

*Krzysztof Koreleski*

## **LAND MANAGEMENT ISSUES IN ECOLOGICALLY PROTECTED AREAS**

### **Summary**

The article outlines certain issues regarding land management within protected wildlife areas, such as national parks, nature reserves, landscape protection areas, NATURA 2000 areas, documentation sites, ecological areas, natural and scenic complexes. It discusses the regulations governing the establishment and management of such areas, the restrictions on land use, the principles of their economic use, as well as nature protection aims within the studies of spatial development, at the local and regional level.

Ecologically protected areas in Poland represent a significant natural potential with a rich variety of nature forms and compose the structures of the ECONET network or the World Network of Biosphere Reserves. These areas frequently neighbour or surround each other. Sometimes, they are exposed to adverse influences from outside (the industry, the cities, transport), excessive tourism, or fire hazard.

The existing restrictions and regulations regarding nature resources management, incorporated into conservation plans drawn up for national and landscape parks, nature reserves, or for other protected areas, become integral elements of local spatial development plans. The owner of a property situated in a transition (buffer) zone or in an protected area can demand this property to be repurchased or exchanged if there exist significant restrictions or difficulties concerning its use.

Distinctive management principles are established then for protected areas and objects which safeguards them against misuse.

**Key words:** land management, protected areas, ecological politics

## **INTRODUCTION**

In the age of sustainable development, nature protection has become a component of ecological politics and mainly comes down to appropriate use and rehabilitation of natural resources and elements.

Polish Nature Conservation Act [2004] provides the following forms of protected areas: national parks, nature reserves, landscape parks, landscape protection areas, NATURA 2000 areas, documentation sites, and natural and scenic complexes. These areas comprise over 30% of the Polish territory.

Protected wildlife areas fulfil significant ecological and social roles within human living space through compensating losses inflicted by man in other places, improving living conditions in intensively exploited areas, or providing recreation facilities. Therefore, they constitute a specific element of land management within the functional and spatial structure of a given area.

### **THE ESTABLISHMENT AND MANAGEMENT OF PROTECTED WILDLIFE AREAS**

Utworzenie lub powiększenie obszaru parku narodowego lub rezerwatu przyrody Establishing or extending the area of a national park or a nature reserve jest celem publicznym. is a public purpose. Incorporating the land or properties not belonging to the state into the area of the park can be realized after obtaining the owner's consent; in case there is no consent – through expropriation [The Act of 1997].

A national park is a state-owned unit, administered by the Ministry of the Environment. It can be established, liquidated, or its boundaries can be changed under an ordinance issued by the Council of Ministers which defines the park's name, its area, determines the course of the boundary line, the buffer area, and state immovable properties not taken over into permanent park management.

State immovable properties situated within the national park and used in accordance with the park's aims are taken over into permanent park management [The Act of 1997].

The national park holds the right of first refusal to purchase immovable property situated within its area for the State Treasury.

Nature reserves are created by voivodes (governors of Polish provinces, called voivodeships) through appropriate ordinances – defining the name, location or the course of the boundary line and the buffer zone, the type of the reserve, as well as the supervising body. The voivode may enlarge the reserve, reduce it in size, or liquidate it, having obtained the approval of the Ministry of the Environment and having consulted the voivodship council for nature conservation.

A landscape park is established, enlarged, or liquidated under an ordinance issued by the voivode, which defines its name, the area, the course of the boundary line, and a possible buffer zone. The project of an ordinance regarding the establishment of a landscape park needs to be consulted with the pertinent local community council.

A landscape protection area is legally established through an ordinance issued by the voivode, which defines its name, location, area, the supervising body, etc. Liquidation or change of the boundary line of a landscape protection area is legally performed by means of an ordinance issued by the voivode, after consulting the voivodship council for nature conservation and the pertinent local community councils.

The Ministry of Environment draws up a preliminary list of Natura 2000 areas, in compliance with the EU regulations.

Delineating a Natura 2000 area, changing its boundary line, or its liquidation are legally performed by means of an ordinance issued by the Ministry of the Environment, with formal agreement of the Ministry of Agriculture and Rural Development, and the Department for Water Economy within the Ministry of the Environment. The ordinance defines the area's name, its administrative location, the area and the area map, the aim and subject of protection, and the supervising body.

The establishment or liquidation of a documentation site, an ecological area, or a natural and scenic complex is legally performed through an ordinance issued by the voivode, or an act passed by the local community council. The ordinance or the act defines the name of the area, its location, the supervising body, etc.

#### **RESTRICTIONS ON LAND USE WITHIN ECOLOGICALLY PROTECTED AREAS**

A national park usually embraces an area of more than 1,000 hectares characterized by unique natural, scientific, or cultural values, where all natural as well as landscape features are set aside for special protection.

A nature reserve embraces areas in their natural state or insignificantly changed by man, including the elements of animate and inanimate nature, characterized by unique natural, cultural, or landscape values.

The following activities are prohibited in national parks or nature reserves:

- constructing or extending buildings or technical facilities, except for objects which are essential elements of the parks' infrastructure;
- altering hydrographic conditions, regulating rivers and streams;
- mining, quarrying, extracting peat, etc;

- devastating soil or altering the land use type or the land use zoning category;
- running private enterprises engaged in productive and commercial activities, or carrying out agricultural operations, except for sites specially designated for this type of activity in the conservation plan;
- using chemical or biological plant protection substances and fertilizers.

A landscape park extends over an area protected for certain natural, historical, and landscape features in order to ensure their sustainable development. In a landscape park, it is prohibited to:

- undertake activities which could significantly influence the natural environment;
- liquidate and devastate woodlots, road trees, or trees growing in the vicinity of water reservoirs;
- mine, quarry, extract peat, etc., for economic purposes;
- conduct earthworks which may permanently deform the relief;
- alter hydrographic conditions, if these changes are not conducted for the purposes of rational agricultural, forest, or water management;
- erect new buildings within 100 metres from river banks or other water reservoirs, except for specific economic projects;
- erect new buildings within 200 metres from cliff edges or sea shores;
- breed cattle with no bedding.

National parks and nature reserves (obligatorily) and landscape parks (optionally) are surrounded by buffer zones.

For national parks, nature reserves, and landscape parks, conservation plans are created which identify nature conservation aims and the scope of conservation activities. These plans also designate places where production, commercial, or agricultural activities can be conducted as well as include information for studies of determinants and directions of spatial development and local spatial development plans.

A landscape protection area embraces a fragment of land characterized by landscape diversified in terms of ecosystems – valuable for their capability of satisfying recreational needs or their role as ecological corridors.

Restrictions set out within a landscape protection area are very similar to restrictions introduced for landscape parks.

A Natura 2000 area can embrace a fragment or the entire area of a national park, a nature reserve, a landscape park, or a landscape protection area. Therefore, the conservation plan for such an area makes use of conservation plans drawn up for its constitutive areas as well as forestry plans which to some extent determines restrictions, and acceptable methods of land use. Generally, undertaking any activities which may significantly deteriorate the state of biocenoses and biotopes is prohibited.

Economic activities, agricultural and forestry operations, hunting, etc. are permitted within Natura 2000 areas, on the condition that they do not threaten the natural environment.

Documentation sites are sites of geological formations, caves, fragments of exposed or unused surface or underground excavations which are visible on the surface and important for their scientific value.

Ecological areas are defined as remains of former ecosystems valuable for their ability to sustain biological diversity, such as natural water reservoirs, small ponds, clumps of trees and bushes, marshes, peat bogs, old river beds, rocky areas, wastelands, etc. In general, ecological areas are not exploited economically, except for mowing and grazing, which are indispensable methods of preventing natural tree and bush succession in valuable protoecosystems, or on mountain slopes used, for example, for winter sports [Koreleski 2005].

Natural and scenic complexes are defined as fragments of the natural or cultural landscape valuable for their scenic and aesthetic features.

The following interdictions can be introduced for a documentation site, an ecological area, or a natural and scenic complex:

- conducting earthworks which permanently deform the relief;
- damaging or contaminating soil;
- altering hydrographic conditions, liquidating, filling in, or restructuring water reservoirs, old river beds, and marshes;
- altering the land use type;
- extracting mineral resources for economic purposes.

#### **MANAGEMENT PRINCIPLES IN ECOLOGICALLY PROTECTED AREAS**

For areas embracing highly valuable elements of the natural environment, such as national parks, nature reserves, or landscape parks, pertinent authorities establish the principles of using natural resources, within the area's conservation plan. Apart from the above-mentioned interdictions, conservation plans enumerate regulations relating to the particular subject under conservation and the scope of conservation in order to protect valuable natural and landscape elements. For example overhead and underground power transmission lines as well as communication routes can be only conducted in such a way so as to ensure preserving valuable landscape features and protecting the environment from their harmful effects.

Tourist infrastructure can be optionally placed in buffer zones surrounding protected areas. However, locating it outside this zone is more appropriate.

The principles regulating economic exploitation of buffer zones of national parks and nature reserves come down to [Koreleski 2001]:

- appropriate (non-invasive) water management;

- preserving clean waters, air, soils: sewage treatment plants, ecological agriculture without synthetic mineral fertilizers and pesticides, not allowing for poultry farms, rubbish dumps and landfill sites;
- appropriate architecture (cubic, surface, linear elements) in the landscape;
- limiting the level of noise coming from communication trails and mechanical devices, using the area configuration as sound-absorbent screens;
- eliminating the industry and restricting other forms of economic activity.

The owner of a property situated in the buffer zone or in the protected area may demand his property to be repurchased or exchanged if significant difficulties or restrictions have appeared concerning its use in comparison to the previous state.

All types of protected areas, although with certain restrictions resulting from the assumed conservation measures, are used for rest and recreation purposes.

Nature reserves and national parks are used for recreation only within so-called controlled qualified tourism (trekking, hiking, skiing, etc.), along appropriately designated trails, whilst infrastructure should be basically located outside their areas.

Forest management is very limited in national parks and nature reserves (indispensable nurturing activities), whilst there are attempts at eliminating clear-cuts and limiting heavy machinery within landscape parks and landscape protection areas [Olaczek et al. 1996].

Environmental restrictions also impose various regulations regarding agricultural activity [Koreleski 1999].

Agricultural operations within nature reserves and national parks, except for small enclaves in the Tatra (controlled sheep grazing), Gorce, and Pieniny mountains are impossible.

Landscape protection areas and landscape parks are potentially areas where health food, based on ecological or integrated agriculture, can be produced.

Restrictions and regulations regarding the management of natural resources, incorporated into conservation plans drawn up for national and landscape parks, nature reserves, or for other protected areas, become integral elements of local spatial development plans [Act of 2003]. For example, separate management principles are established for ecological areas, just as for other protected areas or objects, which safeguards them against misuse. Moreover, in the case of forested areas, indispensable activities, resulting from the need to protect the environment, are also incorporated into forestry plans.

---

## **PROTECTED WILDLIFE AREAS AND REGIONAL POLICIES**

At the voivodeship level, with regards to spatial development issues, conservation plans aim at:

- preserving and recreating biotopes within protected wildlife areas;
- placing environmentally valuable areas under legal protection ensuring the preservation of their biological state and ecological functions (establishing the network of nature reserves, landscape parks, ecological areas and other forms of conservation complementing the areas of national parks);
- limiting adverse impacts of the industrial and technological infrastructure, particularly regarding areas important for agriculture, biodiversity, etc.
- preserving and reconstructing biotopes in protected wildlife areas (woodlots, old river beds, marshes, peat bogs);
- introducing spatial policies conditioning the development of natural values and cultural goods, by means of eliminating dispersed development, limiting the pressure exerted by urbanization on the most valuable wildlife areas, opting for local afforestation and ecological agriculture.

## **CONCLUSIONS**

Summing up the issues raised in this article, we can formulate the following conclusions regarding acceptable forms of management and land use within ecologically protected areas:

- national parks and nature reserves: reserve management, science and didactics, qualified tourism and sightseeing;
- landscape parks and protected landscape areas: reserve management, forest management, environmentally-friendly agriculture (ecological, integrated), settlement, tourism, science and specialist didactics, park infrastructure, and in the case of the buffer zones also holiday residences;
- buffer zones: reserve, forest, and water management, agriculture, settlement, tourism, holiday residences, park infrastructure;
- similar forms of use are allowed for Natura 2000 areas;
- documentation sites, natural and scenic complexes, and ecological areas: science, specialist didactics, tourism, and in the case of ecological areas also ecological functions, small water retention, or bioengineering.

Ecologically protected areas in Poland represent a significant natural potential with a rich variety of nature forms. They create the structures of the ECONET network, belong to the World Network of Biosphere Reserves, or they are recognized as CORINE refugia of European significance.

Various types of protected areas can neighbour or surround each other, for instance the Ojcowski National Park is surrounded by the Complex of Jurajskie

Landscape Parks (the Małopolskie Voivodeship). Very often protected landscape areas surround national parks, landscape parks, and nature reserves.

Sometimes, protected wildlife areas are exposed to the adverse, degrading influences from outside. For example, the Ojcowski National Park is threatened by industrial pollution of the Krakow-Silesia agglomeration; the nature reserve "Gibiel" in the Niepołomicka Forest - by the Nowa Huta steelworks [Koreleski 2001]. Moreover, protected areas are also threatened by excessive pressure exerted by recreation and tourism, or are negatively influenced by transport (also connected with tourism), fire hazards, vermin, etc.

The existence of protected areas gives rise to many conflicts between obeying protective measures, particularly in national parks and reserves, and the needs of local communities.

It has to be underlined, nevertheless, that special forms of protection only seemingly contradict socio-economic interests; for they ensure high quality of the natural environment, provide new perspectives regarding space use for tourism, recreation, or medical services.

#### REFERENCES

- Koreleski K. 2001. *Szczególne formy ochrony przyrody jako element struktury funkcjonalno-przestrzennej województwa małopolskiego*. Zeszyty Naukowe Akademii Rolniczej w Krakowie, Geodezja v. 20. pp. 37-46.
- Koreleski K. 2005. *Użytki ekologiczne jako specyficzny element zagospodarowania przestrzeni i ewidencji gruntów*. Zeszyty Naukowe Akademii Rolniczej w Krakowie, Geodezja v. 21. pp. 209-215.
- Olaczek R., Głowaciński Z., Sokołowski A. W. 1996. *Ochrona przyrody w Polsce*, Warszawa.
- Ustawa z dnia 21. sierpnia 1997 r. o gospodarce nieruchomościami. (The Real Estate Act of 21.08.1997) Dz. U. (Journal of Laws) No. 46, item 543 (with later amendments).
- Ustawa z dnia 27. marca 2003 r. o planowaniu i zagospodarowaniu przestrzennym. (The Real Estate and Spatial Management Act of 27.03.1997) Dz. U. No. 80, item 717 (with later amendments).
- Ustawa z dnia 16. kwietnia 2004 r. o ochronie przyrody. (The Nature Conservation Act of 16.04.2004) Dz. U. No. 92, item 880 (with later amendments).

Prof. Krzysztof Koreleski, Dr. Sc., Ph.D  
The Department of Rural Areas Planning, Organization and Protection  
Agricultural University in Krakow  
Al. Mickiewicza 24/28, 30-059 Krakow  
tel. 012 633-40-60;  
e-mail: koreleski@ar.krakow.pl

Reviewer: Prof. Zbigniew Piasek, Ph.D., Dr. Sc.