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Sustainable tourism development of islander coastal areas: The case of Skala in Kefallonia, Greece.

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ABSTRACT

The development of the Greek islands, besides its positive effects, has caused a variety of significant problems particularly to sensitive ecosystems, where the interactions between the economy, society, and the environment are particularly intense. These problems are related to the different rate of development of the islands, especially in the coastal areas, due to the unique features pertaining to their size and location. This research focuses on the inspection of the environmental effects of tourism activity at Skala resort, which is part of the Elion-Pronon area on the southeastern coast of Kefalonia island located in north-western Greece in the Adriatic Sea. The relevant effects, mainly in the last decade, have contributed problems to the sustained development efforts of the area, especially to the natural and built environment, because of the over concentration of tourism activity.

The methodological frame used to assess the relevant effects is a questionnaire based survey using a statistically adequate population sample. The results of the research lead to useful conclusions which can help the relevant authorities qualitatively reform and improve tourism policy, so as to achieve sustained tourism development.

Keywords: Sustainable tourism development, Kefalonia island, Skala resort

1. Introduction

Greece is an islander country due to its geographical location and the geomorphology of its land. It has a peculiarity because of the great number of its islands which make up 18% of its area and differ greatly in area, socioeconomic structure, population and natural features. The 15% of the population in Greece live on islands; a percentage which can be compared only to that of Italy (12%), which is much higher than the rest of the countries. Out of the 400 European islands, the 167, which is 42%, belong to the Greek territory. Today, the Greek coastal island areas are popular tourist destinations both in Greece and Europe.

Despite their differences, the Greek islands have some particular features, which make up their identity and require their special handling. These peculiarities can be divided into 5 factor groups (table 1).

Table 1
Factors which are related to the peculiarity of the islands

Geographical position	<ul style="list-style-type: none">• Distance from the mainland• Distance from other island• Frequency of adverse weather conditions / prohibition of sailing for ships and transportation by air
Climatic & cultural characteristics	<ul style="list-style-type: none">• Long period of high temperatures• Culturally rich environment which makes them a special tourist destination
Geological and hydrogeological characteristics	<ul style="list-style-type: none">• Limited available land and conflict of land usage• Limited water reserves, sensitive water table
Social and economic characteristics	<ul style="list-style-type: none">• Substantial population rise during the tourist season• Substantial dependence of local economy on tourism• Concentration of the majority of the commercial activities in few parts of the island• High energy supply cost
Administrative characteristics	<ul style="list-style-type: none">• Difficulty in applying a joint management with the mainland or with larger islands

Source: Plan for the Management of Solid and Fluid Waste of Periphery of South Aegean (2005)

The model of tourist development followed by most areas during the post war period was the massive “sun and sea” tourism. This model was based on a uniform large scale (agglomeration economies), and low cost production and on agglomeration economics, so as to minimize the production cost. This model brought about multiple land-planning, residential, town-planning and environmental consequences (Mathieson & Wall, 1982:56-57). This is due to the fact that the increase in the flow of tourists along the coastal area was related to the exhaustion of tourist resources, the pressures for a more intensive exploitation and use of the land, the deterioration of the quality of the coastal waters, the loss of tourist value for parts of the coastal zone in the long-term, as well as the bio-diversity (Μπεριατος, 1996:103-121, Middleton & Hawkins, 1998:98-100, Briassoulis, 2002:1065-1085, Gossling,

2002:283-302). The uneven distribution of tourism is typical, whatever effects it may have caused, such as environmental damage, excess capacity, excessive centralization of tourist facilities and occurrence of land-planning problems, etc (Lagos & Stamatiou, 2005:5).

Furthermore, a lot of areas have lost their own traditional character and their economy is, now, based only on the tourist demand, which is uncertain as it is affected by imponderable factors, such as economic and political conditions of other countries, the climate and the competition with other destinations that constantly emerge. The problem seems to be quite serious in small island ecosystems, which make up the majority of the Greek island, where there is a sensitive balance among the environment, the economy and the society.

Typical examples of island destinations which faced these consequences are the areas “Benitses” and “Kavos” in Corfu, “Malia” in Crete, “Phaliraki” in Rhodes, Aigina (Oikonomou, 2002, Papadopoulou et al., 2002), the island of Zante, which is the most significant area for the reproduction of the “Caretta-Caretta” sea turtle, during the summer season, the island of Mykonos, a cosmopolitan island with an upheaval urbanization displaying signs of satiation (Κοκκώσης & Παρπαίρης 1996).

Internationally, the “Costa Brava” coastal area in Spain, the island of Majorca and the Gomera in the Canary islands, where the deterioration of the natural and constructed environment led to the loss of their initial attractiveness (Morris, 1996:25-27, Gomez et al., 1987:170-175, Brigand, 1991:67-69).

In the last few years, because of the environmental threats, the without-beginning tourist development has brought about, the necessity of planning and activating a process of managing tourism so as to achieve sustained tourist development, is of main concern (Middleton & Hawkins , 1998:67-72; Briassoulis, 2000:87-92, Briassoulis, 2002:1065-1085, Gossling et al., 2002:199-211). This leads to the formation of a tourist product which will respect the environment and the local peculiarities (Briassoulis , 2000:65-85), will be based on certain codes of ethnics for the specific sector, adopting a policy based on long-term environmental planning. It is the sustained development which allows us to maintain the variety of the island’s characteristics in the course of time. This could be achieved, as Maroudas & Tsartas 1988, Lagos 1998 claim, if we turned to new tourist products, which will come from the proper exploitation of the island’s characteristics.

Becoming conscious of the situation and the need to adjust to the requirements of demand, led to applying sustained tourist development that promises positive prospects, especially in problematic areas and it’s one way process for the island ones. In this direction, the European Union has laid down a policy for its coastal zones, such as the Integrated Management of Coastal Zones. Especially, this policy is an efficient procedure in the course of time, for the sustained management and use of coastal zones, taking into consideration the importance of the ecosystems, the variety of activities and uses and their impact on the marine and terrestrial territory.

As far as the above theoretical and experiential speculation is concerned, this research is focusing on the investigation of the effects, which are brought about by the tourist trade in the coastal settlement of Skala in Kefalonia, aiming at the detection of the factors which cause environmental problems and disprove its sustained development.

2. The case of Skala, Kefalonia

Kefalonia belongs to the complex of islands called Eptanisa, which is near the Greek mainland. It belongs to the Regional Administration of the Ionian Islands and is one of the most developing tourist destinations. Kefalonia has a distinctive morphology, which combines the island character with the highland one. Tourism has been developed at gentle and low rates in the largest part of the island. Its south-east part, where the tourist trade is more intense, is an exemption. The country of Skala is located in this part of the island and the settlement with the same name is a typical example of residential development. It is a region which, like the rest of the island, has followed the one-dimensional model of tourist development, which prevails over the last decades in most island regions. The area is administrated by the Elliou Pronon County, which was born after Kapodistrias plan of 1997. Skala is situated 312 km south-east of Argostoli. The settlement is newly-built and was moved away from the hill after the earthquake in 1954. The ruins of a Doric temple of Apollo or Neptune in Agios Georgios of Skala dating back to the 6th century BC and the Roman mansion with the mosaic are the most important archaeological sights. The morphology of the coastal zone in Skala, which is 6-7 km long, is varied with the gentle slopes as well as rocky and steep regions. This relatively gentle morphology and the proximity to the harbor of Poros, which is one of the most significant harbors in the island, contributed greatly to the development of various activities along the coastline. The last census (ESYE, 2001) showed a remarkable increase of the actual population of Skala (700 inhabitants), while the previous census in 1991 had shown a population of 532 inhabitants, which implied a residential development not only of permanent but mainly of lodging houses.

Tourism develops in the form of apartments, rented rooms, guest houses and hotels which come to 100 on the whole (EOT, Union of Hotel Keepers, Chamber of Commerce of Kefalonia 2009). The tourist season lasts for six months, from May to October. The majority of tourists are European Union citizens with the British being first due to direct access through charter flights. The Greeks are second and a minority of Italians, Scandinavians and Austrians follow.

We can get a picture of the diachronic tourist development in the area from table 2. This table shows quite an important increase in tourist trade during the period from 1999 to 2007. The year 2000 could be considered as a turning point for the tourist development of the area because there is an enhancement of arrivals with more nationalities being added diachronically, first Austrians, then Italians and finally Germans and Scandinavians. The increase in arrivals was accompanied by a proportionally increased fullness and number of people staying overnight, with years 2006 and 2007 being the best.

Table 2

Tourism development of the area of Skala since 1999

Years	Arrivals	Nationality	Fullness	Overnight stays
1999	3724	Greeks, British	42%	25.034
2000	6.022	Greeks, British,	88,1%	54.931

		Italians, Austrians		
2001	6.576	Greeks, British, Italians, Austrians	91,9%	59.317
2002	6.991	Greeks, British, Italians, Austrians	96,7%	57.427
2003	3.969	Greeks, British, Italians	109,2%	29.550
2004	7.928	Greeks, British, Italians Germans Skandinavians	87,2%	68.899
2005	8.541	Greeks, British, Italians Germans Skandinavians	96,5%	73.345
2006	11.888	Greeks, British , Italians Germans Skandinavians	110,7%	75.675
2007	16.220	Greeks, British, Italians Germans Skandinavians	115 %	82.678

Source : [Γ. Γ ΕΞΥΕ, 2009 NSSG]

In the last few years there's a strong interest for investment in the area, especially after the year 2000, which results in a constant building in areas out of the zoning plan. In addition, there's a strong interest for alteration of the existing settlements by building accommodations inside the settlement (very few on the whole), out of the settlement on farmland and in pastures (areas which are not cultivated). The last two categories have the biggest number of accommodations and there is an increased tendency to continue construction. As a result, a number of them have been built near the beach, in areas where significant species of animals and plants live and reproduce (Mouna beach in Scala). Furthermore, there's a gradual transformation concerning the use of land in the area. The farmland is gradually transformed into an area for tourist exploitation. There is a constant conflict on the use of land between stockbreeders and accommodation keepers. The increase in accommodation shows the pressure imposed on the coastal area of the settlement which together with their need for using up natural resources, leads to undermining the viable development of the area. The situation which was configured is due to the construction of several works of road building along the coast as well as the expansion of construction on coastal settlements in order to serve the tourist trade. The primary sector which was structured concerning mainly tree-cultivation such as olive trees, vineyards and wheat small and medium size stock- breeding units, shows that it is complementary income or it gradually declines. The inventory valuation of farming- stock breeding in the

years 1991 and 2001 (ESYE) indicates that the majority of the economical active people are occupied in this sector, along with the increase in tourist lodgings. As a result, the lack of an institutional development plan caused a series of town-planning and environmental problems. The inefficiency of the road network and the infrastructure network for the waste processing during the peak season is typical. Big hotels have a chemical processing unit, while smaller ones, rooms and apartments, which are more numerous than hotels haven't got such units. In the last few years there has been an attempt to complete the waste processing project.

3. Research Methodology

In order to trace the environmental effects of the excessive centralization of tourist trade in Skala, Kefallonia, field research was used with random sampling among hotel keepers. Personal interviews of structured questionnaire were used. The questions included in the questionnaire were mainly close- type questions and only one was open- type. Parameters, such as overall satisfaction of the participants on certain sectors (tourist development of the area, the standard of the offered services, facilities, action taken by local authorities and citizens for the tourist development of the area etc). Emphasis was given on questions about the environmental management of the accommodations.

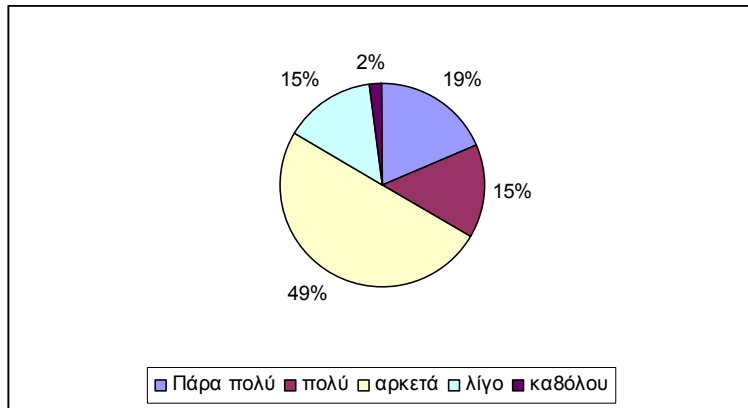
The questionnaire was checked in its form, its language, its clarity and its reliability in a pilot research done before the main sampling. The research was carried out from 7th to 8th December 2009. Out of the 100 hotels which are operating in the area, 54 answered the questionnaire (this is 54% on the whole).

4. The result of the research

After the data processing of the research, it was noted that most accommodations (49%) are rooms for rent, and to a smaller percentage (26%) accommodations consisting of rooms and apartments for rent. Both categories have low capacity and it's indicative that 41% of the accommodations have 1-10 rooms and 55% of the furnished apartments have 1-5 rooms. 50% of the accommodations are 3-star hotels. Most accommodations (32%) began their operation 6-10 years ago, while 22% of the lodging companies began their operation earlier than 5 years ago. The tourist season, as most hotel keepers (64%) claim, lasts for six months (from May to October). The main form of tourism in Skala is the organized massive tourism. Most tourist lodgings in the area work with a travel agency or a tour operator that provides the majority of their guests. 56% of those who answered the questionnaire are mainly occupied with tourism. The financial contribution of tourism to the area as it appears on Graph 1 brings a moderate satisfaction to the entrepreneurs involved as 34% are fully satisfied, while 49% declare that they are satisfied enough. 17% of those who participated in the research seem to be dissatisfied. The results are considered to be rather important because they indicate that there is moderate satisfaction for the economic boom the tourist development in the area promises to bring.

Graph 1

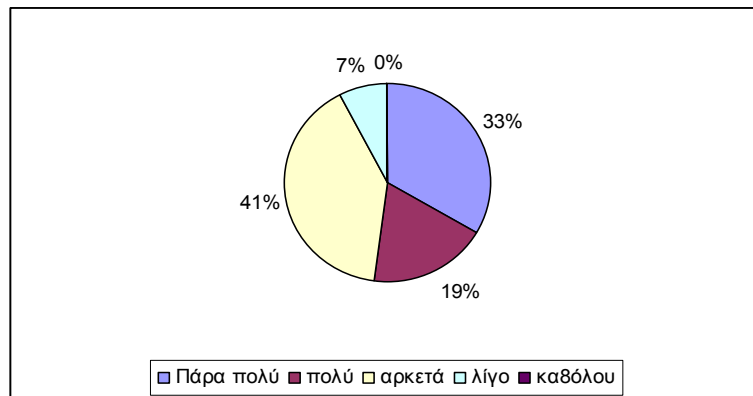
The economic contribution of tourism in the area



As far as satisfaction for the general development of tourism is concerned, the research shows (Graph 2) a high level of satisfaction (41% fairly satisfied, 19% very satisfied & 33% fully satisfied). A small percentage (7%) shows some dissatisfaction related to the short duration of the tourist season.

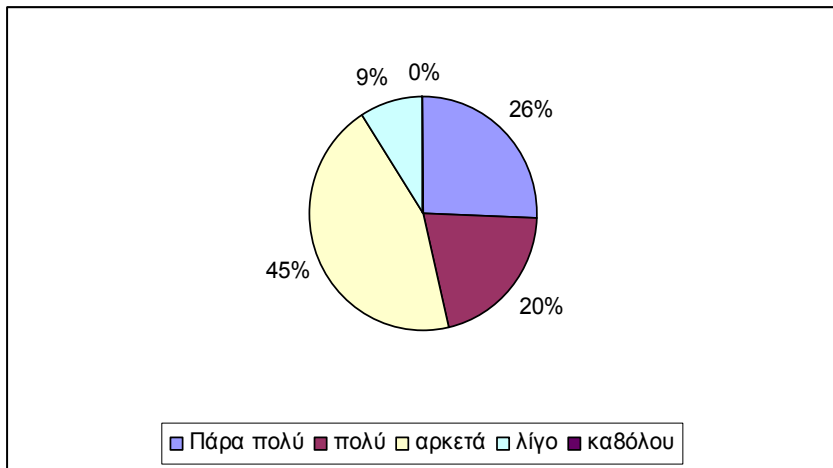
Graph 2

Overall development of tourism in the area



The results of the research on satisfaction for the services offered by tourist enterprises in the area are more optimistic (Graph 3). It results in percentages of 45% who are fairly satisfied, 20% very satisfied and 26% fully satisfied. This is particularly encouraging for the tourist development of the area, as it has been proved that there have been new entrepreneurs lately, who deal with tourist trade and focus on the quality of the services offered in order to satisfy tourist demand.

Graph 3
The quality of the services offered in the area



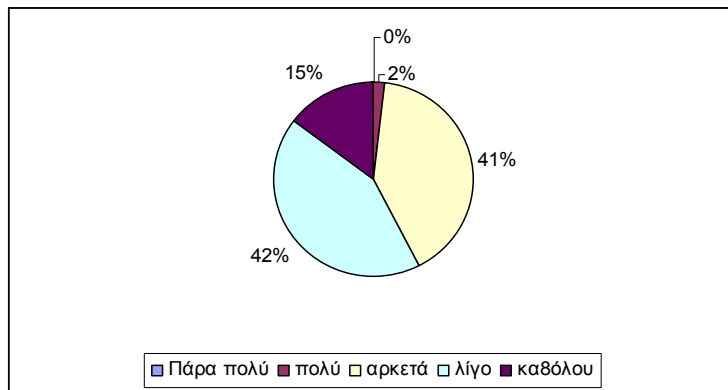
The local society is entirely dependent on tourism up to 87%. This percentage is justified by the number of tourist enterprises in the area, which are constantly increasing and the variety of tourist activities. This dependence affects negatively the other sectors leading them to decline and abandonment. Tourist development together with the rest of economic activity in the area (agriculture, stockbreeding etc) can bring favorable economic, social and environment balance to the area.

Graph 4
The dependence of local society on tourism



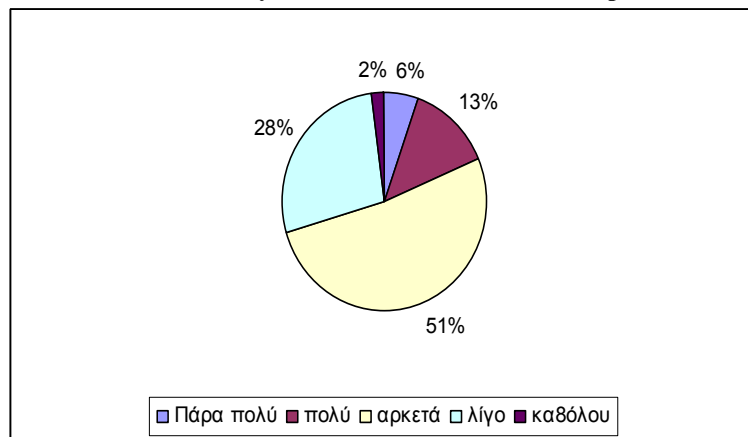
There is a particularly limited participation of the local authorities (e.g OTA) in taking action regarding tourist development (Graph 5). It is indicative that 42% of the people asked declared to be a little satisfied, while 15% of them were not satisfied at all. These facts show the limited interest on the part of the local authorities and the limited action for tourism development and environmental protection of the area as well as the elevation of the natural environment by taking initiative using action related to environmental management, land planning, protection of coastal areas from building without planning, pointing out environmentally sensitive areas, environmental education of the citizens etc.

Graph 5
participation of the local authorities in taking action regarding tourist development



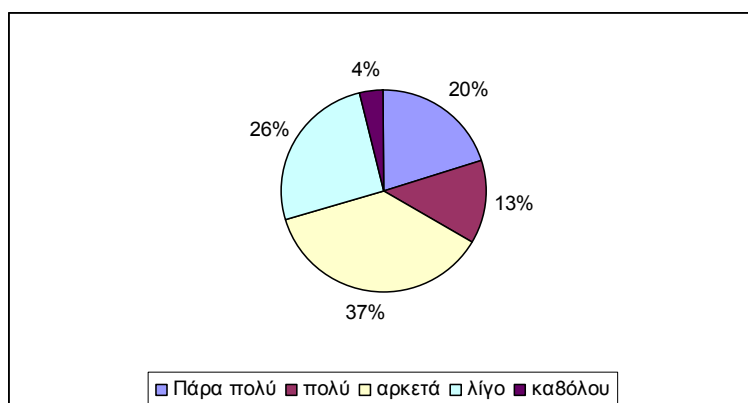
Unlikely local authorities, citizens seem to take initiative and action related to the tourist development of the area at a larger percentage (Graph 6). It is clear that the fact that 55% of those who appear to be fairly satisfied, 13% very and 6% fully satisfied, proves that there is great awareness by the citizens who aim at maintaining tourist development. However, a percentage of 28% who are a little satisfied has to be mentioned.

Graph 6
Action taken by the citizens for tourist development



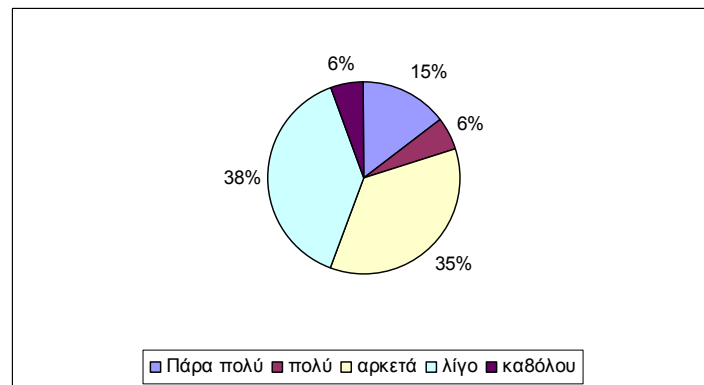
The satisfaction of the sample for tourist infrastructure in the area is rather moderate (37%), while there is a remarkable percentage of dissatisfaction as 30% of the participants in the research declare that they are a little satisfied or completely dissatisfied (Graph 7). This outcome has a suspensive influence on the area as the tourist infrastructure is the main tourist attraction. The uncompleted draining network is a typical example.

Graph 7
Tourist infrastructure in the area



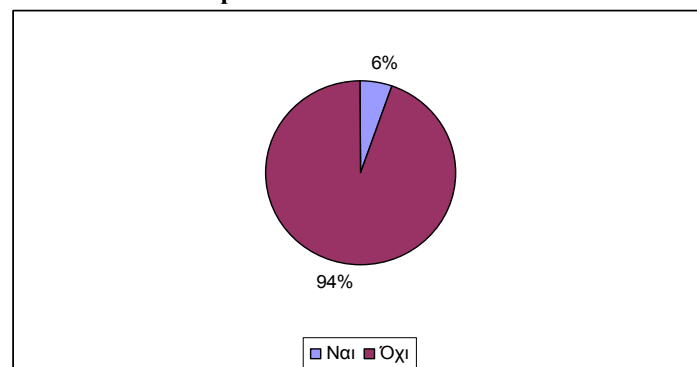
Most of the people, who were asked, admit that tourist development has burden the natural environment, a fact which is obvious from the percentages 35%, 6%, and 15% respectively answering fairly, very and very much (Graph 8). Although the result is negative for the area because it undermines future tourist development, the awareness of the negative impact of tourism development on the environment is a very important issue. There is a strong need to emphasize on environmental education of the local entrepreneurs, which will help among other things, action to be taken for environmental management in their enterprises, such as saving water resources, energy, garbage disposal etc.

Graph 8
Burden on the natural environment ζ



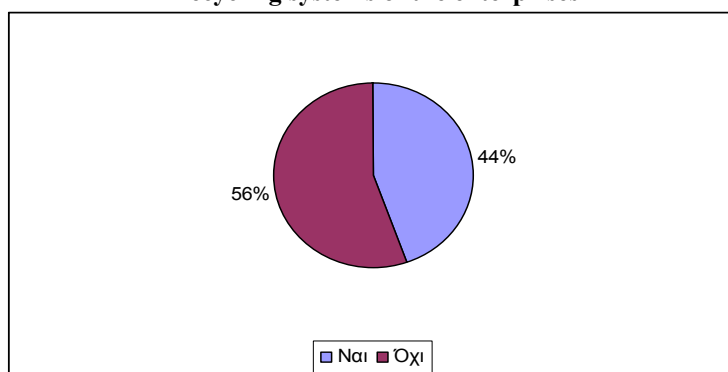
A particularly small percentage (6%) of entrepreneurs complained about noise, odour and pollution (Graph 9). The result is fairly satisfactory for an environmentally sensitive area like Skala, where all the above factors can cause severe problems to the environment and consequently to the tourist development.

Graph 9
Complaints about noise and odour



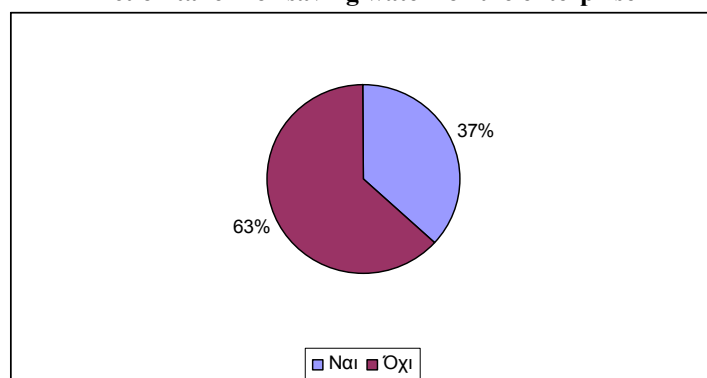
56% of the enterprises were found to lack units for recycling and reducing their wastes (Graph 10), which is expected because of their small size. The lack of processing units for solid and liquid wastes causes pressures which has a negative effect on the protection of the environment and undermines the coast and beach cleaning and in general the activities related to the sea.

Graph 10
Recycling systems of the enterprises



A particularly high percentage (63%) of the participants has not taken any action to save water in their enterprises (Graph 11). The irrational management of the water tables causes a problem for the future viability of the area as it leads to the exhaustion of natural resources..

Graph 11
Action taken for saving water for the enterprise



The last question enabled the participants to express their views on the actions which have to be developed in the area in order to reduce the burden on environment.

The main suggestions refer to:

- ◆ Town planning – housing plan
- ◆ Undertaking of actions by the local authorities for the environmental protection
- ◆ Meticulous organization of the touristic development (protection against the anarchic construction)
- ◆ Completion of the project “Waste water treatment” (drainage system)
- ◆ Marking and beneficial use of the paths of the region that are of a special touristic interest
- ◆ Briefings in order to raise awareness among citizens on environmental issues
- ◆ Beneficial use of natural resources
- ◆ Conservation of the authentic character of the region
- ◆ Protection of the coastal - littoral zone
- ◆ Infrastructure management
- ◆ Construction of pedestrian zones
- ◆ Vocational training
- ◆ Investment actions for the creation of waste recycling centers
- ◆ Financial support for new infrastructure

- ◆ Encouragement for ecological actions
- ◆ Rationalized use of the water- table
- ◆ Use of solar heater (solar collector)
- ◆ Measures for the protection against fire and noise (creation of fire break zones)

5. Conclusions- suggestions for policy

In this article there has been an attempt to detect the environmental problems in the sensitive coastal area in Skala, through primary research. Many of the environmental problems are due to the constantly increasing tourist trade and the fact that the main form of tourism is organized massive tourism. The research indicated, although tourism is the basic economical activity, on which the local society depends to a large extent, its financial contribution to the area is not particularly satisfactory. The dependence on tourism, on the part of the local society, as it is considered to be the only field of economic activity, causes problems to the balance and the management of the environment. Basically, actions which will ensure the maintenance of other economic activities, such as the primary and secondary sectors, must be taken, using effective marketing policy.

The policy which can be applied will have to involve interventions in infrastructure works, such as the draining network completion works, so as to deal with garbage disposal which is an absolute priority for the area. Furthermore they have to cooperate with other authorities related to tourism for more efficient management of the water table using land planning, in order to adapt the partial policies in the area. In addition they should allocate the settlements, establish zones, define the use of land etc. It is essential to encourage people's awareness through environmental education so as to disseminate the concept and the preconditions of viable development, which will help tourist activities, incorporate smoothly in the natural environment.

The environmental effects of tourism in the area of Skala are partly due to the lack of legislated actions by the local authorities involved and partly the lack of environmental management of tourist facilities. Within this framework the targets we need to set, concern the improvement of the environmental quality and especially the protection and exploitation of its advantages, so as to improve the total of tourist offer. It is necessary to adapt specific policies- actions for the sustained development as the area in question is considered to be a totality.

The most important actions should aim to:

- ❖ Improving infrastructure works, by using integrated interventions respecting the environment (road network, rational management of natural resources, infrastructure works like waste processing unit and draining network for the disposal of solid and liquid wastes as well as rainwater collectors).
- ❖ Environmental education, training and expertise of the local population and tourist authorities through special environmental projects, one-day sessions, environmental consciousness reinforcing seminars so as to ensure tourist development within the limits of the existing environmental capacity.
- ❖ Reinforcement of other economic activities in the area (primary and secondary sector), in order to mitigate the dependence of the local population on tourism by creating a satisfactory income source.

This way the effects could be eased and the environment could be preserved according to the viable development principles.

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