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**MANAGEMENT SYSTEM OF
PROTECTED AREAS AND ITS
MONITORING IN POLAND**

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ABSTRACT. In Poland, a system of protected areas should be created, the system which would protect more effectively the most precious wealth of biological and landscape diversity in the country, at the same time resulting in a dynamic socio-economic development in accordance with the principles of sustainable development. For the systems of protected areas environmental monitoring is necessary, it would improve correction and design of new directions of development adjusted to already existing of natural, social and economic interest reality.

JEL Classification: Q57, P2 **Keywords:** a system of protected areas, monitoring.

Introduction

Nowadays every human being should be engaged into wildlife conservation and education should play a significant role in our life, beginning at the very early stage. Its aim would be to shape appropriate pro-ecological attitudes in life. Natural environment protection should be based on the assumption that the most effective way of man's behavior is a national shaping of natural environment, planned and harmonious economic development, which is in accordance with the natural possibilities of the country. Such an attitude is possible to reach thanks to well functioning management system of environment.

Managing of environment is education and practical activity which means to design, implement, control and coordinate the processes of managing environment. Its aim is to make possible keeping creativity and self-organization of natural environment, in other words environment should develop in such conditions which would be of least negative interference of man (anthropopression). Effective management of environment will result in reducing the degradation of natural environment because of running business activity. At present environment degradation concerns not only industrial areas, but also forest and agriculture areas. Caring about natural environment means not only its protection or rational management but also rehabilitation, creation of new and more effective legal rules, retaining already existing and creating new protected areas.

A suggestion of the management system of protected areas

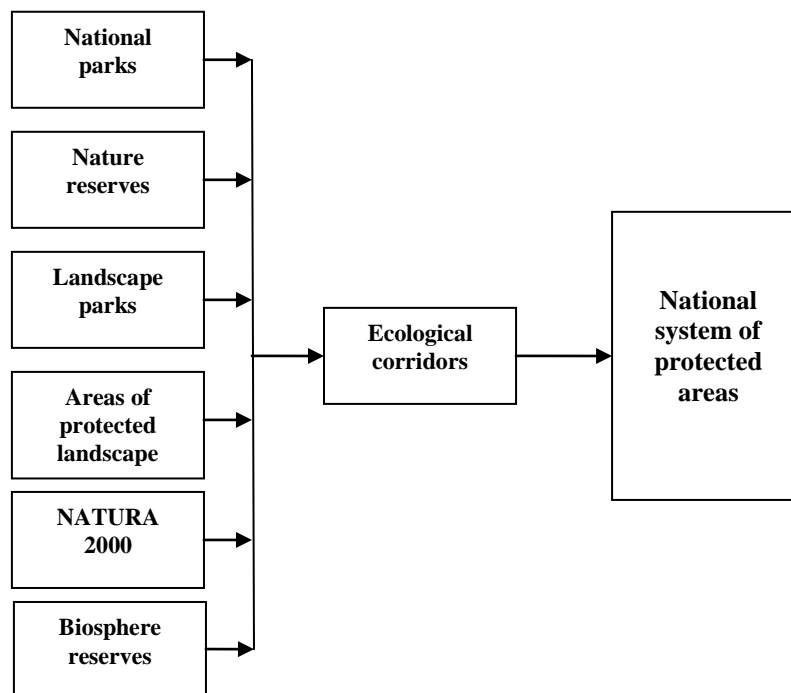
The aim of management system of environment is to improve relations, saying more precisely, to keep the balance between man's activity and natural environment, and the

processes taking place in it. Although, the society can see a need of particular care of life quality through well preserved natural environment, it is still left in a minor position to economic or social needs, where the needs play absolutely bigger significance in man's behavior than environment's values. That is why rational and effective natural environment management will guarantee support for ecological security of the country.

One should also remember that wildlife conservation is effective only when it encompasses the whole space of natural environment, not only single elements (for example certain plant, animal species or valuable natural areas). That way, spatially consistent system of wildlife conservation is being created. (Zielińska, 2005, p. 168).

Wildlife conservation leaves, from conservative attitude and narrowly understood, area protection in the form of national and landscape parks, nature reserves or areas of protected landscape for mega spatial forms of natural environment protection, such as the network Natura 2000. In a consequence, it causes more effective protection between different biological and landscape diversities. Such mega surface protection improves the management system, which manages them.

One heads to design and create in the area of the country, a harmonized system of protected areas. In the subject literature there is suggested a name "National system of protected areas" which would provide effective realization of the aims of wildlife conservation. This system should encompass spatial arrangement, where the forms of area protection complete each other, and they will be joined together with ecological corridors¹ (look scheme 1.). At present, there is lack of legal guidelines concerning the case of keeping cohesion of ecosystems and contacts between populations, what provides already mentioned ecological corridors.



Scheme 1. National system of protected areas

Source: own study.

¹ The area which aim is to serve for the migration of the organisms with the physical ability or ability to move „step by step” ,the genes and specimen without such ability; the area which enables the migration of plants, animals or mushrooms (Journal of Laws of the Republic of Poland 2009, No. 151 item 1220, article.5 pt.2)

The pillar of „National system of protected areas” should be already existing forms of wildlife conservation (national parks, landscape parks, nature reserves and other forms of area protection), which will function in accordance with the principles of eco-development and sustainable development. Such system should play, for the society, not only protection functions (environmental), but also socio-economic and spatial ones.

A holistic approach should be applied if it goes about protected areas as a whole. Holism is one of the system paradigm’s feature and it means that analyzing some relation and dependence, they should be seen as a whole. It also refers to the protected areas which are a complex system. Protected areas are a system of high level of complexity and that is why all diagnoses concerning this system should be led in a holistic way. Inability of global thinking is a cause of many wrong decisions, taken by local authorities as well as by central authorities.

Creating a system of protected areas will be depended on (Zielińska, 2007, p. 57-64):

- appropriate legal, organizational and economic-financial mechanisms which condition keeping and national using of natural resources towards future generations;
- coordinating of interministerial activities for the protection of natural resources at a scale of a country;
- implementing instruments which aim is to take ecology actions towards economy;
- introducing a monitoring of wildlife protection, and creating and implementing criteria/indicators for a control of the effectiveness of protection programs’ realization;
- a responsibility to take into account the demands of wildlife conservation in such documents like: ecological state’s policy, environmental protection programs for all units of territorial government, a concept of spatial development of a country, strategies of voivodeship development, plans of spatial development of voivodeship, strategies of districts’ development, studies of determinants and directions of districts’ spatial development, local plans of spatial development;
- working out the plans for the period of 20 years and protection programs of selected species and environmental habitat for new-created forms of wildlife conservation;
- disseminating the meaning of wildlife conservation for local communities and for the administration of local governments – ecological education.

The system which functions in such a way will improve the management system of protected areas. The system of protected areas will protect the values of natural environment and at the same time it will be a dynamic factor for socio-economic development, which is in accordance with the principles of sustainable development. Creating properly functioning organization (appointing one state institutions will be responsible for administrative-formal structure of the system from the beginning to the end) is necessary for functioning of this system. It will provide the establishment of clear organizational-functional rules of a system, what would strengthen its meaning not only in a national or European arena but also in a global one.

The following things will have a significant impact on the efficiency of system functioning: correctly prepared strategic documents connected with the process of planning, managing and monitoring, through eco-development programs for nature reserves and national parks or the programs of sustainable development for landscape parks, areas of protected landscape and Natura 2000. These programs should play only a support role in managing of this system which will be helpful for better learning, diagnosing the values and resources of these areas and implementing practical solutions.

Monitoring the management system of protected areas

Monitoring of environment can be understood as a system of measurement, gathering, processing, sending and making information available, it can stand for assessments, and prognoses of environment conditions, carried out on the basis of harmonized methods and calibrated research tools. (Poskrobko, 1998, p. 201). In accordance with the act of 27 April 2001 “The Right of Environmental Protection” (Journal of Laws of 2008, No.25, item 150) ecological monitoring was acknowledged to be an official source of information about natural environment (article 25(1)). Legislator used here a very wide definition of monitoring, treating it as a system of measurement, assessments and prognoses of environment condition, also gathering, processing and spreading information on environment (article 25(2)). The aim of national environment monitoring is to support natural environment protection through informing systematically administrative bodies and society about the quality of environmental elements, keeping the standards of environment quality, defined by regulations, and the areas where there are the overruns of these standards or the changes of quality environmental elements, and the causes of these changes, including cause-result connections existing between emissions and conditions of environmental elements (article 25(3)).

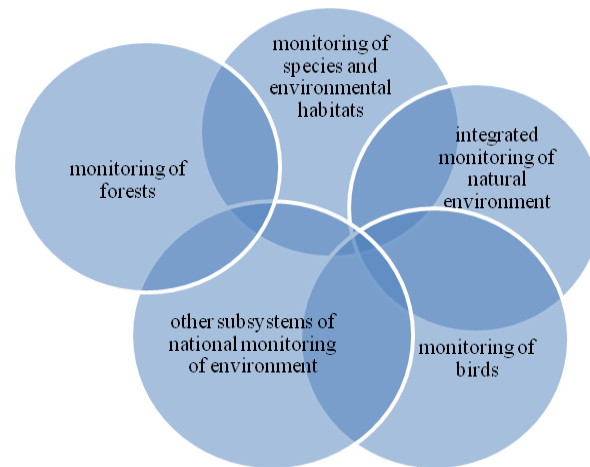
Within national monitoring of environment there is also environmental monitoring of biological and landscape diversity (Environmental Protection Act of 16 April 2004; Journal of Laws of 2009 No.151, item 1220, art 112), which implements the regulations of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (so called Habitats Directive) and Council Directive 79/409/EEC on the conservation of wild birds (so called Birds Directive). In accordance with the act, monitoring of environment should lie in the observation and the assessment of condition and the changes taking place in the elements of biological and landscape diversity in the selected areas, and also in the assessment of effectiveness of applied methods of wildlife conservation, including the observation of environmental habitats and plant or animal species, for the protection of which the area Natura 2000 was outlined.

There are big gaps of knowledge on distribution and resources of species and environmental habitats. It is caused by lack of support for the research of fauna and flora, which provide basic information about the places where species can be found and about the size of their population. An attempt to define environmental habitats at the national scale has not been done yet. That is why monitoring of national natural resources is not essential. Only systematically and selected from many years data concern a stand of forest. National monitoring of other environmental elements (for example: plant, animal species and peat bog) at the scale of a country is chaotic, and it is difficult to keep it in continuity.

Individual efforts of educational institutions and non-governmental organizations are not integrated in an overall system. Begun in 2005, monitoring of environmental habitats and species from the attachments to Habitats Directive is not essential in the eyes of the demands of Directive (*The most important problem of environmental protection ...*).

Within subsystem of environmental monitoring the following tasks are carried out: (<http://www.gios.gov.pl/artykuly/164/Informacje-ogolne-o-podsystemie-monitoringu-przyrody>):

- monitoring of birds, including monitoring of the areas of special birds conservation Natura 2000;
- monitoring of species and environmental habitats, with a particular attention to special area of habitats protection Natura 2000;
- monitoring of forests;
- integrated monitoring of natural environment.



Drawing 1. The organization of environment's monitoring

Source: <http://www.gios.gov.pl/artykuly/164/Informacje-ogolne-o-podsystemie-monitoringu-przyrody>

One should unambiguously point what administrative bodies are responsible for the protection of environment. Additionally, into the activity of monitoring, social units and local community should be involved. In consequence, the structure of administrative and social bodies should accomplish the visions and the tasks of wildlife conservation, they should propose updating and change in conservation, because of changing determinants of researched protected area and in its surrounding. A necessity of a continuous monitoring and updating of accepted aims and tasks concerning wildlife conservation is caused because of continuous changes taking place in the protected areas and in their surrounding.

A significant tool of monitoring of protected areas is specifically created indicators of eco-development (nature reserves, national parks) and of sustainable development (other forms of system), which will provide effective monitoring of the changes taking place in these areas. These measures will give information if the process of wildlife conservation is a correct one, or if there is a need of updating the tasks, protection plans, or if there is a necessity to change these tasks in such a way which would allow to adjust these changes to the tendencies of the functioning condition changes of protected areas and their surrounding.

Monitoring of protected areas should be adjusted to existing of natural, social and economic interest reality. It will enable to design the directions of the protected areas' development from ecological and socio-economic point of view, keeping these areas for future generations, in accordance with the idea of sustainable development. At the same time, monitoring has to be an important part of the sustainable development strategy of protected areas, districts or a region, in the area of which the following areas are situated.

The process of environment monitoring and gaining back information in planning protection of natural valuable areas can be explained thanks to a few principles (Iddle and others 2004, p. 40):

1. Clarity and logic – who will benefit from the results of monitoring and assessment, why and how.
2. Concentration – one should gather key information connected with the assessment of the realization of basic and long-term operational aims. Complete by information connected with the realization of short-term aims.

3. Organizing – gathered information suit to the procedures of protected area managing in such a way that their gathering becomes an essential and integrated action with the whole of managing.
4. Balance- gathering information is not too expensive and illustrates established operational aims.
5. Updating – one should regularly assess if the collected information is still needed? If the operational aim has not changed?
6. Reliability and its force – indicators can be independently assessed also by organizations and external institutions. Indicators should be: simple, measurable, reachable, realistic and delivered on time.

Long-term monitoring understood in that way, is a tool of gathering information, which is directly used towards continuous improvement of action for wildlife conservation.

Monitoring for protected areas should be done and introduced as rapports, which will become a crucial element in communications with social partners. These rapports should introduce in a clear and simple way, this what had been achieved and what kind of progress had been done in implementing these discussed actions. It will result in a wider acceptance of the concept of area protection by all partners interested in wildlife conservation.

Summary

The system of protected areas requires legal regulations concerning the aim, tasks, subjectivity, management and financing the system. It will enable to create a system of legal-administrative meaning, which will protect more effectively the most valuable wealth of biological and landscape diversity in a country.

There is a necessity to conduct a monitoring for the protected areas, in order to proper functioning of the system of protected areas. Thanks to it, on the basis of observation, assessment of the condition and changes taking place in the elements of biological and landscape diversity, there will be a possibility to react on this information, correcting or designing new directions of development adjusted to existing of natural, social and economic interest reality. This venture is not definitely easy, it can raise many doubts or threats, but in a long-run perspective it will result in harmonious and coordinated action for wildlife conservation.

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