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## EVALUATION OF THE VISUAL ATTRACTIVENESS OF THE LANDSCAPE IN SELECTED AREAS IN POLAND

**Abstract:** In the article photographs presenting the natural landscape of various areas of Poland: lowlands, highlands, lake districts, mountains, cliffs and dune coastlines, have been analyzed. Moreover, photographs presenting diverse natural landscapes in a single image were selected too. The purpose of this article is to answer to the following questions: Do tourists appreciate diverse natural landscapes more highly?; Is there any difference between men and women?; Do national tourists differ from foreign tourists? The study was conducted among a group of 174 students of Geography and Spatial Development as well as among foreign students who had come to Poland on the Erasmus program. The research took place between October 2015 and May 2016.

**Keywords:** natural landscape, landscape valuation, tourism attraction, evaluation of photographs.

### 1. INTRODUCTION

The natural landscape, and its evaluation by potential tourists, constitutes a very important issue from the perspective of tourism infrastructure development. Potential owners of hotel facilities more willingly choose attractive locations regarding landscape. Additionally, they differentiate the price of accommodation depending on whether rooms have a view of an attractive landscape (e.g. sea-views or mountain-views). Knowing the preferences of potential tourists and how landscape is valued can contribute to better decisions concerning the development of the tourism industry.

When valuing natural tourism attractiveness, the following natural environment conditions are normally considered: level of forest cover, access to the coastline, presence of national parks and other nature reserves, variations in relief, climate conditions (e.g. precipitation or the number of sunny days) (KOWALCZYK 2000, pp. 88-97, PIRASZEWSKA 2004, pp. 4-45, DRABAREK 2011, pp. 6-57, TERTELIS 2012, pp. 6-122). Furthermore, for various types of tourist other natural attributes may be necessary, such as lakes and other water resources for nautical tourism, and caves for speleological tourism. There has been much academic work in which natural attractiveness and the distribution of the accommodation base has been analyzed (*op. cit.*). However, significantly fewer present an evaluation of an individual landscape by tourists or potential tourists.

The objective of the article is to answer the following questions: Do tourists value a diverse natural landscape more highly?; Is there any difference between men and women?; Do national tourists differ from foreign tourists? The hypotheses were presented: tourists value more diverse natural landscape more highly; it is assumed that women are more critical in natural landscape evaluation; moreover, national tourists appreciate local landscapes more. It is assumed that there are no differences in landscape valuation among students of Geography and Spatial Development.

The photographs were presented to a selected group of students using a multimedia projector were used to evaluate a landscape's visual attractiveness. They were taken at such a resolution that during their presentation it was possible for them to be evaluated properly. The survey was conducted among 174 students.

### 2. DEFINITION OF LANDSCAPE IN THE LITERATURE

According to the definition contained in the PWN dictionary of Polish, a landscape is "a space of the Earth seen from a certain point", "an area divided due to its characteristic natural features, topographic features, etc." ([www.sjp.pwn.pl](http://www.sjp.pwn.pl)). A landscape is be-

lieved to be one of the most important elements shaping the quality of human life. Landscapes fulfil various functions: cultural, aesthetic and social. A landscape's aesthetics may depend also on its appropriate use (KISTOWSKI 2007, p. 681-699).

According to J. KONDRACKI (1976), natural landscapes include natural elements and in distinguishing them, one must take into account the entire physical and geographical complexity, considering the fact that the landscape is related to its lithological composition, water, climate, biocenotic and soil relations (KONDRACKI 1976, pp. 32, 62 after Lencewicz, pp. 489-494). According to LITWIN, BACIOR & PIECH (2009, p. 14) "landscape valuation is conditioned by the availability of information resources which allows the regionalization" of a given area. Landscape valuing involving the determination of homogeneous areas is important (LITWIN, BACIOR & PIECH 2009, p. 14).

According to S. LESZCZYŃSKI (1988) the notion 'landscape' (*Landschaft*) has been used with various meanings. Cultural and natural landscapes can be differentiated (LESZCZYŃSKI 1988, p. 9). In this analysis, the focus is on the natural and the cultural is not taken into account (all analyzed photographs presented only natural landscapes).

The research presented in this article refers to that presented by A. KOWALCZYK (2000) in his book entitled "Geography of Tourism". It was observed that respondents valued landscapes presenting mountain areas more highly than lowland areas. Tourists are rarely "attracted by only one environmental component" (KOWALCZYK 2002, p. 95) and according to N.S. Mironienko & I.T. Tvierdochlebov (1981) landscape contrast is important (KOWALCZYK 2002, p. 95, after Mironienko & Tvierdochlebov 1981). In these landscapes their value depended on the contrast presented. Landscapes including forest and water were rated 4; forest, fields and water – 3; forest, meadow and field – 2; bushes, meadow and field – 2; forest and bushes – 2; field and meadow – 1 (KOWALCZYK 2002, p. 95, after Mironienko & Tvierdochlebov 1981). According to the results, the landscape attractiveness of areas of water is greater when compared to areas without any.

An analysis involving the evaluation of the visual attractiveness of a selected region was made by P. ŚLESZYŃSKI (2000, p. 198-233) in the area of Pińczów and was presented in the article entitled "Evaluation of visual attractiveness of the landscape in the area of Pińczów". Moreover, M. JAKIEL (2015) assessed the visual attractiveness of the landscape of valleys around Kraków and he analyzed their possible use in spatial planning, however he used the rating method and did not conduct a survey evaluating photographs.

In the work of M. JAKIEL & A. BERNATEK (2015, p. 93-107) "Landscape perception among various cultural

groups through the example of Kraków and Istanbul residents" an analysis of similarities and differences in the perception of landscape by Poles and Turks was made. In the study 10 photographs of landscapes from Poland and Turkey were used. Although it indicated that the general evaluation was similar, differences in expressing extreme emotions were observed.

In the work of N. MIROWSKA & S. KRYSIAK (2015, p. 25-35) "Visual attractiveness of the landscape of the Mroga valley and its surroundings in Dmosin commune", an evaluation of the visual attractiveness of the landscape based on 426 photographs taken from 72 points was presented. It turned out that natural areas or areas insignificantly modified by man are most attractive, while anthropogenic areas are least attractive.

### 3. EVALUATION OF SELECTED NATURAL LANDSCAPES IN POLAND BY STUDENTS: ANALYSIS OF RESULTS

Research was conducted in the period from October 2015 to May 2016 among a group of students of the Department of Geography and Regional Studies at the University of Warsaw. Ten photographs were analyzed which came from the official portal of the Polish Tourism Organization ([www.pot.gov.pl](http://www.pot.gov.pl)) promoting Poland<sup>1</sup>. Table 1 presents the locations where the photographs were taken and the type of landscape they show.

Table 1. The place where the photograph was taken and the type of landscape presented

No.	Place where the photograph was taken	Type of landscape
1	Żywkowo	lowland
2	Bieszczady National Park	hills and low mountains
3	Tatra National Park	high mountains
4	Poleski National Park	lake
5	Wigry National Park	forest and lake
6	Babia Mountain	high mountains and forest
7	Tatra National Park	high mountains and lake
8	Ślowski National Park	coastline by the sea
9	Baltic Sea Coast	coastline with dunes
10	Wolin National Park	coastline with cliffs <sup>a)</sup>

<sup>a)</sup> Also, evaluation of a completely different landscape – a tropical island – was checked. The photograph was obtained from an official portal promoting Jamaica run by *Tourism Jamaica Board* and it referred to previous photographs, i.e. it did not present any elements of tourist infrastructure and it only presented local natural landscape. The respondents observed 10 photographs from Poland first and then only after obtaining their evaluation, they were presented the 11<sup>th</sup> photographs of natural landscape in Jamaica.

Source: author based on photographs of the Polish Tourism Organization.

The research was conducted on a group of 174 students: from Poland studying Geography and Spatial Development as well as foreign who had come to Poland within the Erasmus program. Foreign students were from various courses and of various nationalities. Further in the article a detailed analysis of respondents' evaluations is made. The photographs were evaluated on the 5-point Likert scale as used in social science, in particular in surveys. Respondents could evaluate the photographs on a scale from 1 to 5 (1 – a photograph with the lowest landscape attributes, 5 – a photograph with the highest). It was also possible to enter an additional comment<sup>2</sup> on each one, however this was used by only a few respondents. The respondents first viewed all photographs of landscapes and then they evaluated them. It was important to eliminate the impact of the order of the displayed photographs on their and respondents were informed where a given photograph was taken after evaluation. The study was anonymous and the respondents provided only the following information: their course and year, their gender and, in the case of Erasmus students, their country of origin. Moreover, students from Poland provided information whether they were studying for a bachelor's or master's degree but for foreign students such information was not obligatory. Later, an analysis of the sample was made concerning gender and course as well as the country of origin of the respondents. There were 121 female (69.5%) and 53 male (30.5%) respondents.

In the study 83 (47.7%) participants were students of geography, 53 of spatial development (30.5%) and 38 (21.8%) were foreign Erasmus students from Hungary, Slovakia, Turkey, Spain, Mongolia, Kazakhstan, Great Britain, Italy, Bulgaria, Japan, Finland, Croatia and Hong Kong.

It should be remembered that the results of the study have been influenced by significant subjectivism most of all due to the selection of photographs and the subjective individual evaluations of particular respondents. High scores were achieved by Photo 9 presenting a coastline with dunes (average: 4.3), Photo 6 presenting high mountains and a forest (average: 4.2) and Photo 3 presenting high mountains (average: 3.9). While low scores by Photo 1 presenting a lowland landscape (average: 2.7) and Photo 4 presenting a lake in Poleski National Park (average: 3.0). The photograph of the tropical island was evaluated highly (average: 4.2), however with the same score as the Baltic Sea coastline (average: 4.2).

On Fig. 1 the average evaluation of the photographs by all 174 respondents is presented.

Another aspect was whether gender had an impact on the results of landscape evaluation. It turned out that the difference was 5%. The overall evaluation of

all photographs for men was 3.4 and for women – 3.6 which means that men evaluated the landscapes more critically.

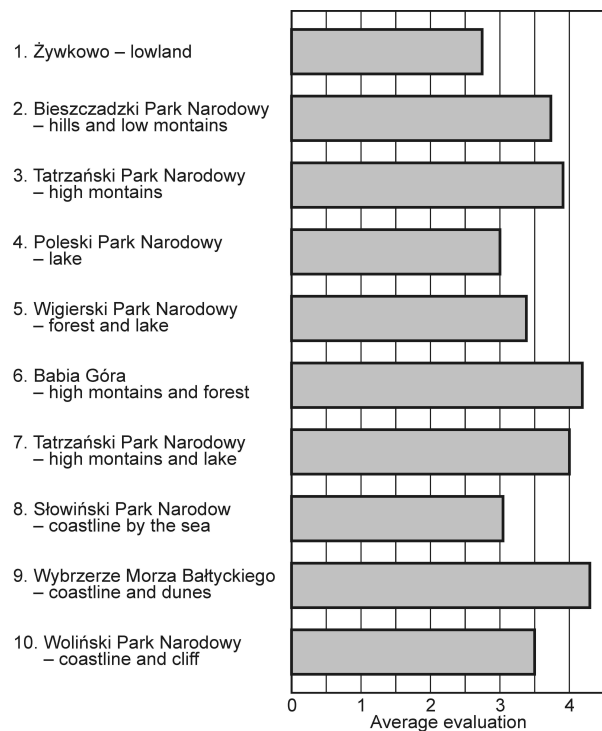


Fig. 1. Average evaluation of the photographs by respondents  
Source: author on the basis of a questionnaire completed by 174 students

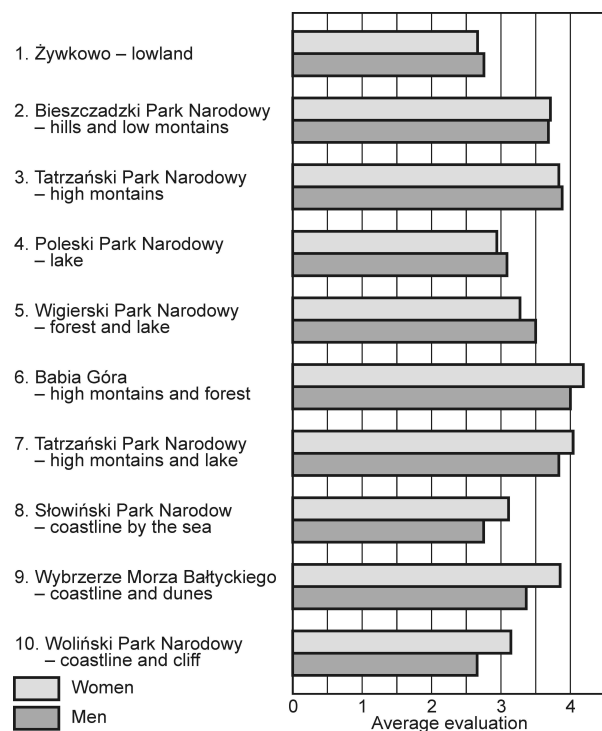


Fig. 2. Evaluation of particular landscapes according to gender  
Source: author on the basis of a questionnaire completed by 174 students

Women evaluated Photo 11 presenting the landscape of a tropical island more highly. The average value for women for all photographs was 4.3 in comparison to 3.8 for men. Women evaluated Photo 9 presenting a coastline with dunes more highly (3.9 to 3.4) and Photo 6 presenting dunes and a forest (4.2 to 4.0). On Fig. 2 the evaluation of particular landscapes according to gender is presented.

The average for all evaluated photographs in the case of students of spatial development was 4.4 in comparison to the average evaluation by students of geography which was 3.6. Evaluation of nearly all photographs evaluated by students of spatial development was higher except for Photo 8 – coastline by the sea – which was evaluated more highly by students of geography (3.1 to 3.0).

In addition an analysis of the evaluation according to the country of origin was made. National students evaluated Photo 2 presenting hills and low mountains more highly, Photo 5 presenting a forest and a lake, as well as Photos 9 and 10 presenting the coastline with dunes and the coastline with cliffs. While foreign students<sup>3</sup> evaluated Photo 4 presenting a lake more highly. On Fig. 3 the evaluation of particular landscapes by national and foreign students is presented.

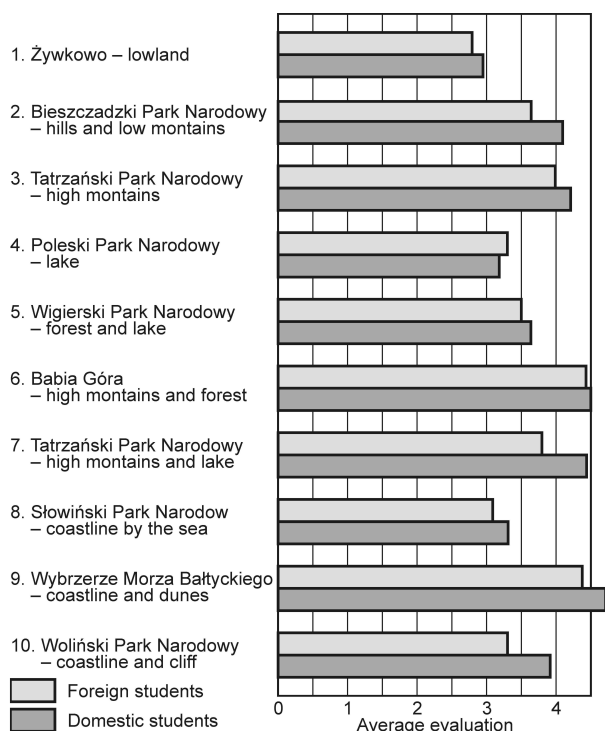


Fig. 3. Evaluation of particular landscapes by national and foreign students

Source: author on the basis of a questionnaire completed by 174 students

Below the ranking of particular photographs with the average evaluation was presented:

1. Photo 9 – Baltic Sea coast – coastline with dunes – (4.3),

2. Photo 6 – Babia Mountain – high mountains and forest – (4.2),
3. Photo 7 – Tatra National Park – high mountains and a lake – (4.0),
4. Photo 3 – Tatra National Park – high mountains – (3.9),
5. Photo 2 – Bieszczady National Park – hills and low mountains – (3.7),
6. Photo 10 – Wolin National Park – coastline with cliffs – (3.5),
7. Photo 5 – Wigry National Park – forest and a lake – (3.4),
8. Photograph no. 8 – Słowiński National Park – coastline by the sea – (3.0),
9. Photograph no. 4 – Poleski National Park – a lake – (3.0),
10. Photograph no. 1 – Żywkowo – lowland landscape – (2.7).

Photos 6, 7 and 3 with diverse landscapes<sup>4</sup> were rated highly. This confirms the results of Mironienko & Tvierdochlebov in which a diverse landscape was evaluated more highly (KOWALCZYK 2002, p. 95, after Mironienko & Tvierdochlebov1981).

Undoubtedly, a great limitation in this study is the fact that the respondents evaluated single photographs. Selection of photographs was subjective, however due to the short time (only 10 photographs were evaluated). The respondents willingly participated however and did not request any breaks thus it was possible to obtain a high level of focus and involvement. Extension could have had a negative impact on the number of completed questionnaires and the validity of the survey.

Table 2. Comparison of the numbers of positive and negative comments for particular photographs

The number of comments	The number of photographs									
	1	2	3	4	5	6	7	8	9	10
Positive	5	1	1	0	2	4	0	1	4	1
Negative	1	0	1	2	1	0	2	5	2	2

Source: author on the basis of a questionnaire completed by 174 students.

Below are comments from the students. Photo 1 presenting a lowland landscape had the most positive comments (5) including that it is landscape “good for relaxing”. Photo 6 presenting high mountains and a forest received four including “great shot” and “astounding”. Moreover, Photo 9 also received four including “fantastic photograph” and “very good photograph”. Photo 8 presenting a coastline by the sea received the most negative comments with “sentimental, boring” among others. It should be remembered that all photographs used in the study were taken by professionals, selected for promotional pur-

poses being official photographs promoting Poland nationally and abroad.

In table 2 a comparison of the number of positive and negative comments for particular photographs is presented.

## 4. CONCLUSIONS

The presented research confirms the observations made by N.S. Mironienka & I.T. Tvierdochlebov that a more diverse landscape is evaluated more highly. Women evaluated photographs of a particular landscape more highly (by 5%)<sup>5</sup>. The photograph presenting the Baltic Sea with its sandy beach was evaluated highly which may confirm the location of higher category tourist facilities along a coastline not far from the sea. The lowland and lake district landscapes were evaluated lowest while the cliff coastline was also evaluated poorly in comparison to other photographs<sup>6</sup>. Low-land and lake district landscapes received various comments, usually based on the experience of students related to that landscape.

The hypotheses set at the beginning were verified: tourists value a more diverse natural landscape more highly – **hypothesis confirmed**. The results also correspond with research conducted by N. MIRONOWSKA & S. KRYSIAK (2015) from which it was concluded that natural landscapes or landscapes insignificantly modified such as meadows, farmland and lakes are visually attractive.

It was also assumed that women are more critical in the evaluation of a natural landscape – **hypothesis rejected** – women valued the presented natural landscapes more highly than men. The hypothesis that landscapes will be valued more highly by national tourists can be considered as **confirmed**<sup>7</sup>. This corresponded to research by M. JAKIEL & A. BERNATEK-JAKIEL (2015) who observed that Poles prefer landscapes other than their own.

## ENDNOTES

Additionally, evaluation of a completely different type of landscape – a tropical island – was checked. A photograph of Jamaica coast was selected. The last photograph was included in the study due to the interest of the author in tropical islands.

<sup>2</sup> Possible evaluation of the photographs: 1 – a photograph with the lowest landscape attributes, 5 – a photograph with the highest landscape attributes.

<sup>3</sup> Foreign students evaluated the additional photograph presenting the landscape of a tropical island much better.

<sup>4</sup> Foreign students who probably more frequently go to tropical regions evaluated the landscape of Jamaica significantly higher. It is surprising that the Baltic Sea was higher in the ranking than the landscape of the tropical island. However, it may

result from the evaluation by Polish students who may be sentimental regarding such a landscape.

<sup>5</sup> Foreign students evaluated the landscape of the tropical island better in comparison to national students (evaluations were higher by 10%).

<sup>6</sup> The respondents also willingly commented the last photograph presenting the landscape of the tropical island. The photographs received the most positive comments among the students being tested.

<sup>7</sup> Foreign students valued the landscape of the tropical island better, while national students valued the local landscape better.

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