

## THE LACUSTRIC LANDSCAPE – THE FACTOR OF TOURISM POTENTIAL IN THE UPPER BASIN OF IALOMIȚA

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### Abstract

The paper presents the results of a study that aimed at identifying the satisfaction of tourists in relation to the presence of the lacustric landscape in the Ialomița River's upper course. The researches, based on the field reality and the bibliographic sources, emphasize the importance of the lacustric landscape, in close interdependence with the natural mountain landscape of Bucegi and the anthropic, reservoir lakes, in the choice of these places by tourists. Beyond that, the satisfaction of tourists depends, according to the analysis of the data obtained from the research based on the questionnaire, on a complex set of factors reflecting the intellectual profile of the tourist and the type of chosen tourism (recreational, scientific, adventure tourism). At the same time, the negative aspects of these landscapes (e.g. the deterioration of vegetation communities close to aquatic areas) are highlighted in their involvement in the tourism process.

**Keywords:** lacustric landscape, touristic potential, Bolboci Lake, Scropoasa Lake

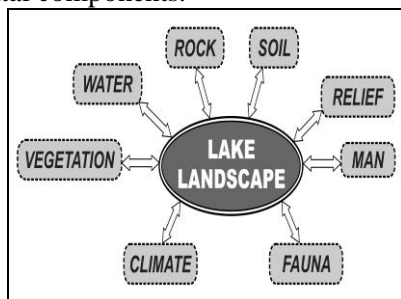
### INTRODUCTION

According to the definition given by the European Landscape Convention (2000), “landscape” means *an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*. The notion of landscape has multiple and complex meanings, comprising an objective reality but also the subjective perception on it.

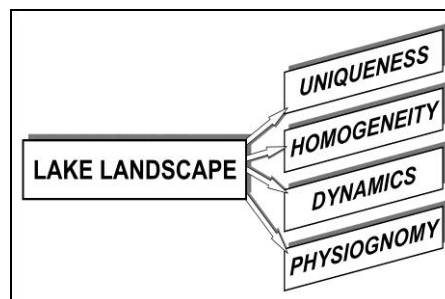
Hommeyer, in 1805, used the term (landschaft) in the sense of appearance of a landscape (Vasiliță-Crăciun and Gavra 2016)). The first definitions (Passarge 1919 fide Antrop and van Eetvelde 2017; Berg 1950) put the accent on the exclusively natural physiognomy and content of the landscape, while Carl Sauer 1925 consider the society as a main agent in the transformation of the landscape and use the term cultural landscape, to designate the landscape created by man.

The geographic landscape, including the lacustric landscape, emerges as a consequence of the interdependence and interactions of the components of the environment, biotic and abiotic, in a certain territory (Fig1). It is characterized by: uniqueness, homogeneity, dynamic character and physiognomy (Fig 2). The features of the landscape depend on the possibilities, practically unlimited, of combining the component elements, on the coordinating role some of them have and on the type of relation created between them. The identification and study of the mutual relations between physico-geographic factors, biological processes, economic and social relations led to the individualization of landscape ecology.

Tourism is a dynamic phenomenon, permanently in adaptation to the economic and social changes, with an important impact on the development of a territory. The increased dynamics of the activities by which the tourist process is identified involves the valorisation of new elements of the tourist potential available to that territory. The activities specific of most tourism forms involve, to a greater or lesser extent, the environmental components.



**Figure 1** The interdependence between environmental components



**Figure 2** The features of lake landscape

The integration of the lake landscapes in the regional tourist development concept (Hall and Härkönen, 2006; Cooper 2006; Hadwen, 2007; Jennings, 2007; Nemeth and David, 2007; Touhino and David, 2012), as subdomain of nature-based tourism is a necessary approach in the context of the accelerated increase of the tourist destination competitiveness. The lacustric landscape, by its characteristic microclimate (Lin & Matzarakis, 2008), the specificity of its biotic components and tourist arrangements of the accommodation, food, recreational facilities type - in certain cases, represents a highly attractive area for tourists. Used curatively, for leisure or only for the strong visual, aesthetic impression, lakes, natural or anthropic, are resources with important potential for the profitable use of a certain area in tourism.

Numerous empirical international studies in this domain (Puczkó and Rátz, 2000; Goossen, 2006 – Netherlands; Vasvari et al., 2015 - Hungary, Touhino, 2015 – Finnish Lakes; Amuquandoh, 2010 – Gana; Xu et al., 2017 - China) demonstrated the existence of a close relation between tourism and the lacustric landscape. At the same time, these highlight the natural and socio-economic impact on the natural or cultural landscape that include this element – the lakes. In the context of sustainable development, the conservation and protection of the lake landscape represents a desideratum that at times cannot be reached. The integrity of the natural and cultural landscapes, of the ecological biodiversity, in agreement with the demands of certain tourist segments, supposes an efficient management of the components that make up the new tourist products, more flexible, yet more specialized.

*The main objective* of the research presented was to demonstrate the fact that the lake landscape of the upper Ialomița River Basin represents for this area an important element in the dynamics that the tourist offer needs in order to satisfy tourists. In this sense, four hypotheses were formulated and then submitted to validation, namely:

- **Hypothesis 1:** The primary tourist offer pertaining to the area of the upper Ialomița River Basin is diversified and attractive enough to stimulate tourist motivation.
- **Hypothesis 2:** The infrastructure and services support a dynamic profitable use for tourism and facilitate the development of diversified tourism forms (which include the lacustric landscape as well) integrated in coherent tourist products, permanently adapted to the demand.
- **Hypothesis 3:** The lacustric landscape amplifies the possibility of exploiting the tourist resource by increasing the effect of the landscape and by the practice of new forms of tourism, yet it does not benefit of an efficient promotion, able to attract new categories of tourists.
- **Hypothesis 4:** There is no adequate sustainable valorization.

## 2. METHODOLOGY

### 2.1. Study area

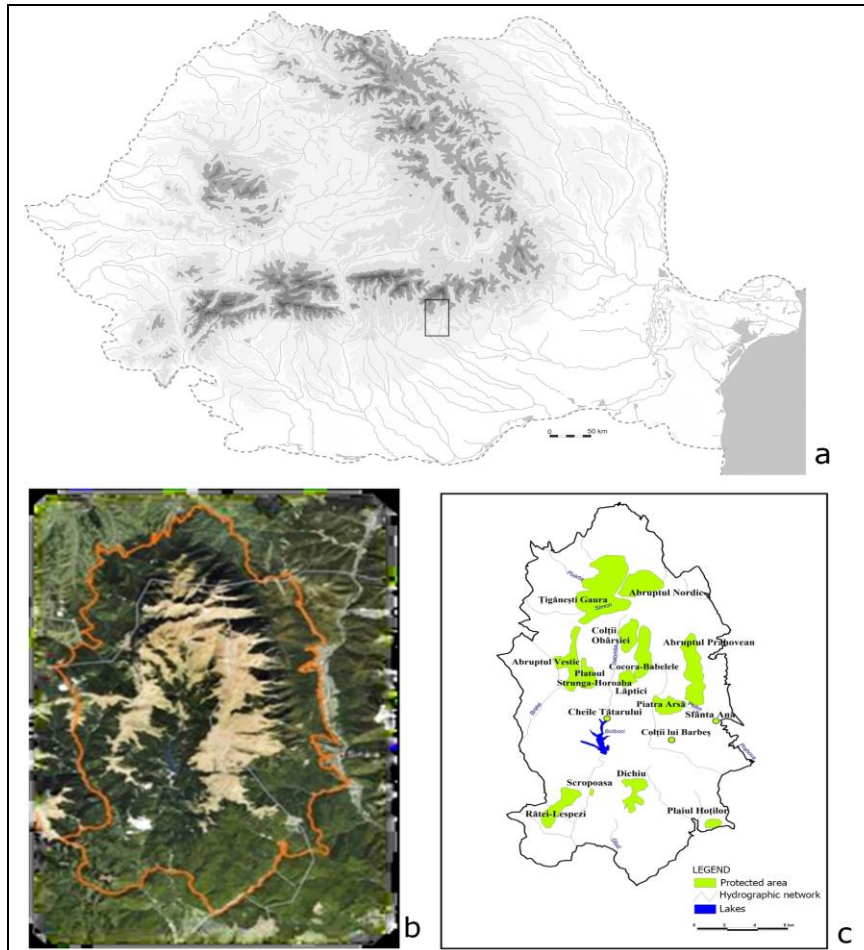
Each landscape accomplishes functions - economic, ecological and social, according to its natural potential but also in close interdependence with the general landscape of the area in which it is identified. The upper basin of Ialomița River covers an area of 686 km<sup>2</sup> and overlaps several geographic units – up to Moroieni locality, nearly, it crosses the alpine area of Bucegi Mountains, then, up to Fieni, the Subcarpathian Hills. The lacustric landscape from the upper Ialomița River Basin constitutes a complex unitary set, with a landscape value representing more than the sum of its components due to the general ambiance offered especially in the mountainous side, by the Bucegi Natural Park. The water areas under analysis are hydrographic arrangements of Ialomița and its tributaries. These are: Bolboci, Scropoasa, Brătei (in the mountainous sector of the Basin) and Ialomicioara I, Moroieni, Runcu, Pucioasa, Bela, Doicești (in the Subcarpathian sector).

The technical-material endowment of the area under analysis supports the dynamic and active tourist valorisation of the natural potential, yet by dimension and typology it does not correspond to the increasingly diverse demands of the modern tourist. There are numerous boarding places (hotels - 3, pensions and villas - over 20), varied services, yet provided at standards much under those that Romanian tourists have become accustomed to through their experience outside the country or those that foreign tourists are familiar with. The transport infrastructure is best developed, facilitating the access to this area rich in tourist resources.

Since, visiting the respective area, we noticed that only the lacustric zones from the mountainous area of Ialomița Basin are part of the tourist process, we decided that our analysis will focus only on the storage lakes Bolboci and Scropoasa, which are also the largest as water surface and volume.

*Bolboci Lake*, in use since the year 1988, is situated 10.75 km away from the spring of Ialomița River. Covering an area of 97 ha (2.7 km length, 0.359 km average width) and comprising a water volume of 19 mil. m<sup>3</sup>, it unfolds between Zănoagei Mici Keys and Tătarului Keys, at an altitude of 1400 m (Istrate and

Frînculeasa, 2009). The chemical characteristics of the water determining the belonging of the lake waters to the bicarbonated calcium- and magnesium-rich waters, the transparency of 4.6 m, the annual average temperature of 5-6°C determine the emergence of a lacustric biocenosis in which prominent are: planktonic algae, diatom, greenish-blueish algae (cyanophyta), protozoans, worms, insects, water bugs (*Naucoris*, *Corixa*, *Ranatra*) and fish such as common trout (*Salmo trutta fario*), common minnow (*Phoxinus phoxinus*), European bullhead (*Cottus gobio*). There is termophile vegetation and a series of rare, endemic species, like (Sencovici, 2010): *Hesperis matronalis ssp. Moniliformis*, *Iris dacica*, *Gentiana lutea*, *Daphne blagayana*, *Nigritella nigra*. frog (*Rana temporaria*), and on the border of the lake, the species *Triton alpestris*, are also present.



**Figure 3.** a. The geographical position of Upper Ialomița River Basin in Romania. b. Alpine area of the Upper Ialomița River Basin. c. Main protected areas in the alpine area of the Upper Ialomița River Basin.

*Scropoasa Lake*, arranged in the year 1927 in the little basin of fluvial erosion Scropoasa, represents the water source for the hydroelectric stations Dobrești and Moroeni (Gâlma). Situated at 1175 m altitude this lake covers an area of 0.28 km<sup>2</sup> (0.8 km in length, 0.35 km maximal width) in between Zănoagei Mari Keys and Orzei Keys. Scropoasa Lake is 9.2 m deep and holds a water volume of 0.55 mil. m<sup>3</sup>. The lake water is greenish-blueish and its transparency is 4.2 m. The average annual temperature is 6.5°C. This lake belongs to the category of the bicarbonated calcium-magnesium-rich waters. The aquatic fauna is poor. One can find common trout (*Salmo trutta fano*), european bullhead (*Cottus gobio*) and eurasian minnow (*Phoxinus phoxinus*).

## 2.2. Methodological landmarks

The main part of the research methodology consisted in the realization of a research whose tool was a questionnaire. The data collection activity was limited only to the interval May-September 2017, considered as having the highest tourist flow. 176 questionnaires were applied to people practicing tourism, under its diverse forms, in the mountainous area of Ialomița Basin (with special focus on Bolboci Lake and Scropoasa Lake).

The questionnaire included, beside questions highlighting the social profile of the respondent, 12 questions whose answers allow delineating the tourist satisfaction degree (meeting expectations), in an area where the presence of the lacustric landscape is an important element.

The research matrix is:

Hypothesis to be checked	Questions addressed in the questionnaire
Hypothesis 1	1. What is the motivation of your choice of the mountainous area of Ialomița (including Bolboci Lake and Scropoasa Lake) as a tourist destination?
	2. What are, according to you, the main tourist attractions in the upper basin of Ialomița?
	3. What are the main forms of tourism practiced?
Hypothesis 2	4. How do you find the transport infrastructure?
	5. Are the services (boarding and food) adapted to your demand?
	6. Are tourist packages diverse enough and adapted to the tourist demand of this area?
Hypothesis 3	7. Do you consider the lacustric landscape (lakes, their surrounding area with all its components) an element amplifying the tourist potential of the area?
	8. Do you involve components specific of the lake landscape (Bolboci Lake, Scropoasa Lake) in the tourist activity undertaken in this area?
	9. Do you involve components specific of the lake landscape (Scropoasa Lake) in the tourist activity undertaken in this area?
	10. Do you consider that Bolboci Lake can be turned to a better use by developing tourist packages based on new activities (amateur sport competitions, relaxation, cultural events)?
	11. Do you consider that Scropoasa Lake can be turned to a better use by developing tourist packages based on new activities (amateur sport competitions, relaxation, cultural events)?
	12. Do you believe that the tourist potential of the upper course of Ialomița (including the lacustric landscape) is sufficiently promoted?
Hypothesis 4	13. To what extent are you disturbed by the negative effects triggered on the natural landscape by the tourists' inadequate behavior?
	14. Is tourists' ecological education, needed to practice sustainable tourism, missing?

### 3. RESULTS AND DISCUSSIONS

The data analysis in point of the respondents' *gender* yielded the following results (Fig. 3) – 57% men and 43% women, whose *age* ranges, on average, between 21 and 38. Their *training level* (Fig.4) is high school – 31%, post-secondary education – 17%, higher education – 52%. The *average distance* they were coming from was 163 km, most of them having their residence in Bucharest City.

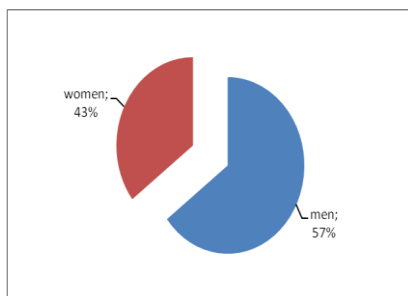


Figure 4

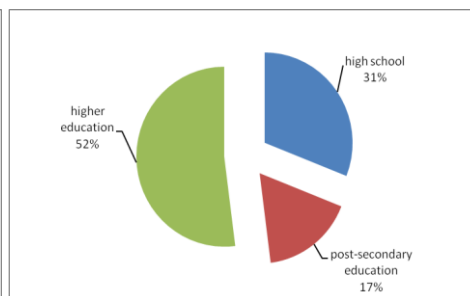
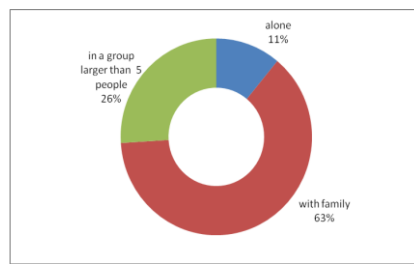
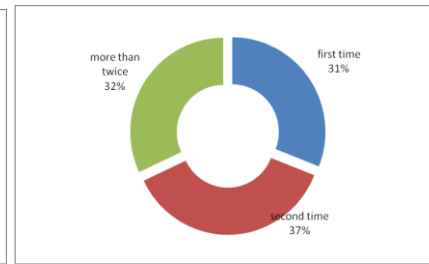


Figure 5

Regarding the *mode of travelling* (Fig.5), the answers were as follows: 11% alone, 63% with the family (namely 3-5 people) and 26% in a group larger than 5 people.



**Figure 6**

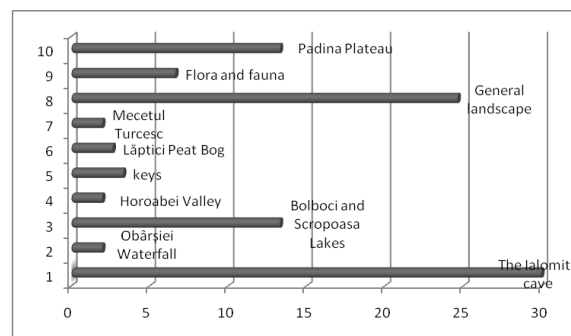


**Figure 7**

31% were for the first time as tourists in the area under analysis, 37% were present for the second time, while 32% had come there more than twice (Fig.6).

The interpretation of the data obtained from the analysis of the questionnaire allowed validating or invalidating the hypotheses.

Regarding the **first question**, the principal motivation of the tourists was the special natural environment (65%), this motivation being followed by the relatively small distance between this area and the city/towns Bucharest, Ploiești, Târgoviște, Brașov (32%). A very small percentage (3%) was motivated by curiosity, the choice of an unknown destination. The **second question**, whose answer justifies the previous question and the large number of tourists who were not there for the first time (69%), has its results presented in the next graph (Fig.7), where the following stand out: Ialomiței Cave (30%), general landscape (24.66%), Padina Plateau (13.33%); Storage lakes – Bolboci and Scropoasa (13.33%), landscape components - flora and fauna (6.66%), Keys (3.33%), Lăptici Peat Bog (2,66%), Horoabei Valley (2%); The Turkish Mecet (2%), Obârșiei Waterfalls (2%).



**Figure 8**

One ought to note that the tourist targets that recorded higher values are included in the itineraries proposed by the tourist packages and are better promoted. Lakes are on the first places in the tourist preferences top.

The main forms of tourism practiced, **question 3**, are (Fig.8): leisure and recreation tourism (49%), sports / adventure tourism (18%), religious tourism (22%), recreational-fishing tourism (8%), scientific (3%). The respondents chose the main form of tourism practiced in this area, yet most of them mentioned verbally that they practice at least two forms (leisure and recreation tourism – sportive / adventure tourism or religious tourism; leisure and recreation tourism – recreational-fishing tourism). A special case are those tourists practicing the scientific form, these being part of a group of students during their specialized practice.

Analyzing the information provided through these questions, it results that the existing tourist offer is motivating enough for tourists. They return satisfied (69%), which allows one to appreciate that the tourist offer quality is high, although not at all dynamic and diversified – the natural framework being the main source of attraction. Thus, hypothesis 1 is confirmed.

The second hypothesis is only partially confirmed. The transport infrastructure is good (74%) as it results from **question 4**, the tourists being content by the rehabilitation of road DJ713 Cabana Cuibul Dorului-Șaua Dichiu-Cabana Pietra Arsă (TransBucegi) which represents an easy variant to Padina Plateau, either from Sinaia or from Târgoviște. Regarding the services provided, **question 5**, the following interpretations were made possible (Fig.9): regarding the services provided (accommodation, food, recreational activities) the tourists interviewed declare themselves in a proportion of 49% discontent (standard under their expectations for public food services and accommodation regarding the general aspect, atmosphere, personnel), 32% know and accept the conditions, 19% declare themselves content. We can note

that 18% of those who have come as tourists in this area are not content with the services, yet we interpret that their interest in the landscape quality and variety prevails.

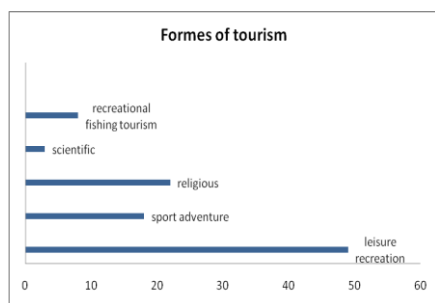


Figure 9

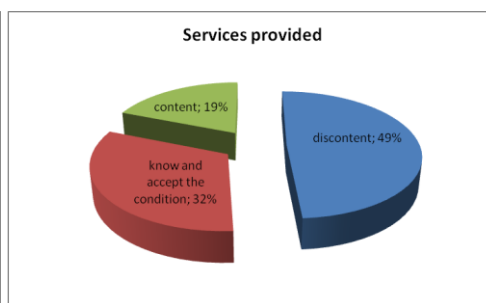


Figure 10

The beauty of the natural landscape is not sufficient to satisfy a tourist. At present, tourist motivation has a very dynamic character, which leads to the permanent adaptation of the offer. The development of diversified tourist packages and in agreement with the tourists' demands needs to be permanently supported by infrastructure and services. In the case under analysis, tourists, in a proportion of 84%, as it results from **question 6**, consider that tourist packages are limited and do not evolve at the same pace as the demand due to the low service standards.

The main subject, namely the analysis of the lacustric landscape as a factor of the tourist potential, is found in the answers provided to the following 4 questions.

To **question 7**, 97% of the respondents answered that they consider the lacustric landscape as a factor increasing the beauty of the general natural environment, 3% being against this affirmation. Even if the latter percentage is small, we hope that the motivation of this answer is the period of the year when these answers were given, the autumn – they were all answers to questionnaires of the month of October, after a rainy week, when the lakes' water and their vicinity reflected the unfavorable meteorological conditions. With the next questions, **8** and **9** (Fig.10), we wished to see the involvement of this landscape in the tourist activities specific of this area. At the same time, they mirror the two lakes – Bolboci and Scropoasa, concerning this theme. Both of these lakes and the perimeter adjacent to them included in activities are an important part of leisure and recreation activities for tourists (81% Bolboci Lake and 74% Scropoasa Lake), a certain category considers them targets on their own, without integrating them in the landscape (10% Bolboci Lake and 21% Scropoasa Lake), and the rest of 9% in the case of Bolboci Lake and 5% in that of Scropoasa Lake give no importance to them in the tourist activities practiced.

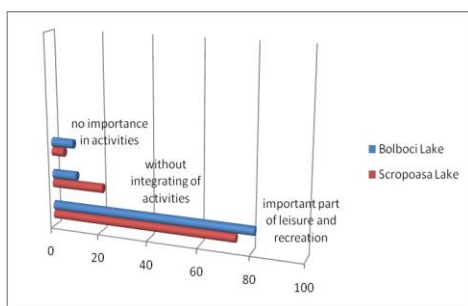


Figure 11

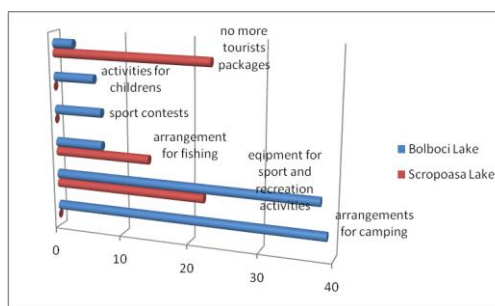


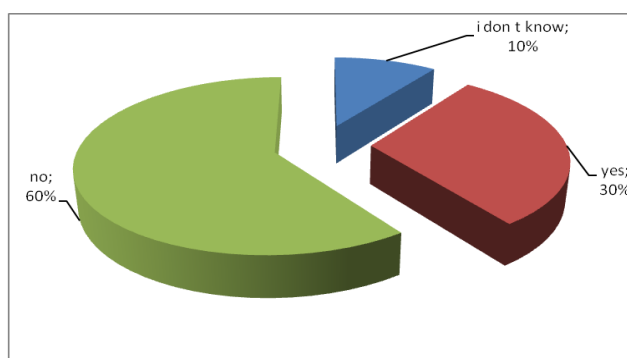
Figure 12

The difference in percentage between the two lakes are considered to be explained by their natural framework (an open space at Bolboci), the presence of certain arrangements and the possibility of certain activities more diversified in the perimeter of Bolboci Lake, the different number of accommodation and food facilities, accessibility and closeness to other tourist targets.

These differences support as well the interpretations to **questions 10** and **11** (Fig.11), when tourists are consulted concerning the potential of development of the two lakes. In the case of Bolboci Lake, the vision of the respondents regarding the possibility of valorization is much larger and include arrangements on the lake border for camping (39%) and the practice of sport and recreation activities on the lake involve the possibility of renting specialized equipment and personnel (38%), the arrangement of areas exclusively for fishing (7%), the organization of sport contests (7%), the organization of activities specific for children

(6%), and 3% consider that the environment would suffer if this space were exploited/valorized much more. The answers concerning the Scropoasa Lake are different, the valorization by activities is limited to the organization of tourist circuits that also include the lake (41%), the practice of sport and recreation activities on the lake that involve the possibility of renting specialized equipment and personnel (22%), the arrangement of areas exclusively for fishing (14%), and 23% that no more tourist packages are needed because the negative effects would be numerous.

The valorization of a landscape as tourist product involves promotion campaigns, visibility being essential to this process. Aligned to the general Romanian trend, the respective area is no exception, the promotion being insufficient due to the focus on punctual targets (e.g. Ialomiței Cave, Padina Plateau) and to the lack of a coherent plan in the composition and selling of tourist packages. Although the area is included in the Bucegi Natural Park, and, in the data collection period, the area of Padina was undergoing a process of evaluation of the capacity of becoming Station of national interest, the tourists' answers to **question 12** (Fig.12) were: 60% consider that it is insufficiently promoted, 30% that it is sufficiently promoted, and 10% do not know.



**Figure 13**

Summing up the information obtained from the answers to these questions, we observe that Hypothesis 3 is validated.

The two final questions of the questionnaire try to grasp the tourists' attitude to the negative effects of the tourist process, evidently visible also concerning the lacustric landscape. Surprising is the fact that the tourists, by the analysis of the answers to **question 13**, have declared that they are bothered by the negative effects on the lacustric landscape (87%), although these effects are caused by them themselves to the largest extent and to the lack of education as they claim at **question 14** (96%). 13% of the tourists questioned are not bothered by pollution, degradation, destruction, and 4% do not feel the lack of ecological education for tourists. Comparing these percentages, we can notice that the human factor, by its implications as a tourist or as a provider of tourist services, is determining in the quality of this process, by qualification and responsibility. Consequently, hypothesis 4 is confirmed.

## CONCLUSIONS

The lacustric landscape and tourism condition each other. The lacustric landscape offers a favorable environment for recreation and leisure, elements of scientific interest – knowledge of the biocenosis, possibility to practice sport and cultural activities, and tourism provides specific tools for their valorization. In the area under analysis, the lacustric landscape is in close relation to numerous tourist landscapes, and the tourist phenomenon has tradition. Yet, the profile of the modern tourist (with great mobility, focused on the tourist experience, desiring active holidays and short journeys of 3-4 days, yet frequent) overlaps increasingly less the reality of the field (infrastructure, services, flexible and dynamic tourist packages). The beauty of the landscape, its scientific value cannot compensate the missing parts for a complete and complex tourist product.

Another aspect noticed, especially by our expeditions in the field, refers to the deterioration of the vegetal communities near the water surfaces as a consequence of the tourists' camping next to them, to the destruction of the forest vegetation on sloping lands and overgrazing, to the phonic pollution and the great quantity of garbage thrown everywhere. They all have serious repercussions on the state of balance in the area under analysis and on tourist activities. The efficient and rational use of the natural resources, by the prevention and the minimization of the negative impact of tourism on the environment remains an important desideratum.

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