



ICCAUA Proceedings Journal

Proceedings of the international conference of contemporary affairs in architecture and urbanism-ICCAUA
Volume 9 (December 2026), 2610343

ICCAUA
Proceedings Journal
<https://journal.iccaua.com/>

Journal homepage: <https://journal.iccaua.com/>

DOI: <https://doi.org/10.38027/ICCAUA2026EN0343>

Gardens, Parks and Landscapes of Interwar Poland – Current Issues of Identification, Conservation and Identity of The Place

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Abstract

Received: 29.04.2026
Revised: 29.06.2026
Accepted: 01.07.2026
Available online: 10.07.2026

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This article has been selected and peer-reviewed for publication in this journal as part of the 9th International Conference of Contemporary Affairs in Architecture and Urbanism, held on 7–8 May 2026 in Istanbul, Türkiye.

This study investigates contemporary challenges related to the adaptation and conservation of historic green spaces created during the interwar period in Poland. The research focuses on two main aspects: the relationship between greenery, tradition, and local identity, and the adaptation of historic green spaces to climate change, including their restoration and public accessibility. The methodology combines historical and spatial data collection, fieldwork, and comparative analysis, followed by evaluation and the development of conservation guidelines. The study covers Polish cities renowned for their modernist heritage: Warsaw, Kraków, Katowice, Gdynia, and Wrocław. The results systematize knowledge and expand the state of research. They demonstrate the significant diversity of modernist parks and gardens, shaped by local context, location, and function. They also point to the individuality of green space solutions and characteristic forms in each city.

As a result of the research, a multidimensional framework of action was developed, aimed at potentially eliminating the identified problems and based on the relationship between understanding the value of these places, shaping local identity, adopting appropriate conservation approaches and supporting sustainable development.

Key words: Cultural Identity; Greenery; Changeability; Modernism; Poland.

1. Introduction

1.1 General Characteristics of Modernism during the Interwar Period in Poland

The interwar period in Polish architecture represents a time characterised by designers' engagement with overlapping classical concepts - historicism, the search for national styles, and the influence of emerging global trends. This was accompanied by new material possibilities that enabled experimentation with form and the separation of structural systems from interior layouts. However, the most significant challenges stemmed from the needs arising from the historical and economic conditions of the country at that time. The primary construction demands focused mainly on public buildings and residential architecture. The period of regained independence and reconstruction following the destruction caused by wartime activities required, above all, the provision of housing, the integration of individual regions, and the facilitation of urban development, which was often constrained by military considerations.

Green spaces nevertheless constituted an important complementary element, not only formally but also functionally, socially, and culturally (Łakomy, 2025). Consequently, this was a period in which specialised green areas began to emerge, designed to meet the specific needs of particular user groups (e.g. children's playgrounds - Jordan gardens - located near nurseries or hospitals) (Nakoneczny, 2018; Zachariasz, 2019). Particular importance was attached to publicly accessible green spaces in new housing estates, semi-public areas such as allotment gardens, and private, representative villa gardens. Greenery also complemented newly designed or reorganised urban structures and layouts, becoming a reflection of political attitudes and an indicator of modernity, progressiveness, and, at times, social prestige.

Alongside new approaches to architectural design, gardens and parks also adopted new forms - simple, geometrised, and architectural in character. They ranged from intimate compositions closely associated with individual buildings to extensive layouts shaping the overall scale of developments. Their form resulted both from broader European inspirations and from local traditions and site-specific conditions (Łakomy, 2013).

1.2. State of research

Literature analyses have revealed a significant research gap in the history of garden art in the period between the First and the Second World Wars. While the heritage of modernist architecture is currently a subject widely addressed by researchers and conservation professionals, the greenery accompanying buildings is usually mentioned only briefly. In key Polish publications on the history of garden art, this issue has received limited attention, and the existing descriptions remain general in nature (in the works of professors such as Gerard Ciołek, Janusz Bogdanowski, and Longin Majdecki).

A broader attempt to characterise modernist gardens, also based on contemporary texts from the period, was undertaken by Hanna Faryna-Paszkiewicz in 2001.

More recently, the topic has been addressed, among others, by Zachariasz (2009, 2010) and Łakomy (2013, 2024). The best-recognised types of sites include villa, domestic, and residential gardens, as well as public, school, and kindergarten parks (Dudek-Klimiuk, 2019). Research has also considered issues related to plant selection in modernist gardens and the restoration of individual sites. Considerable attention has been devoted to the role of greenery in urban planning (Motak, 2020; Jakutowicz, 2019; Hirsch, 2019; Gierko, 2021; Afara et al., 2024; Etemadi, 2026). Social aspects and issues of public accessibility have been addressed primarily in studies concerning the WuWa exhibition estate (Urbanik, 2009; Markiewicz, 2022). Problems related to the state of preservation of park and garden layouts were highlighted by Zachariasz (2011).

Overall, the literature indicates a broad range of topics, but there is a lack of systematic classification and analysis of the underlying ideological framework, as well as identification of existing conservation objectives for Modernist heritage sites. This research aims to fill this gap and identify other necessary directions for action.

1.3. Contemporary Problems – Preliminary Identification

Preliminary analyses of green spaces from the period under discussion in Poland have shown that, in response to the needs of the time, these areas were highly diverse. Concern for the residential environment as a design issue required not only optimal architectural solutions but also well-considered spatial planning. As revealed during archival research, particularly through the study of period journals, greenery accompanied nearly all buildings and both smaller and larger urban layouts developed at that time.

However, the changing conditions of cities and towns over the past century have led to a significant decline in these areas, while a lack of knowledge has resulted in weak conservation protection, numerous transformations, and improperly conducted restoration works. During the preliminary research, the main groups of problems influencing this situation were identified (Table 1).

Table 1: General problems.

State of research	- deficiencies in documentation, identification, and evaluation - unrecognised forms of spatial and compositional design - incomplete information regarding the technical and plant materials originally used
State of preservation	- unrealised projects (design sketches, conceptual proposals, competition entries) - sites that have not survived - built over or transformed beyond the possibility of reconstruction - sites preserved only fragmentarily, including modernist elements within larger complexes - areas that have survived but have been transformed, with potential for the restoration of their original layout and greenery - well-preserved sites
State of knowledge	- architectural objects considered in terms of promotion, research, or conservation works without reference to their landscape and garden context - improperly conducted restoration or revalorisation works - insufficient knowledge and public awareness regarding the value of these layouts

1.4. Territorial scope of the research – criteria for the selection of cities

The most important centres of the modernist movement were Warsaw, Kraków, and Lviv (currently outside the borders of Poland). As the capital city, Warsaw played a key role in this process. Like the other two cities, it constituted a centre of emerging modern architectural thought, shaped both by the technical universities located there and by the exchange of experience between the new generation of architects and foreign ideas and projects.

New spatial and political conditions created opportunities for the implementation of one of the largest urban projects of that period - the construction of the port and the development of the urban structure of Gdynia. Katowice, in turn, as the capital of the autonomous Silesian Voivodeship (1922-1939), had to adapt to new requirements of functionality and representativeness. This provided these relatively young cities with the opportunity to create clear spatial structures characterised by distinct avant-garde features. It is also important to mention Wrocław (Ger. Breslau), which during the period under discussion was located within the borders of the Weimar Republic (1919-1933, and subsequently the German Reich), and its contribution to the development of the European modernist movement.

Despite their very different historical and spatial conditions, these cities appear to be the most significant centres in the formation of modernist architecture. It was therefore assumed that they would also possess a valuable and diverse stock of garden and landscape heritage, and consequently they were selected for the present analyses. It should be noted, however, that other cities such as Łódź, Bydgoszcz and Lublin also played an important role in the development of modernist architectural form.

1.5. Place identity of historic urban spaces of the modernist era

The cities that constitute the subject of this study are classified as historic cities. Their cultural heritage is rich and complex. The concept of the Historic Urban Landscape (HUL) views the city as a combination of natural, cultural, and socio-economic processes. It emphasises the importance of both tangible structures (such as buildings and infrastructure) and intangible heritage (including memories and traditions) in shaping urban identity (UNESCO, 2011).

Despite its recognised importance, the HUL approach is currently under pressure from numerous contemporary challenges, such as urbanisation and globalisation, ongoing development processes, and the need to adapt to climatic and

environmental change. In the context of the phenomenon under study, this constitutes a significant factor creating real threats, particularly with regard to the preservation of place identity.

The phenomenon of place identity (PI) is multifaceted (Peng, 2020). It can be defined as a set of physical, social, and cultural characteristics shaped by the environment, economic structures, cultural practices, and social interactions (Mansour, 2023). Many researchers attempt to address the question of how to measure, and whether it is possible to measure, PI, as it is a highly dynamic phenomenon (Ziyace, 2018; Boussaa, 2018; Etemadi, 2019).

In general, three groups of indicators are identified: physical (architecture, urban form, landscape), functional (activities and uses), and socio-cultural (identification, participation, and meaning). These reflect two main groups of values: tangible and intangible. Place identity should therefore be considered on the basis of variables resulting from differences in individual perceptions of space, the scale of a given environment, and time understood as the process of urban development (Mansour, 2023).

In this context, time is a critical factor in studying and understanding the urban identity of the modernist era in Poland. Owing to a clearly defined time frame and characteristic forms of development, this period has created relatively distinct urban zones within cities. Other components of identity, however, are less clearly defined.

1.6. General research assumptions and objectives

As demonstrated above, issues related to the interwar period in Poland require extensive and multidimensional research. Therefore, the present article is intended as an introduction to a broader diagnosis and recognition of the problems identified.

The main objective is to diagnose and characterise green spaces of the interwar period in Poland using examples from selected cities. These objectives will be examined on two levels: the relationship between greenery, tradition, and the local identity of cities, and guidelines for the adaptation of historic green spaces to climate change, including their conservation and public accessibility.

In addition to expanding knowledge concerning the typology of gardens of the modernist period and their influence on the identity of individual cities, the conducted research also pursued additional aims.

Accordingly, the following research questions were formulated:

- what framework of actions should be adopted, and which components should be integrated into the process of restoring interwar green spaces to the urban and social environment?
- what forms characterised interwar greenery, what relationships existed between greenery and architecture, how did green systems develop in each city, and what are their defining features?
- can green spaces shape the identity of a modernist city and contribute to the development of sustainable tourism?
- what are the causes of the limited survival of interwar green spaces in Poland?
- what contemporary framework of action should be adopted for these areas, taking into account the relationship between historic greenery and the modern urban environment and its ongoing transformations?

Given the complexity of the issue, it is also important to indicate directions for further research.

2. Materials and Methods

Two main groups of methods were employed in the research: desk research and field studies.

The first consisted of collecting and systematically processing cartographic, iconographic, and literature-based materials, which were subsequently used to establish the background of the study and to conduct comparative cartographic analyses. These analyses were then supplemented by field investigations. Both archival sources (plans, maps, photographs, and period publications) and contemporary materials obtained during fieldwork were utilised. Field studies were carried out between 2024 and 2026 using the method of direct observation combined with photographic documentation.

Contemporary spatial data were also used to determine the characteristics of green space forms, the relationships between greenery and the urban structure, and the nature of ongoing transformations.

The comparative analyses were undertaken to assess the dynamics of landscape change and to evaluate the state of preservation of pre-war land-use arrangements. Comparisons between pre-war cartographic materials and the present-day situation were conducted using a Geographic Information System (GIS).

The current availability of cartographic and iconographic sources, including modern digital datasets, enables more in-depth comparative research and facilitates the tracing of transformations undergone by green spaces over time (**Table 2**).

Table 2: Structure of research stages.

Stage I desk research and field studies	Stage II data summary	Stage III evaluation
- historical and archive research - contemporary spatial analyses (comparative and qualitative)	- characteristics of greenery (typology) - the relationship between green areas and the city in the interwar period - forms of greenery shaping the current cultural identity of each city	- verification of the causes of the current state of preservation of the gardens - indicating future research directions - general guidelines

3. Results

3.1 Greenery within the urban structure (1920s & 1930s)

3.1.1 Warsaw

The urban development of interwar Warsaw laid the foundations for modern spatial planning, the traces of which continue to define the city's unique character today. After regaining independence in 1918, Warsaw faced the challenge of transforming itself from a provincial capital of the partitioned territories into a modern European metropolis. The intensive

urban development of the 1920s and 1930s was based on the principles of modernism, functionalism, and the garden city concept, placing strong emphasis on improving housing conditions, developing infrastructure, and expanding green spaces (Solarek et al., 2023).

One of the most significant achievements of this period was the construction of housing estates, particularly the residential colonies of the Warsaw Housing Cooperative (WSM) in Żoliborz, which became a model of modern social housing. Designed with social integration in mind, these estates provided access to light, greenery, and public services. Similar ideas were implemented in the Ochota district (e.g. the Staszic Colony and Rakowiec). The settlement on Saska Kępa, planned in 1916 as a villa district, drew more strongly on the garden city concept than on avant-garde urbanism in its spatial layout. However, the conditions of the period meant that the villas with gardens built there - designed by leading architects of the time in Poland - are now regarded as icons of modernist architecture.

The development of green spaces became an integral component of modern urban planning. During this period, parks such as Żeromskiego Park, Traugutta Park, and Dreszera Park in Mokotów were established. Existing parks were also redesigned and modernised, including Skaryszewski Park and the Saxon Garden. Greenery was regarded as a key element of public health and quality of life, which led to the creation of sports facilities (such as the Polish Army Stadium and the Służewiec horse racing track) as well as children's recreational gardens known as Jordan gardens.

At the same time, modern public buildings were constructed, including the headquarters of the Bank Gospodarstwa Krajowego on Aleje Jerozolimskie (designed by R. Świerczyński, 1928-1931) and the Prudential Insurance Company building (designed by M. Weinfeld and S. Bryła, 1931-1933). These structures symbolised the modernisation ambitions of the state and introduced a new modernist aesthetic into the city skyline. Green avenues, squares, and public spaces complemented the overall urban composition.

The urban planning of interwar Warsaw thus established the foundations of modern spatial planning, the legacy of which continues to shape the city's distinctive character today (Szmelter & Zdunek-Wielgońska, 2020).

3.1.2 Kraków

Both architecture and urban planning during the interwar period represented a continuation of aesthetic directions and urban transformations initiated in the preceding decade. The most significant initiative was the competition for the plan of Greater Kraków, announced in 1909, and its partial implementation. This became possible following the dismantling of the Kraków Fortress and the removal of the spatial restrictions associated with its existence. As a result, the city's development direction shifted markedly towards the western part of the city. The planning of new residential districts, the layout of the Three Bards' Avenue (Aleja Trzech Wieszców), and the purchase of the Wolski Forest in 1917 for public recreational use were key factors in shaping a coherent landscape characteristic of the modernist era (Purchla, 2007).

The layout of this avenue, together with modern mixed-use buildings and monumental public institutions, was conceived as a promenade linking parks and public squares - one of the more innovative planning solutions of the time. It connected seamlessly with two other avenues - Focha Avenue and 3 Maja Avenue - surrounding the open meadow landscape of the Błonia, and further extended towards Kościuszko Mound and the newly developed large-scale landscape composition of the Wolski Forest, as well as the newly constructed Piłsudski Mound, forming a picturesque and coherent urban landscape system.

The introduction of zoning concepts and the increasing demand for housing led to dynamic development in the building sector, while the spatial distribution of new developments reflected a growing awareness of the need to maintain spatial order. Consequently, residential developments typically formed relatively small-scale urban units - such as street frontages, quarters, and building ensembles - or complemented the existing urban fabric. Notable villa districts were established, including the Cichy Kącik, Legionowe, Urzędnicze, and Oficerskie estates (Motak, 2020).

Characteristic features of Kraków's residential structure included multi-family housing quarters composed of tenement buildings with gardens both at the front and within internal courtyards. Interestingly, large-scale multi-family housing estates were not common in the city. Apart from the areas mentioned above, the existing stock of urban green spaces was sufficiently extensive that there was no strong need to create entirely new public green areas. Instead, smaller villa gardens and gardens associated with public buildings were developed, while stylistic transformations were introduced within already existing urban parks (such as Krakowski Park) and public squares (such as Axentowicza Square).

3.1.3 Katowice

In the history of Katowice, several key events can be identified as crucial to its development: the granting of municipal rights on 11 September 1865, its incorporation into the Second Polish Republic on 20 June 1922, and the establishment of the autonomous Silesian Voivodeship with its capital in Katowice. The creation of Greater Katowice by resolution of the Silesian Parliament on 15 July 1924 provided a strong impulse for extensive efforts to adapt the city to its new role as an administrative, economic, and cultural centre. Owing to financial autonomy, large-scale construction initiatives became possible; however, a significant challenge remained the shortage of suitable building land, both for necessary public institutions and for housing development intended for various social groups.

The original area of Katowice covered approximately 450 hectares and encompassed what is now the city centre. In 1914, the city expanded to include southern territories, and by 1925 its area had increased to 4,023 hectares (Nałęcz-Gostomski, 1926). A number of challenges related to urban development and adaptation to new functions resulted, among other factors, from the ownership structure, the large number of industrial and post-industrial sites, and the already established urban fabric. The city was divided into four districts, and urban plans prepared in 1924 and 1930 designated the principal residential zones. A comprehensive plan for the regulation and expansion of the city was developed only as a result of a competition announced in 1935; however, before the outbreak of the Second World War, it was implemented only to a limited extent (Łakomy, 2025).

New residential estates were therefore established in newly incorporated areas, while the so-called southern district experienced significant residential development. At the same time, vacant plots were gradually built up with individual buildings or building complexes, often forming relatively compact urban units. The city of that period appeared highly modern, and its skyline was shaped by landmark buildings such as the high-rise tax office building (designed by S. Bryła and T. Kozłowski, 1929-1934), the garrison church (designed by L. Dietz d'Arma and J. Zarzycki, 1933), and the cathedral building with its dominant dome rising above the city (designed by Z. Gawlik and F. Mączyński, 1927-1955).

New greenery functioned primarily as a complementary element within the urban structure. Numerous squares and small public green spaces were created, as well as gardens associated with public institutions and many tenement buildings. Villa-and-garden complexes were also established in Ligota, in the southern district, and in the area of Bogucice. Existing parks and forest areas, which were modernised and adapted for public use, served as the main recreational spaces. Several sports facilities were constructed, including the Bugla swimming pool, as well as an ice-skating track and a horse racing facility that no longer exist today.

Characteristic features of Katowice's green infrastructure also included Jordan gardens for children and allotment gardens and small green squares.

3.1.4 Gdynia

The contemporary city centre of Gdynia constitutes the largest urban and architectural complex in Poland implemented in accordance with the principles of modernism prevailing at the time. Successive development plans and numerous competitions for the design of the city centre consistently realised the key ideas of modernist urban planning (Sołtysik, 2019).

The structural framework of the city was formed by three principal axes, the most important of which led towards the sea. A regular street grid was complemented by perimeter block development consisting of tenement houses, public buildings, and service facilities. In addition to functions typical of residential districts, these buildings also accommodated facilities related to the specific character of the city, including port services, education, and recreation. They were accompanied by front gardens, courtyard gardens, and roof gardens.

Modernist architectural forms created a coherent urban structure, albeit expressed through various design concepts characteristic of the period. Importantly, greenery constituted an essential component of the urban layout - complementing the city both functionally and aesthetically, and together with the coastal landscape forming a distinctive spatial composition of high scenic value (Zaworska, 2020). The dominant forms of greenery included avenues, squares, and small public green spaces.

In the areas surrounding the city centre and those incorporated during later stages of urban expansion, intensive development of residential and leisure infrastructure is clearly visible. A characteristic type of development consisted of villa districts - Kamienna Góra, Orłowo, Redłowo, and Działki Leśne - where numerous villas surrounded by gardens were integrated into the coastal topography to create distinctive landscape ensembles. The seaside location also gave rise to greenery associated with piers, seaside boulevards, and urban forests.

A paradox of Gdynia's green infrastructure lies in its distinctly modernist origins and, despite the extensive interest in the city's architecture and urban planning, the lack of detailed research concerning the quantity and compositional forms of its greenery.

3.1.5 Wrocław

Wrocław is the oldest city among those analysed, which is reflected in the fact that during the period under discussion it also possessed the largest urban area. The architectural and urban development of the city was strongly influenced by Hans Poelzig, whose pioneering educational concepts were later adopted by the Bauhaus, and by Max Berg, who served as the municipal building councillor between 1909 and 1925. Buildings constructed within the city during this period - including the Centennial Hall (designed by Max Berg, 1911-1913, inscribed on the UNESCO World Heritage List in 2006), the office and commercial building of the Junkernstrasse-Baugesellschaft G.m.b.H. (designed by H. Poelzig, 1912-1913), and the Rudolf Petersdorff Department Store (designed by Erich Mendelsohn, 1927-1928), as well as numerous other commercial, multi-family, and single-family buildings - are regarded as outstanding examples of modernist architecture.

A key element shaping both the city's development and its landscape is the Oder River, whose branches meander through the urban fabric. The natural qualities of the river had already been utilised in earlier periods to create extensive recreational areas. The dismantling of the city's fortifications at the turn of the nineteenth and twentieth centuries made it possible to establish attractive public green spaces and to designate areas for new residential development. Thus, the existing system of green spaces was supplemented by new modern facilities related to education, commerce, and public services. Along the river, numerous modernist hydrotechnical structures were constructed, as well as recreational facilities associated with water-based activities. Sports grounds, public parks, and numerous allotment gardens were also established.

What distinguishes Wrocław from the other cities discussed above is the development of new residential quarters or building ensembles composed of several structures, which more closely resembled traditional urban blocks than the large-scale housing estates characteristic of Warsaw. These developments were accompanied by greenery within internal courtyards, which served as meeting places for residents. Another distinctive element consisted of satellite housing estates such as Sepolno and Biskupin - modern and coherent spatial compositions in which the building scale remained relatively intimate and greenery formed the structural framework of the overall design.

Wrocław is also home to the model housing estate WuWa, created for the Wohnungs- und Werkraumausstellung exhibition in 1929 (Urbanik, 2019). Today, following revitalisation, it constitutes an iconic spatial representation of the modernist era in Poland.

Table 3: Analyzed cities and their general characteristics in the interwar period.

Study case	City location	City area in square kilometers (year)	Urban greenery system
Warsaw	1310	112,0 (1921)	Wedge-ring system
Kraków	1257	49,5 (1915)	Ring-and-patch system
Katowice	1865	40,23 (1925)	Patch system
Gdynia	1926	14 (1926)	Strip system, including surrounding natural forest and coastal areas
Wrocław	1242	175 (1919-1939)	Wedge-ring system with satellite residential estates

3.2 Basic Groups of Green Spaces in Interwar Poland

As demonstrated by the analyses, urban green space systems during the interwar period developed in diverse and multidirectional ways. The fundamental characteristics of green space forms were primarily determined by their function or by the function of the associated architectural structures (Figure 1). The basic classification includes the following categories:

- greenery associated with residential buildings – estate greenery, villa gardens, residential gardens, as well as gardens adjoining tenement buildings (front gardens, internal courtyard gardens, and roof gardens)
- recreational greenery – urban parks
- supplementary recreational greenery – squares, small public gardens, and loans
- transport-related greenery – avenues, boulevards, promenades, piers, and squares,
- commemorative and monument settings
- greenery associated with public buildings – including hospitals, museums, town halls, and office buildings, in the form of front gardens, courtyard gardens, or roof gardens
- roof gardens and terraces – associated with both residential and public buildings
- educational and didactic greenery – botanical gardens and arboreta, zoological gardens and menageries, school and kindergarten gardens, Jordan gardens (ogrody jordanowskie), and so-called children's playgrounds
- recreational and productive greenery – allotment gardens (so-called Schreber gardens)
- recreational and sports areas – open-air bathing facilities (seaside, riverside, and municipal swimming pools), sports grounds (single-function facilities such as skating rinks or horse-racing tracks, as well as multi-functional complexes), and suburban forests
- greenery with specialised functions – including exhibition grounds, airports, and industrial areas
- sacral greenery – associated with churches, cemeteries, and other religious institutions (such as seminaries or diocesan offices)
- spa and health-resort greenery – towns or their parts possessing an officially recognised spa status, established or significantly modernised during the interwar period.

	estate greenery	villa gardens	residential gardens	gardens of tenement houses	city parks	squares, small public gardens, and loans	transport-related greenery	commemorative and monument settings	greenery associated with public buildings	zoos and menageries	botanical gardens and arboreta	jordan gardens	school and kindergarten gardens	allotment gardens	sports grounds	suburban forests	sacral greenery	greenery with specialised functions	spa and health-resort greenery
Warsaw																			
Kraków																			
Katowice																			
Gdynia																			
Wrocław																			

Figure 1. Types of green spaces and frequency of occurrence: absent – incidental – present – typical (Developed by the Author).

The scale of occurrence of particular types of green spaces within the urban structure of the cities under discussion was influenced both by historical conditions and by the realities of the time, including the functions performed by each city and its size. The tabulated summary presented above illustrates the types of greenery applied and the frequency of their use. Large housing estates were primarily characteristic of Warsaw. Tenement block layouts occurred in all cities, differing significantly in scale, the arrangement of internal courtyards, and the presence of front gardens. With the exception of Wrocław, urban plans designated areas for villa-and-garden settlements. Naturally, greenery accompanying public buildings and educational institutions (schools and kindergartens) was also typical. The use of tree-lined avenues along newly constructed transport arteries, as well as small public green squares, became a standard practice.

It may appear surprising that few new municipal parks were established in Katowice or Kraków, and that only a limited number of educational and Jordan gardens were created. Conversely, a significant share of suburban forests can be

observed, reflecting the general tendency to incorporate adjacent natural areas into expanding urban boundaries. Wrocław also possessed this form of recreational greenery, although of earlier origin.

Overall, in terms of the quantity of newly created green spaces, Warsaw has been the most thoroughly documented. Kraków also introduced a relatively small amount of new urban greenery. However, attention should be drawn to territorial constraints, the historical origins of urban development, and the presence of previously established green spaces.

Large-scale spatial systems constitute a particularly interesting issue, including sports facilities (stadiums, racetracks, and open-air swimming pools), allotment gardens, as well as airports (in Katowice and Gdynia), and forms of technical greenery that remain difficult to identify and assess.

3.3 Forms of Greenery Shaping the Cultural Identity of Individual Cities

The conducted research indicates that each of the analysed cities has preserved its individual distinctiveness, both in terms of urban development and the compositional forms applied. The forms of greenery used in each centre also differed in their intensity of occurrence, thereby shaping the individual character of the urban landscape. It is worth emphasising that frequency of occurrence is not always a factor determining importance within the socio-cultural space or the significance of a feature in landscape composition - for example, the widespread presence of villas compared with the relatively rare occurrence of open-air bathing facilities.

Additional variables should therefore be considered, including the scale of individual objects versus groups of objects, their location, their contemporary social significance (such as residential estate greenery or school gardens), and their importance for the development of architectural and urban planning theory (including theoretical works and competition designs). The geographical context was also of considerable importance - natural landforms created opportunities for long-distance visual connections and provided a spatial backdrop for urban structures.

For this reason, in order to determine the relationship between the identity of the modernist landscape of each analysed city and the greenery present within it, three indicators were identified, referring to the theory of urban composition and to elements of spatial structure that most strongly influence the observer (Wejchert, 1974). These are: 1. areas (districts) – typical objects and surfaces forming characteristic and recognisable spatial ensembles; 2. dominants or landmarks – individual spatial and landscape features that serve as distinctive reference points; 3. special features – unique, atypical objects whose form represents a distinctive design idea or concept (**Table 4**).

It should be emphasised that in each case these are highly valuable and original sites that are significant for the heritage of the modernist era at the regional scale (entry in the regional heritage register), the national scale (designation as a Historic Monument), and even the global scale (inclusion on the UNESCO World Heritage List).

Table 4: Green elements in the spatial structure that have the strongest impact on the observer - which can create the identity of the place.

Study case	1.	2.	3.
Warsaw	Cooperative functionalist housing estates, e.g. Żoliborz, Mokotów, Ochota, Bielany	-	Villas (often private homes) by avant-garde architects
Kraków	Villa estates, front gardens and courtyard gardens of tenement houses	Piłsudski Mound and its surroundings, Avenue of the 3 Prophets	World War I cemeteries
Katowice	Villa estates The southern district and its greenery	-	Green squares
Gdańsk	The greenery of the villa districts and the tenement houses of the city center	Kosciuszko Square - South Pier Axis	Greenery of sacred structures
Wrocław	Satellite housing estates, e.g. Sępolno, Biskupin, Psie Pole, Grabiszyn	World Exhibition Grounds and Centennial Hall (UNESCO), WuWa	Greenery accompanying the technical infrastructure of the rivers

While characteristic areas can be identified for all cities, the identification of clear dominants is not possible in the case of Katowice and Warsaw. In turn, the special features that have been identified no longer retain their original spatial composition; however, owing to the preservation of the main structure, the surrounding land, and archival documentation, they possess significant restoration potential.

Preliminary estimates indicate that the number of publicly accessible green spaces of modernist origin that have retained their original form and vegetation and are protected under heritage conservation regulations is very limited. Examples include selected parks in Warsaw, the surroundings of the Piłsudski Mound in Kraków, the WuWa housing estate in Wrocław, and the garden associated with a villa in Katowice (currently serving an office function).

4. Discussion

4.1 Loss of modernist green areas – causes and countermeasures

In addition to expanding knowledge concerning the typology of gardens of the modernist period and their influence on the identity of individual cities, the conducted research has also provided an answer to the key question regarding the reasons why so few of these gardens have survived in Poland.

The principal factors include:

- the post-First World War process of state consolidation, differences in urban form, functions, and character of cities, diverse models resulting from historical circumstances, varying levels of economic development, and differing social conditions, all of which required urban centres to adapt to new realities of operation;

- the relatively short period between the First and the Second World Wars, combined with economic stagnation in Poland and across Europe;
- the continuation of urban development plans initiated before the First World War;
- the availability of new development areas, including former military and fortress sites, the incorporation of neighbouring towns and villages into expanding cities, as well as natural forest complexes, which became the main zones of urban expansion and the development of urban green systems;
- architectural and urban planning priorities, in which the primary focus was placed on addressing social needs and economic considerations, while aesthetic aspects (including greenery) were often treated as secondary, unless greenery formed an integral part of the functional programme (e.g. school or residential estate gardens);
- numerous competitions and theoretical projects published in professional journals of the period, primarily addressing pressing construction challenges, particularly housing development, public buildings, large urban complexes, or commemorative projects.

For these reasons, detailed research concerning both the number of preserved gardens and those that have not survived is of particular importance. It is equally valuable to consider the possibilities of reintroducing these sites into contemporary public awareness. This may be achieved both through the dissemination of knowledge about their historical significance and through appropriate conservation measures (**Figure 2**).

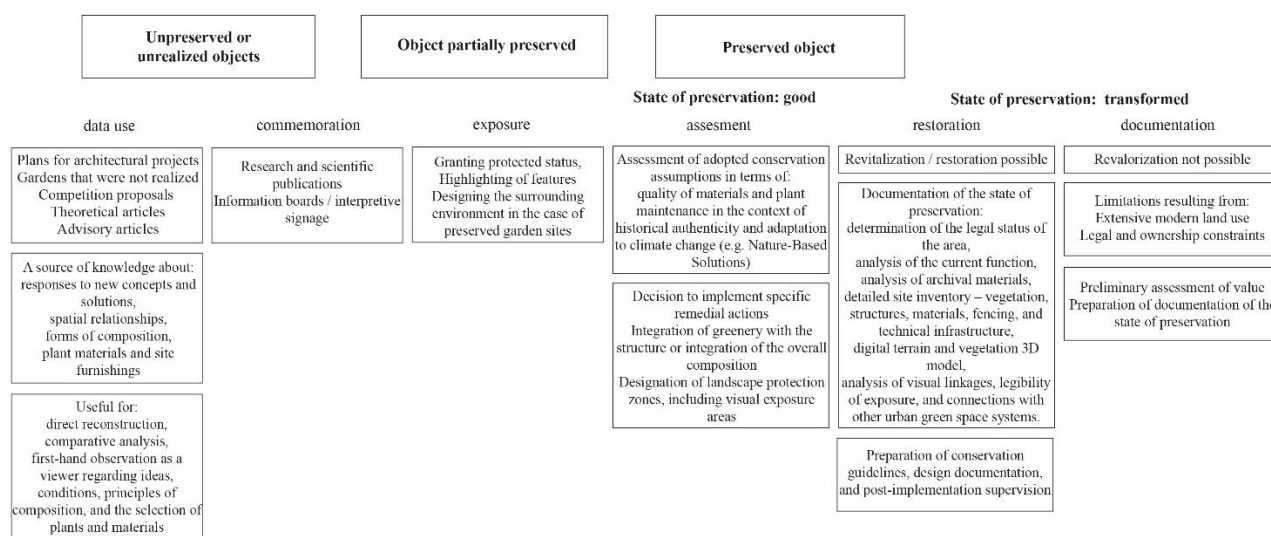


Figure 2. Directions of action for the protection of the cultural heritage of modernist greenery (Developed by the Author).

4.2 Tourism and identity

As demonstrated by the examples presented, modernist sites in which greenery harmonises with architecture can become an important element in shaping place identity, as well as in supporting the development of cultural tourism.

The process of enhancing knowledge should go hand in hand with building place-based identity using a place's pre-existing assets (Kotradová, 2019; Robson, 2023). Cultural tourism can play a key role and contribute to the development of three types of identity (Mousavi et al., 2016). It may also act as a driver of economic development, particularly as research indicates emerging trends in tourism, where places that are not traditional tourist destinations - less obvious and preferably discovered independently by visitors - are becoming increasingly popular (Richards, 2018). An additional trend is the growing phenomenon of so-called "tourists in their own city" (Richards, 2016).

Experience shows that opening modernist buildings to visitors has a positive impact on the social and economic development of neighbourhoods, districts, and even entire cities (e.g. Brno, Dessau). One example is the development of the model housing exhibition WuWa in Wrocław. Organised in 1929 by the Silesian association Deutscher Werkbund, the exhibition consisted of 32 buildings, including modern villas. Today, the area is included in a comprehensive regeneration programme (Urbanik, 2009). As a result of these measures, it has become not only an iconic place for enthusiasts of modernism but also a high-quality tourism product. Importantly, local residents also perceive the site positively and, through educational activities and workshops, have developed an awareness of its historical value. Its spatial qualities (layout and greenery), functional and technical limitations, and the broader post-war context contributed to the formation of a strong sense of neighbourhood identity and social cohesion (Markiewicz, 2022).

Villa Tugendhat in Brno has become a symbol of the city and one of the most important heritage sites (inscribed on the UNESCO World Heritage List). As a tourist destination comprising both a building and a garden, it demonstrates not only historical narratives but also the architect's inspirations and the principles governing the relationship between architecture and landscape (Ivashko et al., 2025). Similarly, modernist sites in German cities such as Stuttgart, Berlin, and Dessau have become destinations of mass tourism. Researchers emphasise that, in addition to providing access to heritage sites, it is equally important to communicate the historical context of the period through complementary educational activities (Hartmann, 2018).

However, the tourist accessibility of garden sites in the analysed cities has revealed certain limitations associated with the possibilities of public access. These constraints result primarily from legal and ownership conditions. They occur particularly in the case of private gardens - mainly villa gardens - as well as state-owned properties, such as gardens

associated with kindergartens or government institutions (for example embassies, administrative bodies, or military facilities). Partially accessible areas include educational gardens and cemeteries (such as war cemeteries in Kraków), while publicly accessible spaces include street greenery and park-type areas (e.g. urban parks).

One of the most effective approaches is the incorporation of selected gardens into existing architectural routes or heritage trails (as implemented in cities such as Kraków and Katowice). Nevertheless, permanent public access appears to be less important than multi-dimensional forms of accessibility, even if temporary, particularly when linked to promotional or cultural events—for example open days in villa districts (a format similar to the popular concept of open studios), workshops, or community festivals organised in public or educational institutions (Smith, 2009).

Closed private gardens should therefore be understood not only as an issue of accessibility but also as a matter of protection against irreversible transformations of greenery. Wherever possible, the most valuable architectural and garden ensembles should be encouraged to adopt functions that are accessible to the public and that promote the heritage of modernist landscape and architecture in Poland. However, these issues are closely related to the complex question of cultural heritage ownership, which remains the subject of ongoing debate (Wyszomirska, 2024).

4.3 Directions for further research

The conducted research did not provide answers to all the intended objectives, which resulted from the complexity and broad scope of the research problem. Nevertheless, the findings may initiate a series of further actions that will enable a more comprehensive understanding of modernist gardens and facilitate the use of their potential in contemporary practice. In particular, the following actions are necessary:

- a comprehensive identification of the existing resource across Poland, including other urban centres. This will enable the proper determination of the formal characteristics of these areas.
- the adoption of appropriate conservation approaches aimed at the restoration and revalorisation of these sites, including the reconstruction of vegetation and the reinstatement of appropriate elements of landscape equipment and furnishings.
- social research concerning heritage, including place identity, aimed at identifying opportunities to engage local communities and users in the protection and appropriate maintenance of modernist landscape heritage.

5. Conclusions

The conducted research has revealed a considerable disparity in the results obtained. On the one hand, there exist interesting and diverse forms of green spaces established during the interwar period; on the other hand, the scale of their occurrence in some cities remains limited. More importantly, the overall state of preservation of this greenery is also relatively poor. This is particularly noteworthy given that the cities selected for analysis are currently regarded as the most important centres for the development of modernist thought in Poland. It is therefore possible that this assumption requires further verification. An especially intriguing case is Gdynia, where - despite favourable landscape conditions and a newly developed urban structure - relatively little attention was devoted to greenery.

It is important to emphasise, that the identity of each of the analysed cities can also be shaped through greenery that complements the architectural and urban structure, particularly through characteristic areas, landmarks, and distinctive sites whose forms appear highly innovative and original on a European scale.

In response to the identified problems - namely the limited level of knowledge concerning the garden art of the interwar period in Poland and the varied state of preservation of green spaces - a general framework for action has been developed. This framework may prove useful both in identifying directions for further research and in guiding conservation practice. At the same time, the possibilities for making historically valuable gardens accessible to the public remain diverse and are often constrained by legal and ownership conditions (for example gardens associated with kindergartens, consulates, or military facilities).

A key element appears to be the expansion of public knowledge and awareness among urban residents regarding the value of these sites. Observing the development of cultural tourism, including interest in modernist heritage in Poland, green spaces should be incorporated into thematic routes and heritage destinations of high cultural value.

A final important conclusion is the necessity of protecting the historic landscape, which is currently undergoing transformation as a result of changes to greenery, architecture, and both immediate and wider surroundings, including new investments and urban development.



Figure 3. Protecting the heritage of modernist greenery - dependency diagram (Developed by the Author).

Acknowledgements

The author would like to thank all those who assisted during the field research and the institutions that provided access to archival materials.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors

Conflicts of Interest

The author report no conflicts of interest.

Data Availability Statement

All data generated or analysed during this study are included in this published article and its supplementary files.

Institutional Review Board Statement

Not applicable.

CRedit Author Statement

Katarzyna Łakomy: Conceptualization, Methodology, Investigation, Writing - Original Draft, Writing - Review & Editing.

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