

## EVALUATION OF THE EFFECTIVENESS OF PLANNING TOOLS IN THE PROTECTION OF LANDSCAPE VALUES, ON THE EXAMPLE OF THE WYSOWA ZDRÓJ VILLAGE

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### Summary

Landscape values are defined in the Polish nature protection law as the natural, cultural and visual values of a given area formed by the nature forces or human activity. Protection of landscape values is realized by the establishment of nature conservation categories with different conservation regimes. No less important instrument for the protection of landscape amenities is spatial planning. This is particularly important in areas exposed to urbanization pressures due to the attractiveness of the area for the development of residential and tourist functions. The aim of this study was to assess the effectiveness of different instruments for the protection of valuable landscape structures. The research was conducted in the Wysowa village, a health and tourist resort. The analysis showed that the most stable elements of the landscape structure are forests. The most vulnerable to irreversible changes are arable land and pastures. Despite many provisions regarding the preservation of scenic exposure, landforms, historical layout of fields and buildings, one can get the impression that activities in the field of preserving landscape values are not strictly followed. This is due to the fact that some of the analysed documents do not have the character of commonly binding laws. In the documents legally binding at the municipal level, the provisions relating to the need to preserve protection of scenic values are very general and lack detailed guidelines regarding the specific measures that should be applied. As a result, there is a considerable flexibility in land use changes, which reduces the protection of landscape values.

### 1. Introduction

Landscape values, according to the provisions of the Polish Nature Conservation Act of April 16, 2004 (NCA), are defined as natural, cultural, historical, aesthetic and visual values of a given area shaped by the forces of nature or human activity. The protection of landscape values is realized mainly through the establishment of various nature protection categories [Habuda 2015], including primarily those dedicated to landscape protection i.e. landscape parks, landscape reserves, protected landscape areas, natural and landscape complexes [Jaworowicz-Rudolf 2018]. Due to the fact that the concept of landscape values also includes cultural and historical values [Sołtys 2008], no less important tools for their protection are forms of historical monument protection, especially those of an spatial character. According

to the Historical Monuments Conservation Act of July 23, 2003 (HMCA), as monuments can be considered cultural landscapes, as well as historical urban and rural layouts. Under the HMCA, the surroundings of a historical monument can also be protected, among other reasons, in order to protect the monument's visual values.

A very important instrument for the protection of landscape values, which is a result of both the provisions of the NCA and the HMCA, is spatial planning [Gorzym-Wilkowski 2017, Giedych 2018]. According to both Acts, the objectives of nature and monument protection, and consequently the protection of landscape values, can be realized, among other things, by taking into account the requirements of its protection in planning documents. These requirements may arise not only from the established nature and monument protection categories, but also from the principles of protection set forth in legal and management documents dedicated to nature and monument protection. These documents, which affect the scope of the provisions of spatial planning documents include, first and foremost, the conservation plans of landscape parks, nature reserves, NATURA 2000 sites and cultural parks, as well as municipal historical monument care programs.

The role of spatial planning in the protection of landscape values is also highlighted by Environmental Protection Law (EPL). The Law indicates that the planned land use structure should, to the greatest extent possible, ensure the preservation of the landscape values of a given area. In addition to planning documents, environmental protection principles can be implemented through environmental protection programs. These documents combine landscape protection issues with the protection of natural resources.

Among the documents mentioned above, the most important for the protection of landscape values is the local land use plan. This is because it is the one that translates the requirements for protection into specific rules for development [Giedych 2018]. It is also a legal act that is binding for all stakeholders.

The role of spatial planning in landscape protection is widely recognized [Cassatella 2015, Kyvelou and Gourgiotis 2019, Thoidou 2021]. The need to harmonize spatial development with the protection of landscape values has also been emphasized [Tomic Reljic et al. 2023]. The realization of such a demand can be fully achieved by integrating different sectoral policies for the protection of landscape values [Cialdea and Privitera 2021]. Unfortunately, this is not always the case. The reason for this may be the low quality of development control documents at the local level, which do not fully take into account the requirements for the protection of landscape values [Pantic et al. 2019].

The purpose of the study was to determine the extent to which the provisions of local land use plan for the village of Wysowa Zdroj take into account the requirements for the protection of landscape values, and thus are able to effectively protect them and prevent their degradation.

## 2. Research area

Wysowa Zdrój is located in the of Uście Gorlickie municipality, in the Gorlice county, in the Małopolskie Voivodeship. Its history dates back to the 15<sup>th</sup> century, when as a small

settlement, in the type of a chain village, it was located on the trade route with Hungary. Surrounded by forested mountain ranges that are part of the Low Beskids, known for its healing mineral water springs, it has become a tourist attraction and health town over the centuries [Sikora 2014]. Currently, the village is permanently inhabited by about 700 people and its area is about 20 km<sup>2</sup>, which is about 7% of the total area of the municipality. About 60% of the area of the village are forests, the remaining land is covered by meadows, grasslands and pastures [Gertner 2021]. They are characterized by a less diversified topography, a more dispersed location of buildings and a less compact composition of vegetation.

Located far from busy communication routes and large urban centers, Wysowa Zdrój has preserved a unique microclimate and has so far been characterized by a low degree of human transformation. The low emission of pollutants, the absence of industry located in the vicinity make it an attractive place for tourism and housing. Along with the economic development of the municipality, it gradually began to transform its spatial structure into a multi-road type, with the highest concentration of buildings observed in the Ropa valley and in the northern and north-western parts of the village. This is due to economic links with the urban agglomerations neighbouring Wysowa, such as Grybów and Gorlice. Wysowa Zdrój has rich landscape that testifies to its unique identity [Bródka and Macias 2015].

### 3. Research methodology

The main body of our research was based on content analysis of basic documents aiming at protection of landscape values of Wysowa Zdrój. As mentioned in the introduction, these instruments are a result of the provisions on the protection of nature, and monuments, environmental protection and spatial planning. Due to the fact that in 1967 Wysowa was recognized as a health resort by virtue of the Ordinance of the Minister of Health and Social Welfare, documents related to the functioning of the health resort were also analysed.

The examined documents included: (1) the Resolution of the Małopolskie Voivodship Parliament on the Małopolskie Protected Landscape Area (PMOCHK); (2) the Regulation of the Minister of Climate and Environment on the Special Area of Protection of the Bat Habitats of the Gorlice County (PLH120094 Natura 2000); (3) the Statute of the Wysowa Zdrój health resort (StUz); (4) Wysowa Zdrój health resort executive report (OpUz); (5) Development plan for the Wysowa Zdrój health resort for 2016–2023 (PRUz); (6) Municipal program for the care of monuments of the Uście Gorlickie commune for 2021–2024 (GPOnZ); (7) the Study of Conditions and Development Directions for the Uście Gorlickie municipality (SUiKZP) and (8) the Local spatial development plan of Wysowa Zdrój (LSDP). The analysed documents were obtained from the Public Information Bulletin of the Uście Gorlickie municipality and from the website of the Republic of Poland [www.gov.pl].

The research on the basic documents related to landscape values protection was carried out in three phases. The first stage of the work was to identify the documented

landscape values and to determine the scope and principles of their protection, resulting from the provisions of documents 1–7. Following Borkowski [2006], three main groups of landscape values were distinguished: cultural, natural and physiognomic (visual).

The next stage of the work was the analysis of the provisions of the Local Spatial Development Plan (LSDP). Its aim was to assess the degree of implementation of the identified protection principles into the local plan. At this stage of the work, it was also checked whether the provisions included in the plan are formulated precisely enough to effectively protect the landscape values of the village. We adopted the Cortinovis and Geneletti [2018] protocol to assess the depth of inclusion. We used three criteria to assess the LSDP provisions: the provisions that are entirely consistent in the LSDP with the guidelines resulting from the findings of the analysed documents were considered ‘fully included’; the provisions ‘included in part’ are those that appear in the content of the LSDP in a general, incomplete manner, or the information contained therein refers to additional documents; and the last criterion applies to those protective arrangements resulting from the analysed documents that have not been included in the LSDP at all.

The third and last step was to check whether the current LSDP is up-to-date in the context of updating both the analysed documents and the documents that were adopted after the local plan came into force, and whether it still effectively protects the landscape values of the village or whether it needs to be supplemented.

#### 4. Results

The content analysis of the legal and management documents developed for the study area showed that a total of 11 landscape values were documented in the provisions of these documents (Table 1). The vast majority of these values were recorded in the POMCHK and the SUiKZP. It should be mentioned that the scope of these arrangements varies and is primarily related to the purpose and scope of the development of the document.

**Table 1.** Documented landscape values of the Wysowa Zdrój village

<b>Cultural values</b>	Spatial arrangement of the village, spatial structure of agricultural land, historic buildings, architecture with regional features, objects building with the health image
<b>Natural values</b>	Terrain relief, water and forest resources, valuable trees and woodlots, biodiversity refuges
<b>Physonomic values</b>	Areas of special landscape exposure, viewing openings

*Source:* Authors' own study

Wysowa Zdrój, in its entirety, is located within the administrative borders of the protected landscape area (PMOCHK) established on October 1, 1997 on the basis of Ordinance No. 27 of the Voivode of Nowy Sącz on the designation of the Protected

Landscape Area of the Nowy Sącz Voivodship (Journal of Laws 1997, No. 43, item 147) and updated in 2006, 2007, 2012, 2013 and 2020. As part of the protective provisions regarding cultural and physiognomic values, there are provisions regarding: protection of open areas against dispersed development by shaping compact urban layouts, shaping a diverse agricultural landscape by preserving mosaics of arable fields, balks or patches of long-term greenery and protection of landscape values in terms of preserving the aesthetic and scenic values of the landscape. In order to protect natural values, it was recommended to: preserve surface water reservoirs, maintain and create buffer zones along watercourses and around water reservoirs, increase water retention and restore ecological corridors, activities for active protection and restitution of rare and endangered species of plants, animals and fungi, as well as maintaining continuity and durability and favouring the creation of compact forest complexes.

In the study area, on March 6, 2009, the Special Area of Protection of Habitats of Bat Refuges of the Gorlice County (PLH 120094 – Natura 2000) was established by the commission's decision of December 12, 2009. It mainly covers the north-eastern part of the village and a protection plan for the areas defined as (PLH 120094) in the entire Uście Gorlickie municipality is currently being prepared. Protection arrangements under this document are mainly concerned with the protection of natural habitats and quite generally defined protective measures to maintain or restore the proper conservation status of the objects of protection.

As already mentioned, Wysowa Zdrój, due to its specific microclimate and access to mineral water sources, was recognized as a health resort and by the resolution of the Uście Gorlickie Commune Council No. XXII/231/2008 of November 27, 2008, the Statute of the health resort was approved (StUz ). In accordance with the provisions of the statute, the health area has been divided into three zones of protection, two of which cover the entire area of the village. As part of the protection of natural values in the 'A' and 'B' zones, the minimum share of green areas (biologically active) or unplanned felling of trees and activities causing adverse changes in water relations were defined. In both zones, it is forbidden to location of industrial plants, multi-family housing, or location of commercial facilities with an area exceeding 400 m<sup>2</sup> with accompanying facilities. In individual health protection zones, minimum areas for newly allocated plots were also adopted. The above provisions can be interpreted as indications to counteract the loss of cultural values. There is no information in the statute about the protection of physiognomic values.

In 2021, pursuant to Article 43 of the Act of 28 July 2005 on health resort treatment, health resorts and health resort protection areas and health resort municipalities, in accordance with the requirements of Article 39 of this Act, an update of the 2018 health report for the village of Wysowa Zdrój (OpUz) was introduced, which identifies and confirms the landscape values of the village, both cultural and natural, listed in Table 1. The first such sampling frame was created in 2008. The study defined health protection zones, which in terms of their arrangements coincided with the zones defined in the Health Statute. However, the boundaries of these zones have been changed, which means that for areas currently located outside zones B and C, the protective arrange-

ments described in the survey and in the health statute do not apply. The survey identifies the cultural values of the village of Wysowa Zdrój and, quite generally, the natural values. There are no additional protective provisions for them, apart from those that can be found in the spa statute.

Another analysed document is the Development Program for the Wysowa Zdrój Health Resort for 2016–2023 (PrUz), which, although it describes and partially identifies the landscape values of the municipality, as part of the principles of shaping the areas of spatial policy, refers primarily to the Spa Statute of 2008. It does not introduce any new information or protective guidelines, it only takes into account general visions of the development of tourist services.

In 2021, the Municipal Program for the Care of Monuments of the Uście Gorlickie Municipality (GPOnZ) was developed, which will be in force in the years 2021–2024. It describes and identifies the historic buildings included in the municipal register of monuments, located in the village. An analysis of the impact of internal and external factors on the cultural heritage of the entire municipality was also carried out, and tasks for the efficient management of cultural resources and the method of their verification were indicated. The described guidelines are very general and serve as non-obligatory provisions. In addition, these arrangements constitute protective guidelines for the objects themselves, disregarding the spatial context of their location. There is nothing in this document about the protection of landscape or physiognomic values. There are only a few protective provisions relating to the arrangements contained in the local spatial development plan.

In the Wysowa Zdrój village, the Study of Conditions and Directions of Spatial Development (SUiKZP) implemented by Resolution No. XL/390/2010 of the Uście Gorlickie Municipal Council of March 16, 2010 that describes the spatial structure of the municipality and defines three natural and functional zones. Within these zones, indications for forest management, tourism development, directions of development of the settlement structure, as well as indicators for land development and use are described. The indications refer to the preservation of the traditional architectural form of buildings as a protection of cultural values. Forest areas are the most valuable natural areas in the scale of the municipality, thus building in these areas is prohibited. It is prohibited to build on or afforest the areas with a special landscape exposure, as well as to construct above-ground technical infrastructure devices. They have been designated as areas for traditional agricultural use with the possibility of creating vantage points, rest areas and tourist trails. Only in the vicinity of the viewpoints, it is permitted to build small architecture objects strictly related to the implementation of the assumptions for the protection of physiognomic values. Other protective arrangements, concerning mainly health infrastructure and historic buildings, refer to the protective arrangements of separate documents.

The identified cultural, physiognomic and natural values, listed in Table 1, were the subject of findings of the analysed documents in different ways and to varying degrees. Their synthetic summary is presented in Table 2.

**Table 2.** Summary of the analysed documents in terms of the arrangements for protecting the landscape values of the Wysowa Zdrój village

Landscape values	Landscape resources	Analysed documents						
		PMOCHK	Natura 2000	StUz	OpUz	PRUz	GPOnZ	SUiKZP
Cultural values	Spatial arrangement of the village	V	-	V	-	-	-	V
	Spatial structure of agricultural land	V	-	-	-	-	-	V
	Historic buildings	-	-	-	-	-	V	-
	Architecture with regional features	-	-	-	-	-	-	V
	Objects building with the health image	-	-	V	V	V	-	-
Natural values	Terrain relief	V	-	-	-	-	-	V
	Water and forest resources	V	-	V	-	-	-	V
	Valuable trees and woodlots	V	-	V	-	-	-	V
	Biodiversity refuges	V	V	-	-	-	-	-
Physonomic values	Areas of special landscape exposure	V	-	-	-	-	-	V
	Viewing openings	V	-	-	-	-	-	V

Source: Authors' own study

Analysis of the MPZP's findings in the second stage of the study, in terms of the principles of protection of the environment, nature and the natural and cultural landscape, showed that only the acoustic climate, air quality, surface water, forests and woodlands, and species of wild plants and animals were considered in the plan's provisions. The local plan, despite the fact that it is an act of local law, mostly refers to separate provisions, and the provisions of the plan concerning the protection of natural values are formulated in a rather general way. It is similar in the case of arrangements regarding the principles of protection of the cultural heritage, monuments, contemporary cultural goods, as well as the principles of protecting and shaping the spatial order and architecture, i.e. cultural values. In particular, there are guidelines regarding the

behaviour of traditional building materials and the design of the architectural body. The original, historically traditional layout of roads is not sufficiently protected and begins to deviate from the chain and multi-road village type. The plan indicates the possibility of creating new roads that divide the space into smaller areas, especially in the north-western and western parts of the village. Agricultural areas lose their spatial structure due to secondary divisions and low physiognomic attractiveness. In the part concerning the determination of boundaries and the way of development of the areas and objects protected by separate provisions, a strict protection of historic buildings and their buffer zones was established (protection of cultural values), and protection zones were designated for landscaped slopes and plateaus (protection of physiognomic reference was adopted for large-area forest complexes, which are covered by additional protection resulting from the following forms: Natura 2000 and PMOCHK (nature values). The plan also includes provisions resulting from the health statute and arrangements for areas intended for recreational functions and tourist services. The protection arrangements contained in the LSDP were collected in the form of a Table and the extent to which they were taken into account for the documented landscape values was assessed (Table 3).

**Table 3.** Assessment of the extent to which the arrangements for the protective landscape values of the Wysowa Zdrój village are taken into account in the local spatial development plan

Landscape values	Landscape resources	Analysed documents	Degree of impementation of protective arrangements into the LSDP		
			Fully included	Partially included	Not included
Cultural values	Spatial arrangement of the village	PMOCHK	V	-	-
		StUz	-	V	-
		SUiKZP	V	-	-
	Spatial structure of agricultural land	PMOCHK	-	V	-
		SUiKZP	V	-	-
	Historic buildings	GPOnZ	V	-	-
	Architecture with regional features	SUiKZP	V	-	-
	Objects building with the health image	StUz	V	-	-
		OpUz	V	-	-
PrUz		V	-	-	

Natural values	Terrain relief	PMOCHK	-	-	V
		SUiKZP	-	-	V
	Water and forest resources	PMOCHK	-	V	-
		StUz	-	V	-
		SUiKZP	-	V	-
	Valuable trees and woodlots	PMOCHK	V	-	-
		StUz	V	-	-
		SUiKZP	V	-	-
	Biodiversity refuges	PMOCHK	-	-	V
		Natura 2000	-	-	V
Physonomic values	Areas of special landscape exposure	PMOCHK	-	V	-
		SUiKZP	-	V	-
	Viewing openings	PMOCHK	V	-	-
		SUiKZP	V	-	-

Source: Authors' own study

No less important issue than the degree of implementation of the identified principles of protection of landscape values in the local plan is the timeliness of the plan itself. Main concern follows the fact that the documents defining the principles of protecting the landscape values of the village of Wysowa were created in different periods. In Figure 1 presents the analysed documents are presented in a timeline to show in which years they were adopted and when they were updated.

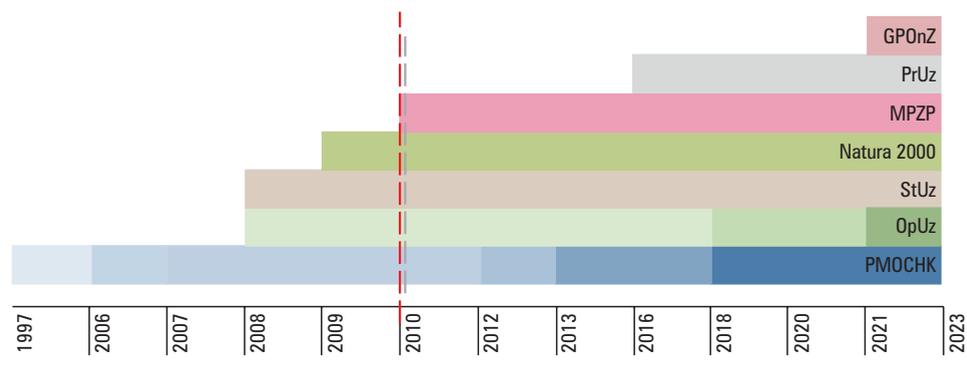


Fig. 1. The analysed documents in a timeline

Since the adoption of the LSDP, the arrangements of PMOCHK and OpUz have been updated several times. In 2016 and 2021, the PrUz and GPOnZ were also adopted, respectively. The conducted research indicated that new protective arrangements related to the protection of physiognomic values appeared in the updated documents, and some of the remaining ones were clarified and detailed. After these updates, they are not fully consistent with the provisions of the LSDP. Since the provisions of these documents are not obligatory, but only serve as protective indications, they will not be effectively respected without updating the LSDP.

## 5. Final remarks and conclusions

The study aiming at examining the extent to which the LSDP's findings take into account the requirements for protection of landscape values arising from separate regulations revealed that its breadth and extent of inclusion is limited. The LSDP in force is dominated by protective provisions regarding cultural and natural values. Physiognomic values and their protection are very general, and the LSDP does not indicate detailed and specific actions related to counteracting the degradation of these values, but only refers to the provisions of separate provisions.

Forests will be least affected by the expected changes in landscape structure. This is because forests are the most protected landscape features by the plan provisions. Arable land, meadows and pastures are the most vulnerable to changes, because they are assessed as the least physiognomically and naturally valuable. Despite many provisions for the protection of individual landscape structures, as well as for the preservation of entire scenic exposures, one can get the impression that activities in the field of conservation of these values are not scrupulously implemented. This can be clearly seen e.g. in changes in the spatial structure of agricultural land and the concentration of buildings, as well as in changes in the topography for the planned functions. The diversification of the concentration of buildings, its compaction and fragmentation may in the future lead to a further reduction in the attractiveness of the landscape, and in result decrease attractiveness of the area as a tourist destination.

The LSDP is insufficiently conducive to the implementation of the protective provisions included in the analysed documents. Although most of them are defined in detail, they are not generally applicable. They are only guidelines and they have no binding force. As a result, the possibility of full protection of the identified landscape values is limited, as the guidelines have not been translated into the provisions of the plan. Another problem arises from the timeliness of the plan. Unfortunately, it has not been updated, and it does not take into account all the provisions aimed at protecting landscape values, which have appeared in various documents after its adoption.

To conclude, the analysed local spatial plan has a limited role in the effective protection of landscape values for two reasons: firstly, it does not fully take into account the protection requirements arising from other documents, and secondly, it is reactive in nature.

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