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Management System of Urban Landscape in Poland on the Example of Wrocław in the Context of European Landscape Convention Implementation

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Abstract. This study analyzes legal system of urban landscape management in Poland and its changes in last decade on the example of Wrocław – city located in central part of Lower Silesia region in south-western Poland. The main objective of the study was to assess the current legal system of urban landscape management in Poland in terms of the implementation of the European Landscape Convention provisions. Before coming into force the act of 24 April 2015 amending certain laws in connection with the reinforcement of the tools for landscape protection (so-called “Landscape Act”) the basis of landscape management were spatial planning documents and guidelines from documents forming protection areas of nature or monument values. Study of the conditions and directions of spatial development, selected land development plans as well as guidelines for seven nature conservation areas and one cultural park were analyzed in terms of landscape management provisions. Changes of legal basis were also taken into account. After 11 years since ratifying European Landscape Convention in 2004 Polish authorities have finally noticed the necessity to implement its provisions to Polish law. Legal basis for urban landscape management has been drastically changed. Landscape Act introduces new tool for landscape management at regional level called landscape audit which will affect all new spatial planning documents of the city. It consists in characterization and assessment of all landscape types identified within the borders of each region in Poland. It is the basis for selection of priority landscapes, identification of threats and determination the way of spatial development of landscape units. Local authorities have also received new tool for shaping advertising policy. In the context of European Landscape Convention implementation, it should be emphasized that before 2015 there was no document dedicated strictly for landscape management of Wrocław because there was no legal basis for it. All the provisions were scattered in various kind of documents that’s why there was no coherent landscape management policy. It remains to be hoped that in the coming years, a coherent policy in this area will finally be developed and adopted thanks to the use of new landscape management tools.

1. Introduction

Studies carried out over the last decade show constantly increasing pressure on the landscape related to urbanization, development of industry, transport, new technologies or intensification of agriculture, especially intensive in suburban areas of large cities [1,2,3]. These threats were noticed already in 2000 by the Council of Europe, which adopted the European Landscape Convention (ELC) [4], setting the date of its entry into force on January 1st, 2004. This document was to be a recommendation and a set of rules of conduct. Only after voluntary ratification individual countries expressed their willingness to



comply with its provisions. The convention was enacted to provide the basis for creating a coherent policy in the field of landscape management in European countries. The signatories recognized the landscape as a key element of the well-being of the whole society, which in large part affects the quality of life of people living in various areas. However, despite this, there is still a small share of society in the process of landscape management and local environmental resources [5].

Initially, the ELC was signed by 18 countries, but over time an increasing number of countries decided to sign and approve the document in the form of ratification. By the end of March 2018, the Convention was ratified by 38 European countries, in recent years among others by Sweden, Bosnia and Herzegovina or Switzerland. Poland signed the ELC on December 21st, 2001, and ratified it on September 27, 2004, thus acknowledging all its findings as correct. Its entry into force on January 1, 2005 should become an impulse to broaden the scope of landscape research and change the methods of managing its resources. This was indeed the case - scientists in various fields not only stressed the importance of landscape research, they also called for compliance with the provisions of the ELC and their implementation into Polish law [6]. With the use of GIS technology, a number of new methods have been developed allowing a new approach at the changes taking place in the landscape [7,8] or plan its changes [9,10]. The interest in protection and responsible shaping of the landscape among self-government authorities also increased [11], and landscape indicators are more and more often taken into account when determining the quality of life [12]. However, the ratification of the ELC until 2015 did not entail any changes in Polish law. The management of the urban landscape is still implemented mainly through the local planning documents, such as the study of conditions and directions of spatial development, local spatial development plans and documents regulating the functioning of various forms of nature protection or monuments, if such are located within the city limits.

Only since the entry into force of the Act on amending certain acts in connection with the strengthening of landscape protection tools from April 24th, 2015 [13], colloquially called the "landscape act", for the first time a legal framework for development of a coherent policy in the field of landscape management. Work on the act was initiated by the President of Poland in 2013, 9 years after the ratification of the ELC. It was supposed to be an answer to the deepening chaos in the landscape and the lack of implementation of the ELCs provisions into Polish law. Work on the Act lasted for nearly two years and was finally concluded with the President's signature on May 15th, 2015. The Act came into force three months after its announcement – on September 11th, 2015. It was therefore necessary to wait as many as 11 years after ratification of ELC to start implementing its recommendations in Poland. One of the basic tasks for the authorities in order to implement the provisions of the Convention was to develop landscape management system at all its levels - material, aesthetic and symbolic - and to conduct a rational policy of shaping and preserving landscapes. These assumptions are to meet the obligation to develop a landscape audit at the regional level. This new landscape management tool will have a significant impact on the shape of spatial planning documents at the local level. It is also an impulse for the development of methods for identifying particularly valuable landscapes, called priority landscapes [14]. At the local level, the authorities were also given the opportunity to develop a policy for placing advertisements [15]. However, it should be noted that only after the entry into force of the Act, work on an executive regulation determining the methodology for conducting landscape audit, which until April 2018 has not yet been final, has begun.

The main objective of this research is to assess the current legal system of urban landscape management in Poland in terms of the implementation of the provisions of the European Landscape Convention. In order to achieve the assumed goal, individual guidelines contained in the ELC were compiled and ways of their implementation were identified in legal acts and planning documents that directly or indirectly affect the management of the urban landscape. First, an analysis of the texts of legal acts that form the basis of the current legal system of urban landscape management. Next, the current planning documents regarding the research area were reviewed to identify the ways how they include landscape management issues.

2. Study area

The analysis of the current system of legal management of the urban landscape was carried out on the example of Wrocław, one of the largest Polish cities - the capital of Lower Silesia. Wrocław is located in the central part of the Lower Silesian Voivodeship, in south-western Poland (Figure 1). It covers the area of 292.82 km² and is inhabited by over 638 000 residents (30.06.2017). It borders with 8 communes, which form the suburban area of Wrocław. Geographically, the city lies on the Śląska Lowland, between the Trzebnickie Hills in the north and the Sudeten Foreland in the south at an altitude of 105 to 156 m above sea level. The Odra River and its four tributaries - Bystrzyca, Oława, Ślęza and Widawa - flow through the city.



Figure 1. The location of research area on the background of Poland and Lower Silesia region.

Wrocław is one of the oldest cities in Poland with a very high cultural value and high tourist potential. In order to protect historical values, the city center with an area of 210 hectares, covering the oldest part of Wrocław within the city moat along with the Odra, Botanical Garden, Ostrów Tumski, Słowacki Park and Promenada Staromiejska, has been protected since 2014 as one of the forms of monument protection in Poland - Cultural Park "Old Town". The cultural park was created by the city council and is intended to protect the area of cultural landscape and landscape areas with immovable monuments characteristic of the local building and settlement tradition. The entire area of the cultural park is subject to the same rules regulating, among others, the ability to place ads. Within the city limits, several fragments of natural ecosystems have been preserved and covered by various forms of nature conservation. They are different big-scale protection forms as a fragment of the south-western part of the city is protected by the "Dolina Bystrzyca" Landscape Park or 5 Special Areas of Conservation Natura 2000 (Habitats Directive) located mainly in the south-eastern and north-western part of the city. The nature conservation system is complemented by small-scale protection forms like 3 ecological sites, Szczytnicki Nature-Landscape Complex and numerous nature monuments. The location of protected areas and objects in Wrocław is shown in Figure 2.

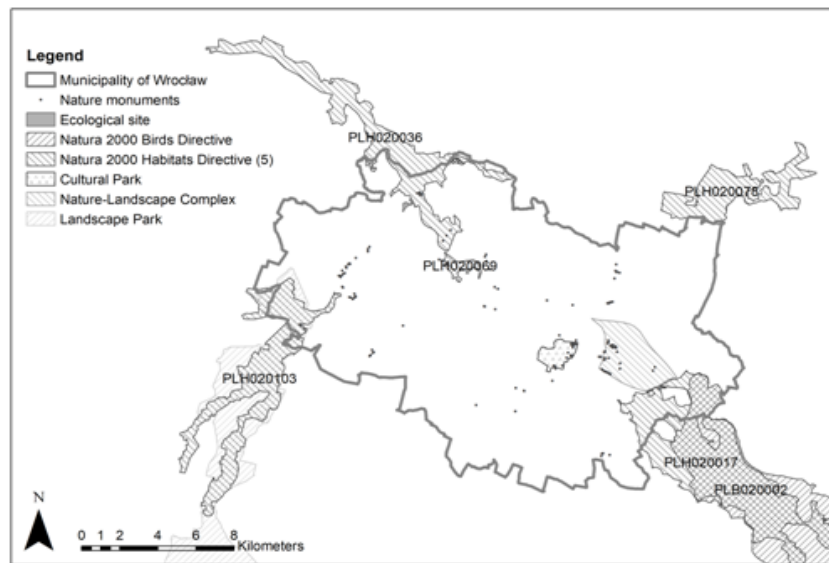


Figure 2. The location of nature and cultural conservation sites in the area of Wrocław.

3. Materials and methods

The analysis of the urban landscape management system based on the example of Wrocław has been divided into four stages. First stage involves, the guidelines for landscape management included in the ELC were identified and legal acts at the national level creating the landscape management system in Poland were indicated. The following regulations were analyzed: the Act on planning and development from 27th March 2003 [16], the Act on nature protection from 16th April 2004 [17] and the act on protection and care of monuments from 23rd July 2003 [18]. The frequency of occurrence of keywords in these files was also checked, the definitions of which are contained in the ELC, such as landscape, landscape management, landscape protection, landscape shaping and landscape planning. In order to check if the way of recognizing the landscape has changed in legal acts at the national level, the same analyzes were carried out for legal acts in force in 2005 – when the ELC entered into force in Poland.

The second stage involved the analysis of planning documents at the regional level. The Spatial Development Plan for the Lower Silesian Voivodeship 2002-2014 [19] and the Spatial Development Plan for the Lower Silesian Voivodeship with the prospect until 2020 [20] were taken into account. In those documents the frequency of occurrence of the same key words was analyzed.

The third stage of the work included the analysis of local planning documents in terms of defining guidelines for landscape design, protection and planning, and the frequency of key words. Three versions of the study of conditions and directions spatial development of Wrocław and 6 local spatial development plans from different time periods have been taken into account (full list of the documents is in Table 3).

The last stage concerned the analysis of the occurrence of landscape shaping principles and management as well as the frequency of occurrence of key words in documents forming and regulating the functioning and possibilities of development within areas protected by the Nature Conservation Act and the Act on protection and care of monuments (full list of the documents is in Table 3).

4. Results and discussion

The ELC sets out four main tasks that each party undertook to implement, including Poland. These include [4]:

1. to recognize landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;

2. to establish and implement landscape policies aimed at landscape protection, management and planning;
3. to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies;
4. to integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.

By 2015, the urban landscape management system in Poland was very dispersed and patchy. Records defining the conditions for shaping and protecting the landscape were found in several acts. The most important was Act on planning and development from 27th March 2003 [17], which includes the possible land development methods, Act on protection of nature from 16th April 2004 [18], which defines the principles of management and protection of areas with high natural values, and Act on protection of monuments and care of monuments from 23rd July 2003 [19], defining the principles of landscape management with high historical and cultural values. It is worth noting that in each of these legal acts there was no definition of landscape. It was mentioned only as an element of the natural environment or as an element of cultural heritage. From the point of view of the landscape definition included in the ELC, this was a missing element. Other key terms defined in the ELC as landscape shaping, landscape protection or landscape planning were very rarely found in legal acts at the national level. The analyzes did not take into account the occurrence of the keyword "landscape" in the names of forms of nature protection. Detailed statistics in this respect are presented in Table 1.

Table 1. The frequency of occurrence of key words in acts obligatory in 2005.

Name of act	Key words				
	landscape	landscape management	landscape protection	landscape shaping	landscape planning
Act on planning and development from 2003	6	0	0	0	0
Act on protection of nature from 2004	22	0	11	1	0
Act on protection of monuments and care of monuments from 2003	5	0	2	0	0

Source: own elaboration

It was only the Act on amending certain acts in connection with the strengthening of landscape protection tools from April 24th, 2015 [13] called the "landscape act" introduced the definition of the landscape and priority landscape, which were not included in legal acts yet. It is worth emphasizing that these definitions are directly inserted in the Act on planning and development from 11th May, 2017 [21], which emphasizes the importance of spatial planning in the context of landscape management and protection. The same act specifies the need to develop a landscape audit at the regional level within 3 years from its entry into force (audit for Lower Silesia has not been developed yet), whose guidelines must be taken into account when creating planning documents at the local level and forms of nature protection and landscape. A number of other acts have also been amended, including Act on protection of nature from 8th December, 2017 [22] and Act on protection of monuments and care of monuments from 8th November, 2017 [23]. Detailed guidelines for the development of landscape audit were included in the draft regulation of the Council of Ministers regarding the preparation of landscape audit. The introduced changes allowed for the creation of a coherent landscape management system from the regional level, which will largely affect landscape management at the local level. Thus, it was 11 years after Poland ratified the ELC that its guidelines for Polish law were implemented. This is also confirmed by the frequency of occurrence of keywords defined in the ELC in the currently applicable legal acts

(Table 2), although some of them like landscape management and landscape planning do not appear directly in them. However, it should be stated that the new legal provisions have a significant impact on both issues.

Table 2. The frequency of occurrence of key words in acts obligatory in 2018.

Name of act	Key words				
	landscape	landscape management	landscape protection	landscape shaping	landscape planning
Act on planning and development 2017	46	0	9	4	0
Act on protection of nature from 2017	41	0	14	1	0
Act on protection of monuments and care of monuments from 2017	7	0	2	0	0

Source: own elaboration

The objective of the landscape audit is to identify, characterize and evaluate landscapes and, as a result, to set priority landscapes and rules for their shaping and protection. In the shape of the final form of the audit, the voice of the public and interested institutions was taken into account while presenting documentation for public inspection and the voice of local authorities (municipal councils) and regional authorities (e.g. directors of landscape parks, national parks, regional conservator of monuments). The integration of the landscape with the policy in the field of regional and urban planning and environmental policy concerns above all the binding nature of landscape auditing in relation to local and regional planning documents, but also to protection plans regarding forms of nature protection. This also includes the addition of the need to determine the principles of landscape shaping in planning documents at the local level and taking into account the analysis of the impact of investments on the landscape in the procedure of environmental impact assessment.

The ELC contains a number of special measures, the purpose of which is to implement its provisions. These include activities in the area of raising the awareness of citizens and administrations regarding the values and role of landscapes, as well as training, specialists in the field of landscape assessment in private sector and administration and education in schools and universities. These tasks are carried out through training and conferences organized by the General Directorate for Environmental Protection and managements of landscape park teams, but also through landscape and spatial economy education as well as in vocational schools. Another special measure is to identify landscapes throughout the country, determine their characteristics and transforming forces and pressures, record changes and evaluate such identified landscapes. These tasks are partly carried out by landscape audit, especially in relation to priority landscapes, for which an analysis of threat sources is indicated. None of the legal acts, however, takes into account the need to define landscape quality standards – the aspirations of society in relation to the features of the surrounding landscape.

ELC should apply to the entire territory of the country and cover all types of landscapes, including those common or degraded. Considering that the identification and characterization of landscapes in the landscape audit refers to the entire territory of the country, this postulate is fulfilled. However, the identification of hazard sources and recommendations that are to be binding for planning documents and protection plans only apply to designated priority landscapes, i.e. those of particular value to society. In this context, one may have doubts as to whether the subject scope referred to by ELC has been fully taken into account in the adopted solutions.

In the next stage, documents that could influence the landscape from the perspective of the region were identified. The document in which it is possible to determine the conditions in the field of protection, management or landscape planning in the area of Spatial Development Plan of the Lower Silesian Voivodeship. The plan in force in 2002-2014 and the current documentation were taken into

account. When comparing both plans, you can also see increased interest in the landscape. Much more often in the documentation from 2014, the word “landscape” and “landscape shaping” are mentioned. It is also worth noting that among all the analyzed documents only in the Spatial Development Plan of the Lower Silesian Voivodeship, which has been in force since 2014, with the perspective up to 2020 there is a formulation of “landscape management” (Table 3).

Table 3. The frequency of occurrence of key words in planning documents on regional and local level.

Type of the spatial planning document	Key words				
	landscape	landscape management	landscape protection	landscape shaping	landscape planning
Regional level					
Spatial Development Plan of the Lower Silesian Voivodeship from 2002	97	0	9	1	0
Spatial Development Plan of the Lower Silesian Voivodeship, Perspective 2020 from 2014	130	2	5	5	0
Local level					
Study of conditions and directions of spatial development of Wrocław from 2006	133	0	4	0	0
Study of conditions and directions of spatial development of Wrocław from 2010	135	0	3	0	0
Study of conditions and directions of spatial development of Wrocław from 2018	148	0	3	2	0
Local spatial development plan for the area of the Widawa and Młynówka rivers in Wrocław from 2004	0	0	15	0	0
Local spatial development plan for the part of urban complex Mokrzański Forest in Wrocław from 2008	3	0	2	3	0
Local spatial development plan for the area of the eastern sections of Odra and Oława rivers in Wrocław from 2012	1	0	1	1	0
Local spatial development plan for the area of Na Niskich Łąkach and Żabia Ścieżka streets in Wrocław from 2015	2	0	1	1	0
Local spatial development plan for the area of Szewska and Fredry streets and Uniwersytecki square in Wrocław from 2017	3	0	1	1	0
Local spatial development plan for the area of Kosmonautów and Żernicka streets in Wrocław from 2018	4	0	2	1	0

Source: own elaboration

Similarly, to the regional level planning documents, documents influencing landscape management were also identified at the local level. The policy of shaping the urban landscape includes a Study of conditions and directions of spatial development of Wrocław, which was adopted three times - in 2006, 2010 and 2018 [24]. Comparing the frequency of occurrences of key words in this type of documents, you can also see a slight, gradual increase in the presence of landscape in spatial politics of the city. It should be noted, however, that the study of conditions and directions of spatial development is not an act of local law and on its basis, it is not possible to issue administrative decisions that directly affect changes in the landscape. Such documents are, however, local spatial development plans that are not performed for the whole city, but depending on the needs for specific parts of it. This fact makes it very difficult to conduct a uniform policy in the field of managing the urban landscape resources. The analysis of the occurrence of key words was carried out taking into account six of the local development plans

of different parts of Wrocław adopted in 2004-2018 [25]. Among these documents directly affecting landscape shaping, there were no significant differences in the context of the occurrence of terms related to the landscape. In this case, the time of adopting a local plan is not relevant (Table 3). It is worth emphasizing that such a small number of keywords in the analyzed documents indicates the lack of implementation of ELC records in documents that have the greatest impact on urban landscape management.

Complementing the analysis of the urban landscape management system of Wrocław, it was also necessary to identify documents concerning various area forms of nature protection and monuments in the city and to analyze references to concepts contained in the ELC (Table 4). Within these areas, apart from local development plans, direct management of landscape resources of Wrocław may also be affected by regulations defining the possibility of developing protected areas of nature in appropriate resolutions [26,27], plans of protective tasks of Natura 2000 areas [28,29,30,31] and resolution regarding the "Old Town" Cultural Park [32]. However, taking into account that they protect either natural elements or cultural landscape elements, there is a lack of references to issues related to landscape as a synthesis of natural and anthropogenic elements. The exceptions are the analyzed plans of protection tasks for two Natura 2000 areas. These documents contain more references to the landscape structure and the characteristics of landscape values. In the documents concerning the landscape park and the nature-landscape complex – the forms of nature protection which, due to their function, should protect the landscape as a whole – references to landscape protection, landscape management or management are not used. This is probably due to the fact that these documents were adopted before and two years after the ratification of the ELC by Poland.

Table 4. The frequency of occurrence of key words in documents regulating the functioning of nature and cultural protection forms within the city of Wrocław.

Type of the spatial planning document	Key words				
	landscape	landscape management	landscape protection	landscape shaping	landscape planning
Nature protection documents					
Resolution No. XV/483/99 of the City Council of Wrocław regarding the creation of nature-landscape complex in the part of Śródmieście in Wrocław from 1999	2	0	0	0	0
Resolution of the Lower Silesian Voivodeship regarding the "Bystrzyca Valley" Landscape Park from 2006	3	0	0	0	0
Plan of protective tasks for the Natura 2000 site "Las Pilczycki" from 2013	2	0	0	0	0
Plan of protective tasks for the Natura 2000 site "Dolina Widawy" from 2014	3	0	0	0	0
Plan of protective tasks for the Natura 2000 site "Grądy w Dolinie Odry" from 2014	15	0	0	0	0
Plan of protective tasks for the Natura 2000 site "Grądy Odrzańskie" from 2014	20	0	0	0	0
Cultural protection documents					
Resolution No. LVI / 1465/14 of the City Council of Wrocław regarding the creation of the "Old Town" Cultural Park from 2014	3	0	0	0	0

Source: own elaboration

5. Conclusions

The analyzes carried out showed that before the entry into force in September 2015, the so-called "landscape act" guidelines included in the ELC were not included in Polish law. Landscape issues were

scarcely addressed in legal acts, and the landscape management and protection system due to the scattering of provisions in several acts was not consistent. It was necessary to wait as many as 11 years from the ratification of the ELC, to develop a legal framework that allowed for creating a coherent landscape management system. Amendments to legal acts as a result of the entry into force of the landscape law resulted in an increase in the number of regulations regarding the landscape and its protection. There are still not enough references to the concepts of landscape management and landscape planning – terms used in the ELC. However, it can be stated that landscape audit is a tool that creates a hierarchical landscape management system and planning its changes from a regional level.

Increased interest in the landscape after the commencement of works on the landscape act can be noticed. This is reflected in the documents presenting the spatial policy at the regional level included in the Spatial Development Plan of the Lower Silesian Voivodeship, Perspective 2020 and at the local level in the Study of conditions and directions of spatial development for the city of Wrocław. In the latest documents, there are more references to landscape concepts and landscaping, and less to the protection of its resources. For the first time, we can also talk about landscape management. However, these are documents showing a policy that only indirectly affect landscape changes. The development of a landscape audit at the regional level, which will be a superior document, will have an even greater impact on the changes of both documents. Also in documents concerning forms of nature protection or monuments in Wrocław, there are few references to the landscape, as they concern only natural or cultural elements. However, the local spatial development plans still remain the basic document of landscape management and they directly determine the possibilities of its transformation. This is important in particular in the context of the urban landscape, which is subject to strong investment pressure. Landscape management guidelines should be included in local development plans. Meanwhile, as demonstrated in all the analyzed local plans adopted in different periods of time, landscape issues are marginalized. The time of adopting these documents is irrelevant. This is the result of a lack of landscape audit, whose recommendations in the field of shaping and protecting the landscape will have to become part of the local development plans. Only when the landscape audit comes into force, the landscape management system will be able to function fully.

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- [31] Resolution of the Lower Silesian Director of Environmental Protection regarding the plan of protective tasks for the Natura 2000 site "Grądy Odrzańskie" PLB020002.
- [32] Resolution No. LVI / 1465/14 of the City Council of Wrocław regarding the creation of the "Old Town" Cultural Park.