

Some Problems of Tourist Activity in the Tatra National Park

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Abstract: Tatra Mts. is an unique alpine ridge in Poland.. The whole Polish part of Tatra is a protected area as a national park (Tatra National Park – TNP). Its area is 21,164 ha. Every year 2.5 millions of tourists visit TNP. Tourist activity is one of the factor of nature degradation in Tatras. The most transformed are the areas with the greatest tourist penetration: Morskie Oko lake, Kasprowy Wierch Mt. and Koscieliska valley. The paper presents preliminary results of the studies dealing with the problems of tourist penetration in the Morskie Oko (MO) and Kasprowy Wierch (KW) regions. In the MO area needs and desires of tourists, time budget during stay at the place and tourists' evaluation of infrastructure were studied with the use of special questionnaires. At Kasprowy Wierch the streams of tourists were observed. The number of tourists on each tourist track crossing KW was accounted. The results of the studies point to great diversity of tourist activity in TNP (making pictures, enjoying nature, walking in the surroundings, climbing, relax). The results can be useful for managing of tourist activity, for making corrections in TNP protection system and for establishing the methods minimising degradation of tourist tracks and its surroundings.

INTRODUCTION

The Tatras are the highest mountain massif of the alpine folding of the Western Carpathians. The area of the Tatras is about 750 km², of which 174 km² belong to Poland. This is the only alpine area in Poland. Tatras consists of two parts: the High Tatras with crystalline rock and the West Tatras with crystalline and sedimentary rock (Krzan et al., 1994). Great climate diversity, wide range of attitudes, varied geological formations and relief resulted in Tatras the great richness of flora and fauna. The Tatra Mts. is the centre of high mountain vegetation in Poland. Among nearly 500 mountain species of the vascular flora known from Poland, more than 90% occur in Tatras and nearly 50% (about 250 species) have their only sites in our country. At least 20% are very rare and mostly relict species (Mirek, 1996a).

In 1954 the whole Polish part of Tatras have become a status of a national park (the highest level of nature protection in Poland) - Tatra National Park (TNP). In 1992, the MaB Committee proclaimed both Tatra National Parks in Poland and in Slovakia as the Tatra Mountain International Biosphere Reserve. TNP is 27 km length and 12 km width. The area of the Park is 21.164 hectares. When considering the area of TPN it is similar only to a single medium-size valley in Alps, or to the area covered by Warsaw - a capital city of Poland.

Over 87% of the Park belong to the government, the remaining parts are the property of local forestry co-operatives. Forests cover about 70% of the park area and alpine grasslands, rocks and water – about 30%. Strict protection reserves cover 11.500 ha, including summits, alpine meadow zones, the dwarf pine zone and some of the upper and lower forests

belts. They allow natural processes to take place in the environment at limited influence of man. Partial protection is implemented on about 45% of the Park area mainly in the lower forest zone which was significantly transformed in the past by the economic activity of inhabitants (Krzan et al. 1994). In 1954, when Tatras were taken under a law protection, they have been seriously transformed by the human activities. In the XVIII and XIX centuries mining and metallurgy works devastated the landscape. Sheep grazing and exploitation of forests were also intensive at that time. Sheep herding continued into the first half of XX century (Mirek, 1996b).

Both, the international definition and Polish law emphasise two basic functions of a national park: first - nature protection as a highest priority, second - providing the public with a limited access to the park for: research, education and tourism purposes. TNP is accessible for tourism, recreational skiing and other sport (officially there is 50 forms of tourist accessibility in TNP). The most encouraged form of tourism is hiking along established trails. Here is well developed and permanently marked trail system for summer hiking with a total length of about 250 km and with different levels of difficulty – from typical walking paths to routes experienced alpine climbers only.

In TNP tourists may walk only on marked routes. A developed tourist base is accessible in the vicinity of the Park (town of Zakopane and nearby villages). In the mountain themselves, there is a system of mountain hostels and lodges open year-round, and on the park borders there are parking places, viewpoints and restaurants. There is a well-developed infrastructure for recreational skiing (the cable car and chair lifts to Kasprowy Wierch) and

competitive skiing: ski jumps, slalom slopes, downhill runs and cross country areas. There are designated areas for mountain climbing, with trainers' centres and camping at various elevations (Krzan et al., 1994). Tourism, concentrated in the most attractive and most easily accessible areas of the Tatras causes pollution, intensification of erosion and degradation of alpine vegetation. In the last years, the number of hiking-tourists constantly increases. Every year about 2.5 millions of tourists visit TNP, 75% of them during the summer season (Fig. 1). In comparison with another mountain regions in Europe the Tatras, and especially Dolina Rybiego Potoku (Rybiego Potoku valley), is under extremely great tourist pressure (Table 1).

The aim of the paper is to present preliminary results of the Student's Research Camp „Tatry'2000” which took place in August 2000. Researches were dedicated to the problems of tourist penetration in two regions of Tatra Mts. - Morskie Oko lake and Kasprowy Wierch Mt., which are the areas with the greatest tourist pressure in Polish Tatras (Fig. 2).

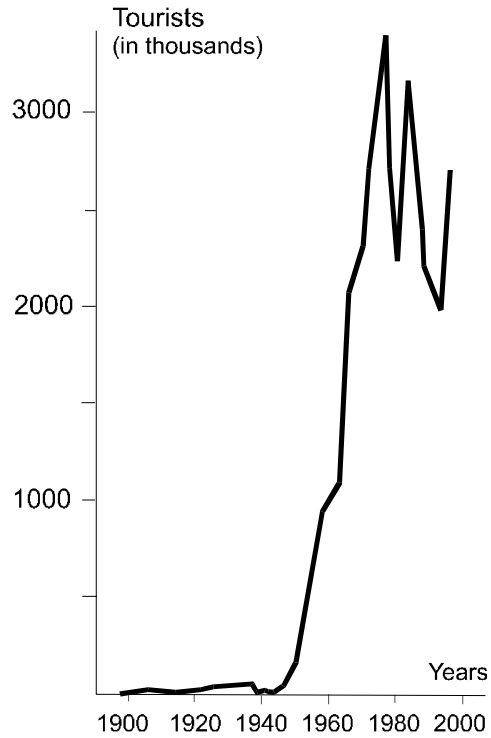


Figure 1: Number of tourists visiting Zakopane and Tatras in the years 1895-1995 (by Mirek, 1996b).

| Country (area) | Mountain region area (km ²) | Number of potential tourists per 1 km ² of mountains |
|-----------------------|---|---|
| Austria | 60 000 | 126 |
| France | 60 000 | 916 |
| Switzerland | 29 000 | 222 |
| Poland: | 9 380 | 3955 |
| TNP | 211 | 15 000* |
| Rybiego Potoku valley | ~ 10 | ~100 000* |

Table 1: Average, potential number of tourists per 1 km² of mountain region in some European countries and in the Tatra National Park (by Mirek, 1996b). (* - actual values)

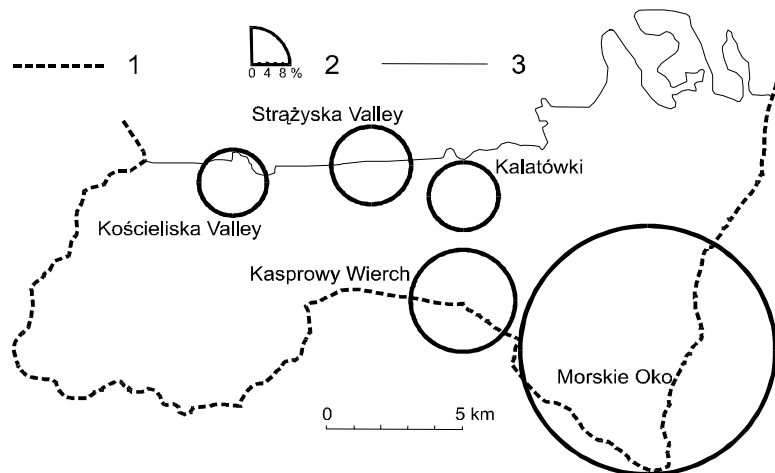


Figure 2: Differentiation of tourist pressure in Tatra National Park (by Mirek, 1996b): 1 - Polish border, 2 - frequency of tourists in selected places (in relation to the total access to TNP), 3 - north border of TNP

Kasprowy Wierch is located between High Tatras and West Tatras and is one of the most frequently visited and very easy accessible, by thousands of hiking-tourists, peak in the Tatras (by cable car, with max capacity of 190 person per hour, direct climbing rout from Zakopane, lot of trails from another parts of TNP) with great attractiveness (good start point and endpoint when penetrating another parts of TNP, year-round open restaurant at the cable car station, view point). By human impacts, resulting primarily from sport, tourism and recreation, the alpine vegetation and tourists routes has been degraded and destroyed in the region of Kasprowy Wierch.

Morskie Oko (Eye of the Sea) is one of oligotrophic lakes, which made a landscape of High Tatras very picturesque, and the largest lake in TNP (with area of 34.5 ha). It is surrounds by very attractive peaks and ridges: Rysy (the highest peak in Poland), Mnich, Mieguszowiecki Szczyt, Przelec pod Chlopkiem, Wrota Chalubinskiego, Szpiglasowy Wierch. Some of them are accessible only for mountain climbing. There are 3 tourists' routes reaching Morskie Oko. The most frequented and easy route, which in the summer season every day about 10.000 person is climbing to MO, is the asphalt track along the Dolina Rybiego Potoku (Valley of Fish Stream). Two other are: track from Szpiglasowa Przelec (Szpiglasowa Pass) and from Dolina Pieciu Stawow (Five Ponds Valley) (Krzsan et al., 1994).

METHODS

At Kasprowy Wierch Mt. (KW) the streams of tourists were observed. There were accounted the amount of tourists on each tourist track crossing KW. 3 groups of observers were located in KW region (on the routes crossing points). Research was realised during typical summer working day, with medium tourist activity. The weather was typical for the summer season: air temperature - 12-17°C, wind speed - 3-7 m s⁻¹, wind direction - W-SW, cloudiness - 10-70%.

At Morskie Oko the selected individuals (with various age and sex) were examined with the use of special questionnaires. It was made 54 interviews with tourists climbed to Morskie Oko from the direction of Dolina Rybiego Potoku. In the questionnaire the following questions were done:

- How much time tourists spend in Tatras?
- How people spend time during summer in Tatras?
- What are the purposes of visiting Morskie Oko?
- How people spend time at Morskie Oko?
- How tourists evaluate selected elements of infrastructure at the rout along Dolina Rybiego Potoku?

RESULTS

Kasprowy Wierch Mt.

During the studied day the total number of person going through KW or spending some time at its surroundings was 3341. There are some ways to reach KW. Results show, that tourists come to KW mainly by cable car (1900 persons). There were 605 persons, who reached KW from East (High Tatras), and 176 persons walked to KW from the direction of West Tatras. The number of persons climbed to KW from Zakopane through Hala Gasienicowa was 234, and 421 persons climbed to KW directly from Zakopane. From the direction of Slovakian Tatras climbed 5 persons only.

For relatively large group of tourists KW was the start point to penetrate another parts of TNP. 853 persons went from KW to the direction of High Tatras and 420 to the direction of West Tatras. KW is endpoint when penetrate another parts of TNP. Results show, which of the ways going down from KW are mainly chosen: 1506 persons back down by cable car, 356 walked down from KW to Zakopane through Hala Gasienicowa, and 206 went down from KW directly to Zakopane.

For large group of tourists KW was only the viewpoint and place of short relax stay. 465 persons spent there about 2 hours making short walks in the nearest surroundings and 1041 spent some hours sitting only at a top of KW. The tourists, for whom KW was only one of the stage in hiking, spend also several minutes at the top relaxing, and visiting restaurant.

Morskie Oko

It has find that majority of tourists (about 60%) spend in Tatra region several-days holidays, 15% - one week and 25% - more then one week (Fig. 3). During summer holidays the most of tourists choose hiking tourism as a main way to spend time in Tatras. The less popular recreation activity is biking along the established routes (Fig. 4).

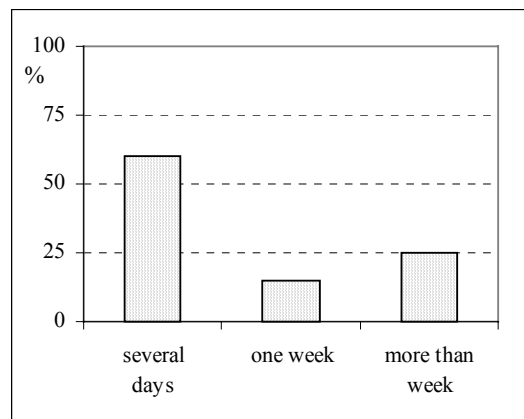


Figure 3: Duration of stay in Tatras

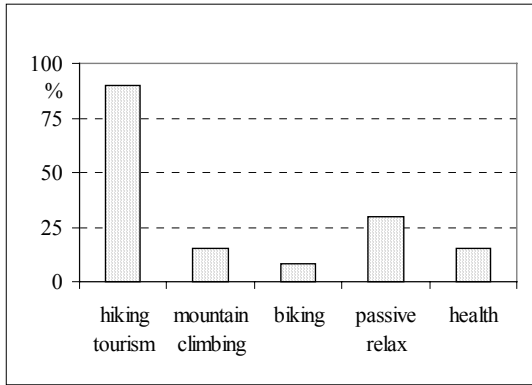


Figure 4: Tourists' preferences during summer holidays in Tatras

Every day thousands of tourists visit Morskie Oko. Results show that most of them need to enjoy nature at this place. For about 50% of visitors the most important was to see this popular site and to see the highest Polish peak – Rysy. About 50% of tourists intend to climb on the nearest peaks (Fig. 5). It was noted that large part of tourists have realised their hopes - 75% of them climbed to Czarny Staw (which is located at the foot of Rysy Mt.) and only 25% of persons stay at the shore of the lake (Fig. 6).

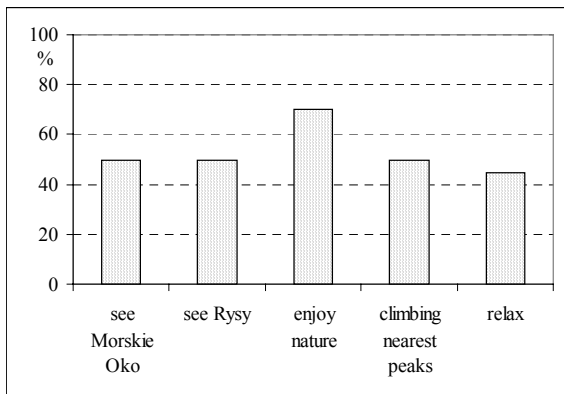


Figure 5: Provided purpose for visit at Morskie Oko

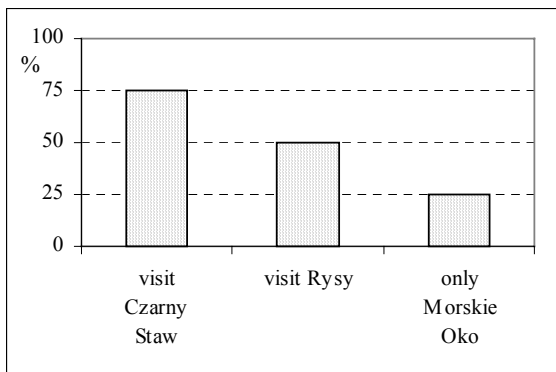


Figure 6: Realised hopes of spending time at Morskie Oko

The rout along Dolina Rybiego Potoku is most often visited track in TNP (about 1000 persons per hour) and it provides the most developed infrastructure. Tourists' evaluation of this

infrastructure is important to set an eventually changes (Tab. 2).

CONCLUSIONS

The results of the studies confirmed great tourist penetration in two regions of Tatra Mts. Morskie Oko lake and Kasprowy Wierch Mt. Hiking-tourism is real the most popular form of spending time in Tatras. Taking into account that majority of tourists spend in Tatras only few days it is clear their needs to visit the most attractive sites in TNP. Additionally, Morskie Oko and Kasprowy Wierch are not only attractive but also very easy to access places.

The great tourist frequency on Kasprowy Wierch depends mainly on cable car station located on its top. So, most of visitors (>50%) reach KW in this way. The presence of cable car makes the Park easily accessible for various groups of tourists. Thus, one of the basic functions of a national park – „providing the public with a limited access to the park” – is well realised. However, great number of tourists affect degradation of nature on the top of KW and destroy of tourists routes (particularly route in the direction of High Tatras – with the most frequency).

The similar situation was observed at Morskie Oko. 9 km of asphalt route is relative easy to walk. Besides, this rout leads to one of the greatest regions of High Tatras with the highest Polish peak – Rysy. The flow of 1000 persons per hour is a serious threat for an environment and it is a great challenge for tourism organisers as well as for TNP and communal services (transportation, infrastructure, renovation of degraded sites etc.).

The open is question: how to continue to throw open to public these two regions and how to adjust the number of tourists to actual capacity of high mountain environment. The studies reported are only the first part of research which should be, and I believe they will be, continue in the future.

| Infrastructure | Number | | | No idea |
|---------------------|----------|--------------|----------|---------|
| | suitable | insufficient | too much | |
| toilets | 60% | 30% | 10% | 0% |
| restaurants | 65% | 10% | 10% | 15% |
| places to rest | 45% | 30% | 20% | 5% |
| waste-paper baskets | 30% | 50% | 10% | 10% |

Table 2: Tourist's evaluation of selected elements of infrastructure at the rout along Dolina Rybiego Potoku

REFERENCES

Krzan Z., Siarzewski W., Skawinski P., Kot M., 1994: Tatra [in:] Biosphere reserves in Poland, Warszawa
 Mirek Z., 1996a: The Tatra mountains and the Tatra National Park - general information, [in:] The nature of Tatra National Park, Krakow-Zakopane
 Mirek Z., 1996b: Anthropogenic threats and changes of nature, [in:] The nature of Tatra National Park, Krakow-Zakopane