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The Spatial Management System in Poland Against the Backdrop of Changes in Environmental and Economic Awareness

Similarly to other Central-Eastern European countries whose approach to natural resources and land use has been revolutionized in recent years, Poland had to implement various changes in its spatial management system. The first changes were observed already before Poland's accession to the European Union, and they were spurred by political transformations. This study analyzes the changes that took place at the national and the municipal level over the past decade.

The analyses presented in the poster refer to two types of values which became the key guidelines in the planning process as a result of political transformations, namely environmental value and economic value.

In the contemporary world, environmental protection may be construed to be merely a form of planning activity – the creation of nature reserves and conservation areas is a planning effort.

The environment which supplies man with natural resources for processing and production is a renewable commodity, but it is not an infinite source of natural wealth. Our approach to exploiting natural resources is shaped by the awareness held by the users of space and the resulting legal regulations that restrict certain types of activities and impose various measures supporting the reinstatement of the natural environment. Even when deprived of the exploitative and regulatory effects of human activity, the natural environment is subjected to constant fluctuations due to fierce competition between various plant and animal species. The above contributes to the formation of areas marked by great environmental diversity.

As demonstrated by the analysis, the only relationship between economy and ecology is one of symbiosis, but in the contemporary world, a symbiotic relationship requires planned action. Symbiosis is largely synonymous with sustainable development, i.e. the attainment of a situation that benefits all users of space.

No protection procedure will be effective without an implementation plan. When deprived of a conscious planning effort, every spatial system, represented by the opposition of two primary values – ecology and economy, will be based on one of the following "natural" relationships: predator–prey, parasite-host, competitors. Those relationships are well known in ecology, yet none of them benefit the natural environment.

The key determinants in the Polish spatial planning process are natural (environmental) factors and anthropogenic factors (mostly economic).

Environmental factors create environmental value, while anthropogenic factors contribute to the economic value of space. The two factors remain in mutual opposition: by increasing the environmental value of space, we usually agree to a drop in its economic value, and – much more frequently – by increasing the economic value of space, we reduce its environmental worth.

Environmental protection in Poland has a long history – the first legal act banning the felling of yews dates back to 1423, and the first parliamentary act on nature conservation was passed on 10 March 1934. Despite the above, the concept of sustainable development was adopted as the key prerequisite for spatial planning only in the most recent Act on Spatial Planning and Management of 11 July 2003.

Key words: spatial management, environment, space, real estate value, changes in the management system.

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Introduction

Similarly to other Central-Eastern European countries whose approach to natural resources and land use has been revolutionized in recent years, Poland had to implement various changes in its spatial management system. The first changes were observed already before Poland's accession to the European Union, and they were spurred by political transformations. This study analyzes the changes that took place at the national and the municipal level in the past decade.

The discussed environmental protection laws can function adequately only in combination with sustainable spatial planning solutions. When deprived of a conscious planning effort, every spatial system, represented by the opposition of two primary values – ecology and economy, will be based on one of the following "natural" relationships: predator–prey, parasite-host, competitors.

Evolution of the Spatial Planning System in the 20th Century

The first Polish law defining spatial planning requirements was the Regulation of the President of the Republic of Poland of 16 February 1928 **on Construction and Housing Development**. Its provisions supported the initiation of a large number of investment projects on the local (municipal housing estates, full reconstruction of the port in Gdynia, public utility buildings), regional (the "functional reconstruction" project for Warsaw) and national scale (Central Industrial Region).

The political transformations after World War II led to changes in spatial planning policies. The Decree on "Centralized Spatial Planning in Poland" was adopted in 1946, and the general provisions of the socialist planned economy were detailed in a decree of 1947. Spatial planning and urban development policies were controlled at the highest, central level. Those measures stilted the growth of the real estate market, they devastated the visual environment and created undeveloped areas in attractive urban locations. On the positive side, the People's Republic of Poland was successful in building millions of apartments, modern residential estates and numerous public utility facilities, such as schools, hospitals and offices (Radecki 2010).

Spatial planning policies were amended in 1980-2000. The Act on Spatial Planning, implemented in 1984, made a distinction between policies adopted at four levels of administration: national, regional, municipal and rural. The centralized and hierarchical planning system was abolished by the Act on Spatial Management of 1994. Under the new law, the responsibility for spatial planning policies was entrusted to municipal authorities. They were vested with decision-making powers pursuant to the provisions of the Act on Municipal Self-Governments of 1990 which created the lowest tier of local government in the Republic of Poland. Regional and district authorities were formally called into existence in 1998, and they were created as part of the administrative reform of 1999.

TABLE 1

Amendments to legal acts regulating spatial planning and environmental protection issues in 1928-2011.

Year	Spatial management regulations	Key provisions	Environmental protection regulations	Key provisions
2004			Act on Nature Conservation	Pursuant to the provisions of the act, nature protection encompasses measures which support the conservation, sustainable use and renewal of natural resources and elements of nature. Nature conservation consists of the following measures: 1) preservation of environmental processes and ecosystem stability; 2) preservation of biodiversity; 3) shaping environmental awareness through education, spread of information and environmental protection campaigns.
2003	Act on Spatial Planning and Management	The spatial planning system at every level of governance in Poland supports the delegation of decision-making powers to respective levels of administration upon the observance of sustainable development principles.		
2001			Act on Environmental Protection	The act defines the principles of environmental protection and the requirements for the use of natural resources in line with the principles of sustainable development , in particular: a) requirements for natural resource protection, b) rules regulating the introduction of substances and energy into the natural environment, c) environmental charges and fines.
1995			Act on Agricultural and Forest Land Protection	The act sets the rules for the protection of agricultural and forest land, land reclamation and soil quality improvement.
1994	Act on Spatial Management	In 1990, the Act on municipal self-governments revived the lowest tier of local government. Municipal governments were provided with legal status and entrusted with a wide variety		

		of spatial planning tasks. Land zoning plans were deprived of the status of obligatory documents. The centralized and hierarchical spatial planning system was abolished. Local governments were entrusted with decision-making powers that would ultimately contribute to the development of spatial management plans covering the entire country.		
1984	Act on Spatial Planning	The act made a distinction between policies adopted at four levels of administration: national, regional, municipal and rural.		
1980			Act on Environmental Protection and Management	The act broadly addresses the issue of environmental protection. The natural environment was defined as a comprehensive system that encompasses all natural resources, in particular the surface of the Earth, including soils, fossils, water, air (ambient), flora, fauna and landscape, both natural and transformed due to human activity.
1976			Amendments to the Constitution of the People's Republic of Poland	The amendments repealed the article detailing the State's duties in the area of environmental protection. The remaining regulations relating to environmental protection remained in force as the only constitutional norm in this area.
1949			Act on Nature Conservation	The act introduced the rules for the use and protection of: 1) natural resources, 2) objects of animate and inanimate nature, including individual specimens, specimen collections and communities in specific areas, plant and animal species which require statutory protection for scientific, historical, commemorative, health, social and scenic reasons.
1946	Decree on "Centralized Spatial Planning in Poland"	The act supported planning measures in undeveloped areas without imposing any restrictions to limit landscape devastation. It fostered the creation of undeveloped areas in attractive urban		

		locations.		
1928	Regulation of the President of the Republic of Poland on Construction and Housing Development	The regulation set the rules for housing construction and development without imposing any requirements in the area of environmental protection.		

Source: own compilation

The contemporary spatial planning system in Poland

Poland's present system of spatial planning relies on the provisions of the Act on Spatial Planning and Management of 2003. The act defines the roles of central and local governments in the planning process. Urban planning concepts and planning studies are developed at the respective levels of governance: the Parliament, regional councils (known as voivodeship sejmiks) and municipal councils. The adopted policies are acts of local ordinance, and their provisions are binding for public administration authorities who participated in the legislative process. They are not binding for third parties, private or institutional. Those policies do not have direct legal implications for planning decisions. They are a set of postulates, guidelines and recommendations rather than the governing law.

Territorial self-governments and government agencies have the following duties:

- **municipal authorities** are responsible for developing spatial planning policies in the municipality and the adoption of local land use plans and local zoning plans;
- **district authorities** develop spatial planning analyses and studies that directly address the district's planning and development needs;
- **regional authorities** are responsible for developing spatial planning policies in the region (province/voivodeship) and the adoption of regional zoning plans;
- **the Council of Ministers** is responsible for developing national spatial planning policies and land zoning plans at the national level.

The planning studies which are developed at various levels of governance in Poland are presented in Table 2.

TABLE 2

Classification of planning studies developed in Poland.

Study	Territorial coverage
municipal land use plans local zoning plans	municipality municipality or parts thereof
regional zoning plans	regional
national spatial planning concept	national

Source: Cymerman et al. 2005.

Local zoning plans are the main instrument of spatial planning policies. As acts of municipal law, they impose the requirements for spatial planning and territorial management on local ground. Local zoning plans are adopted by the municipal council. Their provisions are binding for the municipality, and they constitute the key tool in the spatial planning process. If not explicitly regulated by the local zoning plan, all decisions relating to esthetics, architectural cohesion and landscape planning are made pursuant to the provisions of the construction law or other national laws.

Planning decisions at the national level are made by the Council of Ministers (central government administration), whereas territorial self-governments are responsible for legislative acts passed at other levels of governance: regional councils and executive boards at the regional level and municipal councils and executive boards at the municipal level. Unlike in the People's Republic of Poland, the present spatial planning system is not hierarchical, i.e. lower-tier authorities are not subordinate to higher-tier entities. Local zoning plans constitute the entire body of planning legislation in the country. National planning policies serve only as general guidelines, and regional zoning plans are not binding for municipalities. The legislator has placed all actors under the obligation to coordinate their plans, but in practice, higher tier bodies do not have supremacy over lower tiers. The above is a source of numerous conflicts, and it obstructs investment in Poland (Budner 2007).

Environmental protection in planning studies

In line with the provisions of the Act on Spatial Planning and Management of 2003, spatial planning studies and projects have to be consistent with, among others:

- environmental protection requirements, including water management and the protection of agricultural and forest land;
- cultural heritage protection requirements, including the protection of historical monuments and objects of contemporary culture;
- architectural and landscape assets.

Out of the nine requirements detailed in art. 1 point 2 of the Act, the three provisions cited above make a direct reference to environmental protection. In addition to general rules regulating planning activities, environmental protection receives special attention in the process of developing planning studies.

Environmental protection requirements in national spatial planning studies

The Government Center for Strategic Studies relies on the objectives formulated in government strategy documents to develop the national spatial planning concept in line with the principles of sustainable development based on environmental, cultural, social and economic aspects.

The national spatial planning concept identifies the determinants, goals and trends in sustainable development and the measures required to achieve those aims, in particular the requirements in the area of environmental protection, monument preservation and the protection of valuable areas.

Environmental protection requirements in regional spatial planning studies

Regional zoning plans are developed in conformance with the region's strategy to define:

- the system of protected areas, including environmental protection areas, nature conservation areas, cultural landscape protection areas, protected resorts, objects of cultural heritage, historical monuments and objects of contemporary culture;
- flood risk areas.

The provisions of the national spatial planning concept are taken into consideration in regional zoning plans.

Environmental protection requirements in municipal spatial planning studies

Two types of planning documents are developed at the municipal level: local land use plans and local zoning plans. The two documents differ in character and territorial coverage: a land use plan covers the entire municipality, whereas a local zoning plan imposes planning requirements for selected parts of the municipality. A land use plan is an obligatory

document, while a local zoning plan is mandatory only under specific circumstances. A land use plan is not a legislative document, whereas a zoning plan is an act of local law.

There are some variations in the way environmental protection requirements are addressed by the discussed documents.

a) municipal land use plan:

A land use plan makes a reference to environmental protection requirements that account for:

- the existing manner of land use, level of development and provision of technical infrastructure;
- spatial order and the requirements for its preservation;
- state of the natural environment, including agricultural and forest production environments, quantity and quality of water resources, requirements for environmental protection, nature conservation and the protection of cultural landscape;
- cultural heritage sites, historical monuments and objects of contemporary culture;
- presence of sites and areas protected under other acts of law;
- presence of geologically hazardous areas;
- presence of documented fossil deposits and underground water resources;
- presence of mining areas identified under other acts of law.

A land use plan defines:

- proposed changes in the municipality's spatial structure and land use;
- trends and indicators relating to land use and management, including protected areas reclassified for non-construction use;
- nature conservation areas, rules for the protection of the natural environment, natural resources, nature conservation, protection of cultural landscape and resorts;
- protected areas and rules for the protection of cultural heritage, historical monuments and objects of contemporary culture;
- areas for which local zoning plans will be developed, including agricultural and forest land that will be reclassified for non-agricultural and non-forest use;
- trends and principles of agricultural and forest production environment management;
- areas exposed to the risk of flood and landslide;
- fossil mining sites and areas where protective pillars will be created.

b) local zoning plan:

A local zoning plan must indicate:

- manner of land use and boundary lines separating areas with various zoning and planning requirements;
- rules for the protection and preservation of spatial order;
- rules for the protection of the natural environment and cultural landscape;
- rules for the protection of cultural heritage, historical monuments and objects of contemporary culture;
- boundaries and zoning requirements for protected areas and sites, identified under other acts of law, including mining areas, areas exposed to the risk of flood and landslide;
- special zoning requirements, including constraints in land use and construction bans.

Subject to need, a local zoning plan defines:

- boundaries of areas where the existing buildings and infrastructure will be revitalized;
- boundaries of areas that require transformation, reconstruction or reclamation.

An environmental impact statement is an integral part of a local zoning plan. Pursuant to the provisions of the Regulation of the Minister of the Environment of 14 November 2002, an environmental impact statement comprises maps and a descriptive part.

The statement determines and evaluates the following:

1) as regards consequences:

- possible environmental consequences of the proposed zoning plan, in particular resulting from the introduction of gas or dust to ambient air, waste production, wastewater discharge to water or soil, use of natural resources, soil and land pollution, man-induced changes in natural landform, noise pollution, electromagnetic radiation and risk of serious failure,
- effects of zoning measures on air, land surface, soil, fossils, surface and underground water, climate, plants and animals and their mutual interactions, ecosystems and landscape;

2) as regards assessment:

- state of the natural environment, natural resources, resistance to degradation, regenerative capacity, as determined in an ecophysiological study, forecasts of environmental changes that could take place if the zoning plan were not implemented,
- functional and planning solutions, other provisions of the local zoning plan as regards:
- conformance of the proposed zoning solutions with the requirements detailed in an ecophysiological study,
- conformance with environmental protection requirements, in particular legal acts establishing protected areas and sites and conservation plans,
- effectiveness of biodiversity conservation measures,
- maintenance of adequate proportions between areas with various zoning requirements and the remaining territories,
- zoning principles detailed in the local zoning plan in view of environmental protection requirements, sustainable use of natural resources, protection of agricultural and forest land,
- environmental threats, including health risks for people inhabiting areas covered by the local zoning plan or areas remaining in its sphere of influence,
- consequences for the natural environment and protected areas,
- landscape changes.

3) as regards solutions that eliminate or limit the local zoning plan's adverse effects on the natural environment, including landscape, and, subject to need, proposed measures that contribute to environmental protection, other than those detailed in the local zoning plan.

Forecasts are developed for the areas covered by the local zoning plan and as well as areas remaining in its sphere of influence. Forecasts should be developed simultaneously with the local zoning plan.

Environmental protection and environmental awareness in Poland

According to Papuziński (2006), environmental awareness is a very broad concept, and the author proposes two definitions to explain it. In the narrow perspective, environmental awareness encompasses our knowledge, views and assumptions about the environment. In the broad sense, it is the entire body of recognized ideas, values and opinions about the environment – the surroundings where man (society) lives and develops (Domka, 1998). The two definitions differ as regards the nature of the object of environmental awareness, its status and internal structure. The narrow approach is outdated, biased and individualistic. An understanding of environmental awareness within the realm of individual awareness dictates a

similar approach. The second, broader definition of environmental awareness acknowledges the relationship between human activity and environmental degradation. It corresponds to two approaches to environmental protection that were developed in the late 1960: the pragmatic and the systemic approach (Papuziński 2006).

In the narrow approach, environmental awareness is defined as man's attitude to the natural environment, his knowledge and assumptions about the environment as well as the system of values that conditions various forms of human activity affecting the environment (Kielczewski 2001). Sociologists argue that environmental awareness has not yet been defined in sociological terms (Sandner 1999). According to Papuziński (2006), the following factors determine the meaning of "environmental awareness":

- environmental crisis,
- threat of a global environmental disaster,
- concerns about the environmental determinants of social life (the most important factor in the cited author's opinion),
- environmental movements and organizations,
- Green parties,
- international policies in the area of environmental protection.

Biotic and natural factors are an integral part of man's surroundings. By analyzing the condition of the natural environment, man formulates evaluations, suggestions and accumulates information, thus creating a system of values that influences other humans. The acquired information contributes to our knowledge about the environment which shapes man's attitudes towards nature. According to Mirowski (1999), the above factors are determinants of environmental awareness.

Conclusions – coexistence of economic awareness and environmental awareness in spatial planning

Spatial planning is an element of spatial management. During the planning process, we allocate various objects and types of human activity in space, thus changing the appearance of environmental components. Human impacts on the natural environment should be limited to ensuring:

- that environmental protection laws take precedence over economic interests,
- that environmental statements are included in planning solutions,
- the implementation of regulations that contribute to environmental protection in planning solutions.

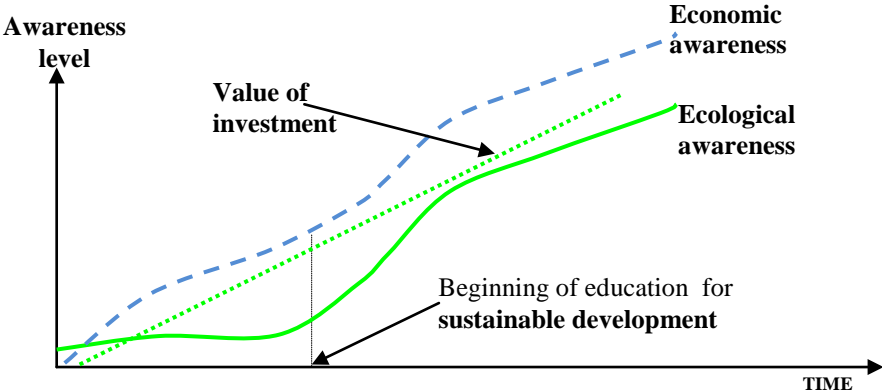
Spatial planning alone does not guarantee effective environmental protection, but by fostering protective measures, it can prevent environmental degradation.

Societies strive to achieve increasingly higher levels of development, and development requires investment decisions. Every decision should be preceded by profit analyses. Profits will be directly linked to the costs borne by the investor. The territorial and material scope of costs and benefits analyses will be determined by the legal regulations in force. Costs have to be minimized to maximize profits, which is why some investors are reluctant to reveal the costs of an undertaking's environmental impact. Can environmental awareness alone repair the damage done to the ecosystem? Practice shows that it cannot. Legal regulations (Act on the Protection of Agricultural and Forest Land, Act on Nature Conservation, Act on Environmental Protection), the product of rising environmental awareness, should impose additional costs on developers who intervene in the ecosystem. Those costs will never be high enough to stop development because an investment project's impact on the environment is always assessed from the point of view of human development needs.

The correlations between environmental awareness, economic awareness and investment projects are presented in Figure 1. The general rule is as follows: the level of economic awareness cannot drop beyond the level of environmental awareness if we want to develop as a civilization. If this rule is broken, investments and social development will come to a halt. All development will end when we put an equal sign between the two types of awareness. In view of the above, sustainable development, which attempts to strike a balance between economy and ecology, is an unrealistic concept due to its inhibitory effect on social growth.

Fig. 1

Levels of awareness vs. value of investment projects



Source: own compilation

The above correlation illustrates the changes in land use in Poland in the process of adopting new laws regulating environmental protection and nature conservation.

Table 3 presents the area of land that is used in the least environmentally invasive manner, i.e. agricultural land and forests. A general downward trend is noted. Some fluctuations are reported in the agricultural land category due to changes in the system of direct subsidies for farmers.

TABLE 3

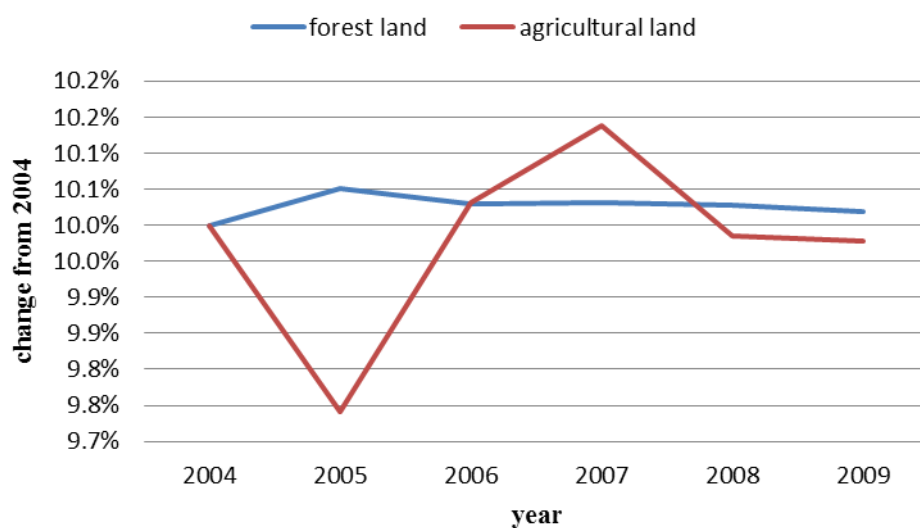
Area of agricultural and forest land in Poland in 2004-2009.

Land use	Area in ha					
	2004	2005	2006	2007	2008	2009
Forests	9 126 723	9 172 556	9 200 448	9 229 331	9 254 586	9 272 558
Agricultural land	16 327 411	15 905 965	15 957 290	16 177 081	16 154 250	16 119 584
Total	25 454 134	25 078 521	25 157 738	25 406 412	25 408 836	25 392 142

Source: www.stat.gov.pl

Graph 1 presents the dynamics of change in the area of agricultural and forest land. The general trend is negative. Despite a steady increase in the number of statutory provisions addressing environmental protection and sustainable development, the area of agricultural and forest land, providing habitat for various animal and plant species, continues to decrease.

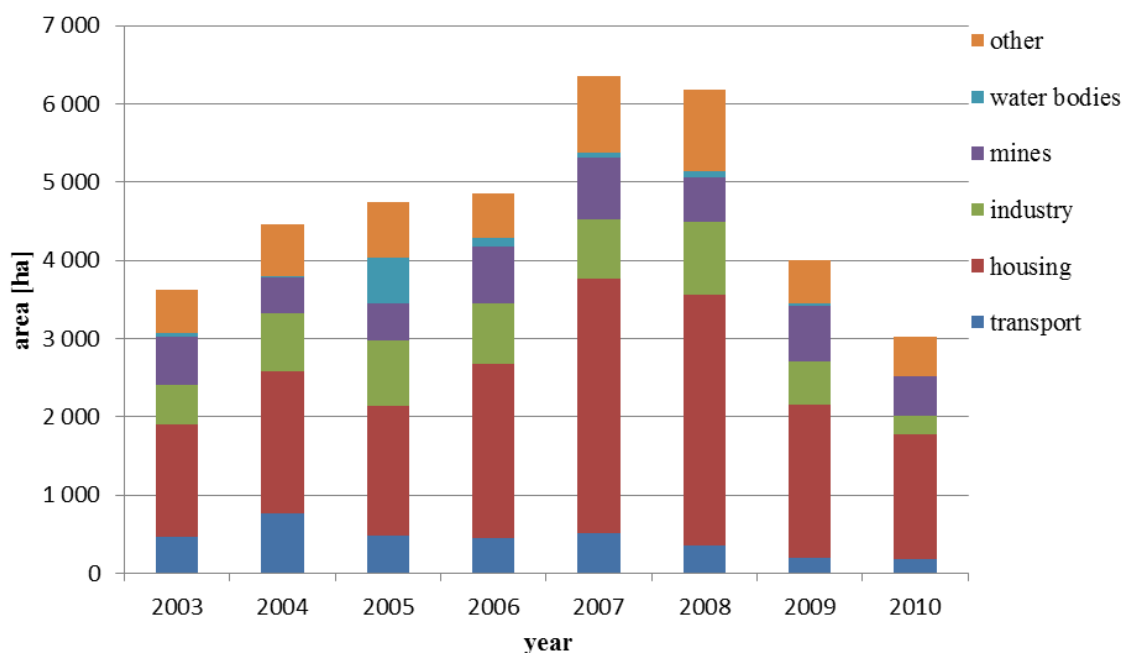
Dynamics of change in the area of agricultural and forest land in 2004-2009.



Source: own compilation

Graph 2 illustrates the reclassification of land to non-agricultural and non-forest use. The implementation of more stringent environmental protection laws in 2001-2004 did not reduce the area of property reclassified for investment purposes. The notable increase in 2007 and 2008 corresponds to the investment boom period in Poland. A drop in property prices in 2009-2010 reduced the area of property reclassified for non-agricultural or non-forestry use. The above indicates that the volume of investments was determined by macroeconomic conditions rather than the stringency of environmental protection laws.

Area of land reclassified for investment purposes unrelated to agricultural production or forestry.



Source: own compilation

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