

Jarosław ŚWIDYŃSKI

SPATIAL FORMS OF NATURE CONSERVATION IN SPATIAL PLANNING AND MANAGEMENT

Jarosław Świdynski, MSc, Eng. – *University of Warmia-Mazury in Olsztyn*

Correspondence address:

Department of Planning and Spatial Engineering
Prawochenskiego 15 p. 127, Olsztyn, 10-720, Poland
e-mail: jaroslaw.swidynski@uwm.edu.pl

ABSTRACT: Space may be divided into two basic components: the natural environment and the anthropogenic environment. Both components permeate one another. The desire for constant development exposes the natural environment to numerous threats; therefore, particularly important areas are included under legal protection. To make more efficient use of limited space, planning documents are adopted, the content of which has to take into account the environmental determinants, including issues related to environmental protection. The paper presents the Polish system of nature conservation and spatial planning, along with mutual dependencies that connect both systems and their reciprocal influences.

KEY WORDS: planning documents, nature conservation, spatial planning and management

Introduction

The space in which people live is governed by its own rights. People who live in a given environment constantly transform it and adjust it to their needs. An entire system of documentation has been developed to ensure that such changes are performed adequately and properly. These documents are used for the proper planning and management of space. Planning documents should not only show what can be done in a given area, but also whether such changes are necessary and how a given space is going to appear in several years' time. This is why preparation of planning studies is so important.

The environmental components also include areas of special significance. These areas are usually protected by legal provisions. In Poland, nine spatial forms of nature conservation were established; their aim is to protect the unique components of the natural environment.

The form of nature conservation determines the manner of human interference in the natural environment. In strict nature reserves or some national parks encompassed by strict protection, any human interference is banned. However, for example, in areas protected as landscape parks or Natura 2000 sites, any activity that does not significantly interfere with the natural environment is permitted.

The aim of the paper is to present the Polish spatial planning system and the nature conservation system, along with the influences of both these systems. It will also try to assess the impact of protected areas on the content of planning documents and show their influence on the process of preparing and adopting such documents.

Principles of Spatial Management and Planning

Space is a three-dimensional set of dependencies occurring among co-existing material objects: their distribution, shapes and sizes. Space is also the living environment and area of activity of humans. Today, space is treated as an object of significant market value. People can change, mould and transform it to a certain degree. Space in the perspective of spatial planning and management is four-dimensional: it is necessary to foresee changes in space over time. The basic features of space are: limitedness (stability of its borders, no possibility of extension), diversity (variety and diversity with respect to natural features makes it an exhaustible and unique asset) and resistance (resistance to activities; changes require time, financial outlays and work). Space as a living environment consists of natural and anthropogenic elements, and their mutual interactions and overlapping makes up a diversified

structure. B. Meyer separated three basic elements of this structure, which are:

- zone elements: areas with uniform, specific features, e.g. forests, arable fields, wastelands;
- linear elements: stretches and belts of technical infrastructure, making up elongated zones with conditions conducive for development;
- point elements: emerging in places where infrastructure stretches cross – these are mainly cities and settlements (Cymerman, 2012, p. 9-10).

In line with the Act, planning documents have to take into account spatial order and sustainable development as basic principles for shaping the spatial policy. Spatial order, as an element of environmental quality and a determinant of efficient management, expresses the desire for harmonious arrangement of the area in which people live. Spatial order is expressed in the desire for harmonious arrangement of space. Spatial order is closely related to social, economic and environmental order. Observing spatial order is possible thanks to:

- proper spatial distribution of functions: functions are positioned in optimal locations;
- adequate vicinity of functions: offers the most benefits and gives rise to the least amount of conflicts;
- observing a proper vertical structure: observing the proportions of height, determining composition landmarks;
- observing a proper horizontal structure: proper shape and size of plots, expanse, arable fields, proper distance from economic entities (Cymerman, Kotlewski, 2015, p. 305-306).

Sustainable development harmonises economic, social and environmental functions in space, along with cultural, compositional and aesthetic functions. Aiming for development of space, it is also necessary to take into account the interests of future generations, which is consistent with the principles of sustainable development. When preparing planning documents, the use of space should be rationalised; conflicts should be minimised and costs of transformations reduced. Sustainable development has a common and global character and cannot be restricted by any artificially designated borders (Cymerman, Kotlewski, 2015, p. 305). Creation on the basis of the principles of sustainable development requires: adoption of a homogenous set of rules for managing environmental resources, using environmental resources in a manner ensuring their renewal, application of technologies that protect the condition and the quality of the environment, taking economic and social determinants into account.

The Polish system of spatial policy may be divided into four sub-systems: decision-making, standardisation, enforcement and planning. The decision-

-making sub-system, i.e. the sub-system consisting in determination of specific objectives and possibilities of spatial planning, was fully entrusted to local governments. Entities preparing spatial management plans and the institutions and authorities approving these documents operate in this sub-system. The standardisation sub-system is made up of bureaucratic procedures created on the basis of legal acts of state importance that influence the manner and the possibilities of spatial management. The enforcement sub-system is related to the rights of governmental authorities, local governments and courts to verify the correctness and observance of spatial policy guidelines. Spatial policy in small communities is often surrendered to lobbyists, and due to this, the number of administrative decisions concerning space is constantly increasing. These decisions greatly facilitate investments in contrast to legislative acts. The basic tool for implementing the spatial policy is a planning sub-system which fits within the enforcement and standardisation sub-systems. The planning sub-system consists of development forecasting and programming, creating local law and evaluation and control of changes that take place in management. Unfortunately, this system is characterised by a facultative and static nature, due to the fact that adoption of a planning resolution does not set off the desired changes at the moment of its entry into force (Chmielewski, 2014, p. 43-45).

Planning Documents

The Act on Spatial Planning and Management introduces a number of planning documents created at various levels of state and local government authorities. On the national level, the most important planning document is the concept of spatial management of the country. On the regional (provincial) level, it is the spatial management plan of the province. On the provincial level, a landscape audit is also prepared, which helps to determine tasks protecting the landscape and the environment included in the plan. Most planning documents are created on the lowest local level. The local government makes a decision on the spatial policy via a land use plan; the basic tool for implementing the policy is the local spatial development plan. Additionally, the head of the commune, the president of the city or the mayor may issue administrative decisions which, to a certain degree, replace the local plan; these are: the decision on location of a public purpose investment and the outline planning permission. The local government may also adopt relevant resolutions concerning revitalisation and principles and conditions for locating landscape architecture facilities, billboards, advertising devices and

fences. Local governments within a metropolitan area also prepare a metropolitan study (Ustawa o planowaniu i zagospodarowaniu przestrzennym).

The basic tool of spatial policy in Poland is spatial management plans. Such plans are prepared by representatives of the government and local government authorities and should indicate changes in spatial management and development, as well as protect the values within their reach. The authorities preparing spatial management plans have to pay special attention to several aspects, including: improvement of the residents' quality of life, economic development of the area encompassed by the plan, protection of natural and cultural assets, protection of the area from threats and cataclysms (Chmielewski, 2014, p. 38).

Therefore, spatial development plans determine the standards and conditions for setting up new development and area management, as well as include guidelines for any investment activity. The plans should also specify the development and spatial potential of a given area and offer a stimulus for the desired economic activity.

System of Spatial Nature Conservation

The national nature conservation system is regulated by the Nature Conservation Act of 16 April 2004. The Act lays down the objectives, principles and forms of nature conservation consisting in preservation, sustainable use and renewal of natural resources (Art. 1 and Art. 2.1. Ustawy o ochronie przyrody). The objectives of nature conservation are implemented by taking into account the requirements of nature conservation in strategies, programmes, programme documents and planning documents (Art. 3.1 Ustawy o ochronie przyrody).

Spatial nature conservation in Poland is implemented by the establishment of nature parks, nature reserves, landscape parks, protected landscape sites, Natura 2000 sites, documentation sites, ecological sites and nature and landscape complexes (Art 6.1 Ustawy o ochronie przyrody). Nowadays, 32.54% of Poland's surface is encompassed by protection solely on the basis of the provisions of the Nature Conservation Act (table 1). Among spatial forms of nature conservation, nature reserves are most numerous; there are 1,488 of such reserves in Poland, whereas the largest share with respect to the surface is taken up by protected landscape sites and Natura 2000 sites.

Table 1. Number and surface of spatial nature conservation forms in Poland in 2015

Name of protection form	Number of units	Surface [thousand hectares]	Share in country's surface
Nature park	23	314,700	1.01%
Nature reserve	1488	166,919	0.53%
Landscape park	122	2606,092	8.33%
Protected landscape site	400	7093,910	22.69%
N2000	145 SPA	4926,205	15.75%
	849 SAC	3491,103	11.17%
Documentation site	174	0,908	0.0029%
Ecological site	7569	52,340	0.17%
Nature and landscape complex	253	112,393	0.36%
	TOTAL	10175,973	32.54%

Source: author's own work based on: www.gdos.gov.pl, www.bdl.stat.gov.pl [26-10-2016].

Almost one-third of Poland's surface is subject to investment restrictions resulting from nature conservation. These restrictions include:

- restrictions in development;
- restrictions in implementation of enterprises that may exert a significant impact on the environment;
- destruction of forests;
- restrictions related to farms;
- performance of earthwork changing the lay of the land;
- change of water relations, and others (Ustawa o ochronie przyrody).

Most protected sites on the basis of the Nature Conservation Act are located in the Świętokrzyskie, Małopolskie, Warmińsko-Mazurskie and Podkarpackie Provinces (65%, 53%, 46.7% and 44.9%, respectively). The Dolnośląskie Province is characterised by the smallest share of protected sites in the total area – 18.6%, along with the Łódź Province – 19.6% (figure 1).

The greatest share of legally protected areas is characterised by the Bieszczady District – 100%; and the fewest protected sites are located in the municipal Chełm District and in the Nisko District – 0.0%.

The first group of districts (figure 2), characterised by a high (above 29%) share of nature conservation sites, contains 155 administrative units. Districts from this group are mainly located in the northern stretch of the lake region, the Świętokrzyskie Mountains and the Carpathians (figure 2). The second group is represented by 152 districts, and the share of protected sites ranges from 6% to 29%. The least numerous group are districts where

the share of protected sites is less than 6% – 62 districts. The fewest protected sites are located in the area of the Upper Silesian conurbation, northern Masovia and around Szczecin.

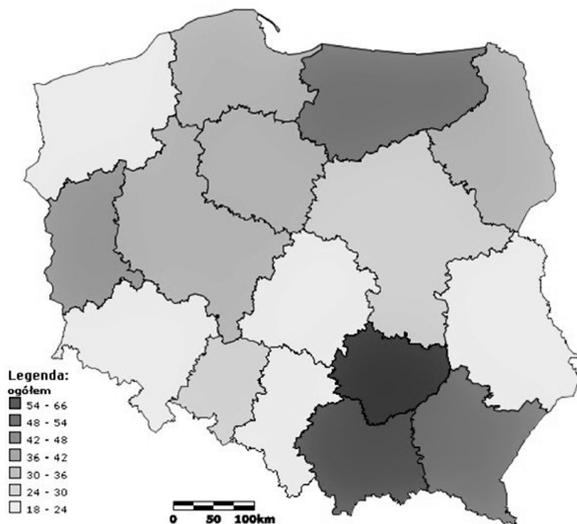


Figure 1. Share of legally protected areas in provinces in 2015

Source: author's own work based on Local Data Bank of the Central Statistical Office.

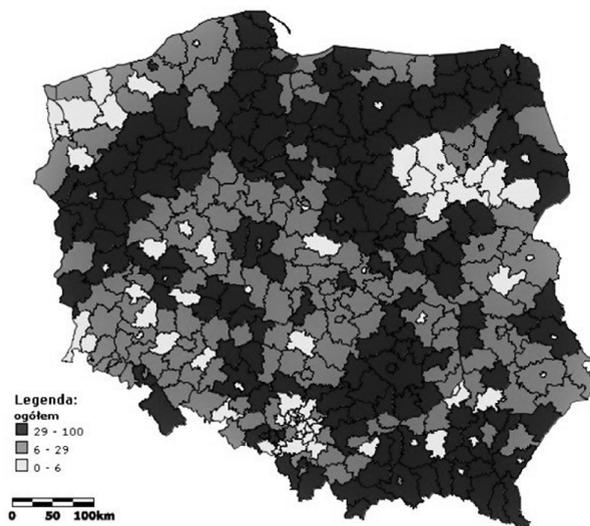


Figure 2. Share of legally protected areas in districts in 2015

Source: author's own work based on Local Data Bank of the Central Statistical Office; www.bdl.stat.gov.pl [27-10-2016].

Impact of Nature Conservation on Spatial Planning

Article 3 of the Nature Conservation Act stipulates that nature conservation objectives and tasks have to be taken into account during preparation and adoption of strategic and planning documents. The content of individual planning documents must refer to issues related to environmental protection, including nature conservation.

The content of the land use plan has to contain, *inter alia*, a municipality's determinants resulting from the condition of the environment and requirements of its protection (Art. 10.1.3 Ustawy o planowaniu i zagospodarowaniu przestrzennym). The plan also determines sites and resources subject to environmental protection, as well as nature and landscape conservation sites (Art. 10.2.3 Ustawy o planowaniu i zagospodarowaniu przestrzennym; § 6.3 Rozporządzenia Ministra Infrastruktury w sprawie wymaganego zakresu...). The local spatial development plan, which constitutes an act of local law, also contains information concerning the principles of environmental protection, as well as nature and landscape conservation (Art. 15.1.3 Ustawy o planowaniu i zagospodarowaniu przestrzennym). Additionally, the local plan should include ordinances, prohibitions, admissions and restrictions resulting from conservation programmes of protected sites (§ 4.3 Rozporządzenia Ministra Infrastruktury w sprawie wymaganego zakresu projektu miejscowego planu zagospodarowania przestrzennego) if such sites are located within the area encompassed by the plan. Similar provisions refer to the framework land use plan of a metropolitan complex (area) (Art. 37o.2.2 Ustawy o planowaniu i zagospodarowaniu przestrzennym).

The auxiliary document in preparation of the land use plan of a province, *i.e.* a landscape audit, fully refers to the province's landscape and indicates the location and borders of protected sites. The audit also presents the possible threats and contains recommendations and conclusions regarding landscape protection, as well as environment and nature conservation within the area of the entire province (Art. 38a Ustawy o planowaniu i zagospodarowaniu przestrzennym). Provisions contained in the audit are mandatorily included in the spatial development plan of a province (Art. 39.3 Ustawy o planowaniu i zagospodarowaniu przestrzennym).

Spatial planning on a national level, represented by the concept of the country's spatial development, lays down the determinants, objectives, directions and activities necessary to accomplish a sustainable target. The concept contains passages pertaining to various areas of development, including the environment and lists requirements resulting from nature conservation (Art. 47.2.2 Ustawy o planowaniu i zagospodarowaniu przestrzennym).

The hierarchic nature of the Polish system of planning and spatial management results in the fact that when reconciling individual documents of a lower level with higher level documents, it is necessary to take into account all provisions contained in them and process them in line with the subject matter of a given study. Each document, before adoption, requires an opinion or approval by a competent institution related to, e.g., nature conservation. In line with the Act on Spatial Planning and Management, these documents are most frequently agreed upon and commented on by the regional director of environmental protection. The exceptions are: the landscape audit, on which opinions are issued by directors of national parks and landscape parks, and the administrative decision, which requires the approval of directors of national parks.

Conclusions

The natural environment is the living space of people and other organisms. Its uniqueness and diversity make it subject to legal protection in certain parts. In relation to nature conservation, various prohibitions and ordinances are introduced that regulate the activities on protected areas. In Poland, over 32% of the surface is subject to protection on the basis of the Nature Conservation Act. This is a large area of the country, where specific standards determining the possibilities for investing in the area or introducing a complete ban on interfering with the natural environment are applicable.

Planning documents contain information about the quality of the natural environment located in the area to which a given document refers. The relevant authority related to nature conservation expresses their opinion on such document; furthermore, the document contains all determinations included in protection programmes. The planning system in Poland is hierarchic, which results in the fact that the documents make up a homogenous whole. However, more and more auxiliary documents are created, e.g. strategies, programmes and studies, etc. A multitude of documents concerning the same issue is not a good solution, as at a certain moment, there is no more clarity about which document is binding at a given moment and from which study information should be drawn. The legal system is not uniform, and in numerous cases, one authority should issue opinions on and approve the same documents, which is nonsensical bearing in mind that opinions and approvals are made up of a similar content. In some cases, various acts of law list different authorities as competent when issuing opinions or approving planning documents. Such discrepancies make the process of adopting planning documents complex and lengthy. In recent years, Poland has been work-

ing on a new Urban Planning and Construction Code, the task of which is unification of standards, as well as shortening the time necessary for preparation and adoption of documents.

Reliably prepared planning documents, where issues of nature conservation are treated seriously and in detail, significantly facilitate investments in a protected area. Such documents clearly stipulate what can be done and what is forbidden in a given area. They assist nature conservation, as the occurrence of protected sites is not an impediment to development, but an opportunity for designing and implementing new and safe technologies.

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