

The increase of visits and prospects of ecotourism in Greek forest areas during the period of the covid-19 pandemic

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Abstract

During the period of the covid19 pandemic and the measures taken to address it (from 3/2020 until 5/ 2021), mass tourism collapsed. The needs for social distancing favored visits to areas of natural beauty and forests, where ecotourism with its special characteristics, which mainly concerns visits to the countryside by small groups of people without overcrowding, covered part of the tourist needs. The purpose of this study is to examine, through quantitative research, if there was an increase of visits at the Greek forests during the pandemic that creates future tourist tensions. Increased visitation creates expectations for mild tourist development of the peripheral to forests areas by achieving an extension of the tourist season, creating more employment opportunities for the locals and is very promising for a more proportional distribution of tourist traffic and revenues between summer vacation destinations and rural areas.

Keywords: Forest, Tourism, Ecotourism, Local Development, Sustainability, Ecosystem Services

JEL classification: Q01, Q23, Q26, Q57, Z32

Introduction

Forest are valuable natural ecosystems that contribute with their goods and services in the improvement of humans' well-being. At the same time, through their integrated management they play a vital role in mitigating the effects of climate change that threatens the planet's environment. Their contribution to the development of local communities is crucial and is achieved through the varied utilization of the goods and services they offer to us. Among these services, important role plays the cultural, spiritual and leisure values (Tsitsoni et al. 2002). When recreation and tourism in forest areas are carried out in responsible and sustainable ways and keep the protection of natural ecosystems, the conservation of biodiversity and the respect to local communities, as a priority, they can significantly contribute to the diversification and multi-functionality of the local production model and the creation of resilient local economies (Kostopoulou et al. 2017; Leung et al. 2018). The use of indicators that will calculate the carrying capacity of each region will ensure the development of tourism in a sustainable and viable way as an economic activity that will supplement the residents' income. (Kostopoulou and Kyritsis 2006; Ganatsas et al. 2013).

Since 11/3/2020, when the World Health Organization (WHO) declared the spread of the covid19 virus as a pandemic, rules of social distancing and restrictions on travel have been issued in Greece. Mass tourism, as a socio-economic activity with travel and accommodation in hospitality companies as its main components, has been dramatically hit (Pappas 2021). In developing countries around the world that are heavily dependent on inbound tourism, the ecotourism sector, a key pillar of their economy, has also been negatively affected (Cherkaoui et al. 2020, Laudari et al. 2021). Restrictions began to gradually de-escalate with the restart of tourism in Greece on 15/5/2021. Having different characteristics from mass tourism, ecotourism, which mainly concerns rural tourism by small groups of visitors (Dorobantu and Nistoreanu 2012), is an activity aligned with the needs for social distancing.

In the present study, potential changes in the rates of citizens' visits to forest areas are investigated, when and as these visits were permitted by the conditions and the authorities throughout the pandemic period and specifically during the period between April 2020 and April 2021. More specifically, whether these changes in the rates of visits to the forests created an increased intention for future overnight stays, especially among those who increased the frequency of their visits. The quantitative nature of the research questions led to the choice of conducting a quantitative survey, but in a way that was allowed to overcome the impossibility for a face-to-face completion of a questionnaire, in the era of restrictions in mobility and needs for social distancing.

Materials and Methods

Opportunity sampling was the chosen method for the quantitative research. To overcome the impossibility for a face to face distribution due to covid-19 restrictions and completion of a questionnaire, Google forms were used to create one, which then was shared online. The questionnaire includes 24 closed-ended questions, while the last 5 of them are related to the independent variables such as: gender, age, marital status, educational level and income. The questionnaire was distributed mainly through social media (Facebook) without specific targeting, to various groups and individuals and the survey was conducted during the period between 12/4/2021 and 19/4/2021. It was requested to be completed by people who have visited at least once a forest area since the beginning of the pandemic and beyond. Acknowledging

that those who do not use the internet and social media have been excluded from the study and that although opportunity sampling provides easier and unrestricted access to the sample, it is less objective than probability sampling (Saunders et al. 2007). To overcome the above weaknesses, the following formula was used to calculate the required sample size that provides a high level of 95% reliability, allowing a maximum possible statistical error rate of 5% regardless of the size of the total population (Aaker and Day 1990, Akis et al. 1996):

$$N = \frac{Z^2(\text{hypothesis})}{S^2} \Rightarrow N = \frac{1.96^2(0.5)(0.5)}{0.05^2} \Rightarrow N = 384.16$$

Needing a minimum sample size of 384 people for achieving the required reliability and accuracy, 501 questionnaires were finally completed successfully, followed by a results procession and a performance of frequency distribution analysis. Important for confirming the research questions is also the attempted correlation test with the Pearson method to determine the relationship between the frequency of visits to forests during the pandemic and the manifestation of intentions for future tourist visits.

Results and Analysis

The frequency of visits to a forest area during the last year (Between April 2020 and April 2021) is shown in Table 1. It is noteworthy that about half of the respondents (46,8%) visited a forest area several times during a month's period.

Table 1: Frequency of visits to a forest area during the past year

Frequency of visits to a forest area in the last year (4/2020 - 4/2021)	
1 to 3 times per year	33,4%
1 to 2 per season	19,8%
1 to 3 per month	26,0%
1 or more times per week	20,8%
Total	100,0%

Almost three out of four persons of the sample changed the rate of forest visits during the examined period (Table 2) with a predominant trend of increasing visits with a percentage of 42%.

Table 2: Change in the frequency of visits to forests (April 2020-April 2021)

Change in the frequency of visits to the forest in the last year compared to previous years.	
Reduced	32,3%
Stayed the same	25,7%
Increased	42,0%
Total	100,0%

Regarding the purpose of their visit to forest areas (Table 3) the first choice as a motivation of attraction was the enjoyment of nature (70,9%) and the second choice as a motivation of impulse was the state of confinement due to covid-19 (46,7%).

Table 3: Purpose of visit at the forest

Purpose of visit at the forest (average of 1,93 choices per person)	
Enjoy nature	70,9%
Sport and recreation activities	33,9%
Spend time with the family outdoors	41,3%
Escape the state of lockdown confinement	46,7%

The vast majority of respondents (92%) stated that when they visited the forests they chose to engage in sports activities for physical exercise and wellness (hiking, running, exercise, etc.) (Table 4).

Table 4: Visitors' activities in the forests

Visitors' activities in the forests (average of 1,43 choices per person)	
Hiking/Running/Exercise	92,0%
Birds and wildlife watching	24,8%
Cycling	7,4%
Winter sports	5,6%
Swimming/Canoe	4,6%
Other	8,4%

A 48,9% percentage of the respondents visited the forest areas in Spring, 43,5% kept the same frequency throughout all season and 32,3% in Autumn (Table 5)

Table 5: Preferred season for forest visit

Preferred season for forest visit (average of 1,53 choices per person)	
Autumn	32,3%
Winter	7,0%
Spring	48,9%
Summer	21,4%
All seasons	43,5%

Although 42,2% stated that it is unlikely that they will choose forest areas for tourism in the near future, a fairly high percentage (38,2%) expressed intention for tourism in forest areas in the near future, while about 20% of respondents have not decided on the destination of their choice for tourism (Table 6).

Table 6: Intention for forest tourism in the near future

Intention for forest tourism in the near future	
Little to very unlikely	42,2%
Undecided	19,6%
More or less likely	38,2%
Total	100,0%

There is a positive correlation between the frequency of visits and the statement of intention of the respondents for tourism in forest areas in the near future (Tables 7a and 7b). The more the respondents state a higher frequency of visits, the more they declare intention for future tourism in forest areas.

Table 7a: Correlation between frequency of visits to forests and statement of intention for forest tourism in the near future

Frequency of Visits	Respondents	Intention for future tourism in forest areas	Percentage
1-3 per year	168	50	29,8%
1-2 per season	99	33	33,3%
1-3 per month	130	54	41,5%
1+ times weekly	104	54	51,9%

Table 7b: Chi-Square tests of Pearson Correlation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33.624 ^a	12	.001
Likelihood Ratio	32.462	12	.001
N of Valid Cases	501		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.60 Among the 42% of all respondents who stated that they have increased the frequency of visits to forests, there is the highest percentage (49,52%) of intention for tourism in forest areas in the near future (Table 8).

Table 8: Percentage of statements of positive intention for tourism in the near future in relation with the changes in visitation rates

Change in Visits Frequency	Respondents	Intention for future tourism in forests	Percentage
Reduced	162	51	31,5%
Stayed the same	129	36	27,9%
Increased	210	104	49,5%

While in the whole sample 38,12% expressed their intention for overnight visits to forest areas in the near future, the percentage increases to 51,71% among those who stated as one of the purposes of the visit to the forests "to escape from confinement caused by covid-19 " (Table 9).

Table 9: Percentage of statements of intention for tourism in the near future at forest areas in relevance with the purpose of visits at the forest

Purpose of visit	Respondents	Intention for future tourism in forests	Percentage
Total Sample	501	191	38,1%
Escape covid19 confinement	234	121	51,7%

Tables 7, 8 and 9 show that among those who visited a forest area very frequently last year, among those who increased their frequency of visits and among those who visited forests to escape the confinement caused by pandemic measures, appear the highest rates of intention for overnight visits to forest areas in the near future.

In Table 10, people without children appear to have a larger percentage of higher frequency of visits at forest areas during the pandemic, in relevance with those who have children.

Table 10: High frequency of visitations for visitors with or, without children

Family status	Respondents	High Frequency of visits	Percentage
Without children	333	171	51,4%
With children	168	63	37,5%

The level of income of the respondents seems to play small to none role (close at the limits of the statistical error of the survey) in the intentions for future tourism with overnight stays at the forest areas (Table 11).

Table 11: Statement of intention for future tourism in forests in relevance with the respondent's income

Level of Income	Respondents	Intentions for tourism in the near future	Percentage
Total Sample	501	191	38,1%
Unemployed/Income up to 7.000€	203	73	36,0%
More than 22.000 € annually	50	22	44,0%

Conclusions and Discussion

The research results show an increase in the number of visitors at the Greek forests between April 2020 and April 2021 and high intentions for tourist visits in the near future, especially among those who increased the frequency of visits to the forests during the covid-19 pandemic restrictive measures. Changes in the frequency of visits to forests were reported by about 74,3% of the sample. A 42% of the respondents stated a small or large increase in forest visits, confirming the trend in favor of nature tourism during the covid-19 pandemic (UNWTO 2021). Among them, with a percentage of 49,52% appears the most reinforced trend for future overnight stays at the forests

areas. A correlation was observed between the frequency of visits and the intention for future overnight visits.

The average percentage of stated intentions for future tourist visits in the total sample is 38,12%, but it is rising up to 51,71% among the people who stated as the purpose of the visits during the last year "to escape from the confinement conditions caused by covid19". This finding confirms the fact that the special features of ecotourism, which concerns rural tourism, contact with the natural environment and de facto social distancing since it is not massive (Dorobantu & Nistoreanu 2012), strengthened the trend for tourism in the forests while at the same time mass tourism collapsed. An additional feature that was identified is that a high frequency of visits was stated by those who did not have children at a rate of 51,35% while the percentage for those with children falls to 37,50%. Income level does not seem to play a significant role in planning future tourist visits to forest areas.

An important finding of the research concerning Greek tourism is the fact that while in our country as a socio-economic phenomenon it presents elements of seasonality culminating in the summer season (Varvaresos 2014), the majority of respondents state that they prefer to visit in spring (48,9%), all seasons (43,5%) and autumn (32,3%), fact that creates expectations for extension of the tourist season, and is very promising for a more proportional distribution of tourist traffic and revenues between summer vacation destinations and rural areas in the future, creating more employment opportunities for the locals.

The change from three-quarters of the sample of forest visit rates during the period of restrictive measures to treat covid-19 raises questions about the reasons that led to the increase or decrease in the frequency of hikers' visits and should be explored.

Under conditions of limitation for meetings, imposed during the period of validity of the measures for dealing with the pandemic, the use and the importance of social media in communication and decision-making for tourism increased (Andreopoulou et al. 2016, Tankovska 2021). This fact provides opportunities for more ICT adaptation practices especially for the protected forests areas management (Andreopoulou et al, 2015). The ICT adaptation in Greek National Parks is in a "transformation" stage (Koliouška and Andreopoulou, 2013) and the incorporation of Social Media and Mobile Apps usage needs to be further explored.

A future increased traffic is likely to add additional pressure on forest ecosystems and so, forest area managers should step up efforts to manage visitors and ensure that tourism will not have a negative impact on sensitive forest ecosystems (Seetanah 2011; Tsitsoni 2015). The above risks are lower than the negative impact of the covid19 pandemic crisis on developing countries which rely heavily on incoming ecotourism. Their fragile economies were directly affected by the sharp decline in tourism and there was an increase in illegal logging, poaching and wildlife trafficking practices by the population that lost its additional touristic income (Cherkaoui et al. 2020; Laudari et al. 2021).

In a world where safety and health are increasingly important factors in deciding on a choice for tourist destination, the successful management of health and safety protocols gives a comparative advantage to forest areas and creates new opportunities for ecotourism development (Susanti et al. 2021).

Climate change makes it more urgent to protect natural forest ecosystems. The increase of tourism in the forest areas can under certain conditions contribute to the environmental awareness of the visitors and to the revitalization of the local communities, but always if practiced by prioritizing the protection of the environment, the preservation of

biodiversity, respect for the local communities and always within the carrying capacity of the areas.

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