



Threats to Areas of Natural Interest

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1. Introduction

The concept of “area of natural interest” is very common in the literature on the problems of environmental protection. Its meaning is not however defined clearly and explicitly. In a general meaning the term denotes an area of high value conditioned by the existence of various minerals, elements, and qualities of animated and inanimate nature [7].

Protected area is a site marked off geographically that is under protection or special management with a view to protecting it from threats. It is usually created in regions with diversified landscape or natural values and it is under legal protection. One of the main aims of protected areas is protection of natural resources against degradation and misuse as well as creation of appropriate conditions for animals, plants and their communities [4].

Definitions of area of natural interest point to the fact that such regions deserve protection, which should include not only preventive means in a specific area, but also prevention of adverse external influences. The area of natural interest should therefore encompass an area of wide natural variety along with the surrounding buffer zone (protection zone) [9].

The areas of natural interest have several functions once they are created. First of all, they are to protect the nature, make it possible to carry out research and popularization of knowledge about nature and preserve cultural heritage of different national regions.

The main reason for the specific treatment of areas of natural interest, i.e. providing legal protection for them, is an attempt to preserve

their ecological function. It helps to maintain the stability of natural ecosystems and basic ecological processes and minimize threats to natural environment.

2. Characteristics of areas of natural interest

The legitimacy of protecting unique elements of nature is indisputable. However, areas which are abundant in living organisms are inhabited by local communities striving for satisfaction of own needs and growth in the quality of life. The efficiency and effectiveness of the area of natural interest protection system should be based mainly on the development of management systems which would not pose threats to such area. No protection area management system will help if there are internal sources of pollution and local communities prefer development strategies which are not in line with reaching protection-related goals.

The landscape is a synthesis of natural, cultural and visual environment and each of these features needs individual treatment for their development and protection. The protection requires familiarity with ecological rights and functioning of ecosystems. The protection of areas of natural interest even along with the implementation of newer systems of protection cannot be the only target. The diagram below (fig. 1) shows strengths which should be used for task groups in areas of natural interest.

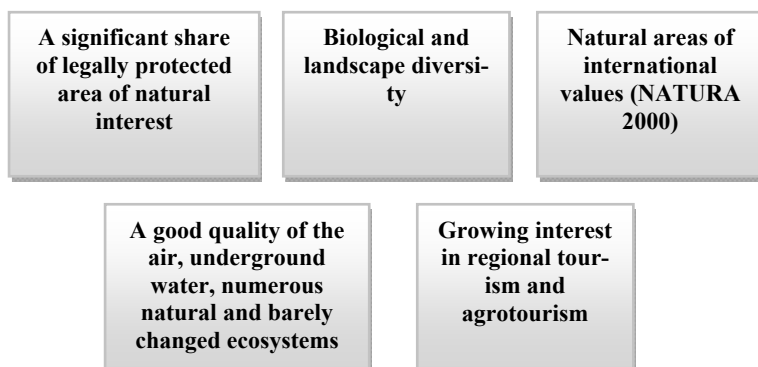


Fig. 1. Examples of strengths of areas of natural interest [by A. Biedrawa]

Rys. 1. Przykładowe mocne strony terenów przyrodniczo cennych
[opr. A. Biedrawa]

Strengths are connected with opportunities as well as threats that should be prevented. The maintenance of strengths of areas of natural interest should be the main objective for local governments and inhabitants. Figure 2 shows aspects relating to opportunities and threats when creating task groups for the protection of areas of natural interest.

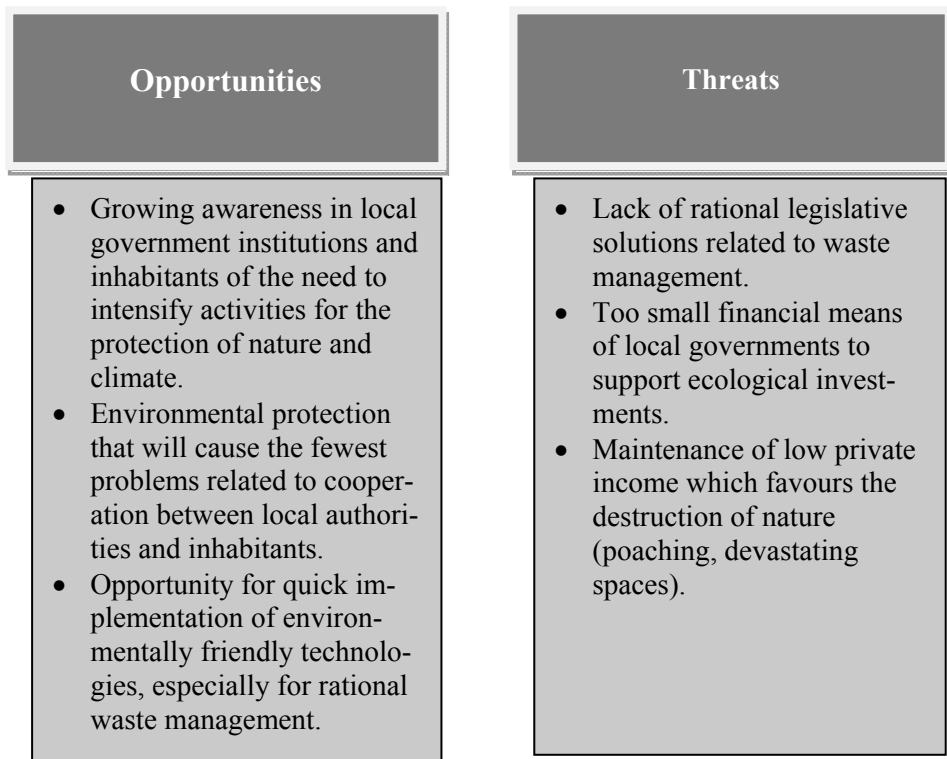


Fig. 2. Opportunities and threats when creating task groups for the protection of areas of natural interest [by A. Biedrawa]

Rys. 2. Szanse i zagrożenia w konstruowaniu grup zadaniowych dla ochrony terenów przyrodniczo cennych [opr. A. Biedrawa]

3. Threats to areas of natural interest

Areas of natural interest are exposed to many unfavourable factors which are often of anthropogenic origin. The scale of threats is alarming and it increases steadily. The main threats to areas of natural interest are increased tourist activity, development of skiing infrastructure and municipal waste.

The specificity, type and location of areas of natural interest as well as landscape interdependencies call for activities preventing the degradation of environmental values. Communes, where protected areas such as national parks or reserves are located, have special tasks to perform. They are obliged to partial withdrawal of certain areas from use, mainly industrial, agricultural and forest [2, 6].

A hope for better understanding of functioning of protected areas lies in the development of science dealing with exploring the nature as landscape (landscape ecology). The dynamics of landscape changes is regulated by time, and quick landscape changes, which are made by human activity, usually refer to destruction of structure and function of nature. Values lost from the genetic and ecological structure and their functions regenerate very slowly or do not regenerate at all; they start to degrade. Experiences have shown that technology not only makes it possible to use landscape, but it also destroys its natural values.

Threats increase every day along with the population growth, migration, industrialization and urbanization. These factors have an adverse impact on the air, water, soil and they also cause the degradation of flora, especially forests which are inseparable from areas of natural interest.

Tourist activity

Tourism and recreation are defined as the phenomenon of migration for visit, leisure and pleasure. Tourism is described as an active form related to travelling, whereas recreation is a passive leisure which is connected with a long stay in one place. In contemporary world tourism is one of the fastest growing forms of human activity [11]. The growth in tourism cannot take place at the cost of natural environment. All forms of tourism in areas of natural interest should be made ecological [12].

Forest areas are the main objective of tourist penetration and the source of attractiveness for leisure-seeking people. At the same time tourism and recreation are among basic forms of anthropogenic impact on the environment, which affect forests. Therefore, tourism in such areas require a special care on the part of forest administration. Different economic entities and forest administration show growing interest in the development of the tourism industry, and particularly in the income that can be generated as a result of providing services to tourists. Hence the reason for indentifying tourism as an economic function of forests. Tour-

ism is consequently a potential common ground for cooperation, but sometimes also for disputes between the forest administration and local authorities. Tourism will always grow, therefore the development of sound relations between the forest administration and the community will require effort from all interested parties.

Green areas are visited by millions of tourists every year (photo 1). Threat has a wide and diversified range of impact expressed by the fragmentation of sensitive ecosystems and population of living species, trampling on plant communities and rare species of plants, erosion of soil due to damaged vegetation and increase in waste materials, eutrophication and pollution of natural habitats.

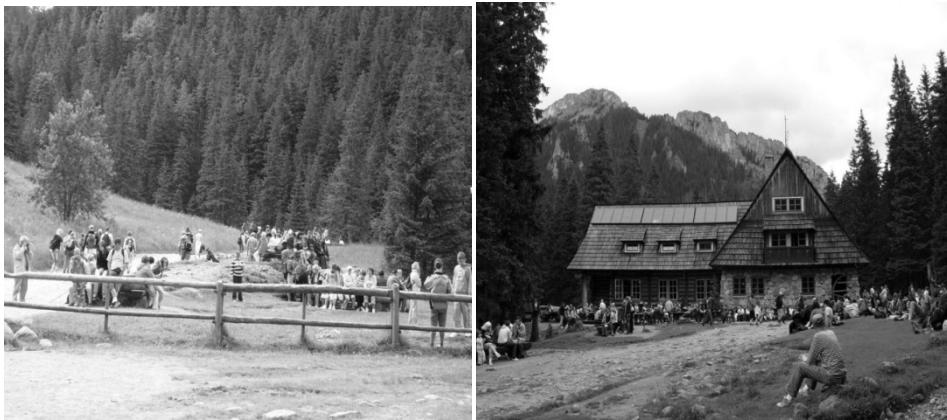


Photo 1. Massive tourist activity in the Tatra National Park
[photo by A. Biedrawa]

Fot. 1. Masowy ruch turystyczny w Tatrzańskim Parku Narodowym
[fot. A. Biedrawa]

The peculiarities of nature protected by reserves (in national parks and natural reserves) are places which are used intensively for leisure purposes, especially for tourist activities. Threats to forests can be serious. They manifest themselves through the disturbance of forest tranquility (anthropogenic noise), littering, damaging trees, trampling, scaring animals, polluting soil.

The development of skiing infrastructure

A local threat, including skiing infrastructure, is very serious. Damages which have been made as a result of skiing are manifested in

the landscape of discussed area mainly through a complete devastation of plants around ski runs and lifts as well as a mountain landscape and mechanical damage of plants and soil (photo 2).

Another very important aspect is also worsening or sometimes even destroyed forests' retention functions. The forest is a sort of sponge absorbing water from rainfall, melting snow and channeling it slowly to streams and rivers. Deforestation causes an uncontrolled flow of water and high water in streams, which may lead to local floods. A great number of skiers in the mountains is also a threat to animals for whom forests are natural environment.



Photo 2. Forest clearance for ski lifts [3]

Fot. 2. Wycinka lasów pod wyciągi narciarskie [3]

An alternative tourism may make up for the above status quo. It is both human-friendly and environmentally friendly. Ecotourism, downhill skiing, hiking or watching birds bring people closer to wildlife and the original goals of tourism. Mountain range clearance, development of slopes for ski lifts, unmanaged condition of the environment deprive future generations of the opportunity to admire wildlife [5, 8].

Municipal waste

Areas of natural interest are facing a serious problem, which is littering. The development of various industries and economies which started at the turn of 19th and 20th centuries, the spread of new technologies and products led to an excessive overload of the environment. In order to pander to every human whim the surrounding environment has been transformed into a big conglomerate. This operation resulted in the production, next to the useful product, of masses of by-products which are called waste (photo 3).

With the economic development and increasing environmental degradation, the approach to issues of environmental protection has changed too. People used to think that given the small population and vast areas of land, the nature will handle all waste by itself. It could not have been more deceptive. It was not more than several decades ago when the viewpoints changed. It was observed that the limits of self-regeneration of nature were exceeded. New technologies and waste management systems began to develop.



Photo 3. Uncontrolled rubbish dump in the Tatra National Park
[photo by A. Biedrawa]

Fot. 3. Niekontrolowane wysypiska śmieci w Tatrzańskim Parku Narodowym
[fot. A. Biedrawa]

A new thinking has originated the human-nature and nature-human relation and a few concepts of which the most prominent include waste reduction, clean technologies and best available technologies (BAT) [1].

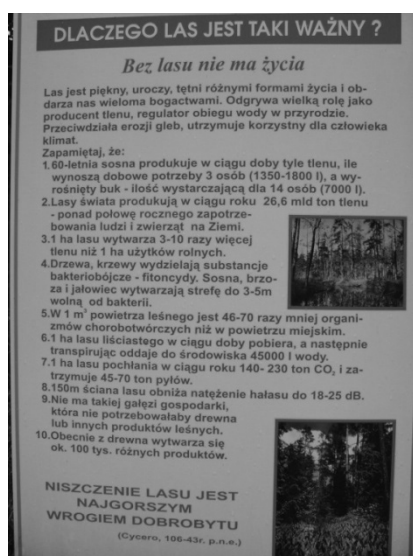
Municipal waste produced in areas of natural interest differ considerably in weight and properties from municipal waste produced in big urbanized areas. This is obvious and it stems from the specificity of household management. The composition of waste is also different. In most urbanized areas waste is highly fertilized as it contains a wide variety of organic elements. On the other hand, waste from small towns and villages and natural areas contains insignificant amount of organic substances, which means that their fertilizing and fuel properties are little (most organic components are used in gardening or as animal feed). They also contain a small proportion of components fitted for recyclable waste.

When preparing a waste management programme in small and medium-size communes it should always be analyzed if there are opportuni-

ties for cooperation with other neighbouring communes to solve the problem. Many small communes are not capable of neutralizing waste.

4. Protection programme

Due to a conflict between the tourist use and management and the protection of natural values it is essential to develop a detailed management programme of areas of natural interest for tourism. The programme should account for a subordinate function of tourism to an ecological function. Areas of extreme natural values must be marked with silence zones that are not for tourist use. The masses of produced and left waste should be minimized [1].



Fot. 4. Educational boards in the Bieszczady National Park
[photo by W. Sobczyk]

Fot. 4. Tablice edukacyjne w Bieszczadzkim Parku Narodowym
[fot. W. Sobczyk]

Moving along marked tourist trails, staying only in places designated for rest which are close to properly developed tourist trails, information boards containing commentaries on proper behaviour in a visited forest area (photo 4) are ways to reduce the nuisance of tourists in forests under legal protection.

The economic problems of waste, especially neutralization, are difficult to solve at the micro level, namely in the case of small communes. Motivation for a proper waste management is targeted at the society because the formula for success in waste management is social education and awareness (photo 5).



Photo 5. Reminding tourists about waste segregation, Przysłup next to Cisna (The Cisna-Wetlina Landscape Park) [photo by W. Sobczyk]

Fot. 5. Przypomnienie turystom o segregacji odpadów. Miejscowość Przysłup koło Cisnej (Ciśnieńsko-Wetliński Park Krajobrazowy) [fot. W. Sobczyk]

5. Conclusion

Environmental protection is about the maintenance of basic ecological processes and systems which are the mainstay of life. Ecosystems are responsible for food production, health, and a steady development. Argosystems, forest and water ecosystems play an important function here. To reduce adverse influences and develop sound relations between the nature and economy the concept was adopted to provide protection to various forms of land which have not been transformed heavily and which show high ecological values. The success of this goal depends on the society's ecological attitude. Therefore, it is advisable to develop positive behaviours in inhabitants and tourists who are the users of areas of natural interest [10].

The development of deliberate behaviours can be achieved through educational and information policy promoting a pro-ecological lifestyle. The educational programme should be available for all age groups: the recipients are young people at different educational levels, teachers, parents, local government authorities and administration officers and tourists, so all people visiting beauty spots in our country.

Increasing the ecological awareness of the society can take place in different ways: formal ecological education for young people, scientific meetings, happenings, workshops, conferences, training schemes, seminars, symposia, or even fairs, contests, trips, concerts. It is worth encouraging educational publishing institutions (publication of books, leaflets, brochures) as well as the mass media: the press, local television and ubiquitous Internet.

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Zagrożenia dla obszarów cennych przyrodniczo

Streszczenie

Obok obszarów silnie przekształconych przez człowieka istnieją zakątki, w których zachowała się przyroda mało zmieniona od wieków. Obszary takie zasługują na pełną ochronę. Niestety dzieje się inaczej. Podlegają one wpływowi zewnętrznych źródeł emisji, które powodują degradację świata roślinnego, zwierzęcego oraz krajobrazu. Na degradację środowiska wpływają wzmożony ruch turystyczny, produkcja odpadów, presja urbanizacji. Działanie tych czynników może wkrótce doprowadzić do zachwiania równowagi ekologicznej na obszarach o cennych walorach przyrodniczych.

W artykule opisano specyfikę terenów cennych przyrodniczo, ich mocne strony, szanse i zagrożenia w konstruowaniu grup zadaniowych dla ochrony terenów przyrodniczo cennych.

Każdego roku tereny chronione odwiedzają miliony turystów. Zagrożenie ma bardzo szeroki i zróżnicowany zakres oddziaływania, wyrażający się we fragmentacji wrażliwych ekosystemów oraz populacji występujących tam gatunków, zadeptywaniu cennych zbiorowisk roślinnych i rzadkich gatunków roślin, erozji gleb w miejscach zniszczonej pokrywy roślinnej oraz we wzroście masy odpadów, eutrofizacji i zanieczyszczaniu naturalnych siedlisk.

Odpady komunalne powstające na terenach przyrodniczo cennych różnią się w istotny sposób pod względem masy i właściwości od odpadów komunalnych, powstających w dużych aglomeracjach miejskich.

Gminy, na terenie których znajdują się obszary objęte ochroną, jak parki narodowe czy rezerваты, mają szczególne zadania. Są zobowiązane do częściowego wyłączenia pewnych terenów z użytkowania, głównie przemysłowego, rolniczego i leśnego.

W celu ograniczenia niekorzystnych wpływów i kształtowania właściwych relacji między przyrodą a gospodarką przyjęto koncepcję objęcia ochroną różnych form terenów, które nie zostały jeszcze silnie przekształcone i które odznaczają się wysokimi walorami ekologicznymi. Osiągnięcie tego celu zależy od postawy ekologicznej społeczeństwa. Należy więc zadbać o kształtowanie pozytywnych zachowań mieszkańców i turystów – użytkowników terenów cennych przyrodniczo.