### TOURISM IMPACT ON THE NATURAL ENVIRONMENT OF POLAND

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The natural environment is a source of different material goods. They were created as a result of man's production work and derived from natural objects. Practicing tourism and using the natural goods (for example: rivers, mountains, woods), we find various benefits of natural environment, values which are necessary in our lives. Contact with nature is a way of spending one's free time. Participation in tourism is to remind of the fact that we should take care of the environment and protect it.



#### Negative effects of tourism:

- Water usage for the purpose of current facilities
- Littering tourist regions
- Emission of harmful compounds (for example: Sulphur dioxide, Nitric monoxide, Carbon monoxide)
- Water pollution by wastewater
- Soil degradation
- Destruction of vegetation
- Displacing of native species of animals





Tourism is inextricably linked with the natural environment. One of the most important aims of it are learning and admiring the nature's values. We can see some interactions between tourism and environment. The environment determines the development of tourism. It has an influence on the quality of it. At the same time, tourism has an ongoing impact on the environment in which it functions, changes it in a favorable way through well-balanced shaping or unfavorable one by destroying the resources and reducing its value.



## Favorable changes in the environment caused by tourism are associated with:

 ✓ taking care of the environment by creating protected areas in order to preserve biological diversity on all levels,
✓ development of investment protection in tourism, such as sewers, sewage farms, organizing landfills, and maintaining order
✓ mainatenance of nature monuments in order to increase their attractiveness
✓ care of hunting animals for the sake of game hunting and trapper tourism,
✓ afforestation for the enrichment of the tourist attractiveness of the landscape. While moderate and well-distributed tourism may help to upkeep attractions and preserve the environment, tourism as a mass industry poses new environmental risks.

#### EXAMPLES OF THE TOURISM'S NEGATIVE IMPACT ON POLISH NATURAL VALUES.

Photo. 1. Tourist trails in Połonina Bieszczadzka

Bieszczady is one of the regions which has not been visited by tourists for a long time, but now are the most popular attractions in Poland. As a result, we can see here: an increase in vehicular traffic on the local roads, more cottage houses sourrounding Solina's Lagoon, more hotels in small villages nearby like Myczkowce, Baligród, Cisna, Ustrzyki Dolne and an increase in intensity of tourists on the tourist trails. Bieszczady are a great example for researches concerning the tourists' impact on the natural environment as an intensive tourism has began here in the late 90's. This was because they have been promoted as a natural, intact place, ideal for relaxation. In the last ten years, however, Bieszczady have changed from a place, where only scout-camps were held to a well-known attraction In Poland visited by a lot of people a day. The growth in visiting Bieszczady has immediately impacted the natural environment of the mountains. The research shows that the trail most attended by tourists is the one ending in Przełęcz Wyżna in Połonina Wetlińska..

The attendance of the tourists here is 40 hundred people and is a record number of visitors in Bieszczadzki National Park. In places like Ustrzyki Górne, Przełęcz Wyżniańska, Wetlina the attendance is a bit smaller, about 20 – 30 hundred per year.

Because of the increase of tourists' presence in the National Park the daily absorbency of trials and paths is exceeded, especially in May and August. Mostly, this problem affects three groups of the mountains: Połonina Wietlińska, Połonina Caryńska and the complex of Tarnica and Halicz.

The consequence of the above-described treading of routes in Bieszczadzki National Park is an increased erosion, which takes the maximum size in the end of June and July, when there are the greatest rainfalls. All in all, using the trails by so many visitors makes them more susceptible to erosion.

Due to the lack of the cross gutters draining rainwater from the broad paths during great rainfalls, the tourist trails transform into the rushing streams. This process can be observed for instance on the yellow trail from Koliba to Mareżek, where the trail turns to muddy stream and the result is a deep indentation erosion.

In order to limit the impact of tourism on the cover of the soil and the increase in erosion processes, bridges, walkways, railings and protection of alpine grasslands are installed. There are also information boards beeing located designed to demonstrate the potential environmental damage caused by tourism and signs informing about the execution of rehabilitation work. In addition, there were also built wooden stairs on the routes in particularly steep and dangerous places.

Another unpleasant consequence of tourism here is the growing noise along hiking trails and routes. It often causes the disturbance of animals living here and of course disrupting their breeding rhythm.

Bieszczady until recently were a mainstay of unique species that were not accustomed to presence of people. Today, the intensity of visitors on both main and small loop of Bieszczady, the noise and emissions due to increased car traffic caused a disturbance in the life cycle of animals. For instance, in the 80's and 90's the frequency of passing cars was 6 at the time, now in the peak seson there are 6 a minute, which gives 360 per hour – a 60 times increase of car traffic. The increase in noise is from 40 to 70 dB.



Photo. 2. Tourist trail in Bieszczadzki National Park

#### KARKONOSZE – KARKONOSKI NATIONAL PARK

Tourism in Karkonosze Mountains started to develop in the XIX century as a result of better accessibility. There are three main conflicts between tourism development and environmental protection: skiing, hiking and tourist infrastructure.

Nowadays, Karkonosze are intersected by a dense web of hiking trails with summary lenght of about 350 km and still growing. It causes fragmentation of habitats and difficulities in animals locomotion. A growing level of noise flushes wildlife and results in further consequences in functioning of zoocenosis. Tourists often go off the track making new trails and elicit devastation of strictly protected habitats.



The other problem is bringing synantropical plants there, which may lead to supersession of local species. Rumex alpinus is the most spreading plant, especially around hiking trails and hostels.

Growth of the touristic traffic induces development of further touristic infrastructure. There are 5 hostels in the area of tight protection. The main task is to reprocess sewage and spoilage - all waste in general, in order not to spoil the environment and not to incur eutrophication. Skiing elicits huge changes in the natural environment. Even construction of skiing infrastructure requires logging of huge forest surface. It causes disturbance of ecosystem, fragmentation of habitats and interferes with the forest microclimate. Soil deprived of trees reduces its capability of accumulating water, erodes easily and can elicit landslides. Vegetation sourrounding ski tracks is at risk of being damaged by snow groomers and skiers themself. Artificial snow causes vegetation period to shorten.

Excessive development of tourism leads to dissapearance of unique environmental benefits, soiling of hiking tracks, growth of noise level and devastation of nature in general.



# Thank you for your attention

I Liceum Ogólnokształcące Collegium Gostomianum w Sandomierzu Klasa IID – profil biologiczno-chemiczny Członkowie zespołu: Aleksandra Gorycka, Aleksandra Świerkula, Wojciech Sabat Opiekunowie: Barbara Sobieraj, Agnieszka Białousz