992.
- [3] B. Bramwell et al., "Sustainable Tourism Management: Principles and Practice". Tilburg: Tilburg University Press, 1996.
- [4] H. Ceballos-Lascurain, "Tourism, ecotourism and protected areas". IUCN (World Conservation Union). Switzerland: Gland, 1996.
- [5] C. Hunter, On the need to re-conceptualise sustainable tourism development. *Journal of Sustainable Tourism*, 1995, pp. 155-165.
- [6] H. Ceballos-Lascurain, 1993, "Ecotourism as a worldwide phenomenon", in Lindberg, K. and Hawkins, D. (Editors), "Ecotourism: a Guide for Planners and Managers". Vermont: North Bennington, 1993, pp. 12-14.

- [7] G. Pipinos G, & P. Fokiali, "An assessment of the attitudes of the inhabitants of Northern Karpathos, Greece: towards a framework for ecotourism development in environmentally sensitive areas." Springer Science & Business Media B.V, 2007.
- [8] M. Mowforth, "Ecotourism: terminology and definitions", Research Report series, No 1, Dept. of Geographical sciences, University of Plymouth Norton, 1993.
- [9] P. Komilis, "Ecotourism" (in Greek), Publications: "Propompos", 2007, pp. 35-36.
- [10] M. Logothetis, "The position of small islands in the development of the Dodecanese", Dodecanese Chronicles Volume KA "Periodical scientific publication, Rhodes 2007.
- [11] G. Tsoumanis, "Corfu Tourists & Providers Characteristics". Corfu: Press publications, 2009, pp. 30-31.
- [12] A. Field, "Discovering Statistics Using IBM SPSS Statistics", London: SAGE Publication, 2017.
- [13] UNESCO (United Nations Educational, Scientific and Cultural Organisation), (1977). The world's first intergovernmental conference on environmental education in Tbilisi. Paris: UNESCO.
- [14] S.J. Hsu, & R.E. Roth, "Predicting Taiwanese secondary teachers' responsible environmental behavior through environmental literacy variables". The Journal of Environmental Education, 30(4), 1999, pp. 11-18.
- [15] R. Scheyvens, "Ecotourism and the empowerment of local communities". Tourism Management, 20(2), 1999, pp. 245-249.
- [16] S. Drake, "Local participation in ecotourism projects". In T. Whelan (Ed.), "Nature tourism: Managing for the environment", Washington: Island Press. 1991, pp. 132-163.
- [17] E. Boo, "Making ecotourism sustainable: Recommendations for planning, development, and management". In T. Whelan (Ed.), "Nature tourism: Managing for the environment" Washington: Island Press, 1991, pp. 187-199.
- [18] K. Brandon, "Ecotourism and conservation: A review of key issues. Environment Department Papers", Washington, DC: World Bank, 1996.
- [19] D.A. Fennell, Ecotourism programme planning. Oxon: CABI Publishing, 2002.
- [20] P.E. Komilis, Ecotourism: The alternative prospect of sustainable tourism development. Athens: Propompos, 2001. (in Greek).
- [21] Epler Wood, M. E., Ecotourism: Principles, practices & policies for sustainability, UNEP-TIES, United Nations Publication, 2002.
- [22] M. Hampton, & P. Heritage, local communities and economic development. Annals of Tourism Research, 32(3), 2005, pp. 735-759.
- [23] K. Lindberg, J. Enriquez, & K. Sproule, "Ecotourism questioned: Case studies from Belize". Annals of Tourism Research, 23(3), 1996, pp. 543-562.
- [24] S. Ross, & G. Wall, "Ecotourism: Towards congruence between theory and practice", Willey, 1999.

AUTHORS PROFILE⁹



Mylona Levanta

Mylona Levanta is a Teacher of Physical Education in Secondary Education. Deputy Director at Bellenis Elementary High School of Leros. She holds a master degree from the Department of Environmental Studies of the Aegean University.



Dr. Moustakas Loukas

Dr. Moustakas Loukas is a Postdoctoral Researcher at the University of the Aegean and a lecturer in "New Education and Learning" and "Environmental Education" Postgraduate Studies and in Undergraduate Research Courses in the field of social research, statistical analysis (SPSS) and adult education. His doctoral dissertation involved the link between lifelong learning and sustainability, while innovation in education is currently the scope of his postdoctoral research.