

MULTIFACETED RESEARCH IN ARCHITECTURE



Editor Beata Komar

VOLUME VI

SELECTED ASPECTS OF CITIES RENEWAL

Editors

Tomasz Bradecki

Paulina Gama Marques



GLIWICE 2022

MONOGRAFIA



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Tomasz Bradecki
Paulina Gama Marques

WYDAWNICTWO POLITECHNIKI ŚLĄSKIEJ
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INTRODUCTION

Cities around the world are struggling. Climate crisis, depletion of fossil fuels, financialization of the housing sector, economic crisis affects cities globally. Some of the difficulties vary on cities: in some regions, we observe depopulation and overpopulation in others, infrastructure deficiencies on the one hand, and overinvestment on the other. However, the end of the second decade of the twentieth century brought an additional challenge to all cities, which meant that the previously used solutions for urban problems ceased to be sufficient. What is needed is a change in basic assumptions within which cities function and develop.

The aim of this publication is to answer the questions of whether it is necessary to renew cities or whether it is necessary to start considering the city from scratch. Both approaches are appropriate. The perspectives for urban renewal can be called as a way towards urban renewal [1]. Since 1999 many inspiring official publications, statements and documents have been published in order to introduce best practices, policies and practical solutions that may be helpful in shaping policies in the field of architecture, urban design, and spatial planning [2, 3, 4, 5, 6]. Also, the urban policy for the common good has been described and revised [7, 8].

These global papers bring research and discussion into another local context and are more focused on the implications of local processes. Some of the research and reports on ongoing urban processes show actual trends [9]. The monograph contains seven chapters covering four principal issues: social participation, the possibility of shaping housing development, landscape and monument protection, and planning. The chapters refer to current research on the chosen issues. The authors refer to contemporary theoretical and practical experience conducted in Poland. Therefore, several important general reports and findings from latest research in Poland have been cited.

* Silesian University of Technology, Faculty of Architecture (POLAND), tomasz.bradecki@polsl.pl

Krzysztof Kafka and Helena Szewiola¹ discuss the issues of social participation in spatial planning and urban design within the scope of legal conditions in Poland. They also relate to practice and indicate the possibility of participation with groups of children. They define their needs and the possibilities of implementing participatory processes for the younger target group. Despite the limitations in communication with children and the superior role and will of their parents, they argue that the role of children is important and that such activities can be developed.

Kafka, Szewiola, and Widzisz-Pronobis highlight the potential of public participation as a contemporary must in planning processes. The authors refer to recognized organisations [10] and local reports and experiences. Experience from public participation conducted in Chełmno and observations from Gliwice, Zabrze, Katowice, Bytom have common law background and conclusions.

Sylwia Widzisz-Pronobis² described attempts to plan new places of residence for social groups that need it. An example of consultations and social participation in this area has been presented in the case study of the city of Chełmno. Sylwia Widzisz-Pronobis describes how various stakeholder groups have an impact on shaping the policy in the field of local social housing development. Author refers to latest Report on the economic losses and social costs of uncontrolled urbanization in Poland [11].

Agata Pięt³ indicates the possibility of creating new housing complexes directly on the water. This is justified by the high demand for residential areas, the necessity to create new ones and the idea of 'on water', which should be considered exceptional. Research carried out in the Netherlands presents the elegant and unusual architecture of houses located in urbanized areas at the interface with water reservoirs. The proximity of water, the possibility of creating floating parks together with the diversity of fauna and flora make this kind of development favourable to sustainable development. Agata Pięt states that floating residential architecture can significantly change the cityscape of areas that used to belong to nature and have now become 'built areas'. This indicates that on-water housing can be presumed as water succession instead of land consumption. The presented case studies fill the

¹ K. Kafka, H. Szewiola: "Participation of children in spatial planning procedures".

² S. Widzisz-Pronobis: "A social strategy for housing investment planning on the example of participatory actions in Chełmno (Poland)".

³ A. Pięt: "Can housing on the water become an answer to the problems of the contemporary cities?".

discussion on finding new residential areas that are not necessarily built on green fields.

Sandra Pichlak⁴ presents how we deal with the revitalization of abandoned post-industrial areas. The most attractive areas, located in city centres, have been transformed and are still used today. Revitalized areas have been presented by quantitative approach, divided into commercial, residential, cultural, and park uses. The green park category is particularly optimistic in the era of widespread surface concreting and sealing, but the list of areas already transformed in relation to the others shows that there is still much to do. The conclusions of the investigation illustrate potential future steps in this direction. The research carried out by the author is a good illustration of the revitalization processes carried out in Poland. Examples of Orzegów Coking Plant, President shaft park, Towers of KWK Polska, Former radio station complex show how to adapt areas to the needs of parks. Case studies of new Gliwice district and the Silesian porcelain Park in Katowice show that office use can be brought to post industrial areas. The residential uses can be presumed as the most promising conversion. The case studies of New Spinning Mill in Żyrardów, Loft Apartments in Łódź oraz Platinum Lofts in Wrocław show that old buildings with new uses can become a lively and vibrant areas of city. Those case studies follow Jane Jacobs' statement: *Cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them. [...] As for really new ideas of any kind--no matter how ultimately profitable or otherwise successful some of them might prove to be--there is no leeway for such clever trial, error, and experimentation in the high-overhead economy of new construction. Old ideas can sometimes use new buildings. New ideas must use old buildings* [12].

Heritage preservation and protection of urban landscapes play key role in cities' development. Marta Kiraga and Beata Fornal-Pieniak⁵ indicate the possibilities for protecting and displaying hydrotechnical infrastructure. Most of them today remain concrete, unattractive, and unnoticed. However, there are examples where a proper design allows to look at small dams, culverts, bridges, and hydropower plants in a slightly different light. The authors show examples, demonstrate the possibility of symbiosis between plant species and objects, and point to the positive effects of local

⁴ S. Pichlak: "Reuse of post-industrial areas as an opportunity to save industrial heritage".

⁵ M. Kiraga, B. Fornal-Pieniak: "Hydrotechnical development with vegetation as opportunities for life quality in cities".

water damming and retention. The examples of Platinum Business Park in Warsaw and Konstruktorska Business Center in Warsaw show that water can be a desired resource that emphasizes the high quality of space. This research shows details and highlights the importance of local implementations, that contribute to wider goals which can be widely described as sustainable objectives.

Marta Lip-Kornatka⁶ highlights the protection of monuments and their valuation. In the current legal status on the protection of historic buildings and structures, it is an entry in the municipal register of monuments covered by local development plan protection or an entry in the provincial register of monuments. Meanwhile, the monument is uneven, the time of its creation, function, and adaptation possibilities play an important role. The author refers to the Alois Riedl method, thanks to which the valuation of monuments could be more effective and considered alternative. Lip Kornatka also refers to Urban Agenda for the EU. Partnership on Culture/Cultural Heritage [13]. and shows how the conservation doctrine can support the sustainable development of cities. Special interest was put on saving the structures that form cities' building stock.

The role of spatial planning is particularly important for the development of regions. Zbigniew Kamiński⁷ demonstrates how the way of spatial planning is changing on the example of the Silesian Voivodeship. Being a co-author of three consecutive voivodship development plans, he indicates that each successive plan is characterized by greater coherence with the voivodship development strategy. Integrated planning combines development policy with spatial policy. Zbigniew Kamiński puts forward the thesis that the digital revolution of the 21st century allows 'not planning' or replacing planning with other spatial management instruments. These types of planning concepts can be reflected in the renewal of cities and regions in a new way than before.

All the above-mentioned problems are illustrated with examples, studies of selected cases. The authors often participate in the processes of participation (Kafka, Szewiola, Widzisz-Pronobis) or planning (Kamiński) they describe, which allows them to present their point of view from the perspective of experienced experts. All texts present the challenges we must face when thinking about cities from the beginning.

⁶ M. Lip-Kornatka: "Criteria of evaluation of monuments in the context of preserving existing building stock".

⁷ Z. Kamiński: "New ways of spatial planning in the Silesian Voivodeship (Poland)".

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12. Jacobs J.: The Death and Life of Great American Cities, 1961.
13. Urban Agenda for the EU: Partnership on Culture/Cultural Heritage. Final Action Plan, 2019.

WSTĘP

Miasta na całym świecie stoją w obliczu licznych wyzwań. Kryzys klimatyczny, wyczerpywanie się paliw kopalnych, komercjalizacja sektora mieszkaniowego, kryzys gospodarczy dotyczący miast na całym świecie. Niektóre z wyżej wymienionych są zmienne lokalnie: w pewnych regionach obserwujemy wyludnienie i przeludnienie, w innych, z jednej strony, braki infrastruktury, a z drugiej przeinwestowanie. Jednak koniec drugiej dekady XX wieku przyniósł dodatkowe wyzwanie dla wszystkich miast, co spowodowało, że dotychczas stosowane rozwiązania problemów miejskich przestały być wystarczające. Potrzebna jest zmiana podstawowych założeń, w ramach których funkcjonują i rozwijają się miasta.

Celem niniejszej publikacji jest odpowiedź na pytania, czy powinniśmy myśleć o odnowie miast, czy też konieczne jest rozpoczęcie myślenia o mieście od podstaw. Oba podejścia są właściwe. Perspektywy odnowy miast można nazwać sposobem na miasta od nowa [1]. Od 1999 roku ukazało się wiele inspirujących publikacji, oświadczeń i dokumentów mających na celu przedstawienie najlepszych praktyk, polityk i praktycznych rozwiązań, które mogą być pomocne w kształtowaniu polityki w dziedzinie architektury, urbanistyki i planowania przestrzennego [2, 3, 4, 5, 6]. Została również opisana i zrewidowana polityka miejska na rzecz dobra wspólnego [7,8].

Wspomniane publikacje wskazują na ukierunkowanie badań i dyskusji osadzonych w lokalnym kontekście i bardziej skoncentrowanych na konsekwencjach lokalnych działań. Niektóre badania i raporty dotyczące zachodzących procesów miejskich pokazują obecne trendy [9]. Monografia składa się z siedmiu rozdziałów obejmujących cztery zasadnicze zagadnienia: partycypację społeczną, możliwość kształtowania zabudowy mieszkaniowej, ochronę krajobrazu i zabytków oraz planowanie. Rozdziały odnoszą się do aktualnych badań wybranych zagadnień.

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Autorzy odwołują się do współczesnych doświadczeń teoretycznych i praktycznych przeprowadzonych w Polsce. Dlatego przytoczono kilka ważnych raportów ogólnych i wyników najnowszych badań w Polsce.

Krzysztof Kafka i Helena Szewiola¹ omawiają problematykę partycypacji społecznej w planowaniu przestrzennym i projektowaniu urbanistycznym w zakresie uwarunkowań prawnych w Polsce. Odnoszą się również do praktyki i wskazują na możliwość realizacji procesów partycypacyjnych z grupami dzieci. Określają potrzeby i możliwości ich realizacji dla młodszej grupy docelowej. Mimo ograniczeń w komunikacji z dziećmi oraz nadrzędnej roli i woli ich rodziców przekonują, że rola dzieci jest ważna i takie działania można rozwijać.

Kafka, Szewiola i Widzisz-Pronobis podkreślają potencjał udziału społecznego jako współczesnego obowiązku w procesach planistycznych. Autorzy odwołują się do doświadczeń uznanych organizacji [10] oraz ich lokalnych raportów. Doświadczenia z partycypacji społecznej przeprowadzonej w Chełmnie oraz obserwacje z Gliwic, Zabrze, Katowic, Bytomia mają wspólne prawne podłoże i wnioski.

Sylwia Widzisz-Pronobis² opisała próby planowania nowych miejsc zamieszkania dla grup społecznych, które tego potrzebują. Przykład konsultacji i partycypacji społecznej w tym zakresie został przedstawiony w studium przypadku Chełmna. Sylwia Widzisz-Pronobis opisuje, jak różne grupy interesariuszy wpływają na kształtowanie polityki w obszarze lokalnego budownictwa społecznego. Autorka odwołuje się do najnowszego Raportu o stratach ekonomicznych i społecznych kosztach niekontrolowanej urbanizacji w Polsce [11].

Agata Pięt³ wskazuje na możliwość tworzenia nowych zespołów mieszkaniowych bezpośrednio na wodzie. Jest to uzasadnione dużym popytem na tereny mieszkaniowe, koniecznością tworzenia nowych zespołów oraz ideą „domów pływających na wodzie”, którą należy uznać za wyjątkową. Badania prowadzone w Holandii prezentują elegancką i niezwykłą architekturę domów położonych na terenach zurbanizowanych na styku ze zbiornikami wodnymi. Bliskość wody, możliwość tworzenia pływających parków wraz z różnorodnością fauny i flory

¹ K. Kafka, H. Szewiola: „Participation of children in spatial planning procedures”.

² S. Widzisz-Pronobis: „A social strategy for housing investment planning on the example of participatory actions in Chełmno (Poland)”.

³ A. Pięt: „Can housing on the water become an answer to the problems of the contemporary cities?”.

sprawiają, że tego rodzaju zabudowa sprzyja zrównoważonemu rozwojowi. Agata Pięt twierdzi, że pływająca architektura mieszkaniowa może znacząco zmienić krajobraz miejski obszarów, które kiedyś były naturalistyczne, a teraz stały się „terenami zabudowanymi”. Wskazuje, że zabudowę na wodzie można uznać za sukcesję wody, a nie obszarów niezabudowanych. Przedstawione studia przypadków uzupełniają dyskusję na temat poszukiwania nowych obszarów mieszkaniowych, które niekoniecznie powstają na terenach zieleni.

Sandra Pichlak⁴ przedstawia problematykę rewitalizacji opuszczonych terenów przemysłowych. Najbardziej atrakcyjne tereny, zlokalizowane w centrach miast, zostały przekształcone i są użytkowane do dziś. Rewitalizowane tereny zostały przedstawione w ujęciu ilościowym, z podziałem na komercyjne, mieszkalne, kulturowe i parkowe. Kategoria zielonych parków jest szczególnie optymistyczna w dobie powszechnego betonowania i uszczelniania nawierzchni, ale lista już przekształconych w stosunku do pozostałych terenów pokazuje, że jest jeszcze wiele do zrobienia. Wnioski z badań ilustrują potencjalne przyszłe kroki w tym kierunku. Przeprowadzone przez autorkę badania dobrze ilustrują procesy rewitalizacyjne realizowane w Polsce. Przykłady Koksowni Orzegów, parku szybowego Prezes, Wieże KWK Polska, zespołu dawnej radiostacji wskazują, jak przystosować tereny do potrzeb parków. Studia przypadków dzielnicy Nowe Gliwice oraz Śląskiego Parku Porcelany w Katowicach pokazują, że funkcje biurowe można przenosić na tereny przemysłowe. Za najbardziej obiecującą zmianę sposobu użytkowania można uznać przekształcenia na funkcje mieszkalne. Studia przypadków Nowej Przędzarni w Żyrardowie, Loft Aparts w Łodzi czy Platinium Lofts we Wrocławiu pokazują, że stare budynki o nowym przeznaczeniu mogą stać się tętniącą życiem dzielnicą miasta. Wspomniane studia przypadków są zgodne z tezą Jane Jacobs: *Miasta tak bardzo potrzebują starych budynków, że prawdopodobnie nie mogą bez nich rozwijać się tętniące życiem ulice i dzielnice. [...] Jeśli chodzi o naprawdę nowe pomysły wszelkiego rodzaju – bez względu na to, jak ostatecznie niektóre z nich mogą okazać się dochodowe lub w inny sposób udane – nie ma miejsca na tak sprytne próby, błędy i eksperymenty w gospodarce o wysokich kosztach ogólnych bazujące na nowych obiektach. Stare pomysły można czasami realizować w nowych budynkach. Nowe pomysły muszą wykorzystywać stare budynki* (tłum. autor) [12].

⁴ S. Pichlak: “Reuse of post-industrial areas as an opportunity to save industrial heritage”.

Zachowanie dziedzictwa i ochrona krajobrazów miejskich odgrywają kluczową rolę w rozwoju miast. Marta Kiraga oraz Beata Fornal-Pieniak⁵ wskazują na możliwości ochrony i eksponowania infrastruktury hydrotechnicznej. Większość z nich pozostaje dziś konkretna, nieatrakcyjna i niezauważona. Są jednak przykłady, w których odpowiedni projekt pozwala spojrzeć na małe zapory, przepusty, mosty i elektrownie wodne w nieco innym świetle. Autorki przedstawiają przykłady, wskazują na możliwość symbiozy pomiędzy gatunkami roślin i obiektami oraz ukazują pozytywne efekty lokalnego piętrzenia i retencji wody. Przykłady Platinum Business Park i Konstruktorska Business Centre w Warszawie udowadniają, że woda może być pożądanym zasobem, który podkreśla wysoką jakość przestrzeni. Badanie to pokazuje szczegóły i podkreśla znaczenie lokalnych wdrożeń, które przyczyniają się do szerszych celów, które można obszernie opisać jako cele zrównoważone.

Marta Lip-Kornatka⁶ zwraca uwagę na ochronę zabytków i ich wycenę. W aktualnym stanie prawnym o ochronie zabytków jest to wpis do gminnej ewidencji zabytków objętych ochroną miejscowego planu zagospodarowania przestrzennego lub wpis do wojewódzkiego rejestru zabytków. Tymczasem zabytki bywają nieporównywalne, ważną rolę odgrywają czas ich powstania, funkcja i możliwości adaptacyjne. Autorka odwołuje się do metody Aloisa Riedla, dzięki której ocena zabytków może być bardziej efektywna i alternatywna. Lip-Kornatka nawiązuje także do Agendy Miejskiej dla UE Partnerstwo na rzecz kultury/dziedzictwa kulturowego [13] i pokazuje, w jaki sposób doktryna konserwatorska może wspierać zrównoważony rozwój miast. Szczególny nacisk położono na ratowanie obiektów wchodzących w skład zasobów zbudowanych w miastach.

Rola planowania przestrzennego jest szczególnie ważna dla rozwoju regionów. Zbigniew Kamiński⁷ pokazuje, jak zmienia się sposób planowania przestrzennego na przykładzie województwa śląskiego. Będąc współautorem trzech kolejnych planów rozwoju województw, wskazuje, że każdy kolejny plan charakteryzuje się większą spójnością ze strategią rozwoju województwa. Planowanie zintegrowane łączy politykę rozwoju z polityką przestrzenną. Zbigniew Kamiński stawia tezę, że rewolucja

⁵ M. Kiraga, B. Fornal-Pieniak: "Hydrotechnical development with vegetation as opportunities for life quality in cities".

⁶ M. Lip-Kornatka: "Criteria of evaluation of monuments in the context of preserving existing building stock".

⁷ Z. Kamiński: "New ways of spatial planning in the Silesian Voivodeship (Poland)".

cyfrowa XXI wieku pozwala „nie planować” lub zastępować planowanie innymi instrumentami zagospodarowania przestrzennego. Tego typu koncepcje planistyczne mogą znaleźć odzwierciedlenie w odnowie miast i regionów w nowy sposób niż dotychczas.

Wszystkie powyższe problemy ilustrowane są przykładami, studiami wybranych przypadków. Autorzy często uczestniczą w opisywanych przez siebie procesach partycypacji (Kafka, Szewiola, Widzisz-Pronobis) lub planowania (Kamiński), co pozwala im przedstawić swój punkt widzenia z perspektywy doświadczonych ekspertów. Wszystkie teksty przedstawiają wyzwania, z jakimi musimy się zmierzyć, myśląc o miastach „od nowa”.

PARTICIPATION OF CHILDREN IN SPATIAL PLANNING PROCEDURES

1. INTRODUCTION

With the rapid changes in the spatial, social and economic structures of modern cities and the new problems and challenges facing them, the role of spatial planning is becoming more important than ever. However, a significant problem is its inefficiency and ineffectiveness. Many urban activists demand for a wider implementation of social participation instruments at all stages of planning processes covering a very wide range of various activities, some of which are legally regulated procedures. These procedures are the main of the chapter. Such participation may be a key element of both analyses of the current situation in the city and identification of social needs. It may also be a condition for ensuring social acceptance of the adopted spatial solutions.

The thesis on the importance and significance of good social participation does not, in principle, cause any discussion or resistance at the moment. However, a question arises as to how much the need to implement social participation in spatial planning procedures is only declarative, and how much of it is a real instrument used in planning practice by cities and municipalities.

Although in a common sense participation simply means taking part in decision-making processes, it also has a specific dimension defined by legal regulations expressed in procedures. As shown later in this chapter, certain elements of participation enshrined in the regulations of the Polish spatial planning system are directed at and reach a very limited group of recipients and participants, thus representing a similarly narrow range of insight into the needs of participants.

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The question posed in this chapter is whether minors, children who are undoubtedly members of local communities, have opportunities for legal and real involvement in such participation. The chapter analyzes how given legal regulations provide real opportunities for children's participation in spatial planning procedures. It is also important to analyze how children can have a significant and creative contribution to the procedure of creating planning documents. The intention of the authors of the chapter is to show and underline that children are a social group that, due to its specificity, can contribute new, often underestimated and neglected aspects of spatial planning of Polish cities.

2. DEFINING THE SCOPE OF WORK

The object of the chapter is to analyze the possibilities of organizing social participation of children according to the currently binding regulations in spatial planning procedures in Poland. This analysis covers the local level of public administration. This specification results from the fact that it is the level of cities and municipalities that has the competence to draw up the most important spatial planning documents. In particular, it concerns the Local Zoning Plan, which in the Polish legal system is the only planning document that constitutes a provision of local law.

The analysis is conducted in two areas. The first is the legal and organizational possibilities of conducting social participation with the involvement of children. Legal regulations were analyzed to determine which people and social groups are entitled to take formal actions in connection with the conducted planning processes and procedures. Special attention was paid to the possibilities of children's participation in these procedures. The second research area is the analysis of cases in which broader public consultations, addressed directly to children and minors.

The confrontation of the conclusions of these two research areas is intended to lead to the confirmation of the accepted theses, as discussed below.

For the purposes of this chapter, children were assumed to be between the ages of six and thirteen. The lower limit is conventionally based on the age at which children begin school. The upper limit is based on the law, which states that a person over the age of thirteen has limited legal capacity [1][2], by which it can be

understood that in matters of participation in planning procedures it can represent itself. Furthermore, the age of 13 can be considered as a boundary between children and adolescents.

3. THESES AND METHODS

Before starting the research work related to this chapter, the following theses have been formulated:

Proper and broad social participation is a condition for effective spatial planning.

Social participation in spatial planning with children can be very useful in identifying the real needs of children and other social groups.

Social participation in spatial planning with children can bring effects in the form of improving the awareness of the importance of spatial planning in the lives of individual people, social groups and the entire local community.

The research method, which aim was to assess the scope of public participation in planning procedures, was based on the analysis of existing and binding regulations in the Polish legal system. Conclusions from the practice of spatial planning at the local, municipal level in Poland were also analyzed. The aim of the study was to identify areas where it would be possible to introduce real and effective participation of children.

4. PARTICIPATION IN SPATIAL PLANNING PROCEDURES

4.1. Participation in spatial planning

The key assumption of this chapter, which deals with the participation of citizens, including children, in procedures related to the planning and design of space, is to define the very concept of participation. Both in practical and scientific terms, this concept is often understood in a variety of ways. It certainly refers to the participation of individuals and organizations in making political decisions. Different types of participation can be identified. Depending on the nature of the people and organizations involved; about social participation that is clearly different from other forms of participation, in which different participants can take part, for example of

a business nature: developers, investors, financiers or representing through lobbying activities different types of special interests [3].

Any participation, especially social participation, is most often understood as active involvement of citizens in political decision-making [4]. Such participation is built around three types of activity: informing citizens, consulting and co-determining [5].

This chapter attempts to analyze how such participation functions in the spatial planning system in Poland. In this system, social participation is understood in two ways. On the one hand, as the fulfillment of certain procedural and legal requirements, without entering their meaning and purpose. On the other hand, as the so-called good practice related to the preparation of planning documents.

In view of the strong domination of legal aspects in the discourse on proper spatial planning, social participation is sometimes reduced and identified only with the provisions and requirements of the generally binding law [6]. The notion of social participation is therefore increasingly understood only as those elements and steps of planning procedures listed in the laws. Such participation is therefore sometimes reduced to the stages of submitting applications and comments on draft planning documents. Even the public discussion on these projects, required by law, is often marginalized due to the lack of procedural and organizational formulas regulating it.

In view of the numerous gaps and formal deficiencies leading to ineffective social participation in planning processes and procedures in Poland, there is a certain fatigue and disappointment in the application of full participatory methods. On the one hand it is taken for granted, but on the other it is unclear and incomprehensible to many how it can bring any useful effects to the planning process itself.

In the face of these problems, asking about the participation of other, non-obvious social groups can be seen as taking on topics that are not very important or marginal. However, it is worth understanding social participation more broadly, as widely as possible. It should be conducted in such a way that the broadest and most diverse social groups can participate in it. Such diversity can have very positive and promising effects on the entire urban spatial policy.

4.2. Social participation as part of the preparation of city development strategies

Each local government unit in Poland, and at the local level, each commune and each city are obliged to conduct an integrated development policy. Such policy is understood broadly and includes the development of the local government unit realized in different areas. In particular, it refers to socio-economic development. One aspect of this policy is spatial policy. Its objectives are defined in the municipality development strategy. The law requires that the municipality development strategy be subject to consultations, in particular with local social and economic partners and residents of municipalities [7] requirement is formulated quite generally. It leaves it to the entity drawing up the strategy to decide who will be invited to such consultations.

Surprisingly, partners in such participation are, by law, social and business partners as well as inhabitants. In this way, various formal and informal groups and persons who are not residents of the city were excluded from participation in formulating the objectives of development policy. However, all those who were not treated as partners by the city authorities were excluded in the first place. The legal regulations in this procedure did not allow for the possibility of declaring the desire and intention to join such consultations on one's own initiative. The seemingly wide range of participants in the consultations can in practice be easily and clearly limited by the entity of the policy. Outside the formula of strategy-building participants may be targeted organizations, non-governmental organizations, e.g., environmental or minority organizations of nationwide range or other informal groups. Various social groups and settings may be excluded, especially groups of people with special needs [8], which may include many different social groups, including children.

An important issue is the merit of these consultations. Is their subject to be a ready, prepared document of the strategy or are they conducted at the preliminary stage of the strategy's preparation? Again, the subject of the strategy, i.e., the city authorities decide on the character of the consultations conducted. It is difficult to decide whether such consultations have any features of social participation.

It is also worth noting that the generally applicable regulations do not indicate the need to consult the strategy with different minority social groups. The law does not require that the strategy be consulted separately with seniors, with economically

active people, and separately with juniors. However, the regulations do not oppose such forms of consultation or participation.

A lot of experience has been gathered in Poland in connection with the preparation of urban development strategies. Creating a development strategy, not confined by too strict legal regulations, gave a lot of opportunities for introducing very different practices, methods and techniques since the beginning of communal self-governments in the early 1990s. Sometimes it was also a field for various experiments. Quite popular at that time was the so-called "brainstorming" method [9]. Although it is difficult to call it a participatory method in the narrow sense, it allowed for active participation of very different people and representatives of the urban community. It brought together representatives of different social groups, classes, different professions and different worldviews. Such "brainstorming" was a place and an opportunity to collect and confront information about the city.

During the 2020 pandemic, planning procedures had to adapt to the unprecedented circumstances. Correspondence methods were practically the only ones allowed and possible. Meetings requiring in-person, such as public discussions, were organized using online contact platforms. This example shows that changes, improvements and adaptations to different conditions are possible, but they require a fundamental change of attitude towards the participatory process.

4.3. Social participation as part of the preparation of spatial planning documents

The spatial planning system at the local, municipal level is based on the preparation of two basic planning documents [6]. These include: the Studies of Conditions and Directions of Spatial Development, as well as the Local Zoning Plan. This system is also complemented by the Local Revitalization Plan, which is a special form of the local plan, and the so-called landscape resolutions (regulations and conditions of placing small architecture objects, advertising boards and devices, and fences) introduced by the same Law on Spatial Planning and Development.

The main requirement for good participation, not only social participation, is equal access to information. The law defines the places and forms in which information about the planning procedures should be published. These are the websites of the city hall, notice boards and the local press. In practice, however, the efficiency of information transfer through these channels is ineffective. They can be

accessed but only on condition that a person knows what to look for. The information prepared by the body drafting the planning document is not addressed to strictly defined participants and stakeholders. Obtaining the information is the basic difficulty and obstacle to effective social participation. The way the information is formulated is usually surrounded by a hermetic legal language, incomprehensible to the average recipient. It should also be noted that reaching and understanding this information by people with special needs, such as children, is basically impossible. It should also be noted that during a pandemic, many of these channels of information have become even more inefficient and ineffective.

The procedures for preparing Studies and Plans (local and revitalization) are similar and very strictly regulated by law. These procedures do not specify the requirement of public consultation. There is also no mention of social participation. In their place, certain formal steps were introduced related to the collection of applications and comments to draft documents. Applications, as well as comments can be submitted by anyone. No one is excluded from this right. Everyone can submit an application filed after the notification of joining the preparation of a study or a plan. Regardless of whether they are property owners or not. It does not even have to be a resident of a given municipality. There are no age limits either. Of course, it should be considered at this point whether the act of filing an application is a legal act. Submitting an application to a plan and study does not involve a person entering any rights or powers. In particular, it does not result in the right to file a complaint to an administrative court in the case of a negative decision. Thus, it can be argued that it is not a legal action. Therefore, the age of the person making such an application is not limited. It can be, of course, a person of full legal capacity, as well as a person over 13 years of age with limited rights. Also, a person under 13 years of age is not deprived of the right to file an application.

The forms and paths of submitting applications and comments on the draft plan do not differ significantly. Comments, just like applications, can be submitted by anyone. Theoretically, this can also be done by a minor. The reservation that this right is theoretical results from experience in which it is difficult to find confirmed examples of submitting such a comment by a child. A written form is required, which may to some extent limit the group of persons capable of preparing and sending such a letter. It should also be noted that the written form significantly limits the possibility of calling these activities public consultation or social participation. These

activities do not provide feedback or communication between the participants of spatial planning. A person who has submitted an application or comment to the draft plan cannot expect that the authority drawing up the planning document will inform them about the manner of its consideration.

An activity that may lead to it being considered a social participation consultation is a public discussion about the solutions adopted in the drafts of the study and the local plan. Also, in this case there are no restrictions as to the right of participation of various persons. There is no age limit for its participants. Public discussion is organized when the draft documents are submitted. However, it does not have any fixed and required legal and organizational form. It usually consists of a part in which the authors of a draft study or plan or persons indicated by the body drawing up the plan present a draft of a planning document. In particular, a drawing of the study or the local plan and the most essential elements of its content are presented. In the second part, other participants of the discussion usually take the floor. During such discussion the participants voices may be recorded as comments on the draft documents. The same procedure is also provided for local revitalisation plans.

Unfortunately, observations of the practice of applying provisions concerning public discussion led to the conclusion that this formula did not meet the expectations placed in it. This conclusion is based on the observation of the course of planning processes organized between 2003 and 2019 in selected cities of the Silesian Voivodeship, such as Gliwice, Zabrze, Katowice, Bytom.

According to many, it is organised too late; when the study or plan project is ready and has been approved and agreed by various institutions. Participants in such a discussion are most often told that they have the right to submit comments on the discussed draft plan or study, but have no right to a real discussion.

From observing the experience and practice of public discussion, it is extremely rare for minors to participate. Most often they are accompanied by parents, guardians or other adults who sometimes speak on their behalf. Full participation of children in public discussion would probably require a special form and organization of such discussion. These should be adapted to the children's level of understanding of the issues being discussed. They should also allow children to speak freely.

The procedure for drafting so called landscape resolutions is slightly different. This procedure does not include the stage of submitting proposals. It is only possible to

submit comments to the prepared project. The draft resolution is also subject to public review.

Therefore, it can be said that spatial planning procedures create a very general framework for public consultations. They do not limit the group of participants in such consultations. They do not exclude minors with limited or no legal capacity from participating. Children can therefore also participate in planning processes and procedures located within them. However, the spatial planning practice in Poland leads to a conclusion that such a possibility is used very rarely.

To sum up, it can be said that even though the law creates conditions for wide social participation, including ones that would involve minors, in practice this participation is very limited. Those limitations lead to lowering the effectiveness not only of the participation itself, but also of the entire spatial planning system.

5. THE DIFFERENCES BETWEEN PARTICIPATION OF ADULTS AND CHILDREN

5.1. The differences in the definitions of participation

Compared to adults, who despite many limitations are able to autonomously engage in participatory processes, children have a more limited opportunity to take part in them. Not only do they lack the required skills necessary to understand planning documents, but they are not included in official planning procedures as potential participants. All forms of participation occurring during preparation of planning documents (written submission of applications and comments, taking part in public discussions) in practice exclude the child as a participant. They are not able to competently participate in any of them independently. Although it is conceivable to involve the child in the mentioned processes, this would only be possible with the help of a guardian, thus changing the degree of participation from direct to indirect. This means that the child's participation in the participatory process within the creating of planning documents does not occur. The following are definitions of participation and their equivalents in relation to children [Fig. 1].

Definition in relation to adults		Definition in relation to children
1 the formal involvement in the process of developing planning documents, making key local decisions and solving local problems[10]	→	informal involvement in the process of developing planning documents, making key local decisions and solving local problems
2 the right to a collective exercise of power, including urban processes[11]	→	the right to <u>collective</u> participation in urban processes
3 the voluntary participation of citizens in managing the public affairs of the community of which they are members[12]	→	the unforced participation of citizens in managing discussions about public affairs of the community of which they are members
4 active involvement of citizens in decisions of a political character [4]	→	active involvement of citizens in urban processes decisions of a political character

Fig. 1. Table illustrating the differences in definitions of participation regarding adults and children
 / The right column is an interpretation of the definitions provided by the chapter's authors
 Rys. 1. Szewiola H., opracowanie własne na potrzeby badań, Gliwice, 2021
 Source: authors study

The set of general definitions presented above shows that they cannot be directly applied to children's involvement in participatory processes and procedures. According to the first definition, the involvement should be formal. However, in the case of children there can be no such participation. While the process itself may be enclosed in a formal framework, the way in which e.g., consultations are carried out needs to adapt its formal character due to the age of the participants. Moreover, as in further definitions, there is the aspect of decision-making. This is a rather rare form of involving children in participation. Usually, the focus is mainly on the identification of needs and education.

In the second definition, participation gives people the right to exercise power, including in urbanization processes and procedures. In the case of children, the scope of entitlements is not as big. An essential element of this definition is to draw attention to the collectivity of the participatory process. By this it can be understood that people engaged in participatory processes collectively represent the needs of the whole community. At the same time, collectivity points to the diversity of social groups and thus the need to represent the needs of each of them specifically, including children.

For the third definition, the word "voluntary" is questionable regarding children. In the sense of unforced participation it is of course adequate, but it can also be interpreted as "on one's own initiative" which again, in the case of a child, can hardly be the case.

The fourth definition was already mentioned at the beginning of the chapter. It is important to note the term "citizens" that appears in it. It can be assumed that the definition refers to persons over the age of eighteen, or in some cases thirteen, who have the legal capacity to exercise all the rights and duties of a citizen. This means that already at this point the definition excludes minors, specifically children. As in the second definition, the idea of a child making conscious decisions, especially of a political nature, is rather far-fetched.

Rephrasing of the definitions of basic forms of participation would make it possible to include a wider group of recipients. However, these activities are not practiced on a large scale.

In an attempt to reformulate the definition of participation in such a way that it does not exclude children or other groups of people with special needs, it could be said that participation is the formal or informal, collective inclusion of individuals or groups in processes that affect the community of which they are members.

It is also worth looking at the commonly accepted levels of participation. The International Association of Public Participation [13] lists five basic levels: inform, consult, involve, cooperate and empower. Based on the analysis of participatory processes carried out in Poland, it can be seen that none of the above-mentioned possibilities is fully incorporated. Information and consultation occur during the previously mentioned planning procedures. However, even they are limited to an absolute minimum. In the case of involving, cooperating and empowering, it is difficult to find any examples. The spectrum becomes even narrower regarding participation of children. Information could take place, especially if the educational aspect is put at the forefront. In this way, social and spatial awareness could be developed in young people, which in later years could contribute to an increased involvement in creating their own environment. Consultations with children are also feasible, examples of which are given below. As with adults, the three highest levels of participation do not occur.

5.2. The differences in the goals of participation

The purpose of participation in the preparation of documents such as Local Zoning Plans is to create provisions that will implement the objectives of spatial policies. These include, in particular, meeting the widest possible range of needs of users of the project area. In practice, it is often only the voice of the larger and more powerful participants in planning procedures that matters; property owners, investors, developers and lobbyists of various kinds. The needs of an individual resident or even groups of residents rarely carry enough weight to be considered by a planning entity. Even in the case of larger social groups acting together to achieve a single, common goal, it is more difficult to convert their expectations into concrete planning solutions. Children, as a separate social group, have their own needs and expectations about the space around them, but their voice is usually not considered during the creation of planning documents.

Another goal of participation in spatial planning is widespread education in the areas of planning techniques and methods [14]. Sieminski justifies that better knowledge of planning processes has a positive impact on social awareness and shapes more active engaged citizens who can participate in future processes with greater efficiency. In the case of children, this goal can actually be considered the most important. Educating people from the youngest generation and helping them become familiar with basic concepts, but also with rights and responsibilities in the context of spatial planning, can cause them to become active participants in the future who will consciously make decisions about the use, development and maintenance of specific forms of space. The educational aspect is the most feasible and implementable form of involving children in spatial planning.

Sieminski also points out the importance of social and psychological impact of participation [14] in spatial planning. Participation in shaping one's own surroundings helps residents build a bond with their neighborhood and a sense of responsibility for its condition. This goal can also be achieved with children. Examples of locally organized workshops with residents, including children, show that the products and solutions created are accepted much better than in cases where the users of the space are not involved in the design process.

From another perspective, the purpose of participation is also to gain broader public representation and support for planning decisions [15]. Of particular note in

the context of children is the first part of this statement. Obtaining wider representation is possible primarily by including new, previously overlooked groups of participants. This applies to excluded communities, often residents of revitalized areas, the elderly, the disabled, but also children. They bring a completely new perspective about perception and understanding of their surroundings. Only considering the needs of all user groups can contribute to creating truly inclusive and good solutions.

5.3. The differences in the execution of the participation process

The planning procedures in which any willing person or group of persons may participate are, as described above, submission of applications, submission of comments, and public discussion. The rules of participation in these procedures do not impose any restrictions on the age of the persons who can take part in them. However, their basic form excludes the real participation of children. An attempt to include this group in the creation of planning documents would therefore have to be made by applying some non-standard solutions. As far as applications are concerned, the participation of children seems to be practically impossible. It may of course happen that one of the stakeholder groups submitting an application to the planning document also consists of children (e.g., if there is a kindergarten in the area of the development). The submitters would certainly expect environmental conditions that do not compromise the safety or comfort of children using the area. However, this is a very indirect expression of the needs of the youngest group and cannot be considered a fully complete representation of their interest.

A similar situation exists with the submission of comments; although legally a child has the ability to submit a comment just like an adult, they may lack the skills to do so correctly. An additional obstacle will be the mandatory method of submitting comments in writing. If, on the other hand, the guardian assists the child in participation, we are talking about mediated participation again.

The greatest opportunity for adaptation to work with different groups is through public discussion. According to the Law on Planning and Spatial Development, in an enabling manner, the only guidelines for public discussion are the opportunity to "speak, ask questions and make comments" [6]. Fulfilling these conditions, public discussion can be implemented in various ways, such as workshops or brainstorming,

which can easily be done in an accessible and child-inclusive manner. However, this raises the question of who the organizer of such forms of consultation should be. In the case of standard public discussions, the role of facilitator is usually assumed by an official, who is sometimes a member of the team involved in the preparation of a particular planning document.

However, working with children requires additional pedagogical and psychological competencies that an official, planner, or other adult discussion facilitator does not necessarily possess. Therefore, holding public discussions with children involves involving third parties who will not only be able to explain planning issues to children, but who will also be able to interpret children's responses to translate them into concrete guidelines.

In addition, a variety of communication tools are necessary to elicit meaningful information from children. Conducting a classic public discussion could result in rapid boredom among the participants, and thus a decrease in the quality and quantity of information that can be obtained from the youngest. Therefore, when conducting participatory activities with children, it is worth using techniques such as brainstorming, association, drawing exercises, etc.

These methods are unfortunately very rarely used in Poland at the moment. They provide an opportunity to organize meetings that bring together very different participants and users of the city. Such meetings can be an opportunity to exchange knowledge and opinions between very different people. Despite the fact that there are no well-known examples of children taking part in such meetings, it can be said that their participation from a formal and practical point of view would be possible and advisable. If children are included in such meetings and discussions, it should be considered whether meetings conducted by alternative methods with children should be separated and conducted separately for adults and for children. Meetings for children should have their own, different formula, adjusted to slightly different objectives of children's and adults' participation, as mentioned below.

6. EXAMPLES OF INVOLVING CHILDREN INTO THE SPATIAL PLANNING PROCEDURES

6.1. Workshop with children in Bielsko-Biała

In connection with the development of the Local Zoning Plan for the downtown area located west of the Biała river from the railroad land, the city of Bielsko-Biała joined the "Common Space – Wspólna Przestrzeń" project [16]. The initiative was held in cooperation with the City Development Bureau of Bielsko-Biała and the Sendzimir Foundation. The aim of the project was to conduct in-depth social consultations, going beyond the legally required stages. The city received funding from European Funds which was to be used, among other things, for organizing these consultations, providing expert support and conducting trainings for the employees of the office.

As part of the in-depth community consultation, a workshop was held with children about the river in the city [17]. A group of fifteen children, aged six to thirteen, took part. The whole event took place in blocks of time spread over three days. Participants had the opportunity to see the study area and take a walk along the bed of the Biała River. They were also presented with inspiring realizations of similar assumptions in order to stimulate their imagination. During the workshops, the need to create an opportunity to get closer to water turned out to be the basic guideline developed by the children. In connection with such a defined goal, the workshop works gained an additional subtitle "Stairs to Water". Children worked on prepared panoramic pictures and maps, on which they drew their visions. They also developed an association map with the pros and cons of the river in the city. On the basis of all the created materials, concepts were developed. Next, they were presented to the seniors in the Senior Citizens Club at the "Józefów" Catholic Nursing Home. Children's visions were confronted with the seniors' memories about the old look of the river. There are many elements in the works created by the children which indicate their understanding of the area's problems and the needs of the residents. Almost all of the visualizations feature the already mentioned various forms of descent to the river (stairs, ramps, and even slides) [Fig. 2]. This is an expression of the need to allow residents to connect with nature and enjoy the riverfront. A similar manifestation of the essence of closeness to nature are the plants and animals appearing in the drawings. The children suggested introducing new plantings, covering the concrete walls of the riverbed with ivy, creating an enclosure for dogs

and a place to feed the ducks. The project also included places to sit in the form of benches, piers and roofed gazebos. In a more or less conscious way, through the diversity of their solutions, the youngest managed to respond to the needs of a wide audience.

The observations of the children from the walk were collected in a tabular form, together with their completed works, are a voice in the discussion on the provisions of the Local Zoning Plan concerning the creation and preservation of riverside green areas, removal of surface parking lots, and creation of entrances and connections to the river. Conclusions of the workshops with children are arguments for planners justifying adoption of specific provisions in the plan.

In addition, the works created by the children were used in subsequent stages of the public consultation. They were displayed during expert debates, on the consultation website, during the consultation point by the river and during the final debate. There was also an exhibition of the children's works in the town hall. There are no reasons to believe the proposals created by children have been considered during further work on the Local Zoning Plan. The Municipalities have not shared any promises as to including specific parts of the presented ideas in the actual project, therefore further proving that public consultations are rarely conducted thoroughly to the end.



Fig. 2. Part of the final exhibition of the project showing drawings created during the workshop.

Rys. 2. Biuro Rozwoju Miasta Bielsko-Biała, Projekt „Wspólna przestrzeń – Partycypacyjne planowanie przestrzenne w gminach”, Bielsko-Biała, 2019

Source: <https://wspolnaprzestrzen.biurorozwojumiasta.pl/wystawa-prac>

6.2. Workshop with children in Ustka

The workshop for children in Ustka was held as part of the Revision of the Studies of Conditions and Directions of Spatial Development for the Town of Ustka. It was organized as part of the project "New quality of social consultations in spatial planning". The participants were older primary school students around the age of thirteen. The event took place in early 2018. It was conducted at the Gen. Mariusz Zaruski Primary School No. 3 in Ustka. According to the organizers [18], their aim was both to find out the opinions and visions of young people and to present the essence of social participation in spatial planning. Thus, the workshop had a participatory and educational character.

The workshop began with an official introduction by the head of the Spatial Planning Department - Małgorzata Bugajewska. Then the principles and course of the workshop were presented. Due to the age of the participants and their potential unfamiliarity with concepts related to spatial planning, the students were asked a simple question "What is urban planning?". The young people proceeded to work in six subgroups in which associations and answers to the question were collected together. Based on them, it can be concluded that the participants understood the complexity of the concept of spatial planning, both in terms of the disciplines with which it is connected and the levels to which it applies. Considering the ideas raised, the speakers presented the official definition of spatial planning and the rules of creating a Studies of Conditions and Directions of Spatial Development.

The second part of the meeting took place in the form of practical workshops. The students were presented with the plans of the city authorities and the details of planning procedures. The main assumption of the study was the relocation of industrial areas. The participants were again divided into groups to create mock-ups showing their visions for the area to be developed [Fig. 3]. Although the final concepts differed from each other, the common element was the provision of recreational, cultural and educational, residential, tourist and service functions. This highlights the fact that even within a similar age group, the needs of individuals and subgroups can be quite different. Therefore it is so important to consult people who are sometimes overlooked during basic planning procedures.

The organizers emphasize that the solutions worked out by the participants are valuable and worth considering in the preparation of the Studies, but it is not clear whether or how they were finally taken into account.



Fig. 3. Part of the after- workshop report as part of the project "New quality of social consultations in spatial planning"

Rys. 3. Urząd Miasta Ustka, Ustka, Projekt „Zmiana studium uwarunkowań i kierunków zagospodarowania przestrzennego dla miasta ustka”, Ustka, 2018

Source: Urząd Miasta Ustka. (2018). Zmiana studium uwarunkowań i kierunków zagospodarowania przestrzennego dla miasta Ustka. Raport z warsztatu dla młodzieży. Urząd Miasta Ustka.

6.3. Workshop with children in Trzemeszno

The workshop for children in Trzemeszno took place in 2017, as part of public consultations during the preparation process of creating a Local Zoning Plan for the City of Trzemeszno [19]. It was part of a larger national initiative called “Przestrzeń dla Partycypacji / Space for Participation” which encouraged involving citizens into local decision making. Locally the project has been named “Zrób z nami plan / Make a Plan with us” which highlights their willingness to involve citizens into the process. The area covered by the Plan lays next to a primary school, which is one of the reasons children have been involved. The consultations have been proceeded by an extensive campaign, creating awareness of the topic. The municipality took it upon themselves to prepare several forms of involving people: open discussions, mobile consultations points, workshops and meetings. To the surprise of the organizers

children got very interested and involved at the local consultation points. They openly shared their ideas and discussed freely with other interested bystanders. It is not clear if the following workshops have been a result of the children's interest or if it has been planned from the beginning.

The workshop for children took place on a school day, within the classrooms of Primary School No 1, located directly next to the discussed area. Twenty-three children, aged 10-13, participated in the workshops. They have been divided into groups by their age. The workshop took around three hours and was conducted by officials from the Municipality of Trzemeszno, led by Paulina Bernarciak.

Firstly, the children took part in a walk around the area of the proposed Local Zoning Plan, to better understand the scope of the project. After that, already divided into smaller groups, they heard about the purpose of the workshop, the goal of the Local Zoning Plan and the activities they would participate in. During the main part students got the opportunity to create their own proposals for the development of the area. They worked with maps and drawings, allowing them to express themselves freely and easily [Fig. 4]. Their ideas focused on greenery and spaces for play. They put focus on solutions that would be available to them even after school hours. Some suggested a park, adventure paths, a football field and extensions to the school's gym. At the end the results have been presented to the other groups as well as to the city officials.

Municipalities openly admit that none of the ideas have been taken into account, explaining that the use of the discussed area had already been decided before the entire process started. This once more confirms that consultations are often considered as a legally necessary part of spatial planning processes and procedures, but is not considered a valuable addition and opportunity for gaining insight into an issue. The proposed Plan still has not been written into law, due to extensive protests of local communities.



Fig. 4. Final presentation of the workshops results in Trzemeszno

Rys. 4. Rada Miejska Trzemeszno, Projekt „Zrób z nami plan – Przestrzeń dla partycypacji”, 2017, Trzemeszno

Source: RAPORT podsumowujący proces konsultacji społecznych dotyczących sporządzenia miejscowego planu zagospodarowania przestrzennego części miasta Trzemeszna.

7. DISCUSSION

Continued research and analysis in the area presented may be valuable for better understanding and use of planning procedures and processes. Some aspects addressed in the chapter need further exploration. It is worth exploring what participatory methods are most effective in working with children, how to conduct them, and how to translate the effects of working with children into viable planning guidelines. In addition, the consideration of forms and phases of work with children within planning processes can be broadened.

The discussed topic can be considered in an interdisciplinary way, not only from a planning perspective, but also from economic, sociological, legal and other perspectives.

An interesting aspect of further research should be an attempt to evaluate public participation with children, including an assessment of the effects and consequences identified in different fields and areas. At the same time, an interesting aspect of this research could be to assess the division of responsibilities between the different participants in the planning procedures.

8. CONCLUSIONS

The chapter in the monography shows that planning procedures fulfill the principles of social participation to a small extent. The forms of participation provided for in the procedures set minimal conditions, which are not sufficient for a thorough recognition of the needs of participants. They also do not consider the barriers and obstacles faced by some groups, including children.

The current form of planning procedures does not create space for the participation of children. The submission of applications and comments completely excludes minors. It is similar in the case of public discussions, which only conducted in an extended form, such as workshops, can include children in the participatory process.

The conducted research points to the extensive and untapped potential that arises from including an increasingly wide audience in participatory processes. The potential also comes from additional aspects of carrying out participation, such as education.

In the case of the few initiatives to include children in planning procedures, there is a noticeable lack of consistency in action. Even in cases where children have been included in the creation of planning documents, the effects of this work are not taken into account in the actual creation of the documents.

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NEW WAYS OF SPATIAL PLANNING IN THE SILESIA VOIVODESHIP (POLAND)

1. INTRODUCTION: RESEARCH SUBMISSIONS

The object of research are spatial development plans of the Silesian Voivodeship, hereinafter referred to as Plans, which were created in the period after the political changes in Poland, at the beginning of the twenty-first century, specifically three works:

- Plan of 2004 (date of adoption of the Plan 21 June 2004), [24],
- Plan of 2016 (date of adoption of the Plan 29 August 2016), the so-called "Plan 2020+", [23],
- Plan in development since 2019, the so-called "Plan 2030", [14].

The plans have the same legal basis as the Act of 27 March 2003 on Spatial Planning and Development (including its subsequent update), which defines the principles of spatial policy formation and the scope and procedures, as well as lists detailed issues to be taken into account in the planning process [29]. The studies have the same territorial scope of the study, which is the area within the administrative boundaries of the Silesian Voivodeship. The studies are connected by the institutional context related to the Self-Government of the Silesian Voivodeship, including the person managing the design work on the Plans (Zbigniew J. Kamiński).

The subject of the research is a comparative analysis of selected planning studies, covering process, substantial and contextual aspects.

The aim of the study is to demonstrate new ways of spatial planning in plans created in the twenty-first century, which were lacking in planning in the twentieth century. By new ways of spatial planning are understood as the application of various types of innovations in planning. The symbolic turn of the millennium has

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a substantive significance, because a whole decade has already passed since the great changes of the turn of 1981-1991. It was a time for theoretical reflection on action in the realities of the contemporary world of the twenty-first century. The inspiration for such a reflection was conventionally accepted here by a scientific conference organized on the initiative and under the patronage of the Committee of Architecture and Urban Planning of the Polish Academy of Sciences. The conference took place in Katowice in October 1989 at a time of Polish transformation. Its basic documentation was included in the "conference materials" [4] and "Silesian Quarterly of Urban Planning and Architecture" ("Śląski Kwartalnik Urbanistyki i Architektury") published by the Chief Architect of the Katowice Voivodeship [28]. The main aim of the conference was defined in the conference materials as "to review the effectiveness of spatial planning in changing system conditions, to define conclusions for the next generation of plans" [4]. The conference was accompanied by a thematic exhibition of archival planning studies.

2. THE INSTITUTIONAL CONTEXT OF PLANNING

Spatial planning in the Silesian Voivodeship is an element of the Polish spatial planning system. This system is regulated by law, currently on the basis of the Act of 27 March 2003 on spatial planning and development [29]. The Act specifies, among other things, "spatial planning in the voivodship", including issues that require consideration and definition in the spatial development plan of the voivodship. However, the Act does not specify the rules for recording the arrangements or the form of the spatial development plan of the voivodship. The course of proceedings when drawing up the plan was formally defined as the activities of the self-government bodies of the voivodship. Thus, a wide margin of interpretation of the applicable regulations was left to the coordinators of the work on the plan. There is room for a traditional approach established in the history of spatial planning, as well as attempts to formulate some new approach to spatial planning in the voivodship. Such attempts were burdened with great uncertainty.

In Poland, the transformation process has been underway since 1981 [1]. In the solutions of the Act of 1984 on spatial planning, one could notice tendencies to socialize spatial planning, which was reflected in the extensive obligation of public

consultation during the preparation of draft plans and the establishment of opinion-giving and advisory bodies in the planning process and the publication of adopted spatial development plans [22]. At the same time, it is estimated that the provisions of the Act regulating spatial planning were still adapted to the needs of the centralized state. Historians describe the years 1989-1991 as the "disappearance of communism"; in 1989, the "key fact of the Polish transformation" took place, which was the total defeat of the totalitarian power in Poland, closing 45 years of its history [1]. The years 1989-1990 brought a change in the socio-political and economic system of the Poland. The spatial planning system ceased to meet new needs [22]. In the following years, although slowly, there were changes towards full democracy, laying the foundations for a market economy, as well as new legal solutions regarding the management of space. Under the Act of 1998 on the introduction of a basic three-level territorial division of the state, 16 new voivodships with legal subjectivity were created. Since 1999, the voivodship has been not only a unit of territorial division of government administration, but also a unit of local government.

Centralized directive planning was abandoned, starting the search for a new formula of spatial plans and studies. The critical position of spatial planning specialists in relation to the traditional method of spatial planning, which has been used for decades, and the adoption of the Act on Spatial Planning in 1984, contributed to undertaking work at the Institute of Environmental Management in Warsaw (Instytut Kształtowania Środowiska) on the preparation of the concept of a new method of general spatial planning [2]. The next stage of concretization of spatial planning methods was determined by the Act of 1994 on spatial development. The subject of updating the theoretical and methodological foundations of spatial planning was discussed [31]. In Poland, at the beginning of the twenty-first century, spatial planning found itself in a new situation defined by political changes and relations in the international dimension, i.e. on a global, European and cross-border scale [32]. Out of concern for the quality of spatial planning studies, the Office of Housing and Urban Development published in 2000 a methodological guide on the preparation of spatial development plans for voivodships. It was intended to be treated as a help and a platform for discussion. For all users, the guide was to create a common platform for the reference of the activities of its users. It was envisaged that the recipients of the guide would be: decision-makers responsible for drawing up and implementing the findings of the plan, who should familiarize themselves with

the essence and function of regional planning; scientists for whom spatial development plans of voivodships are the subject of research and studies, as well as spatial planners professionally involved in the development of spatial development plans [32]. The transition from this approach to regional planning in centralised directive planning to subjective planning required new ways of spatial planning. However, it must be honestly admitted that for the "new thinking" needed above all, there was a lack of sufficient knowledge and skills. Examples of the spatial planning in Western European countries were helpful, but they required an understanding that was not facilitated by the ever-widening cognitive gap between practice and the theory of spatial planning. Although publications based on a review of foreign methodological experiences completely new in relation to traditional forms of planning appeared in Poland already in 1980, they were incidental and reached a narrow group of interested recipients, e.g. [20]. Spatial planning was perceived primarily in technical terms, as a rational response to a set of identified problems. The essence of spatial planning remained virtually unexplored. It remained beyond the interest of the wider audience, to which this intellectual and informative message reached. A professional discussion usually focused on making physical plans, not on the planning method. The central problem was an impact of a heavy old industry of the region on the environment (damages) and the poor quality of life in strong urbanized areas.

3. SPATIAL PLANNING FROM BEFORE THE POLISH TRANSFORMATION

The key importance was the conference of the Committee of Architecture and Urban Planning of the Polish Academy of Sciences entitled *Spatial management in the Upper Silesian Industrial District (GOP) on the example of the implementation of spatial development plans in the years 1945-1989 – Katowice, 19-20.X.1989 r.* ("Gospodarka przestrzenna w GOP na przykładzie realizacji planów zagospodarowania przestrzennego w latach 1945-1989"). At that time, it was considered that:

Spatial planning in the Upper Silesian Industrial District (GOP) has an important contribution to the development of Polish urban planning thought. For this reason, achievements in this area deserve to be registered, organized and discussed.

The emergence of successive generations of plans, such as the GOP's large-scale plans, prompts reflection on the causes of change. With the multiplicity of workshop differences of subsequent generations of spatial plans, it seems appropriate to ask the question to what extent they are continuations of the previous ones. To what extent has GOP spatial planning so far been a genuine tool of spatial policy and has influenced spatial management?

In addition to the historical reflection related to the changes in spatial planning in the GOP, it is particularly important to indicate the directions of desired changes in this area [4].

The main aim of the conference was *to review the effectiveness of spatial planning in changing system conditions, to define conclusions for the next generation of plans*. The papers for the conference describe four basic editions of the plans covering the Upper Silesian Industrial District (GOP), which were created in the post-war period (the number of studies related to them is greater). The authors of the papers, as a rule, were the main designers of these regional plans. A polemic with them was a co-paper prepared by Czesław Kotela (1924-2015), an architect and urban planner with a rich professional achievements, who, among others, in the years 1957-1962 worked as the chief provincial architect in Katowice. The co-referent called these plans (for convenience, but also not without reason) the surnames of the general plan designers and listed [19]:

- Pieńkowski's plan of 1953
- Dziwoński's plan of 1962
- Dołhun's plan of 1978
- Łukowski's plan of 1985-1989 (not finished in 1989).

In his co-paper, which was an introduction to the conference discussion, the co-referent expressed this opinion:

Without denying the need to improve plans, I would like to express my conviction that this point of view does not lead to positive results in spatial development. You can get excellent results in spatial management, using average plans and very bad results – with excellent planning studies. Spatial management is a process in which the plan is one, sometimes even the most important, but only one of the factors of this process [19].

This opinion argued with the main goal of the conference and the influential view that spatial development depends on urban craftsmanship and graphic

establishments of the plan [21]. In order to move away from such functionalism, in the twenty-first century a lot of effort was put into searching for new ways of spatial planning in the Silesian Voivodeship.

4. SPATIAL PLANNING AFTER THE POLISH TRANSFORMATION

As it is known, spatial planning involves various methods most often used by the public sector, in connection with changes in the environment and the development of the environment. Modern spatial planning arose at the beginning of the twentieth century in the state's response to the specific social and economic problems caused in the nineteenth century by the Industrial Revolution and its aftermath. It consisted in a comprehensive assessment of all relevant issues and links between them, and then rational distribution of activities in the layout of the entire city or urban region. Zoning regulations were created for the separation of areas with different types of land use. Attempts have been made to limit or halt urban growth in some locations and to encourage growth in others; whether by planning "new cities," or "green belts" around cities, or by using other spatial forms. The success of this type of spatial planning, which we now refer to as "physical planning", fell on the 1960s of the twentieth century [33]. Examples include the plans drawn up for the Upper Silesian Industrial District (GOP), from 1953, 1962, 1978. The 1985-1989 plan represents a systemic approach to controlling spatial change [9], [12], [13].

As it is also known, in the years 1960-1970, with the development of the theory of spatial planning, it was thought about using mathematical analysis to fully program the development of settlement systems, but this approach quickly lost favor. However, under the influence of criticism of the prevailing style of planning, in which the planner planned for society treated as a homogeneous whole, planning procedures began to include more opportunities for social participation in planning. In recent years, the scope of "interests" with access to participation in planning processes has been expanded. The challenge for planners was to manage these competing interests and balance social and economic development in terms of space. In Poland, since the beginning of the 1990s of the twentieth century, this required taking into account not only the accelerated pace of transformation taking place on a global scale, but also a radical change in the socio-political and economic system of

the country. The principles of the market economy, the transition from centralization to decentralization of state life, the empowerment of local communities and the creation of local self-government, etc., forced a revision and re-evaluation of existing positions. Attempts were made to reformulate the paradigm of the field of spatial planning in the new conditions of the country's development. Added to this were the issues of European integration. European aspirations led to a broader view of the surrounding reality. It also required understanding the essence of spatial changes and taking into account "liquid reality" in planning processes. The "liquid reality" is expressed by constant changes in land use and spatial development. Changes bring social and economic development or stagnation and sometimes collapse to cities and regions. Thus, changes are fraught with uncertainty and risk that are brought about by unpredictable interactions and interdependencies between the components of such a spatial system as the city and the region.

Currently, spatial planning in Poland has different faces. However, it continues to address public policies and activities undertaken with the intention of influencing the distribution of activities in space and the links between them; ensuring that the development is in the right place at the right time. It looks different when it comes to spatial planning in the province. However, the essence of this method lies in taking into account the changing situations and uncertainties. This is a method of strategic planning. This strategic approach and new ways of spatial planning in the Silesian Voivodeship are represented by the plans from 2004, 2016 and the plan currently under development [7], [8], [10], [15], [17], [18], [25], [26], [27], [30]. The new methods are briefly characterized in the following aspects: substantial, process and contextual.

4.1. Substantial aspects

The material scope of the Plan is determined by the Act on Spatial Planning and Development. It indicates issues that need to be taken into account in planning and spatial development. It is crucial to assess the state of the existing and key problems of the development of the voivodeship. The boundaries of the study, the type of data collection and the structure of the information collected require determination.

In the 2004 Plan, the diagnosis of the state includes, in accordance with the Act: basic elements of the settlement network, communication and infrastructural links,

environmental resources, public safety and the occurrence of threats, problem areas in various spheres.

In the 2016 Plan, the diagnosis of the condition primarily includes the characteristics of the space in the system of 7 functional areas. The basic trends of spatial development of the region were also characterized, including social, economic and environmental trends.

In the Plan in development since 2019, the so-called "Plan 2030", the state diagnosis withdrew from the examination of the state of space in the arrangement of problem areas or functional areas. "Planning Territorial Diagnosis" focuses on the study of the relationship between "Society" and "Economy" and "Environment" with references to changes in the structure of land use and the spatial structure of the region [11]. A new diagnostic element is the "relational approach" [6].

Shaping the purpose and development of the area takes place through the shaping of the spatial structure. In order to organize space and shape places, neither ideal forms of the region nor an apparent planning order are sought. Rather, trends and trajectories are analysed in order to ensure that projects and action programmes with adequate political support are later ensured to correct them. Territorial integration, cohesion and coordination of conflicting interests are key concepts for them in the spatial planning of the region. In all 3 Plans, the shaping of the spatial structure of the region is based on models that illustrate the principle of shaping the region's spatials, "discussed" in the 2004 Plan, rather than a specific solution [16]. It is such a "strategic vision of the development of the Silesian Voivodeship", which consists of 4 metropolitan areas, development bands and multifunctional zones (Fig. 1).

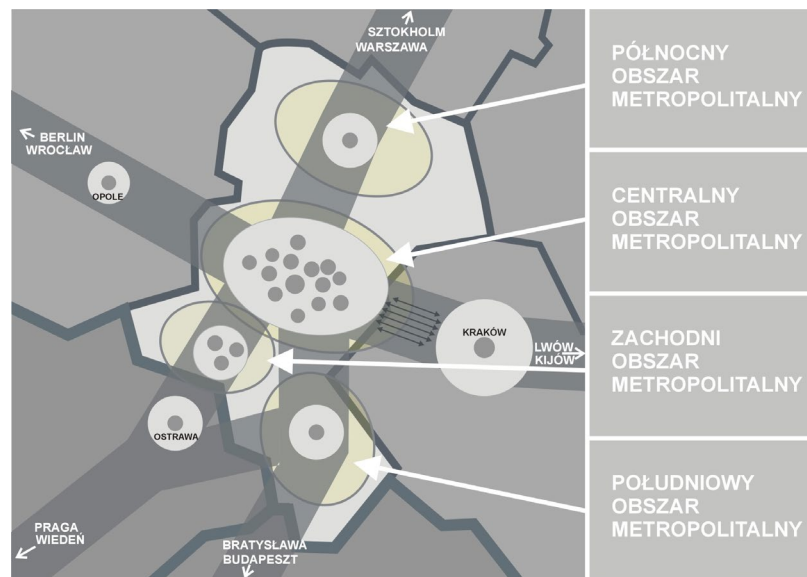


Fig. 1. Model of the spatial structure of the Silesian Voivodeship

Rys. 1. Model struktury przestrzennej województwa śląskiego

Source: "Plan of 2004" [24].

4.2. Procedural aspects

The formal procedure for drawing up the Plan is specified in the Act on Spatial Planning and Development. The procedure includes the possibility of social participation in planning. It is crucial to be aware that space is created in social processes. Therefore, the shape of the real space will be influenced by who takes part (or does not take part) in the planning process. The process of spatial planning, understood as a process of social communication, imposes the obligation to design an appropriate "communication environment", including various planning entities, forms of communication between them and the language of communication.

The 2004 Plan shows the planning process: designed next steps in the planning process, some participants and communication channels (Fig. 2). A similar scheme of action was included in subsequent studies. Detailing of these issues occurs in the resolutions of the Silesian Voivodeship Assembly regarding the commencement of the change of the Plan and the organization of planning works in each of the 3 Plans. As a rule, the Plan does not have a general designer/planner, but has an appointed "Plan Change Consultant" who directs the design work and supports the planning process. In addition, it is the Marshal of the Voivodeship who appoints the Steering Committee, the Task Force and the Design Team. The Design Team consists of employees of substantive departments of the Marshal's Office and employees of local

government organizational units of the Silesian Voivodeship. Therefore, the projects and action programmes created have adequate substantive and political support.

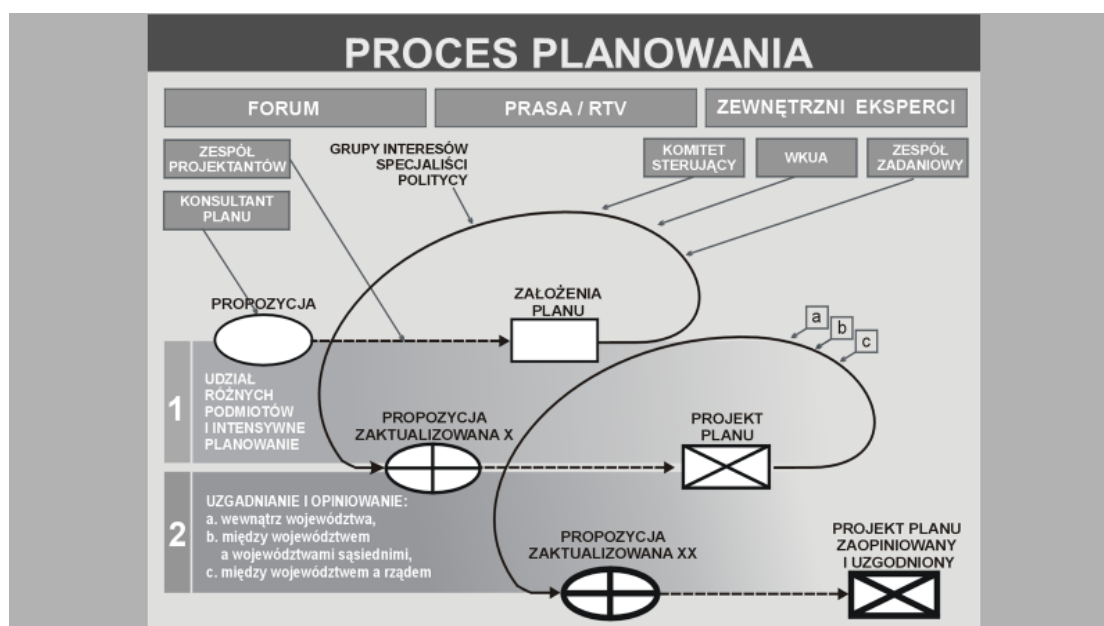


Fig. 2. Planning process

Rys. 2. Proces planowania

Source: "Plan of 2004" [24].

4.3. Contextual aspects

The Act on Spatial Planning and Zoning indicates spatial order and sustainable development, as the leading ideas in which spatial planning is carried out and implementation of the plans. However, it is crucial to understand that places are produced through the interaction processes of global and local factors. This draws attention to the global, European, national and regional context of programmes and policies, and to the issues of political economy and ethics in which spatial planning occurs. These are issues closely related to the development strategy of the region and the question of who gains and who loses on planning and why.

Each subsequent Plan is characterized by greater consistency with the development strategy of the voivodeship. Integrated planning combines development policy with spatial policy. Identified challenges that the Plans seek to address include economic competitiveness, social cohesion, and spatial and environmental balance between open and built-up areas.

In the currently developed Plan, the Areas of Strategic Intervention (OSI) are indicated. This is accompanied by the conviction that in this way undertakings and projects created under the Regional Operational Programme for 2021-2027 can strengthen the spatial dimension of the voivodship's development strategy (Fig. 3).

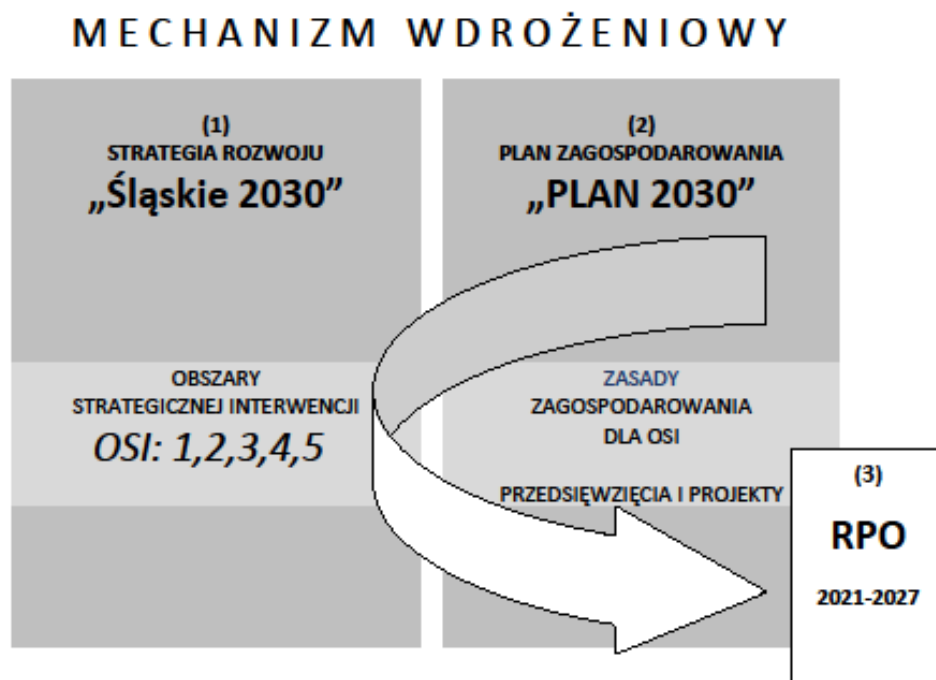


Fig. 3. The implementation mechanism

Rys. 3. Mechanizm wdrożeniowy

Source: The so-called "Plan 2030", in preparation [14][15].

- (1) The Silesian Voivodeship Development Strategy ("Śląskie 2030"); Strategic Intervention Areas (OSI): 1. Growth centres, 2. Naturally valuable areas, 3. Communes losing socio-economic functions, 4. Municipalities in coal mining transformation, 5. Municipalities with environmental problems range of air quality.
- (2) The Spatial Development Plan ("Plan 2030"); Rules of spatial development for the Strategic Intervention Areas (OSI), Undertakings and Projects.
- (3) The Regional Operational Program (RPO) for 2021-2027.

5. CONCLUSION

Research shows another new "way" of spatial planning in the Silesian Voivodeship. It consists in "not planning" or replacing spatial planning with other instruments of spatial management. Currently, this is a much broader trend, which goes even beyond the Polish reality [3], [5]. It is often perceived as an aversion to spatial planning. Meanwhile, spatial planning is constantly changing and will continue

to change, if only because it must take into account the consequences of the IT revolution of the twenty-first century. This shows that the future could be "without plans" and at the same time planning as a set of methods could survive with roles other than regulatory and strategic roles. This could be the case primarily on a local scale. Therefore, the search for new ways of spatial planning in the Silesian Voivodeship can hardly be considered completed. It must be continued, and the research attention directed beyond the plans, because as mentioned at the beginning: *"Spatial management is a process in which the plan is one, sometimes even the most important, but only one of the factors of this process"*.

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HYDROTECHNICAL DEVELOPMENT WITH VEGETATION AS OPPORTUNITIES FOR LIFE QUALITY IN CITIES ABSTRACT

1. INTRODUCTION

Water is a key and multifunctional resource in the context of the urban economy - the most complex anthropogenic structure. Water affects space, society, cultural and environmental resources. Hydrotechnical structures affect both the potential and image of the city. Integrated urban management is based on three pillars: equal access to the natural environment, efficient economic benefit, preservation of ecological balance, and the ability of the city's natural system to regenerate [1].

Hydrotechnical structures and regulation systems are introduced in river channels for various reasons. Larger hydrotechnical structures, such as weirs or dams, may serve industrial, communication, or protective roles of areas inhabited by humans [2]. Recognizing the riverbed development influence on its functional pattern seems to be a crucial problem, especially in the context of flood risk elimination. Many hydrotechnical objects, especially made of concrete (Fig. 1a), may disturb the ecosystem not only in terms of influence on the river regime but also on its aesthetic aspect. However, large damming facilities are placed at considerable distances from city centers or residential areas, to mitigate this negative impact.

Inappropriately exposed hydrotechnical elements, such as neglected bridge pillars (Fig. 2b), or sew outlets, will significantly disturb the aesthetic aspect of urban space.

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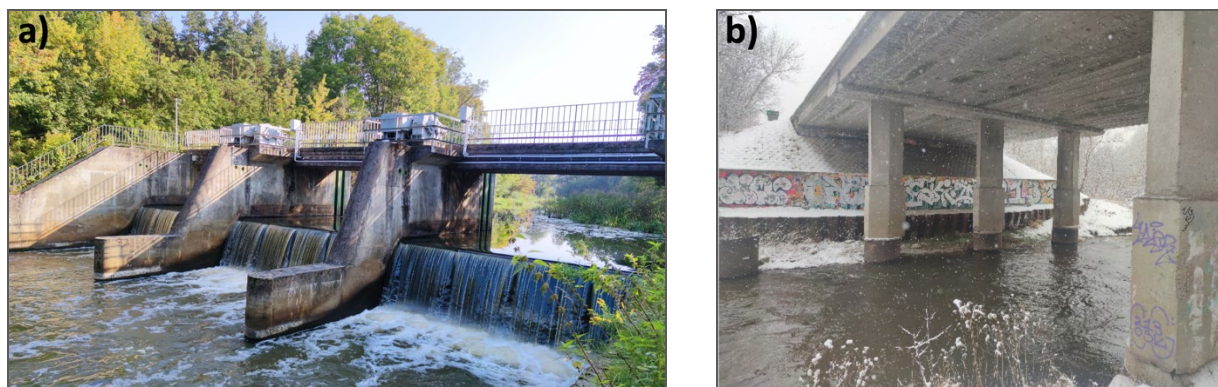


Fig. 1. Examples of concrete hydrotechnical structures: a) weir on Świder river, b) bridge piers on Świder river

Rys. 1. Przykłady betonowych budowli hydrotechnicznych: a) jaz na rzece Świder, b) filary mostowe na rzece Świder

Source: Authors' property

The retention and slow release of stored water should be the guiding idea of water management in urban spaces. Towards the equitable concept of increasing retention in cities, the research problem is to reconcile the need for technical development with the relative non-deterioration of its ecological status, as well as urban aesthetics. Therefore, research questions arise, connected with human living space created using vegetation, water and architectural elements, and proper water management. Is it possible to develop the city rivers using hydrotechnical structures that enable water retention, obtaining additional benefits of enhancement of life quality in cities?

2. VEGETATION IN URBAN SPACE

The comfort and well-being of public spaces users are connected not only with ensuring visual and social comfort, but also with preserving biodiversity, providing the possibility of direct contact with nature, and increasing the recreational value of the city. The basic functions of city greenery include ecological function; participation in gas exchange, influence on water circulation, on air humidity conditions, filtering role, protection, isolation, health function, recreation, didactic, educational, etc. [3, 4].

From an early age, we learn about oxygen production by trees. However, the engineering approach needs to be clarified - the highest oxygen production will be

obtained using such trees and shrubs species as lilac, aspen, hornbeam, followed by ash, oak, pine, maple, etc. [5]. Large areas with grassy vegetation, e.g., lawns with the character of flower meadows, play a significant role in regulating oxygen-carbon dioxide ratios in the air [6, 7]. Thermal and humidity conditions of urban areas depend very much on greenery, its stage of growth, planting method, and species selection. Daytime heat absorption, accumulation, and nighttime heat release are different in urban and rural areas [8]. With the water vapor also phytoncides are produced, some of them have bactericidal, insecticidal, disinfectant, etc. effects on the human organism. The greenery creates a protective zone from roads runoff as well as from vehicle emissions, including heavy metals. Vegetation has filtering properties [9, 10], retaining some of the pollutants in the air, preventing atmospheric pollution.

Urban vegetation spaces are permeable surfaces for rainwater, i.e., biologically active areas, acting as city ecological protection systems, mainly those characterized by a diverse structure of species [11]. The existing urban greenery, especially in the city center, should satisfy a wide range of user needs, from aesthetics and urban composition to health, recreation, and educational functions. Bank vegetation not only has an obvious effect on riverbed ecological quality enhancing but also improves the conditions of bank stability (Tab. 1).

Table 1

Aquatic (*w*), perennial (*p*), and shrub (*K*) plant species for city hydrotechnical objects planting – selected examples

Role	Decorative (not for banks reinforcement)	Bank and canal or riverbed reinforcement species (decorative leaves/flowers)	Bank reinforcement species (decorative shape)
Example of application	a decorative plant species in ponds, wetlands, steep and gentle banks, oxbow lakes	community gardens containers, terraces naturalistic compositions ponds, city gardens, oxbow lakes	Scalpers Island, coastal zone Ecotone vegetation, covering vegetation along automobile traffic routes
Selected exempla	<i>Iris pseudacorus</i> (<i>p</i>)	<i>Phalaris arundinacea</i> (<i>p</i>)	<i>Carex acutiformis</i> (<i>p</i>)
	<i>Galium palustre</i> (<i>p</i>)	<i>Phragmites australis</i> (<i>p</i>)	<i>Carex appropinquata</i> (<i>p</i>)
	<i>Alisma plantago-aquatica</i> (<i>w</i>)	<i>Sparganium erectum</i> (<i>p</i>)	<i>Carex acuta</i> (<i>p</i>)

	<i>Rumex hydrolapathum</i> (p)	<i>Typhetum latifoliae</i> (p)	<i>Salix fragilis</i> (k)
	<i>Galium palustre</i> (p)	<i>Corylus avellana</i> (k)	<i>Salix purpurea</i> (k)
	<i>Nuphar lutea</i> (w)	<i>Rosa canina</i> (k)	<i>Salix eleagnos</i> (k)

Source: Own elaboration based on [Wysocki & Sikorski 2014].

Vegetation performs numerous functions in a river and its valley, the more important of which are: natural channel integration into the adjacent terrain, habitat creation for various animal species not found in agriculturally used areas, water protection, improvement of its oxygen balance, shading, etc. Dissolved oxygen is essential for the aquatic animal's respiration process and is a crucial factor influencing organic matter circulation in the aquatic ecosystem. The solubility of this gas decreases with increasing temperature, which can lead to a decrease in dissolved oxygen during summer. Both "live" and "non-living" vegetation is used. "Non-living" vegetation is used as construction material. Rooted, living vegetation inhibits erosion processes, provides for the growth of aquatic organisms, and initiates the formation of riparian habitats [12].

3. LIFE QUALITY IN CITIES

The current quality of life researchers often refers to utilitarianism. Since the beginning of the 20th century, the social sciences have been dominated by an economic approach to given social situation assessment. The European Union organizes annual competitions for the European Green Capital, which compare the current situation and plans in more than a dozen areas to be evaluated (including those related to water). The concept of integrated water management has been defined by the Global Water Partnership as a process that promotes the harmonious development and management of water, space, and other resources to maximize social and economic benefits within the limits of ecosystem health. Its implementation has become particularly important in the context of Poland's membership in the European Union.

Campbell proposed supplementing this definition with "subjective" indicators, focusing on individual evaluations, opinions, or the broader spheres of life expressed by individuals. Quality of life is therefore divided into domains, and then domains into components, being a subject of various research approaches [13]. Basic domains may

be health, recreation, social relations, or local environmental quality (Fig. 2) [13-16]. Each domain can be described by qualitative or quantitative indicators, considering a person or community as an individual. City design, as a habitat, opens opportunities for new activities, facilitates or enables health improvements, can provide opportunities for education, e.g., on sustainability, as well as allowing leisure and social relationships.

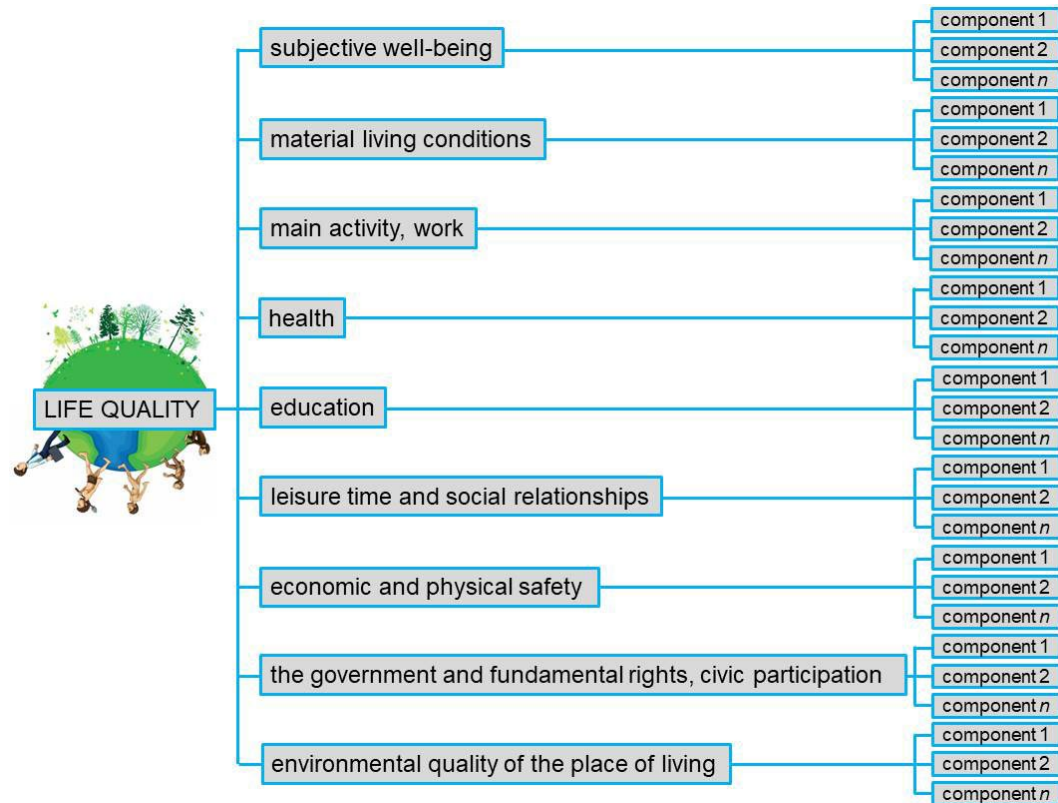


Fig. 2. Life quality main domains and component's structure

Rys. 2. Główne domenę, w których rozpatruje się jakość życia oraz ich komponenty

Source: Authors' own elaboration based on [13-16].

The city development considering the space for animate and inanimate elements of nature is emphasized by a document containing postulated principles of modern urban design - the Athens Charter. This document, prepared under the leadership of Le Corbusier, discusses the separation of the functional areas of the city and the creation of a rational and healthy living space. The document promotes the slogan "sun, space, green", thus three elements that should influence modern urban planning and architecture.

The high priority for urban water considerations stems from the fact that more than half of the global population already lives in urbanized areas, and the rate of urbanization has never been so high. Cities are major emitters of pollutants to water.

Water and greenery are the most principal elements of hydro morphological status assessment, as well as water resources management, which improves the natural environment and ecological safety of city inhabitants. The increasingly widespread and higher level of education and awareness of society increases expectations about the quality of life. And this depends on a healthy environment, proximity to green areas, and water bodies in the city. Their presence reduces the costs of the city's functioning and its infrastructure. It also reduces the number of factors that cause asthma and allergies and creates opportunities for psychophysical regeneration.

4. HYDROTECHNICAL STRUCTURES WITH VEGETATION AS A TOOL FOR PRO ECOLOGICAL URBAN SPACE DESIGN

Urban water resources management requires individual solutions, adapted to local specificities. The first step of integrated urban management model implementation is to recognize the need for innovative rainwater use solutions at the point of rainfall [12]. This creates the possibility to relieve pressure on stormwater drainage systems, increase groundwater recharge, increase the efficiency of wastewater treatment, improve microclimates, especially by support by the vegetation, to the development of green infrastructure, and consequently to improve the quality of residents' life and the cities aesthetic value. Once established vegetation, coupled with water objects, increases its efficiency and stability over time, because of plant growth, increasing variability of species, intensification of soil-forming processes, and thus soil retention, more intense evapotranspiration, climate regulation, and progressive adaptation to existing infrastructure. This results in reduced urban management costs [1].

Hydrotechnical structures are understood as constructions together with related technical devices and installations, serving water management and shaping water resources and their use, including earth and concrete dams, weirs, weir structures with overflows and drains, culverts, hydroelectric power plants, surface water intakes, sewage outlets, sills, harbors, pools, pillars, piers, boulevards, fish ladders and others [17]. During the past decades in Poland, the conviction of the absolute necessity to "move water away from people" was prevailing – for example in the case of Włocławek dam developed in the 1960s or weir on Radomka river in the rural in the suburbs of Radom. It was executed by technical measures including the

construction of embankments and large retention reservoirs [13]. Nowadays, the importance of water present in the city is emphasized, which is one of the objectives of the small retention programs implementation. Through retention and treatment of water resources in the landscape, watercourses restoration, and multifunctional management of rainwater, urban flooding can be prevented, while improving the microclimate and availability of water resources and using the cultural potential of water to increase the life quality of residents and urban landscape attractiveness.

Thoughtfully planned green infrastructure can serve as support for water retention. In non-urbanized areas, up to 90% of rainwater is absorbed by the soil in a place of precipitation occurrence. In cities, a significant quantity of rainwater is carried away by sewer systems and disappears from the city irretrievably. Precipitation is the only source of renewable water, so it should be seen as a valuable resource. When properly managed, it can effectively recharge groundwater, promoting the maintenance of vegetation and mitigating the effects of urbanization.

Water objects, arranged by hydrotechnical structures introduced in urban space, give a chance to create habitats close to nature. Such habitats will constitute places of natural or induced fauna and flora introduction. Hydrotechnical structures are necessary in many cases due to their contribution to the improvement of both the water balance and air-water relations in river valleys in the aspect of agricultural and natural environment needs. The construction of dam structures is provided both in programs related to wetland protection and small retention, as well as in drainage systems modernization plans. However, it should be emphasized that still, the priority in many urban agglomerations and agriculture is to meet the growing water demand, and therefore the needs of ecosystems recede into the background [18].

Green areas are subject to the common rules of spatial city composition. Urban green areas, being a place and a plane of social contacts, can become a space integrating the structure of the city by combining non-living elements such as water with different forms of plants. Aquatic and pond vegetation is characterized by high decorative values and has a significant impact on increasing biodiversity in the urban landscape. It creates natural habitats for many plant species, as well as other living organisms, such as amphibians, birds, small mammals, and insects. The aquatic vegetation is represented by plants completely submerged in water, as well as plant species whose leaves and flowers float on the surface of the water [21]. To introduce aquatic plants to hydrotechnical engineering structures, it is worth remembering to

create a favorable aquatic environment for various living organisms. The second group of plants associated with the aquatic environment is the rush communities, which are represented by rushes. Januchta-Szostak [22] in the context of sustainable development raises the need to consider qualitative attributes of public spaces related to the quality of the constituent elements such as water, air, flora and fauna, microclimatic and acoustic values of urban spaces, therefore it is important to deliberately combine water with aquatic and aquatic vegetation.

Reduced water retention and prolonged drought periods impede green infrastructure from functioning, especially in urban areas. They also reduce minimum discharges in rivers, threatening the maintenance of biological life. In addition, inappropriate channel regulation degrades the biological structures, functions of rivers, and reduces their self-purification potential. Accelerated water surface runoff results in increased export of pollutants. Deterioration of water quality prevents the safe use of the environment by society and biodiversity conservation [23].

Small hydrotechnical structures could create a space convenient for animals, frequently ensuring the continuity of organisms' migration by discontinuous structures, such as stone blocks [17, 24]. Natural materials are nowadays proposed to be implemented for various types of banks and bed reinforcements. The most popular and widely used are gabions, stone (Fig. 3a, b) and wooden weirs (Fig. 3c) or piles (Fig. 3d) as well as fascine constructions. Various vegetation species are used in aim to banks stabilization: turf, spreadingly rooted trees, shrubs, rushes, that provide shelter and nesting places. Environmentally friendly construction materials easily integrate with the adjacent terrain. Following reinforcement solutions are widely used in engineering practice: stone, fascine, or gravel coverings, wooden sills, fences and palisades, fascine, or stone rapids [25]. Retention reservoirs may be accompanied by an entire range of introduced types of vegetation, which can be divided according to their location in the cross-section of the reservoir or the river (Fig. 4).



Fig. 3. Environmentally friendly solutions for water regulation: a) stone sill (Park im. Edwarda Szymańskiego in Warsaw), b) stone sills cascade (Park im. Edwarda Szymańskiego in Warsaw), c) wooden Palisade (Park Arcadia in Warsaw), d) wooden sill (Park im. Edwarda Szymańskiego in Warsaw)

Rys. 3. Przyjazne naturze rozwiązania w zakresie regulacji zasobów wodnych: a) kamienny próg (Park im. Edwarda Szymańskiego w Warszawie), b) kaskada kamiennych progów (Park im. Edwarda Szymańskiego w Warszawie), c) drewniana palisada (Park Arkadia w Warszawie), d) drewniany próg piętrzący (Park im. Edwarda Szymańskiego w Warszawie)

Source: Authors' property.

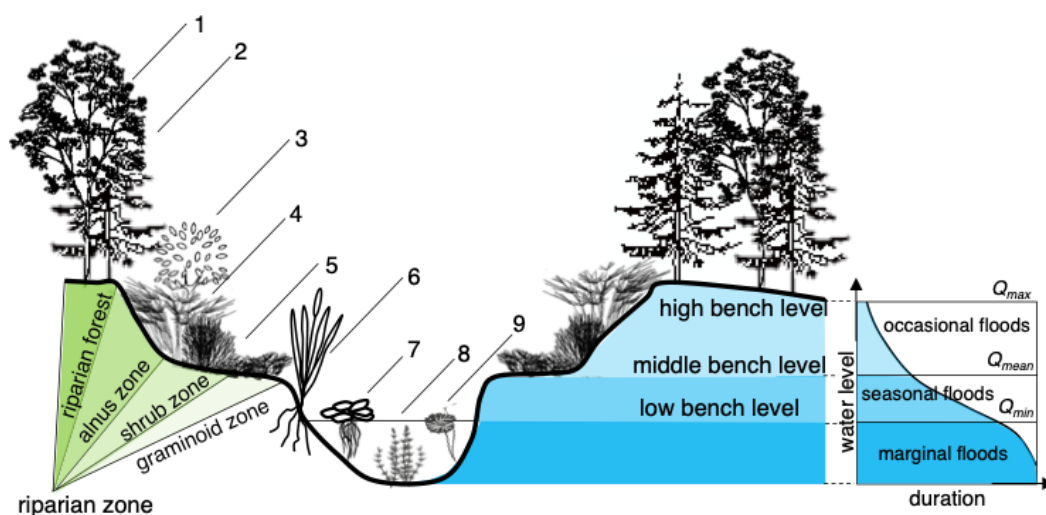


Fig. 4. Well-developed city river vegetation zone, where: 1 – deciduous trees, 2 – coniferous trees, 3 – alnus trees, 4 – high grass, 5 – low grass and shrubs, 6 – emergent plants, roots in water, 7 – floating species, 8 – submerged species, 9 – rooted floating species, Q_{min} – minimal flow; Q_{mean} – mean flow, Q_{max} – maximal flow

Rys. 4. Dobrze rozwinięta strefa miejskiej roślinności przybrzeżnej, gdzie: 1 – drzewa liściaste, 2 – drzewa iglaste, 3 – olchy, 4 – roślinność trawiasta wysoka, 5 – niskie trawy i zarośla, 6 – rośliny zakorzenione w wodzie, 7 – gatunki unoszące się na wodzie, 8 – gatunki zanurzone, 9 – gatunki zanurzone ukorzenione w dnie, Q_{min} – przepływ minimalny, Q_{mean} – przepływ średni, Q_{max} – przepływ maksymalny

Source: Authors' own conception.

Water retention ponds are reservoirs with additional retention capacity to retain and treat rainwater (Fig. 5a, b). When the water in the pond purifies itself by seeping through successive substrate layers, the object could be classified as a bioretention basin.

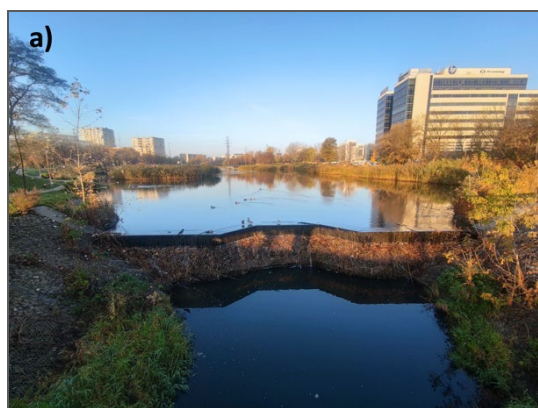


Fig. 5. City reservoirs: a) Staw Służewiecki in Warsaw, b) Park Moczydło in Warsaw

Rys. 5. Miejskie zbiorniki wodne: a) Staw Służewiecki w Warszawie, b) Park Moczydło w Warszawie

Source: Authors' property.

Small hydropower plants often recreate historical damming. Old, sometimes damaged structures are restored, allowing to obtain power from 1 to 5 MW, also in

cities (Fig. 6a). As of 2017, about 800 such small hydropower plants were operating in Poland, of which almost 600 were the smallest, run-of-river plants (Fig. 6b), with power output up to 0.3 MW. Old constructions, although most often typically technical, can have interesting architectural forms and elements such as ornate handles, elegant counters, or worktops in control rooms.

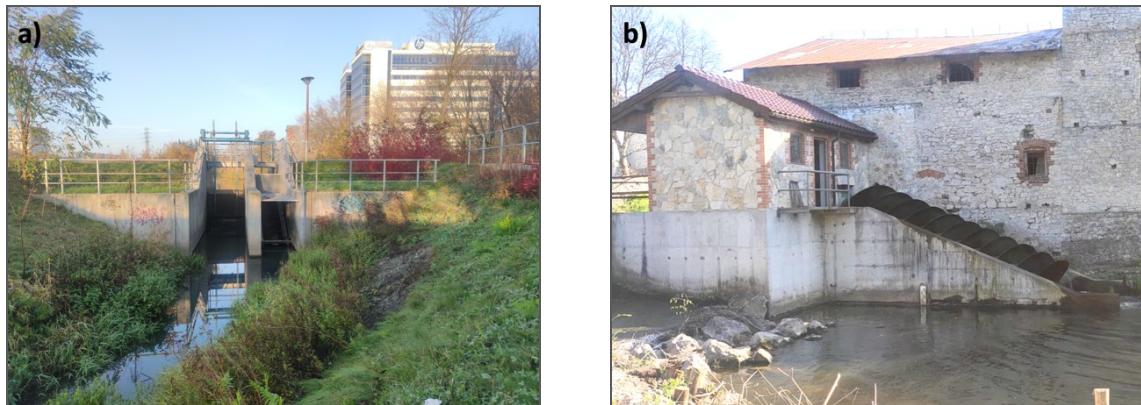


Fig. 6. Small hydropower plants equipped with Archimedean screw: a) Staw Służewiecki in Warsaw, b) Run-of-the-River hydropower plant in Wolica, built-up on old mills ruins, Świętokrzyskie voivodship.

Rys. 6. Małe elektrownie wodne wyposażone w śrubę Archimedes: a) Staw Służewiecki w Warszawie, b) elektrownia wodna w Wolicy, zbudowana na ruinach młyn, woj. świętokrzyskie

Source: Authors' property.

There is a current trend to introduce small water structures into the patios of office buildings (Fig. 7 a,b). The courtyard space consists of various elements such as green areas, access roads, squares, parking lots, etc. However, for such a space to adequately fulfil its function, it should be properly designed and arranged. Harmoniously designed will have a calming effect. Hydrotechnical constructions introduced in open common spaces of office buildings create small reservoirs, and the accompanying vegetation creates terraces, shaded areas, or places to rest.

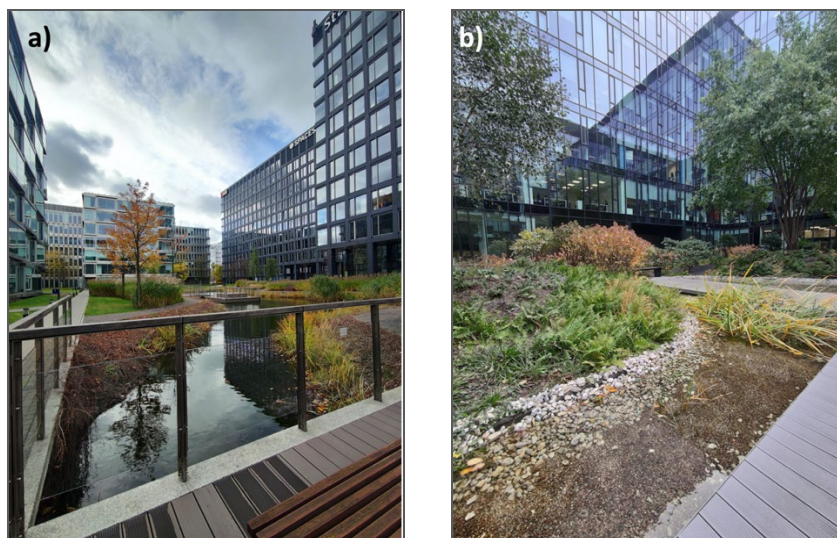


Fig. 7. Office building patio arrangements: a) Platinum Business Park in Warsaw, b) Konstruktorska Business Center in Warsaw

Rys. 7. Aranżacje patio budynków biurowych: a) Platinum Business Park w Warszawie, b) Konstruktorska Business Center w Warszawie.

Source: Authors' property

Urban development, with the right direction of vegetation storage adoption, leads to the search for modern solutions. An example of an innovative approach is the patented HYDROBOX system [26]. This system is based on geocomposite system with a superabsorbent that can absorb up to 300 times more water than it weighs itself, while easily returning moisture to plants.

To create the additional curvature to city rivers or canals, different types of flow-directing structures are used, such as low thresholds (0.10 - 0.20 m high) or deflectors. In addition, tree trunks, stone, or gravel islands, or individually placed boulders can be used for this purpose. These elements influence the flow direction, by changing the spatial distribution of stream velocity, as well as energy dissipation pattern. The proper placement of such structures can result in the erosion intensification in a certain section and subsequent bedload accumulation in river another part, which leads to a riverbed morphology transformation. The use of such elements has a relatively positive effect, leading the hydro morphological river status closer to the natural following restoration idea [27].

Ecological conditions improvement is influenced by the vegetation introduction, but with the caution to avoid a dangerous, unacceptable reduction in the cross-section's capacity. Both channel zone plants and riparian vegetation shall be introduced. The introduction of technical reinforcements such as mesh-stone gabions allows the vegetation introduction, which not only improves the watercourse

appearance but can also serve as biofilters improving water purity [27]. The gabions application is justified due to several following advantages:

- they easily integrate with the adjacent terrain;
- they are permeable for water and do not cause large local hydraulic gradients;
- gabion elements can be transformed or dismantled;
- local damages to the nets can be easily repaired;
- they enable free fauna migration and create hiding places for fish;
- their porous structure allows the sand, silt, and organic debris retention, constituting the base for the roots and rhizomes of rush plants, and shrubs and grassy communities to develop in the silted spaces between the stones [25].

The occurrence of bays, local bed narrowing, stagnation areas, rapids, islands, a subsequence of steep and gently sloping banks, local obstacles: boulders, fallen tree trunks, wooden palisades, fences are a requirement for the diversified abiotic conditions development in the riverbed zone (hydraulic, humidity, light and thermal conditions). They determine the effectiveness of the water self-purification process as well as the possibility and pace of induced habitat restoration [27].

The vegetation present on all floodplains provides conclusive evidence that an area has high ecological value. The urban watercourses banks can be planted with introduced plants species. Further vegetation development can proceed spontaneously. Human activity therefore should be limited to necessary maintenance. With time, such a habitat will acquire natural morphological features. Bank protection should aim at the natural biological covering as a technical element intentionally included in the overall solution. Plants integrated into the bank can fulfill certain tasks of technical elements by impeding and reducing the water flow velocity in the shoreline region and protecting slopes from being cut and eroded.

Complete bank enhancement by stone or concrete riprap and slabs are considered undesirable due to low ecological values for stocking, biocenosis development, water quality, and low aesthetic value. Bioengineering, as opposed to purely technical measures, is recognized by environmental organizations as a combination of biological, technical, and ecological aspects of erosion control and land stabilization, combining vegetation with artificial construction materials [12, 25]. Even small elements of urban development, which have an obvious utilitarian role, can contribute to the visual attractiveness of an environment. For example, rapid canals will seem completely different, made of concrete, with a uniform cross-

section, and made of architecturally interesting stone. While designing this type of device it should be remembered about the technical requirements. In this case, the basic condition will be the permissible stream velocities, characterizing the given material, the exceeding of which may cause erosion and elements displacement (Tab. 2) [27].

Table 2

Stream velocity limitations for various types of bed reinforcement materials

Stream velocity v [ms^{-1}]	Reinforcement material
5 ms^{-1}	Concrete slabs >1.0 m thick, coarse and stone-filled cushions, stone mattresses >1.0 m thick
4 ms^{-1}	Concrete slabs $0.4\text{-}1.0$ m thick, two-layered cobblestones with medium diameter >0.25 m
3.5 ms^{-1}	Cobblestones with medium diameter >0.30 m or 0.40 when using cobblestones with palisade
$2.0\text{-}2.5 \text{ ms}^{-1}$	Fascine mattresses >1.0 m thick

Source: Own elaboration based on [27].

5. CONCLUSION

Hydrotechnical structures in the city must meet several technical requirements in the field of river engineering. Therefore, they have certain restrictions, and the aesthetic aspect should not be a decisive factor when choosing the type, material, and shape of the structure. However, with a wide range of nature-friendly materials, following the idea of natural landscaping, they can be designed to provide an opportunity to create an urban landscape. Activities aimed at life quality increasing and preparing the city for floods and droughts should apply to land managed by developers, housing communities, or private entities. Properly designed hydrotechnical facilities provide an opportunity to enhance the life quality within the domain of human activities, health, education, leisure time, and social relationships, as well as the environmental quality of place of living, however, quantifying this impact requires questionnaire surveys research. This study is modern environmental solutions review that can be applied not only in large cities, but also can serve as

development factor for smaller cities. The design of such solutions should be performed based on multidisciplinary expert knowledge.

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CRITERIA OF EVALUATION OF MONUMENTS IN THE CONTEXT OF PRESERVING EXISTING BUILDING STOCK

1. INTRODUCTION

The 21st century is a period of specific challenges for European cities. Demographic changes, social and economic problems as well as issues related to climate change require the use of tools that will allow them to develop in such a way that, while meeting the needs of the current generation, will also make it possible to pass on functional cities to future ones. An idea that responds to this demand is the idea of sustainable development. In Poland, this principle has the rank of a fundamental law and arises from the provisions of the Constitution. At the same time, there are a number of legal acts within the European Community, which take up threads related to the idea of sustainable development. In particular, documents such as the Leipzig Charter, the New Leipzig Charter or the Agenda for Sustainable Development set goals based on this idea for particular sectoral policies. The New Leipzig Charter devotes much space to the transformative power of cities. Transformation is understood in this document as an activity based on the integration of social, ecological and economic aspects of the concept of sustainable development. It is supposed to be a change that, by transforming production and consumption models, will make it possible to "allow for the establishment of a circular economy which redefines and ensures a sustainable use of resources, while significantly reducing waste and carbon emissions" [1]. At the same time it is noted that the core of sustainable urban development is the preservation and promotion of tangible and intangible heritage. The above provisions allow for the identification that one of the objectives of sustainable development should be the development of cities based on the use of the existing elements of the urban structure, including

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elements of cultural heritage. This principle is codified in the Urban Agenda for the EU. Partnership on Culture/Cultural Heritage. Final Action Plan, where Transformation, Adaptive Reuse and Urban Reconversion is one of the five pillars of the Urban Policy on Culture and Cultural Heritage [2]. The links between effective heritage protection and sustainable development are also highlighted in the Davos Declaration, where we find the following passage: "Cultural heritage is a crucial component of high-quality Baukultur. The way we use, maintain and protect our cultural heritage today will be crucial for the future development of high-quality built environment" [3].

The aim of this paper is to show how the conservation doctrine can support the sustainable development of cities, especially in the aspect of saving the structures that form cities' building stock. Taking into account that at the core of conservation activities is the issue of selecting objects for protection by assessing their value, the analysis will focus on the criteria used for this purpose in Polish law. The analysis will be accompanied by a research question on how the current criteria support sustainable urban development. This will allow for the identification of gaps in the system. In order to set this reflection in the history of doctrine, the basic text for the discipline, *"Der Moderne Denkmalkultus"* by Alois Riegl, will be reviewed. The analysis of the text will allow answering another question - whether there are tools in the text that can be used in conservation doctrine today to support sustainable urban development based on the preservation of the existing building stock. These issues are a voice in the deliberations undertaken by Polish conservators for more than ten years [4], and are also an attempt to solve a problem signalled repeatedly at scientific conferences related to the discipline such as last year's 6th Heritage Forum of Central Europe. Heritage and Development organised by the ICC in Kraków.

2. SUSTAINABLE DEVELOPMENT AND HERITAGE PROTECTION

The preservation and protection of the built structure of cities is one of the most crucial issues of conservation doctrine. Echoes of the idea that the urban landscape should be treated as a whole and protected holistically appear already in the 19th century in the writings of John Ruskin or later in the work of Camillo Sitte [5]. The Athens Charter of 1931, the first international document with recommendations for

conservation policy, also noted the need to preserve the image of historic cities [6]. A particular moment in the history of the issue was the reconstruction of European cities from war damage. Urban planners, architects, and people associated with the protection of cultural heritage were then faced with the challenge of rebuilding cities in such a way as to, on the one hand, preserve their original, historical character and the monuments they contained, and, on the other, improve building standards and create good conditions for their further development [7]. At that time also, many European countries developed legal principles of spatial planning, which also included the ways of managing cultural heritage [8]. Parallely, an international debate on the concept of heritage and the legal conditions for its protection was developing, which was reflected in the development of numerous documents signed by UNESCO and ICOMOS. Throughout the years, the definition of heritage has become broader. Milestones include the recognition of intangible heritage and later, the urban landscape. In the preamble to the UNESCO Recommendation on the Historic Urban Landscape the principle of sustainable development appears literally - *"the principle of sustainable development provides for the preservation of existing resources, the active protection of urban heritage and its sustainable management is a condition sine qua non of development"* [9]. Simultaneously to activities connected with broadening the definition of heritage, processes connected with its use in spatial planning are taking place. Initially treated as an object of planning, over time it is becoming its subject [10]. The development of both disciplines is reflected in the formation of urban policies and is represented in legislation on heritage protection.

3. EVALUATION OF MONUMENTS

3.1. The issues of statutory definition

At the foundation of the protection and conservation of historic monuments is the recognition whether the object we deal with is a monument. To make such an assessment the object is visually inspected and evaluated. During the assessment, values are identified in the object which, when recognised, allow the object to be classified as a monument. In this process not only the formal judgment is important, but also the reference to the current law and the definitions that are included in it. The current definition of a monument was introduced by the provisions of the Act on

the Protection and Care of Monuments (Act of 23 July 2003). According to the definition included in this Act, a monument is *an immovable or movable property, its parts or complexes, being the work of man or related to his activity and being a testimony of a past epoch or event, the preservation of which is in the public interest due to its historical, artistic or scientific value*. From the material point of view, all existing objects have a historical value, as they are the product of a specific era and are the evidence of its existence. The role of conservators is to identify which of the preserved objects should be given a special status of historic monuments so that they can survive for future generations. This recognition is carried out by means of the process of evaluation. Evaluation itself has a multitude of meanings and interpretations. For the purpose of this study, the meaning of the term related to its foundation for conservation activities will be adopted, which can be covered by two dictionary definitions - as defining values and as formulating judgements.

The analysis of the cited provisions of the law allows us to conclude that the determining role when evaluating an object or building is assumed by aspects relating directly to its material substance and the level it represents [7]. However, it should be noted that historic properties function in a particular urban context. Equally important in this case is their spatial and use value, which are not directly present in the definition. This lack is particularly critical in the case of objects that are an integral part of the urban structure, but are not outstanding works of architecture themselves or are contemporary objects (created after 1945). When we add the problem of low coverage of the country with local spatial development plans (and it should be added that protection based on the plan is one of the forms of historic monument protection), it turns out that such objects are very difficult to preserve. If, in addition, they are in poor technical condition, they often face demolition. In the context of contemporary heritage, this problem has been noted by many Polish researchers [11], while in relation to the layout of buildings it is exploited by conservation authorities in other European countries. A relevant reference for this text is the 2020 publication of the German Bundesministerium des Innern, für Bau und Heimat *Building Stock of High Conservation Value in Germany and Europe* [12]. The starting point for this document was the observation that one of the problems of modern cities is the structural loss of architectural quality and historic building stock. It is also recognized that the challenge we face today demands developing our towns and cities based on their existing building stocks. This approach has led German urban planners and

heritage experts to look more closely at those buildings and structures, that are not under heritage protection and preservation. One of the findings of the document is that *"building stock-oriented development must consider building stock from all epochs - right up to the newest buildings of the last decade of the previous century - as the starting point for its planning"*. At the same time, this approach not only ensures the survival of the historic urban fabric, but also preserves local identity and contributes to environmental enhancement [13].



Fig. 1. 1 Maja Street in Zabrze – frontage of historic street with buildings dating after 1945

Rys. 1. Ulica 1 Maja w Zabrze – pierzeja ulicy z zabudową historyczną oraz wzniesioną po 1945 roku

Photo by Marta Lip-Kornatka.

In today's city crises, the role of conservation authorities is to fulfil their statutory tasks in order to prevent these crises and to enable the cities themselves to develop in a sustainable way. Such an opportunity would be provided by the identification and formal protection of objects located within existing building structures, leading to their rescue and allowing their re-use. For this to be possible it is necessary to change the paradigm of evaluation, which refers to the material properties of an object, and to include within the doctrine those values that constitute the functioning of an element as part of the urban space and take into account its use values. In the following part of the article, tools will be proposed which, while

fulfilling these criteria, are at the same time based on one of the most important doctrinal texts of conservation, namely *Der Moderne Denkmalkultus* by Alois Riegl.



Fig. 2. Charles de Gaulle Street in Zabrze – central space in the city built by contemporary and historical objects

Rys. 2. Ulica Charlesa de Gaulle’a w Zabrze – centralna przestrzeń miasta z elementami historycznej i współczesnej zabudowy

Photo by Marta Lip-Kornatka.

3.2. Evaluation in conservation theory

One of the most synthetic definitions of conservation was formulated by Jan Bialostocki, according to whom *the basic characteristic of conservation is an activity based on valuing relics of the past, which are the subject of this activity* [14]. This definition can be supplemented by Paweł Bytniewski's remarks: *Work which preserves the past and protects the remains of what has survived and has been saved from total obliteration produces monuments in modern culture. I say "produces", because monuments are not only the evidence of the past culture, but also the evidence of the present culture. This is because this culture has developed a specific relation to the remains of what has passed, out of the need created by its own actuality and not by the past, and therefore a monument is also a testimony of this very relation* [15]. This quote perfectly illustrates the context in which all theories related to the evaluation of monuments operate. It should be noted that the valuing

of symbols of the past has accompanied all eras. However, it was only at the end of the eighteenth and in the nineteenth century that theories systematising this issue and trying to outline its axiological context appeared [16]. The most important of these is the theory developed by Alois Riegl, a Viennese art historian and conservator, presented in his publication *Der Moderne Denkmalkultus. Sein Wesen und Seine Entstehung* published in 1903 [17][18]. It was a reference point for later considerations in this area, and the systematics developed by Riegl was the basis for other theories of valuing monuments. Also, the thematic scope presented in this publication is constantly present in the doctrinal considerations of conservation [8] - for Riegl proposed not only to systematize the criteria describing historical objects and valuing them, he also took up the subject of the evaluator's relation to the evaluated object, the very essence of the monument in the ontic sense, and defined the place of conservation in the permanent conflict between nature and culture.

From the point of view of the paper, the most important elements of Riegl's theory are those that refer to the intentional reception of historical objects and the fragments of his systematics of evaluation that refer to the contemporary significant values of historical objects. In order to discuss them and set them in the context of contemporary needs, it is necessary to briefly present the whole theory.

4. RIEGL'S THEORY

What is most crucial in Riegl's theory is the division of signs of memory into two classes - intentional and unintentional monuments. He also pointed out that the identification of an object in this respect is not an external thing, but depends on the attitude of its recipient. From the text of *Der Moderne Denkmalkultus* we can also deduce that this attitude is not active, but dependent on certain trends of the era. As an example of an object that became an unintentional monument, Riegl gives the Roman column of Trajan. This monument, erected to commemorate historical events (and therefore an intended monument) became an object of interest in the Renaissance because of its form, the artistic means used and its artistic character (in this aspect it became an unintentional monument). This was possible thanks to the widespread interest in antiquity and the history and legacy of the Roman Empire at the time. Trajan's column therefore acquired a new significance, helped by the

interests of the period. This element of Riegl's theory informs another important point - a monument (or memorial) is something that is created. This aspect is of great importance for the functioning of conservation doctrines, as it allows for their constant evolution, leaving open the definition of a monument.

On the topic of evaluation itself, Riegl suggests distinguishing between two types of values in objects - commemorative values and contemporary values. The former, crucial for conservation, are monumental value, historical value and antiquity value [19]. From the perspective of this article, however, the more interesting values are those which it distinguishes as contemporary significant. As briefly summarised by Janusz Krawczyk: *"They assess the usefulness of relics of the past in terms of satisfying immediate needs, not related to memory"* [20]. Their scheme is presented in the diagram below (fig. 1).

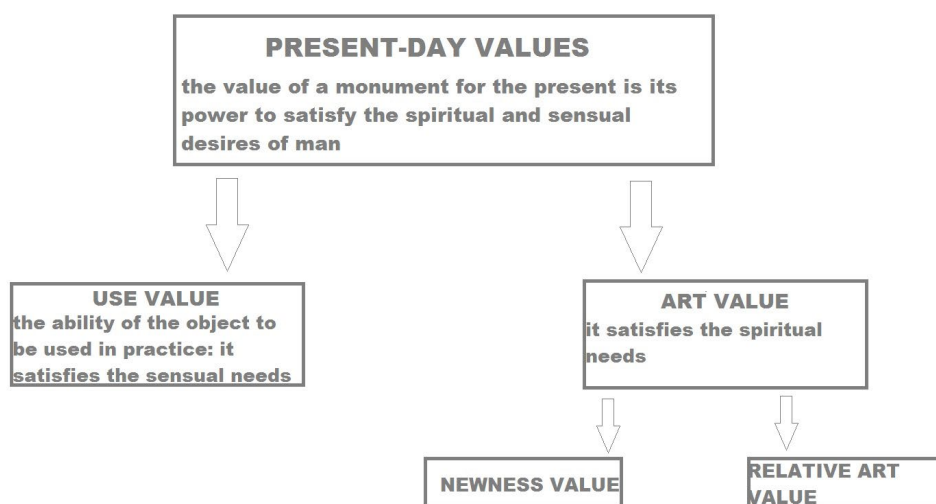


Fig. 3. A scheme of division of contemporary important values according to Alois Riegl's theory
 Rys. 3. Schemat obrazujący podział wartości współcześnie doniosłych zgodnie z teorią Aloisa Riegla
 Source: Author's compilation based on the text: Kasperowicz R. (2006), Alois Riegl, Georg Dehio and the cult of monuments, Warsaw 2006, pp. 54-56.

What Riegl writes about the use value of an object is particularly interesting. For him, it represents the object's capacity for practical use. On this occasion, he notes that the identification of this value in an object simultaneously allows it to be subjected to external interventions: *"An old building, still in practical use today, must*

be preserved in such a condition that people can stay in it without threatening the safety of their lives or health". He goes on to state that *"...the treatment a monument receives is completely indifferent as long as it does not affect its existence"*. The use value of a monument is therefore its feature that entitles to its adaptation. It seems obvious from the contemporary point of view, however, it should be remembered that Riegl's theory was formulated in opposition to those restoration activities which assumed the freedom of conservator's creation [7]. In the 19th century the romantic paradigm of the cult of the ruin was also constantly present, and the question of whether a historic object may be disturbed in any way was the subject of many doctrinal considerations. The possibilities of adaptation that arise from the presence of use values in an object are also a factor that directly threatens the monument as such: *"For consideration of the value of the corporeal good ultimately outweighs any respect for the ideal needs of the ancient value"*. This internal dispute within Riegl's own doctrine, however, is resolved by noting that the cessation of human use of an object and its degradation, especially one that is not a natural degradation (caused by the passage of time and the activity of nature), are phenomena that work against the object. This leads the author to conclude that *"the cult of ancient value is not difficult to make concessions for the preservation of their condition (of the objects – note by author), as these concessions would precisely enable these works to remain useful for circulation among people and for their manipulation"*.

5. APPLICATION OF USE VALUE

From a recent point of view, the use-value described by Riegl is that characteristic of an object which makes it necessary to preserve it in order to serve people. At the same time, it is also the feature that makes it adaptable to current needs and external conditions. The following diagram (fig. 2) shows the possibilities of incorporating the use value into the evaluation system.

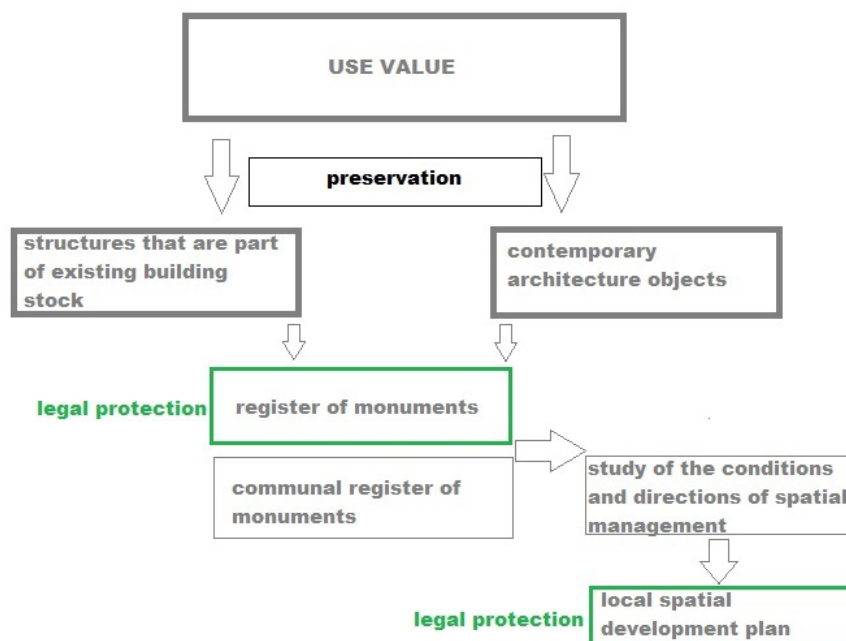


Fig. 4. A scheme of the possibilities of incorporating the use value into the evaluation system

Rys. 4. Schemat możliwości włączenia wartości użytkowej do systemu wartościowania zabytków w ramach prawa polskiego

Firstly, it allows for the protection of those buildings which have not been included in the preservation system by means of the recognition of the current values, and which are an integral part of existing building stock. Secondly, it allows for the protection of contemporary architecture objects, which are also elements of the built environment, but the conservation and architectural communities do not yet agree on the identification of their artistic, historical or scientific values. The identification of use value in such objects would allow them to be placed under legal conservation protection, which would require them to be preserved in the first place and to maintain in second.

6. CONCLUSIONS

A discussion of the change in the evaluation system is possible on the assumption that these elements are fluid and can be subject to modification. *The valorisations of the testimonies of past forms of life therefore themselves belong to the relative in time reference system that culture constitutes* [15]. Starting from this interpretation, it can be assumed that the theory of doctrine corresponds to the needs of the era. Thus, for George Dehio it was closely linked to the idea of statehood, for John Ruskin

it grew out of a critique of the recognition of manufacturing processes and for Walter Frodl it represented the need to find a conciliatory supranational objectivity. Alois Riegl's theory, discussed above, also arose in relation to the surrounding political, social, scientific and cultural conditions. Its emergence is linked to the need for a reaction against 19th-century historicism and the conservationist creations that were popular at the time, but also to the need to recognize attitudes towards the past and its forms, which, once ignored, were rehabilitated in the 19th century and recognized as integral stages in the development of culture (such as artistic crafts or early Christian art objects). The need for such recognition did not itself remain in isolation from the epoch and grew out of the ground prepared by scientists and philosophers. Janusz Krawczyk notes that: *The starting point for Riegl's considerations was a statement that we are inclined to take for granted today: people strive to preserve for posterity not only outstanding works of art. Wondering about the genesis of such attitudes, he came to the conclusion that actually any product of human activity, any object (even a utilitarian one) may become an object of conservation care, provided that someone recognizes it as a Denkmal or a sign of memory, a monument. This current of Riegl's considerations leads directly to another observation: the problem of intentionality of reception is crucial for the birth and development of conservation. What is important is not so much what the creator of a work thought about his work, but what the recipient of this particular work wants to remember when deciding to preserve and protect it* [20]. Awareness of this relationship allows us not only to treat doctrine as a set of principles subject to contemporary influences, but also to see it as a set of responses to the quintessential needs of the times [19]. If we adopt this perspective, we can also ask what values doctrine should include in order to respond to the diagnosed problems of modernity and to be able to counteract them.

The EU documents quoted in the introduction agree that the present times require taking care of those components of cities that already exist. This is in line with the idea of sustainable development and, at the same time, is desirable from the point of view of the protection of cultural heritage. In order to enable the preservation of existing building structures, solutions are needed to support this approach. The system of care for monuments has such solutions, but narrow criteria of valuation do not always allow for effective protection of all objects that are components of the urban built environment. The use value discussed in this paper, if

incorporated into the valuation system, would allow for more effective protection of those elements of the built environment that have not been eligible for protection so far. From the perspective of contemporary spatial, ecological and social problems, the preservation of cities as compact as possible is undoubtedly in the social interest of both present and future generations.

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REUSE OF POST-INDUSTRIAL AREAS AS AN OPPORTUNITY TO SAVE INDUSTRIAL HERITAGE

1. INTRODUCTION

Research on Polish industrial areas is a topic often mentioned in scientific discussions. They cover the possibilities of transforming these sites and the possibility of revitalization [1]. A considerable part of studies also concerns the comparison of Polish cases to foreign, already completed adaptations of industrial sites, as mentioned by Paulina Badura [2]. One should also refer to studies treating monuments and industrial areas as an element of cities with high development potential [3][4].

This article will refer to the reuse of post-industrial sites and heritage as one of the elements allowing the limitation of urban sprawl and providing the possibility of preserving the monument in an appropriate condition and setting it in a space allowing it to function properly. As revitalization and adaptation of post-industrial sites is still developing in Poland. This study covers already adapted post-industrial sites located in areas that exemplify the most significant social and economic transformations, especially visible in the cities of Łódź and Silesia. The selected sites indicate great adaptation potential of historical industrial buildings.

Industrial plants are an integral part of the spatial structure of cities, co-forming culture, tradition, and history. The location of these areas was mainly related to economics, but above all to the existence of valuable materials such as metal ore or coal. These areas were the reason for the establishment and development of cities, shaping their character. It should be pointed out that all spatial transformations of the past years, which involved the overgrowing of residential, service and

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accompanying industrial areas, resulted in the fact that these currently abandoned lands are usually located in the centers of modern cities.

In 2020, in Poland were 62,482 hectares [5] of degraded and devastated land still requiring intervention. These spaces, after the liquidation of technical infrastructure of factories, create valuable hectares of land for investors. One of the barriers to takeover by persons interested in these areas is the necessity to maintain the historic buildings located on the purchased land in a proper technical condition. This obligation reduces the enthusiasm of those interested in investing in such areas, resulting in the purchase of a less problematic plot of land that does not contain undesirable bans and orders. As a result of these actions, brownfield sites containing historic buildings remain in a poor state of repair due to lack of development [6] [7].

2. RESEARCH METHOD

This article attempts to collect and present data on the amount of reclaimed space through its reuse of existing buildings. The study covers spaces located in the centers of Polish industrial cities, containing historic buildings of post-industrial character. The research was conducted on the example of selected projects located in the centers of industrial cities in Poland. The scope of research includes objects and spaces in which historical post-industrial buildings were used and adapted to new functions. This action contributed to the use of degraded areas located in the central parts of cities. The subject of the research are reference sites corresponding to crucial functions of the city, which are defined by the following classification:

- park and recreation: point objects with scenic functions, "permanent ruins" located in park and recreational areas;
- industrial and administration: facilities adapted to other type of industry or converted to offices or administration;
- residential: adapted to residential functions with minor services;
- commercial and services: facilities wholly or partially used for commercial and service functions.

The research was based on data obtained from the "Communal Register of Historic Monuments" (hereinafter GEZ) – relevant for the towns and cities in question and from the internet portals of the investments in question.

3. ENDANGERED POST-INDUSTRIAL HERITAGE

Post-industrial areas are created following the termination of manufacturing plants, which were an important part of the economic development of cities. The facilities located on the sites in those areas remain in good technical condition until the plant ceases production. Taking into account the previously mentioned existence of the building, ensured by its continuity of use, it should be stated that after the facility is abandoned by the plant in order to maintain its structure, efforts should be made to give it a new function or to continue the original one. Adaptation and utilization of the facility bring benefits in the form of economically developed space as well as preservation of the buildings under preservationist protection, forming historic landscape of the cities.

3.1. Protection of industrial heritage

The liquidation of industrial plants in Poland, from the light and heavy industry does not consider the further protection and maintenance of the remaining objects in an appropriate technical condition. The formal protection of buildings, structures and spaces is regulated by Art. 7 of the Act on the protection and care of historical monuments of July 23rd 2003 (Dz. U. z 2021 r. poz. 710), based on which, for example, a building can be entered in the register of monuments or placed under protection in the local zoning plan. The recognition of the object itself and skillful inclusion of all valuable elements under legal protection plays an important role here. The knowledge of individual components and the operation of an industrial facility requires an in-depth analysis by an expert in industrial and technical facilities. When verifying the area of protection, attention should be paid to the correct inclusion of the object in the inscribed space, providing it with a foreground to protect the exposure, area protection is important in this case. Proper and detailed inclusion in the object's charter will allow for effective protection against demolition.

However, the biggest role in the case of preservation of post-industrial monuments is the way the owner handles the monument. An important aspect here is the use of the building, which ensures the survival of the monument [8]. This often involves the need to adapt the building to current standards required by law. Therefore, it may be necessary to interfere with the structure of the building, which

being a minimal interference may turn out to be a better solution than no use of the object.

It is impossible to generalize the problem of protection of industrial monuments and their adaptation, due to the huge variety of cases of objects and a large cross-section of machinery and equipment located in the interiors, every case should be considered individually.

3.2. The problem of the re-functioning of brownfield sites and facilities within a compact city structure

The problem of abandoned brownfields is faced by a significant number of post-industrial cities. These problems are currently being exacerbated by the environmental demands arising from the challenges posed by climate change and new building and land use standards. Poorly managed or inadequately prepared for future investment, these inner-city sites can cause future spatial problems for city managers, landowners, and future investors.

Referring to the above, locating the areas of former industrial plants in city centers becomes a threat at the same time, because of the risk that the area will not be used for new functions and will not be revitalized, and an opportunity that allows for a completely new use of the area and partially stops the process of urban sprawl. It is also an opportunity that allows for a completely new use of the land and partial stopping of the process of urban sprawl. It provides an opportunity to merge the existing urban fabric with the degraded areas.

However, for the process of adaptation and revitalization of such areas to take place, it is necessary to pay attention to several factors, the implementation of which at the stage of liquidation of plant infrastructure can bring many benefits to future investors and persons participating in the investment process. In this connection, attention should be paid to the appropriate geodetic separation of the building plot. It should be delimited in a way enabling its future development, which may accompany the adaptation of the facility located on this plot. It is necessary from the point of view of the future functioning of the facility, and a common mistake when separating plots for such facilities, in order to save money and make it possible to sell more land, is separating the plot along the contour of the building (e.g., separating the Margarine Factory and Water Mill in Ruda Śląska). In such a case there is no place left for a parking lot or other surrounding infrastructure. Such a division does not

even allow for providing access to a public road, as the plot does not have an access road. Therefore, it is necessary to conclude an agreement with the owner of adjacent plots in order to establish an easement of necessary passage. A related problem, therefore, is the ownership structure of the sites, which, due to the numerous divisions of plot boundaries, may prove to be too complicated and lengthy to acquire the plots of land of interest to the investor.

The transfer of land from mine companies to the next companies can be confusing because of the ownership structure, especially for companies that no longer exist. Problems related to the non-obvious ownership structure in turn translate into unattractiveness of the plot due to the protracted development process. However, despite difficulties connected with the spatial and ownership structure of brownfields, these sites should be revitalized and developed, regardless of the difficulties connected with investment processes and high costs of adaptation of post-industrial objects, the use of these sites relates to saving lost urban tissue and possibility of creating unique space.

4. THE NEED TO USE POST-INDUSTRIAL LAND FOR NEW FUNCTIONS

An important task of the state and cities is to apply sustainable spatial development (Article 5 of the Constitution of the RP), according to which space should be managed in a well-thought-out way so that it can be used by future generations. The principle must also include the city's aspirations as regards the content, not to expand the built-up tissue beyond the already built-up one. Therefore, the existing compact tissue should be supplemented with the "architectural plumb" and the existing abandoned buildings and infrastructure should be used in line with the and infrastructure in accordance with the current recycling trend. Adaptation and use of existing infrastructure and post-industrial buildings brings many social, technical, ecological, economic, and political benefits. Abandoned degraded areas are usually located in the centers of the former industrial cities, creating tracts of devastated space, which is compounded by the sight of partially decommissioned buildings forming landfills of decomposed objects, prepared for sale at scrap yards. These areas remain vacant until they are sold, which may not happen in the near future.

4.1. Landscape objects with public functions

The functional category includes mainly building objects with a vertical structure, the economic development of which could involve the necessity of adding new infrastructure to service them, which was the case e.g., in the case of utilization of the towers of "Polska" coal mine in Świętochłowice. The examples below are used as observation towers or terraces.

The reclamation and remediation of the former "Orzegów Coking Plant" area was realized in 2018 - 2021. The work included land clearing and renovation of historic buildings that were saved from demolition: coking batteries, coal tower and tar tank [Fig.1]. These buildings are located on the side of the development and are surrounded by plenty of trees and small architecture in the form of benches and playgrounds. An interesting part of the development is a viewing terrace created on the "roof" of the coking batteries, which allows viewing the entire revitalization area from above. In this case, revitalization included the protection of historic buildings did not contribute to the adaptation of the interior of the buildings. By stopping the degradation of the historic buildings and preparing the interiors for future development, it will be possible to use the buildings for any function [9].



Fig. 1. View of the Orzegów Coking Plant in Ruda Śląska, left side: tar tank and coal tower, right side: inside of the coke oven battery

Fot. 1. Opracowanie własne: Widok na Koksownię Orzegów w Rudzie Śląskiej, zbiornik smoły i wieża węglowa, wnętrze baterii koksowniczej

Source: author.

The park of the "President" shaft is a circular arrangement, extending to the north. The hoist tower, which is the most principal element and dominant structure, is located in the central part of the layout, as it is presented on Fig 2. The park is equipped with alleys, inscribed into the round layout. Also provided with benches,

playgrounds, and a skate park [10]. Situated near the "Sztygarka" post-mining complex developed for services, for which it constitutes an ideal supplement and foreground from Kościuszki Street.



Fig. 2. View of the „Prezydent” hoist tower park, left side

Fot. 2. Widok na park wieży wyciągowej "Prezydent" TVS

Source: author, right side source: TVS: <<https://tvs.pl/informacje/industriada-2016-chorzow-program-wejdz-na-szyb-prezydent-albo-zagraj-w-gre>>

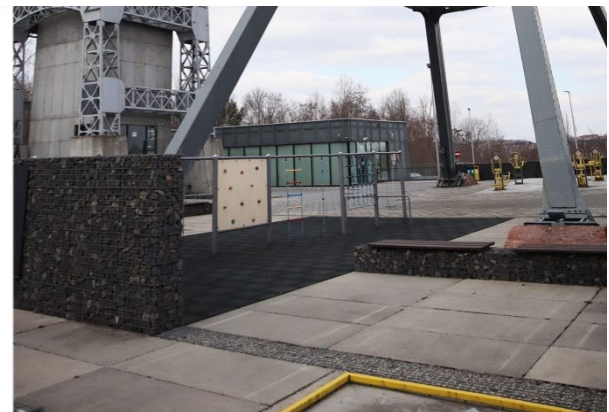


Fig. 3. View of the KWK Polska hoist towers

Fot. 3. Widok na wieże KWK „Polska”

Source: author

The revitalization of the historic hoist towers of the "Polska" mine included the renovation of the hoist towers and the construction of a new building necessary to service the complex [11] for sightseeing, ending with a viewing platform located at the top. The development of the area under the towers includes many small architectural objects planned for use by children [Fig. 3]. The complex is fenced off and accessible only to visitors. The museum is surrounded by production and storage halls, against the background of which the towers stand out.

The site of the Gliwice radio station complex was adapted to its new function and is now a section of the Gliwice museum [12]. The complex consists of three buildings and a broadcasting mast. The development of the area directs the most important objects to the main axis, surrounding them with paths, small architecture objects, including fountains and plenty of greenery. The tower, which is the main attraction, is not a functional building. However, it is an element that significantly stands out in space. Revitalization and adaptation of the historic complex for use as a museum significantly increased the attractiveness of the city space in Gliwice. Opening the buildings to visitors and using the historic equipment contributes significantly to its state of preservation by carrying out necessary maintenance.

Table 1 shows sites that have been revitalized or preserved through operations in an attempt to create green recreational spaces. It should also be noted that all objects in this category were entered in the provincial registers of historic buildings. This significantly contributed to the fact that they could not be demolished and had to be maintained in the future.

Table 1

BUILDINGS WHOSE SURROUNDINGS HAVE BEEN ADAPTED INTO PARK AREAS					
OBJECT	LOCATION	ORIGINAL FUNCTION	CURRENT FUNCTION	REVITALIZED SPACE [HA]	FORM OF PROTECTION OF THE SITE
Orzegów Coking Plant	Ruda Śląska	coking plant	park/ observation terrace	4,80	register of monuments 1352/87
President shaft park	Chorzów	mine	park/ observation tower	3,00	register of monuments A/228/08
Towers of KWK Polska	Świętochłowice	mine	park/ observation tower	0,53	register of monuments A/110/04
Former radio station complex	Gliwice	radio station	park	15,86 (Gminny program...)	register of monuments A/384/12

Author own study.

4.2. Industrial and office spaces

The use of former industrial land and facilities for industrial and office purposes is a partial continuation of the previous functioning of the plant. This category includes urban complexes and single buildings. The still existing building complexes are being transformed into facilities referring in their activity to industry, e.g., technology parks, economic zones. In adapted spaces there are also accompanying functions such as halls, fragments of exhibitions, museums.

The "New Gliwice" complex is a sports and educational zone located in the central part of Gliwice [12]. In the context of revitalization works, the monumental buildings of the pithead building with bathhouse and engine room, which represent the part of the entire complex, visible from the front, were preserved. The entire urban layout is based on connection of new buildings with the existing historic buildings. The new buildings are situated on separate plots, enriched with greenery and a sports zone.

Next example of adaptation is City Hall in Racibórz which is an adapted building of a former chocolate factory. Its new function is based on the introduction of office rooms - public administration. The external structure of the building remained almost entirely unchanged. The necessity to adjust the building to the current legal standards resulted in placing a glass elevator in the side part of the front elevation. Adaptation of the building in question allowed for a suitable location of an important function for the residents, in the city center.

The complex of the former Porcelain Factory in Katowice [Fig. 4] is a good example of using and adapting existing buildings. As part of the revitalization process, the building of horse stables, preparation of raw materials, furnace, warehouses, order picking building and packing building, the building of animal feed production and a canteen with a meeting room for employees were preserved [13]. All of these buildings have been adapted into retail, office and recreational spaces, and the whole has thus not changed its relationship with the surrounding area. The complex is adjacent to other post-industrial buildings, some of which are used as warehouses.



Fig. 4. Porcelain factory complex

Fot. 4. Zespół fabryki porcelany

Source: author

The presented examples show buildings focused strictly on adaptation and office functions, placing in them, for example, space for rent, administrative parts of industrial plants or administration. Activities undertaken in the field of adaptation of post-industrial buildings to industrial and office functions allow to save a significant part of city centers, creating close and easily accessible workspaces without the need to degrade further areas outside of city centers.

Table 2

CONTINUATION OF INDUSTRIAL FUNCTION AND ADAPTATION TO OFFICE FACILITIES					
OBJECT	LOCATION	ORIGINAL FUNCTION	CURRENT FUNCTION	REVITALIZED SPACE [HA]	FORM OF PROTECTION OF THE SITE
New Gliwice [12]	Gliwice	mine	industry, offices	15, 86	protection in local zoning plan (MPZP)
City Hall	Racibórz	chocolate factory	administration	0,13	municipal monuments register (GEZ) 039
Silesian porcelain park	Katowice	porcelain factory	technology and industrial	3,00	municipal monuments register (GEZ) 3677

Author own study

4.3. Residential spaces

Locations usually related to former light industrial activities, e.g., manufacturing of textiles, footwear, clothing, are selected for residential adaptation. The choice of these types of post-industrial sites is due to the lower risk of polluted areas characteristic of heavy industry. Apartments built in post-industrial sites are characterized by large glass openings and high ceilings, characteristic for industrial buildings. All adaptations of the investment must be carried out in accordance with current law and in accordance with conservation agreements and permits.

A typical feature common to the examples of adaptation of industrial facilities to residential and residential-service functions cited in the table below is that the investment was carried out with complete respect for the external fabric of the building. Any interference in their facades resulted from the need to adapt the buildings to use them in accordance with the law [14]. As a result of the adaptation, the buildings were given the opportunity to reintegrate into the urban fabric without damaging their image, and the parking spaces, installations, accesses, and greenery made during the adaptation are only related to ensuring their use. The use of post-industrial buildings for residential purposes, due to their significant cubature, gives the opportunity to create apartments of different standards, while providing housing in the city center [Fig.5].

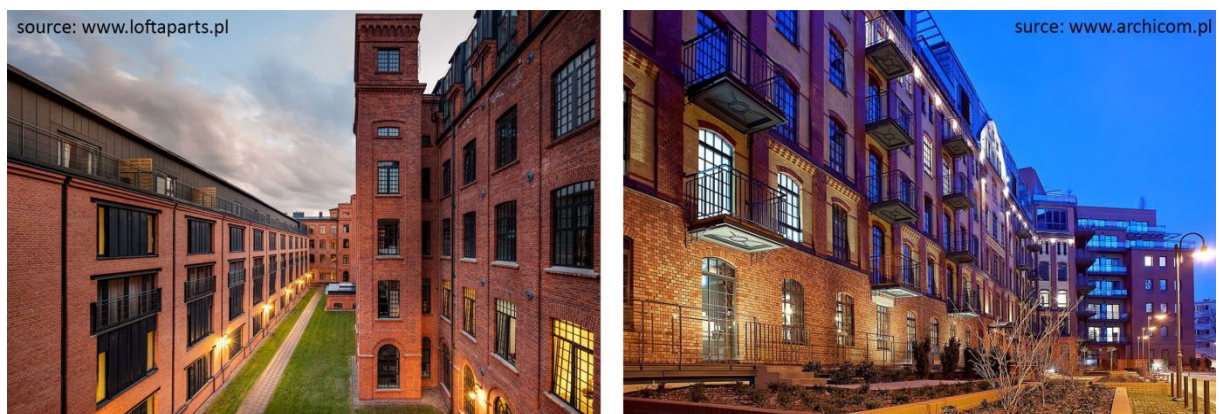


Fig. 5. View of Loft Apartments (in the middle), view of Platinum Lofts (right side)

Fot. 5. Widok na loft Apartments Archicom, widok na loft Platinum

Source: Lofts Apartments <<https://loftaparts.pl>>, Archicom <<https://archicom.pl>>.

Table 3

CONVERSION INTO RESIDENTIAL BUILDINGS					
OBJECT	LOCATION	ORIGINAL FUNCTION	CURRENT FUNCTION	REVITALIZED SPACE [HA]	FORM OF PROTECTION OF THE SITE
New Spinning Mill	Żyrardów	linen spinning mill	residential	286	register of monuments A /828/91
Loft Apartments [16]	Łódź	spinning mill	residential and services	421	register of monuments A/361
Lofty Platinum	Wrocław	distillery	residential and services	53	municipal monuments register (GEZ)

Author own study.

4.4. Commercial and service spaces

Analyzing the examples of revitalization, we can see that the objects were adapted holistically (Manufaktura in Łódź) using the existing buildings, but it was not without adding new parts to the existing edifice of the factory, which partly play the role of connecting spaces. The investment included the complete elimination of buildings not listed in the register of historical monuments, and only the external walls remained from the interior of the main body [15].

The Katowice example of Silesia City Center construction seems to be the opposite, the main body of the shopping facility was built on the site of the heap, thus it does not use the existing infrastructure under construction. Only post-mining objects visible from the side of highway (DTŚ) were developed, they were used for service activities, and the engine room building took the function of a chapel. At this stage it should be noted that the smaller the form of protection of the object, the less of the object is used [Fig. 6].



Fig. 6. View of historical buildings in Silesia City Center site

Fot. 6. Widok na historyczne budynki Silesii City Center

Source: author.

Focus Park in Rybnik was built on the site of the former municipal brewery, and the only element used is the malt house building, which currently serves as a retail outlet. The chimney, which creates an industrial accent of the object, was also left. A retail and service center are a difficult function to develop completely in the old tissue [Fig. 7].



Fig. 7. View of Manufaktura in Łódź (left side), Focus Park shopping center (right side)

Fot. 7. widok na Manufakturę w Łodzi, Centrum handlowe Focus Park

Source: Łódź travel <<https://lodz.travel.pl>>, <<https://galeriehandlowe.pl>>

In the majority of cases of service and commercial investments, investors choose post-industrial plots, adapting only small elements that create a historical "accent". Post-industrial sites have too small area to be used as a whole for a facility. Therefore, in order to realize a large-scale investment, it is necessary to intervene in the form of adding a new tissue, which, due to the conservator's protection, may turn out to be impossible or possible only fragmentarily.

Table 4

ADAPTATION TO COMMERCIAL USE					
OBJECT	LOCATION	ORIGINAL FUNCTION	CURRENT FUNCTION	REVITALIZED SPACE [HA]	FORM OF PROTECTION OF THE SITE
Manufaktura Łódź	Łódź	textile mill	multifunctional centrum	9,00	register of monuments A/45/71
Silesia City Center	Katowice	coal mine	retail and services, chapel	ok. 10,00	municipal monuments register (GEZ)
Focus Park	Rybnik	brewery	shopping centre	ok. 4,20	municipal monuments register (GEZ) 509

Author own study.

5. CONCLUSIONS

The examples of re-using post-industrial sites through adaptation in the urban fabric presented in this article show the scale of the problem of brownfield sites located in urban centers associated with industrial plants. The research confirms that the adaptation of manufacturing-related facilities contributes both to the reduction in the number of sites in need of revitalization and to the strengthening of further conservation protection of historic buildings. The majority of the examples of analyzed objects in the text were covered by the highest possible conservation protection that is in force in the country, which undoubtedly contributed to the survival of the objects in question. An important role is held by the form of conservation protection, which influenced the necessity or lack of use of the object in whole or in part. The study also reveals that the conservation supervision of these objects contributed to design solutions that saved the monuments and preserved the historic cultural landscape. It is encouraging that the adapted space of just a few post-industrial sites analyzed in this paper contributes to a significant improvement in the quality of the urban fabric, this space also contributes to at least temporary protection of investment areas located outside the city and provides an opportunity

to change the legal regulations in a way that aims to maintain the permanent built-up area of Polish cities. It should be remembered, however, that there are still about 62 000 hectares of land in Poland which still require intervention in the form of revitalization and further studies.

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CAN HOUSING ON THE WATER BECOME AN ANSWER TO THE PROBLEMS OF THE CONTEMPORARY CITIES?

1. INTRODUCTION

Nowadays cities are facing many challenges regarding climate crisis, over or under-population as well as over- or under-development of the technical and road infrastructure. Those problems, among others, are the subject of “The New Leipzig Charter – The transformative power of cities for the common good” adopted at the Informal Ministerial Meeting on Urban Matters on 30 November 2020. Ministers agreed that, as space is limited in cities, it is important that distances between housing, work, leisure and other functions are minimised – that can enhance development of the mixed-use urban spaces. They also pointed out the necessity of reducing land take and focusing on urban renewal and brownfield redevelopment. It was noticed that there is lack of green and blue infrastructure that can help in increasing urban biodiversity, as well as improve air quality. Other important factor is to find sufficient areas for affordable and well-designed housing. [14].

The most precious locations for housing are those in the existing urban tissue as there is already an existing infrastructure, services, and public spaces. The search for new areas to be developed is observed, which results in investing at the sites that have been previously used for other purposes and with time became unused. Those are very often post-industrial areas as well as those which used to serve as harbours within the cities. Especially the last ones have big potential to be redeveloped due to their attractive location by the water. In some places, solutions other than the traditional ones were applied due to the significant lack of the existing land – new islands, as well as floating buildings were created. The floating architecture is thought

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to be one of the solutions for rising sea level and floods in times of global changes [11].

Literature on the floating architecture focuses mainly on the issues connected to its technological advancement, sustainability, and environment protection. These aspects are the research scope of Stopp and Strangfeld from BTU Cottbus who have published many articles and monographs [11, 12]. There are also publications about floating architecture that present different types of buildings on the water, not only residential ones [1]. Some of them focus not only on the environmental and technological aspects but also on those related to architecture appearance of the buildings and urban layout of the neighbourhoods [2, 10].

The main aim of this chapter is to find an answer to the question if floating neighbourhoods might become a solution to the problems of the contemporary cities regarding the land scarcity, overpopulation, and flood risk. The research is based on the literature and field studies from the 2021. The history of the boat houses in Amsterdam is presented as a starting point for the analysis of the two neighbourhoods realised in the XXI century [9]. The main emphasis was on issues related to the: 1) background of development of the neighbourhoods; 2) urban and spatial layout (greenery, connection to the surroundings); 3) aspects related to architectural appearance; 4) sustainability (e. g. transportation, sense of community).

2. FLOATING ARCHITECTURE

One of the typologies of buildings on the water is floating residential architecture. It became popular in the Netherlands, especially in Amsterdam, which has long history regarding that aspect. It all started with bargees who lived at the boats while being at work and waiting on the boats for the next load. The first mentions about such a way of living come from the seventeenth century, but it has been already prohibited by law in the 1652. The restrictions were reminded in 1682 as the rule had not been respected properly during previous 30 years [6, pp. 34]. After that time probably some workers still continued to live at the boats. In 1869 the first register of people living at the boats was done, while the second one – between 1875 and 1892 [6, pp. 40]. The increase of houseboats had been noticed, as well as adjustments within their interiors, which led to create new housing typology. Finally in 1918 the

Mobile Homes and Houseboats Act was passed and since then in order to live on a houseboat it was necessary to have a permit from the Royal Commissioner. The permission could have been issued only if the dimensions of the boat were at least 4,5 x 2,1 x 2,1 m and the interior was possible to be divided into the day and night areas. Those restrictions were valid till the 1980s. The new rules also regulated the mooring place for boats – every municipality had to allocate sites for that purpose [6, pp. 44-45]. In 1930 the interest in this type of living decreased, but already in 1950s again increased. In 1960s and 1970s living at the boat became very popular in different groups of people, as it offered an attractive location, a possibility of being in the city centre, a sense of freedom and it was also low cost [6, pp. 70]. Because of those values it attracted many people of different professions and sections of society (both rich and poor). Also, there was other issue connected with the houseboats, not yet under regulation. Their location was not involved in the land use plans. That had to be regulated at some point, as the boats within the centre of Amsterdam were moored right opposite the historical buildings. Any adjustments of the traditional canal houses had to follow the certain restrictions and guidelines regarding the landscape and heritage protection [6, pp. 82]. In 1990s new regulations on the houseboats were set to make living on the water as similar as possible to living on the land. Also, basic principles regarding the aesthetics and dimensions of the boats were formulated [6, pp 88].

The goal of the Amsterdam municipality is to find new sites for living on the water [3]. Primarily the houses on the water used to be private investments moored at the different places, but in recent years also groups of buildings arranged according to some well-thought-out plans designed by architects and urban planners are more common. That became possible as a result of the bigger interest in living by the water and not treating the waterside just as a residual space; also law regulations finally allow for that kind of developments.

2.1. Waterbuurt, Ijburg in Amsterdam, the Netherlands

An example of floating neighbourhood built according to the developed masterplan is Waterbuurt in Amsterdam. It is located on the Steigereiland which is a part of Ijburg district composed of artificial islands [2]. The name of the neighbourhood stands for Water Quartier which is an exact description of that development. Within the plot on the water formed between the islands and dikes on

the Ijmeer, two different types of living by the water could be distinguished: on the western side there are the project-based floating buildings arranged according to urban design layout and architectural concept prepared by one design studio. On the eastern side there are privately owned plots, where certain rules had to be respected during the design process, but the general appearance of the buildings was up to their owners and architects who designed those houses. The western side of the area was developed according to the project based on the results of the competition. The winning proposal came from the developers Villanova and Woodstone & Sparkey bv, that later formed a syndicate with Monteflore Vastgoed bv and Eigen Haard. They also invited architectural offices Dok Architekten and Architectenbureau Marlies Rohmier to work together on the architectural aspects of the investment. Dok Architecten designed the Kadegebouw – an elongated building on the platform up against the quay, located on the south-western part of the site. It is situated parallel to the main communication artery, where also the tram line that connects the city centre of Amsterdam with other IJburg islands is located. There are arched gates in that building that lead directly to the jetties where the floating houses are located. At first, according to the urban plan there was an intention to have a view towards the floating houses from the street to make them visible to everybody, but the plan was changed because of the acoustics. The Kadegebouw building serves as a sound barrier for the houses on the water and the inhabitants of the floating buildings can use the car and bike park located in Kadegebouw. Architectenbureau Marlies Rohmier was in charge of designing the rest of the buildings within the project based part of the neighbourhood. There are 55 floating houses in 3 types (the first house sailed in 2009). There are 13 “Vancouver” solo (free-standing typology) houses; each has a living area of 156 m², occupied by the owners. The other owner-occupied houses are 24 “Sydney” duos (twin houses) that have 107 m². There are also 18 houses intended for rent – trios (row houses) that have a surface of 100 m². At the places where the jetties cross there are also 3 pile dwellings of 112 m² that are higher than the other surrounding buildings. On the north-western part of the site there are dike houses built according to the same architectural and urban concept as the project-based floating houses, but their construction is different that the floating buildings as they are built on piles in the water. Even though they are not floating on the water, they are still part of the concept of living that derives the special quality because of the vicinity of the water. That is also a characteristic of the Kadegebouw,

as between its eastern external wall and the water there is no public street. The architecture style of the façade design by Marlies Rohmier is very “basic, referring to the water world and comfortable” [2, pp. 15]. That was achieved by designing the front and back facades mainly of the glass with white-coloured framing, so they seem to be light. On the side walls of the houses the solid panels in different shades of brown and beige were used. The owners of the buildings had a possibility to choose the closest surrounding of the buildings – whether they prefer to have a terrace, veranda, or walkway around the house. Even that there were different possibilities to arrange some parts of the buildings, it is easily visible that they were designed by one architect especially regarding their architectural appearance [2].

The development plan of the eastern part of the floating neighbourhood was prepared by the municipality who divided the site into the plots meant to be developed by private owners. Of course, there were some restrictions regarding the general layout of the plot. The maximum width was set to 7 meters while the length to 10 metres. The height of the building could achieve maximum 7,5 meters above the water and the depth under the water is maximum 1,5 meters. The third storey of the building can have maximum 50% of the surface of the biggest floor, which led to the situation that the buildings are shaped differently, have various volumes and there is usually a terrace or green garden on the last floor. Moreover, the minimum of 20% of the plot had to remain open water, where there can be neither the garden nor the terrace. There were no further restrictions regarding the architectural appearance of the buildings and the materials used. That resulted in the colourful neighbourhood with different façade designs regarding the materials, colours and also the openings in the walls, such as sizes of the windows, their division and location [2].



Photo. 1. View of the project-based western part of Waterbuurt (author)

Fot. 1. Widok na zachodnią część Waterbuurt – zrealizowaną zgodnie z projektem (autor).



Photo. 2. View of the project-based western part of Waterbuurt, the Kadegebouw on the right (author)

Fot. 2. Widok na zrealizowaną zgodnie z projektem zachodnią część Waterbuurt, budynek Kadegebouw po prawej stronie (autor).

The urban plan of the Waterbuurt does not involve greenery as it is not considered as a part of the maritime environment. Some of the inhabitants solved that issue by creating floating gardens in spite of the terraces or mooring platforms for boats. Other used plants in pots in front of their houses and in the walkways [2].

Within the complex some solutions regarding the self-sufficiency were applied. The residents can trade electricity with each other, and the rainwater collected by the roofs is used for flushing toilets. Also, the green roofs can be used for growing plants and food [15]. All pipes and cables are placed under the walking surface of the jetties. There is connection with municipal grids: gas, electricity, sewage, water, telecommunication, and television. The only difference with other houses on IJburg is lack of district heating, so the inhabitants of Waterbuurt use gas for heating and also for cooking [2, pp. 23].

Right after the Waterbuurt district had been constructed it was believed that for sure new smarter floating districts would be created [2, pp. 2]. That prediction became true once the Schoonschip neighbourhood was built, which is unique not only for being on the water but also because of its characteristics regarding the sustainability.

2.2. Schoonschip, Buiksloterham in Amsterdam, the Netherlands

Schoonschip is situated in the northern part of Amsterdam in Buiksloterham district that has an industrial history e.g., connected with shipyards. Nowadays the Buiksloterham is being under redevelopment with the main goal of achieving a multi-functional area intended for living and working at the same time [5]. Because of its industrial past there is a scarcity of greenery and most of the area in Buiksloterham is paved. The whole project is being realised according to the bigger plan developed by the Municipality of Amsterdam that aims to make the city as sustainable as possible. Because of that fact, the City allowed for experimental projects in different locations, among which are those in Buiksloterham e. g. De Ceuveld and Schoonschip. In the district there are plots by the water developed according to the self-built scheme. There is also a Schoonschip neighbourhood situated in the Johan van Hasseltkade Canal, which is north from the IJ Canal that divides the historical central part of Amsterdam from the northern one [17].



Photo. 3. View of Schoonschip neighbourhood, the common floating garden and basin on the left (author)

Fot. 3. Widok na osiedle Schoonschip, wspólny pływający ogród i basen po lewej stronie (autor)



Photo. 4. View of Schoonschip neighbourhood (author)

Fot. 4. Widok na osiedle Schoonschip (autor)

The urban concept of the Schoonschip was designed by Space & Matter, but the owners of the houses had freedom in creating the architectural layouts and appearance of the buildings. Of course, there were certain restrictions regarding the size of the plots and actual position of the buildings within the sites. The urban layout of the Schoonschip consists of 5 groups (clusters) of 6 houseboats. There are 7 main types of the buildings regarding their surface which ranges from 180 to 378 m² [4].

The houses were designed by architects from different architectural offices: +31architects, Amber Architecture & KUUB, Chris Collaris Design & i29, Corine Dijkers, Hans Kuijpers, Hollandshuis, Jeroen Apers Architect, John Kusters, KPMV Architects, Loco-Motif Amsterdam, MTB architects, Mijke de Kok & Studio Valkenier, Office Winhov, Smeelearchitecture, Studio Lumens & Space&Matter, TWWB and Waterstudio [17]. That resulted in creating colourful neighbourhood with different appearance of the buildings. That has happened already also in the eastern part of the Waterbuurt floating neighbourhood, but the Schoonschip has other feature that makes it unique. That is due to the social aspects related to the sustainability. The whole investment was made possible thanks to the initiative of Marjan de Blok. All of the present inhabitants of the Schoonschip were involved in the design process. They were divided in groups that took care of certain issues connected with the realisation of the neighbourhood. Some of them were in charge of the transport aspects, while the other ones with those related to energy self-sufficiency. The engagement of the future inhabitants helped to achieve the sustainability in terms of social aspect [7]. Also, mainly environmental low-impact circular building materials were allowed for the construction of the floating buildings. That means that for facades only cork, wood and bamboo were used; some of the wooden parts are leftovers from a sawmill or upcycled pieces from other buildings. In one of the houses the insulation is made from flax, as polyurethane foam is not allowed. The materials used for construction are meant to be sustainable in terms of their source, production, and maintenance [7, pp. 74, 77, 78]. Unfortunately, it was difficult to find the replacement for concrete basins, so the recycled concrete was used [16]. The main goal of the Schoonschip was to become a self-sustaining floating community. Among implemented facilities are: collection of rainwater which is used for flushing toilets and green roofs on at list a third of their surface. All of the buildings are connected by jetties on the water. They serve as path for inhabitants but they have also technical role, as underneath them there are sets of water pipes (grey water, back water, and central water supply), so the sewage does not pollute water in the canal. The houses produce their own energy from the solar panels and the neighbourhood is connected to the smart municipal grid so an excess energy can be given back. The circuit of water in the buildings is part of the system consisting of solar collectors and underwater heat pumps and it allows the recovered heat to be used inside the houses [7, pp. 78]. Arranging houses into the clusters resulted in creation of small courtyards with water

inside. The jetties serve as a public space for inhabitants, for meetings, other activities and for socialising. In the basins between the jetties there are also places for greenery which have form of the floating gardens and each building has a green roof. The neighbourhood is car free – inhabitants agreed on using shared cars [13].

3. COMPARATIVE STUDY OF THE CHARACTERISTICS OF THE FLOATING NEIGHBOURHOODS

First houses on the water in Amsterdam were boats used for living moored in different locations, which was not regulated at that time. Nowadays in the historical parts of the city there are still houseboats along the canals, arranged in the simple linear way. The bigger interest is in solutions applied to the houseboats communities organised in the groups of buildings on the open water where there is more space and also a possibility to create certain urban layout.

Waterbuurt and Schoonschip are both neighbourhoods developed in a planned way, but different from each other. Waterbuurt is an organised investment divided into two parts (one of which is project-based according to one concept; while the second one was developed as plenty of private projects according to general rules set by the municipality). The Schoonschip is a result of the initiative of the future inhabitants that took care of the process, it was not developed by the external company that build in a traditional way.

Also, when we compare the urban and spatial layouts of those two neighbourhoods, we might notice the differences. In both projects there are jetties and houses moored to them, but they are arranged in a different way. In Waterbuurt the jetties are longer than in Schoonschip and the density is higher. The entrance to the jetties leads through the arched gates in the Kadegebouw. There is also no common public space despite the path between the buildings. In Schoonschip the buildings form smaller groups next to each other. There are jetties that link every group of buildings with the land, so inhabitants can go directly to their house, but the additional jetties between the groups of buildings allowed for creation of the internal water basins for swimming. On the jetties there are some spaces used for social activities for inhabitants, like bathing or just spending time together. That solution might result on the quality of the neighbourly relations in Schoonschip, as the way buildings are arranged might influence the relations between inhabitants within each

group of buildings. Smaller number of inhabitants within one group can give them more privacy. Regarding greenery – in Waterbuurt it was thought not be a part of the maritime environment at the time it was designed, so now there are mainly plants in the pots and some floating gardens. In Schoonschip it was decided to have more greenery in the form of common floating gardens in the water basins; also each building has a green roof. Moreover, the surrounding land next to the street is covered by wild greenery.

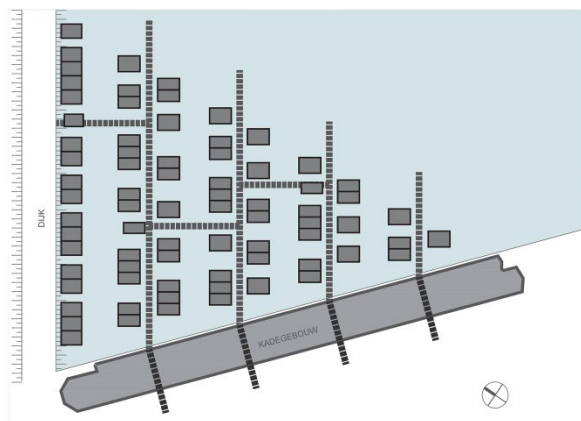


Fig. 1. Scheme of the site plan of the western part of the Waterbuurt neighbourhood (author)
Rys. 1. Schemat zagospodarowania terenu zachodniej części osiedla Waterbuurt (autor)

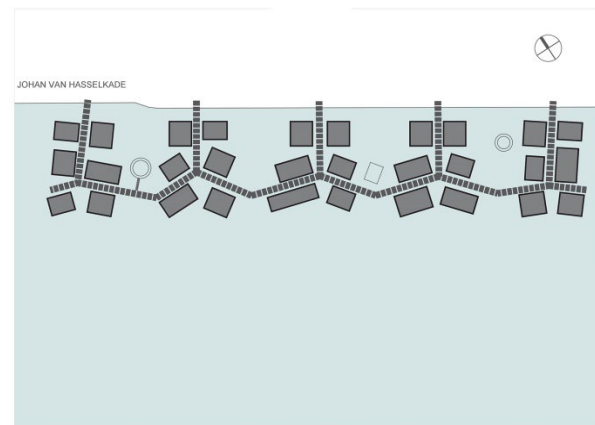


Fig. 2. Scheme of the site plan of the Schoonschip neighbourhood (author)
Rys. 2. Schemat zagospodarowania terenu osiedla Schoonschip (autor)

Architectural appearance of the buildings also differs between the neighbourhoods. In the project-based western part of the Waterbuurt it is a result of the architectural design by one architectural office so buildings look similar to each other – they are mainly white with some colours on the side walls (but in the same tone). The eastern part of Waterbuurt designed by different architects resulted in big variety of materials and colours used on the façade. Also, in Schoonschip the houses were designed by various architectural offices, but there was an additional restriction that allowed the use of only environmental friendly building materials. That also resulted in different façade designs, but the colours used are more subdued as in the eastern part of Waterbuurt.

There are some common factors in both presented floating neighbourhoods regarding sustainability. In terms of environmental, economic and social dimensions these are: flood resilience, adaptation to water level change, long-term usage, possibility to relocate, solid security against crime and peaceful atmosphere [8].

Within the buildings there are different self-sustaining solutions applied, such as rainwater collection and trading energy. Also, all the sewage is collected by the pipes under the jetties, so the water is not additionally polluted. The bigger amount of various technological solutions regarding sustainability was applied in Schoonschip than in Waterbuurt. Also, the involvement of the inhabitants in the whole process proved the Schoonschip to be sustainable in the social aspect. Moreover, the owners of the houses in the Schoonschip decided on sharing common electric cars, while at the Waterbuurt people who live in the floating houses park their cars in the Kadegebouw building. Even though it is questioned nowadays whether the electric cars are as sustainable as they were thought to be, in case of Schoonschip it is important that inhabitants do not own private cars but share a few communal ones.

4. CONCLUSION

Even though housing estates on the water have been already present in the urban landscape for years, they might be still considered something extraordinary. Nowadays floating neighbourhoods are not only simple houseboats moored in the canals, but well-thought-out developments built according to the plan. Floating residential architecture can significantly change the cityscape of the areas that used to belong to nature and have now become “built areas”. It can be a response to the flood risk and gives a possibility to move house elsewhere, which is an advantage, but at the same time can cause uncontrolled urban sprawl on the water, therefore it is necessary to create regulations and plan settlements according to them. Housing on the water can be a solution to the scarcity of land and can give inhabitants a feeling of living close to nature. Properly planned can strengthen neighbourly relations and have all of the features of high-quality residential buildings and estates (e.g., new floating houses do not have a limited space, as it used to be in old barges).

In conclusion, even though housing on the water has some disadvantages it may be an answer to some contemporary problems of the cities, but it requires good planning and taking into account various aspects. The presented chapter gives an overview of architectural and urban solutions of the planned floating neighbourhoods that can provide guidelines for other newly designed housing districts on the water.

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THE SOCIAL STRATEGY FOR HOUSING INVESTMENT PLANNING ON THE EXAMPLE OF PARTICIPATORY ACTIONS IN CHEŁMNO (POLAND)

1. INTRODUCTION

Chełmno is one of the municipalities that took part in the Space for Participation 2 project implemented by the Stocznia Foundation and the Sustainable Development Workshop Foundation [1]. Representatives of the municipality received support in planning and conducting social research and in the process of co-creating the Study of Conditions and Directions for Spatial Development of the Chełmno Municipality (hereinafter referred to as the Development Plan). We analysed the research tools and the effects of the participatory process in terms of the effectiveness of co-planning and the development of housing strategies for the town.

Chełmno is a historic town with great historical [2] and natural values. The unique character of the town and its history attract both tourists and potential residents [Fig. 1]. These circumstances allow for development and draw new dwellers, thus influencing the dynamics of the revitalisation process. The development strategy is being hampered by the spatial and housing situation within the municipality. The natural diversity of the area, along with the expositional layout of the old town, makes it difficult to find new sites for residential development. The high demand for new residential areas was brought to light by studies conducted throughout the Kujawsko-Pomorskie Province [3] as well as the situation of the local community living 'semi-legally' in allotment gardens. The town did not dispose of enough municipal and social housing to meet the obligations set by the law. The Act on the Protection of Tenants' Rights, including the housing stock of the municipality, as of 21 June 2001 explicitly states that "the provision of conditions for satisfying the housing needs of the local community is part of community's own tasks". All the housing

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needs combined caused the subject of housing development in Chełmno to become one of the main issues taken up in the participatory process. The inhabitants of the town were asked to join the conversation, but it was necessary for the municipality to further investigate the spatial and economic possibilities. The scale of the town, characteristic of small towns with compact buildings, is of great value as it is conducive to building a local community capable of planning and implementing spatial and social changes [4].



Fig. 1. Market Square in Chełmno

Rys. 1. Rynek w Chełmnie

Source: Author's own photograph.

Chełmno has been focused on building a strong, cooperating local community capable of facing a variety of urban challenges. The housing policy and finding social and spatial solutions which increase the development potential and allow municipal authorities to fulfil their obligations, under the law, have posed a great challenge for the town. In such a situation, the municipal community could act as a partner, supporting coping processes in the future, so that the town will be able to maintain its functions and retain control over the state of the municipality [5].

The municipal participatory process aimed to:

- identify the main housing needs among Chełmno inhabitants,
- study the investment potential of the inhabitants and entities interested in residential investments,
- study the possibilities of utilizing post-military real estate.
- The research aimed to find answers to the following research questions:
- Do citizens have an impact on the municipality's spatial planning strategy? To what extent?
- What impact does the selection of stakeholders have on the conclusions?
- Do social data make it possible to find key solutions to the municipality's housing problems?

The municipality conducted research focused on a wider range of city strategies including revitalisation of degraded areas. The study involved a comparison of data obtained in the participatory process conducted as part of the Space for Participation 2 project with information obtained directly from the residents and with the documentation drawn up by the municipality based on social data. It was important to check the extent to which the initial assumptions of the municipality were confirmed in the course of the participatory activities and whether the aforementioned documents responded to the needs reported by the stakeholders.

2. LOCAL HOUSING POLICY AND PARTICIPATION

Agata Twardoch's research approach is significant from the perspective of the following study [6]. The researcher identifies the planning documents of the municipality (the Study of Conditions and Directions for Spatial Development of the Municipality and the Local Spatial Development Plan) along with its Development Strategy as the main tools of the local housing policy. At the same time, she points out the need to link all the strategic and operational documents in order to reliably determine the needs and development opportunities of the municipality. All of that is important to limit excessive suburbanisation. In the case of Chełmno, the demographic absorption analysis [7] seems to indicate that the risk of excessive sprawl is low, as stated in the CSO analysis performed by the municipality on 31 December 2020.

However, the range of needs required some confirmation and clarification, hence the municipality undertook to carry out participatory activities, as described by Siemiński in a broad analysis concerning the objectives and principles of participation in spatial planning [8]. The selection of the participatory tools used in the process was based on publications prepared by Suchomska and Karłowska. The authors collected popular research tools and methods in the form of a toolbox, to be used by municipalities when engaging residents in spatial planning processes [9].

3. METHODOLOGY

The methods used in the study included:

- analysis of municipal documents,
- analysis of the participatory process carried out by the municipality,
- spatial observation performed during study visits to Chełmno,
- analysis of individual cases based on individual interviews with the inhabitants of the municipality,
- a street survey in the form of a “hanging question”.

The municipal participatory process was devised in the Individual Consultation Plan for the sake of the Space for Participation 2 project [Fig. 2]. The tools selected included a diverse set of techniques which allowed for a varied collection of data and gave rise to a dialogue about the town. Research techniques promoted by the Shipyard Foundation [9] were used. However, the organisers of the participatory process tried to take advantage of different possibilities for public engagement (e.g., a bike tour) and also reacted to the restrictions introduced as a result of the Covid-19 pandemic.

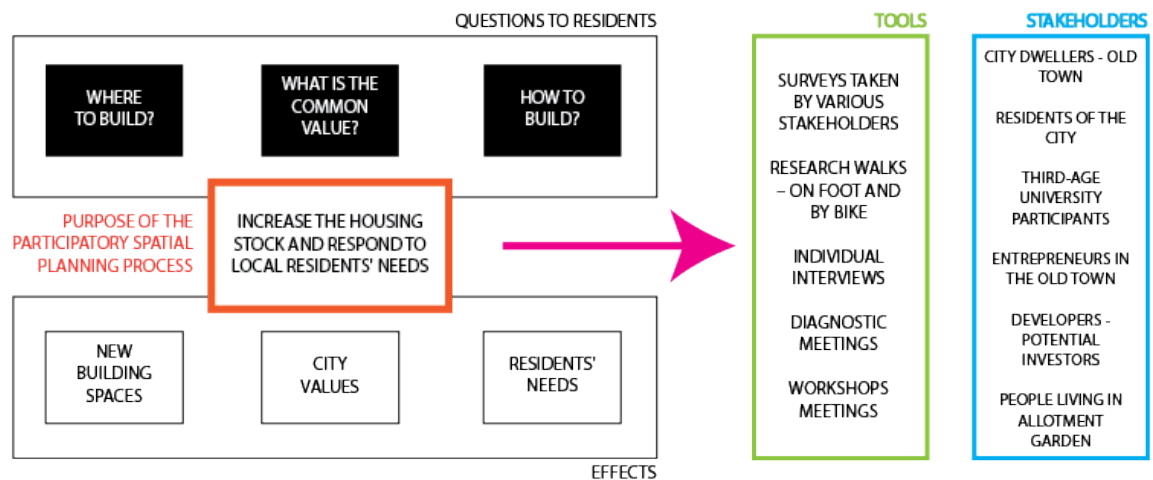


Fig. 2. Diagram of the participatory municipal process in Chełmno
 Rys. 2. Schemat partycypacyjnego procesu miejskiego w Chełmnie
 Source: Authors' own.

In the course of participatory planning, officials together with experts identified key stakeholders with potential knowledge and needs regarding the subject of housing in Chełmno. Based on the findings, officials carried out the following activities: research walks, workshops with residents, workshops with developers, and surveys dedicated to different groups of dwellers.

The participatory process was analysed based on the author's own experience gained during the work performed with representatives of the municipality (the author of the article was part of the expert team) and on summaries prepared within the framework of the project Space for Participation 2 (Fig. 3). The analysis also took into account the minutes of the public debate on the draft of the Development Plan, in which seven residents of Chełmno participated.



Fig. 3. Informative poster "Let's plan our town #Chelmno 2050"

Rys. 3. Plakat informacyjny "Zaplanujmy nasze miasto #Chełmno 2050"

Source: The City Hall Chełmno.

The participatory research undertaken by the author complemented the toolkit used during the municipal participatory process. Additional activities were aimed at clarifying individual expectations about the form and the location of residential development in Chełmno.

The analysis of the planning documents included the analysis of the previous Development Plan of Conditions and Directions for Development of the Chełmno Municipality adopted in January 2009, and the draft of the new Development Plan, which was the subject of the municipality's study. In addition, the analysis also included the following documents: Report on the State of the Municipality of the Town of Chełmno for 2019 [10], Assumptions of the housing policy and spatial development of the municipality [11].

The spatial observation was carried out during two study visits performed in March and August 2020. During the observation, an original research tool was used, based on the analysis of natural and historical assets, pedestrian accessibility to the main urban functions, and open-view points. The observations were supplemented by a street survey carried out in the form of "a hanging question" to show the attitude to and expectations regarding the place of residence [Fig. 4, 5].

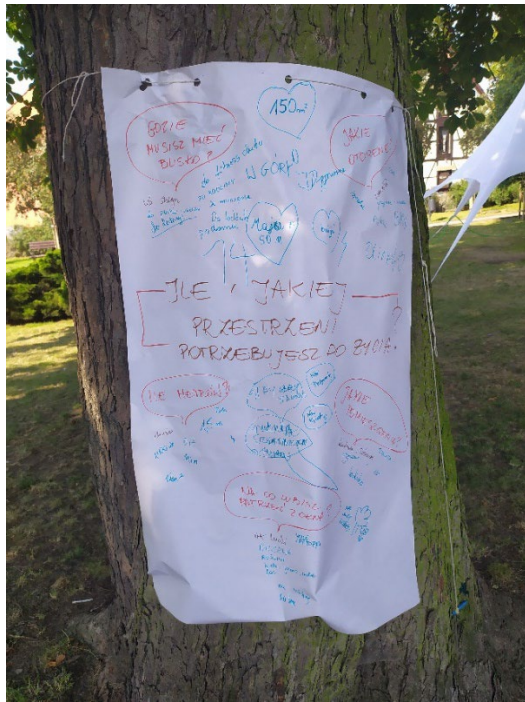


Fig. 4. A hanging question in the park
Rys. 4. Zawieszone pytanie w parku
Source: Author's own photograph.

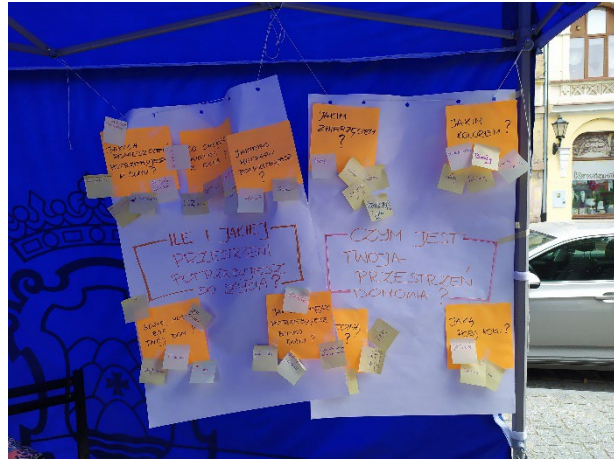


Fig. 5. Hanging questions in the town square
Rys. 5. Zawieszone pytanie na Rynku
w Chełmnie
Source: Author's own photograph.

Individual interviews were relevant to determine the preferences when choosing one's place of residence. Moreover, there was a plan to interview people representing various circles of Chełmno (entrepreneurs, youth, and seniors). 15 individual interviews were conducted with the attendees of the 9 Hills Festival (a cyclical cultural event organized in the town). The survey involved residents of Chełmno representing different parts of the town and of different perspectives on life. The group of the interviewees included an owner of a clothing store located in the old town, a senior citizen who has lived in Chełmno all her life, and students of local high schools living in different parts of the town. It was not possible to interview people aged 25-45, that is to say, people representing the largest group of residents of the town of Chełmno (information based on CSO data as at 31st Dec.2020).

4. HOUSING CHALLENGE OF THE CHEŁMNO MUNICIPALITY

Housing availability is now a national challenge which occupies a major part of the debate on social and spatial problems within many a municipality. In her publication, Agata Twardoch states: "The availability of housing is determined by the ease of

buying, building or renting on the open market, or with support." [12]. In Chełmno, the birth rate was 2.45 per 1000 population in 2020 (CSO as of 31 Dec. 2020). This phenomenon makes the need for new residential spaces a key challenge in the development of the municipality. The CSO data for 2020 also shows that there are 276 dwellings for every 1000 inhabitants, which is way below the average, as far as whole Poland is concerned. The analysis prepared for the new Development Plan showed that there was 25.0 m² of residential building space per one inhabitant in Chełmno. At the same time, an increase in the number of new housing buildings was observed. The simulation performed for the sake of the development analysis in the new planning document showed the demand for new usable areas of residential buildings at the level of 8075 m². [13]. The city authorities observed an outflow of inhabitants to neighbouring communes, where more opportunities to acquire a living area could be found.

Chełmno's housing problems were also made visible by the situation of the people living in allotment gardens, who should be placed under the special care of the municipality [14]. The allotment gardens were inhabited by people who had social problems and should be placed in social housing. The problem was worsened by the fact that the town did not have an adequate supply of council flats, which was perceived as a potential challenge in the future city development policy.

The historical and natural values of the town constitute an attraction for new potential inhabitants. Chełmno's authorities observed situations where people, unable to find a place to live, had to look for alternative locations in the *neighbourhood* (e.g., Świecie). This potential could act as a factor reversing the phenomenon of depopulation observed in statistical data analysis. The CSO data concerning changes in the number of inhabitants of Chełmno between 1997 and 2018 [13] show that there is a gradual decrease in the number of inhabitants. The whole process was hindered by the previous provisions of the Development Plan, in which large areas are covered not only by the nature conservation policy but also the conservation policy itself which includes the exposure protective zone.

Meetings with inhabitants concerned matters related to the possibility of building their own homes and having access to services accompanying the residential function. The officials discussed the possibility of launching new areas for development with respect to historical and natural values. The data obtained was to

be used as a basis for amending the provisions of the existing Development Plan of Chełmno Municipality.

5. EFFECTS OF THE MUNICIPAL PARTICIPATION PROCESS

The main effect of the work performed with stakeholders turned out to be the potential increase in the area for residential buildings. The prepared analysis of development in relation to the existing spatial conditions took into account the need to increase the amount of land for the development by the areas indicated by those involved in the participatory process. Activation of areas along the southern border of the town was planned, as can be observed in the comparison of the existing document with the new study, visible in Fig. 3 and Fig. 4. In the perspective of 30 years, the officials planned for the development of single- and multifamily housing, as well as housing connected with accompanying services. Importantly, changes to the study require some additional planning works concerning the Local Spatial Development Plans so that assumptions developed with the residents and other stakeholders can be implemented. The municipal authorities assumed a gradual implementation of the new housing strategy in order to prevent a possible stagnation on the housing market.

Direct comparison of the two documents: the Development Plan of 2008 and Development Plan of 2021 seems difficult due to the differences in naming the functions of particular areas [Fig. 3]. However, it should be noted that the changes to the Development Plan of 2021 included an area of land allocated for residential development along with the identification of the types of housing development planned in the neighbourhood. An important factor, which had to be taken into account when looking for new housing sites, was connected with the conservation of historic buildings. The southern part of the municipality, due to the terrain, constitutes an exposure protection zone for historic buildings in the Downtown Area. Therefore, areas with a potential residential function should be of a certain volume so as not to disturb the scenic qualities of the municipality. An analysis of this criterion allowed the designers to develop a solution to improve the continuity of the residential development structure without compromising the conservation needs.

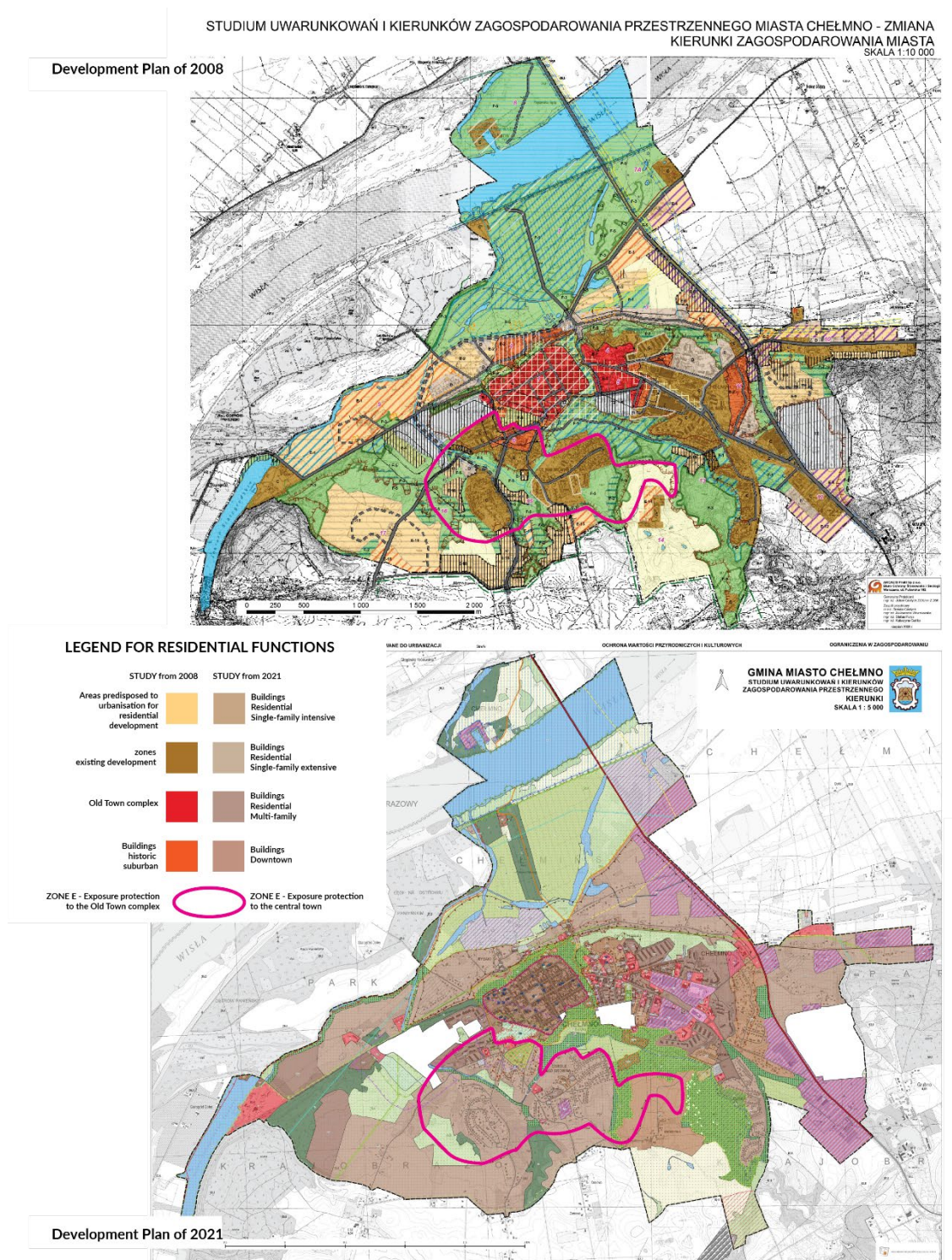


Fig. 6. Directions of the town development in the Development Plan of 2008 and the Development Plan of 2021

Rys. 6. Kierunki rozwoju miasta w Planie Rozwoju z 2008 roku i Planie Rozwoju z 2021 roku

Source: materials from the resources of the Chełmno Municipal Office developed by the author

Research has shown that residents need housing that is reasonably priced and is of proper size, set in good locations, and with access to accompanying services. The town authorities have drawn a crucial conclusion that the spatial development

policy should correspond to the housing policy and vice versa, as they are mutually dependent. The assumptions of the city's housing and spatial development policy are presented in Table 1. and show the multifaceted activities supporting housing development in relation to the municipality's spatial and administrative capacities, government programmes, and the free market.

Table 1

Summary of tools used by the municipality with potential effects and reference to participation and possible risks

TOOLS USED IN MUNICIPAL DOCUMENTS	ASSUMPTIONS	POTENTIAL LONG-TERM EFFECTS	REFERENCE TO PARTICIPATORY RESEARCH	THE RISKS OF IMPLEMENTING TOOL-BASED ACTIVITIES - author's assessment
OBJECTIVE 1: The town of Chełmno creates a spatial policy that provides opportunities for the realization of projects satisfying housing needs and provides opportunities for town development.				
PLAN FOR THE USE OF THE REAL ESTATE STOCK IN THE CHEŁMNO MUNICIPALITY	A 3-year plan involving the following principles: each year min. 10 single-family residential lots for sale; each year min. 2 multifamily residential lots for sale; each year min. 1 service/manufacturing parcel for sale.	Using the municipality's resources to increase the number of private housing developments, planning the development process taking into account the access to needed services.	The need for increasing the number of dwellings, including houses. Need to acquire land that the municipality owns that has investment potential.	Difficulty in finding investors willing to provide service/production investments that would respond to the needs of the municipality, thus disrupting the availability of services accompanying the residential function indicated, for example, in the so-called special housing law – "the specustawa" [15].
STUDY OF CONDITIONS AND DIRECTIONS OF SPATIAL DEVELOPMENT IN CHEŁMNO (DEVELOPMENT PLAN)	Securing investment areas that are privately and publicly owned, enabling the implementation of new single- and multifamily housing, new manufacturing and service investments.	Providing support for private investors who wished to invest on their plots and were not allowed to do so due to the previous provisions of the Development Plan.	Identification of parcels for potential housing, single-family, and multi-family development. Individual farms and developers indicated the locations they were interested in and where they planned to develop.	There is a risk that land planned for residential function may not be developed, while there is growing pressure to make other lands available for residential development. There is also a risk of losing sites of

				natural and historic interest.
LOCAL SPATIAL DEVELOPMENT PLAN	Successive implementation of changes in the provisions of the local law, enabling the realisation of new residential investments, as well as industrial and service investments, providing the possibility for private investors to carry out their investment intentions in compliance with the spatial order.	Supervision over investment activities protecting the interests of all residents of Chełmno.	The need for efficient updating of documents so that the provisions are conducive to the use of the property for the construction of houses.	The risk of introducing provisions too restrictive or too focused on the individual interests.
OBJECTIVE 2: The town of Chełmno has a diverse range of housing to meet the requirements of people with different incomes.				
MUNICIPAL HOUSING RESOURCES	Social rental accommodation (listed allocation)	Reducing the number of homeless people in order to enable the municipality to meet its legislative obligations (16)	The voice of allotment residents living in allotment gardens illegally since the town has no housing stock to offer them.	The cost of renovations could turn out too high, holding up the process of providing communal housing.
MUNICIPAL RENTAL HOUSING RESOURCES	Introduction of a new form of housing management in the municipality	Maintaining municipal resources and creating various forms of access to housing.	The need for partnerships with other public institutions within the municipality, e.g., in the context of activating post-military areas.	The standard of housing should be competitive with private rentals, although the sense of potential rental stability offered by the municipality may be behind the choice of urban resources.
FLATS CONSTRUCTED UNDER THE TBS FORMULA (Communal Building Society)	In the so-called "flats with participation fee, also called contribution", where tenants pay 20% of the amount of the project of a given flat (the so-called participation or contribution), 80% of the amount intended for the project of the	Using the financial opportunities offered by government programs to increase the housing stock in the municipality.	Residents' interest in the offer of the Communal Building Society - TBS.	With so many options for obtaining housing in the municipality, the TBS option might be the least financially beneficial. There ought to be a conscious pricing policy promoting

	investment is financed according to the rules set out in the Act of 26 October 1995 on some forms of housing support			the appropriate form of rental/purchase based on the potential financial means of the recipient.
FREE PRIVATE HOUSING MARKET	Stimulating the development of the construction (housing) market using the tools set out in OBJECTIVE 1	Close cooperation with developers and small lot owners to meet their needs and expectations while respecting the needs of other residents based on the municipality's developed housing policy.	The need for cooperation between the City Hall, developers, and smaller investors. The need to address investment needs related to housing.	The municipality is exposed to pressure from potential "pathological" developers providing dysfunctional, or pathological, housing [17]
OBJECTIVE 3: Chełmno is a town with a varied and attractive housing offer, stimulating town development.				
ACTIVE SOCIAL HOUSING COMPANY SBC CHEŁMIŃSKIE TOWARZYSTWO BUDOWNICTWA SPOŁECZNEGO SP. Z O. O.	Development of the municipal housing infrastructure providing access to housing for people with low- or medium-income: social and communal rental housing, communal rental housing, "participatory" housing – the TBS formula	Creating low-rent housing for people who might have difficulty obtaining housing on the open market.	The need to take care of urban resources so that the town can respond quickly to the housing needs of its residents.	Need for clear rules for obtaining housing relative to other tools used in the municipality's housing policy. There is a risk that assumptions for different tools and potential social conflict might overlap.
CHEŁMIŃSKIE TOWARZYSTWO BUDOWNICTWA SPOŁECZNEGO SP. Z O. O.	The use of government mechanisms to support the development of housing, including the financing from the Bank Gospodarstwa Krajowego, or the mechanism of MIESZKANIE + and other proposed forms of support, possible to a limited extent in the current formula of the budgetary establishment.	Maximising the use of government programs to improve the access to housing in Poland.	Need for active use of government programs implemented in neighbouring municipalities. (e.g. Świdnik, Mińsk Mazowiecki, Katowice)	Legal instability in the context of housing schemes acts as an impediment.
Progressive spatial policy	The Real Estate Management	Flexible response to the needs of the	The need for the City Hall to cooperate with	The municipality is exposed to pressure

	Department stimulates the private real estate market, including developers - activating new areas for the construction of single- and multifamily housing.	property market to support private investors.	developers and smaller investors. It is necessary to respond to housing investment requirements.	from potential "pathological" developers, providing dysfunctional housing [17] There is a lack of clear information on how housing policy relates to other urban challenges the town is facing or may face in the future.
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Source: Own elaboration based on data and contents of the document "Housing and spatial development policy of the town of Chełmno".

The town has taken measures to stimulate housing investment and ensure the availability of municipal and social housing. The municipality's activities concerning the availability of housing resources have gone in two different directions. The first involved the activation of undeveloped land, a former economic wasteland, for private housing investments. The second path concerned the use of vacant land in the historic part of the town. The changes in the planning documents are intended to stimulate the diversity of the housing offer and encourage developers to invest in Chełmno [18]. An important step taken by the municipality to respond to the needs of residents and other stakeholders was the establishment of the Chełmińska Społeczna Inicjatywa Mieszkaniowa Sp. z o.o. [19]. The task of the company is to support people whose income does not allow them to buy a flat and whose individual life situation does not qualify them for support under the housing policy. It is worth noting that in 2021 the first investment was announced, which concerned the renovation of post-military buildings for housing purposes. Thus, thanks to national funding, the municipality will obtain 44 council flats [20].

The housing theme was not the main objective of the research conducted by the representatives of the town of Chełmno. From the beginning, the aim was to motivate the inhabitants to discuss the town and its needs. The multifaceted participatory process yielded many ideas for local initiatives. One of them was to renovate a townhouse in the town centre, where the Chełmno NGO Incubator GRUDZIĄDZKA 36 currently operates, and where the residents associated with

nongovernmental organisations can meet. The task of the new institution is also to promote the history of Chełmno.

6. RESULT OF THE RESEARCH

The influence of residents on the spatial planning strategy and the housing policy of the municipality is relevant to the participatory spatial planning processes. In the case of Chełmno, the process provided confirmation as to the direction of the activities undertaken to increase the housing stock. In addition, cooperation with inhabitants has provided inspiration for activities involving residents in the social life of the town.

A preliminary analysis of the municipality's problems revealed the need to involve different stakeholders. The selection focused on involving different age groups and different interests, but also on involving people who have the legal and financial tools to face the municipal challenge. This approach allowed for an inclusion of different stakeholders in a common debate about the future of the municipality. At the same time, it has become an important business case for developers interested in investing in Chełmno.

The effects, which could be observed shortly after the first meetings ended, showed increased activity in the housing business. Direct operational activities carried out by the municipality, including the establishment of a special purpose vehicle and the identification of land for residential development through public tenders, have been of great importance. It is important for the future to achieve synergies between the capacities and needs of all stakeholders in the municipality's housing resources, supported by a continuous multi-stakeholder dialogue.

Participants of the Development Plan identified areas for potential housing development taking into account the development characteristics for each area. In addition, there were expectations towards the city authorities regarding everyday functioning within the public space and needs related to building social relations. The interviewees stressed that the inhabitants have the potential to create common innovations in public spaces. It is worth pointing out that the participatory spatial planning process was complemented by other inclusive activities focused mainly on building mutual relations and strengthening bonds between inhabitants and officials.

Municipal authorities maintain continuity in public dialogue by organising successive meetings and studying successive social groups and their needs.

Individual surveys conducted with residents of Chełmno indicate that location, the view out of the window, as well as means of transport constitute significant values to them. The location is related to distance to the town centre, the services needed in our daily life, and the access to green areas. Among the interviewees, most of the people talked about their place of residence as an ideal place to live. The form of housing was not crucial for that assessment. The view out of the window was very important to all interviewees and was often associated with the possibility to observe other people, for example, just to choose the right clothes for the weather. Car and bicycle transport is significant for inhabitants, especially the cycling infrastructure. In most parts, the town is compact, and one can walk comfortably around on foot. The remote parts, on the other hand, can be reached by public transport provided by local carriers. However, during the survey, residents highlighted the problem with the location of bus stops and the frequency of their services. The problem of solving the transportation issue was related to the new organisation of roads around the old town in order to move the car traffic out of the market square area and to improve cycling in the town.

The focus of the research was placed on housing, which meant that there was little discussion on the contemporary challenges that cities face. The great need to build housing may not go hand in hand with other actions that the municipality will have to take, such as adaptation to climate change. The essence of the participatory process and the author's research was the process of spatial planning and the search for solutions to increase the number of housing units. However, the results of the survey show a weakness in terms of the lack of awareness among residents about the dangers of the over-development of green spaces. Most of the data obtained from the inhabitants referred to the current situation and did not go beyond the image outlined by the city authorities. The need to preserve spatial values was strongest: proximity to the town centre and green areas, beautiful views, preservation of the historic urban fabric. However, there were no critical voices pointing out the gaps in the assumptions of housing and spatial policy in the context of climatic, social, economic, and other threats.

7. CONCLUSION

Increasing the amount of land for residential development must be done in a balanced way to preserve the identity of the town of Chełmno. There is a risk that housing objectives and the desire for dynamic urban development may overshadow other values. Currently, the housing problem in Chełmno appears to be a challenge shared by many stakeholders. The status of a priority task may cause that with the initial saturation of the housing market new problems will arise which are not visible at present. Therefore, it is important to maintain a continuous social dialogue and to introduce a multifaceted diagnosis of the progress of housing policy implementation. **A social discussion of further plans for investment activities may help with reacting to potential social and ecological threats at an early stage [21].**

As far as the strategy for the implementation of the housing policy is concerned, it is worth adopting indicators regulating the potential loss of green areas, including those of particular natural value. Urban sprawl and gradual concretisation must be prevented, as they hinder the plans to protect the climate [22]. **It is necessary to introduce appropriate provisions in local plans aimed at introducing solutions conducive to responding to phenomena caused by climate change.** In the context of social inclusion, it is important to undertake educational activities on adaptation to climate change in order to increase social sensitivity to nature. A good direction for the municipality is to activate post-military areas and revitalise the historic centre in order to maximise the saturation of the housing market based on the existing building resources.

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Krzysztof KAFKA, Helena SZEWIOLA

PARTICIPATION OF CHILDREN IN SPATIAL PLANNING PROCEDURES

Abstract

The chapter of the monography analyses the possibilities, limits and deficiencies of spatial planning procedures in Poland in regard to involving children. The chapter highlights the areas where participatory improvements could be made and displays possibilities of adapting currently binding procedures. Differences between participation of adults and children are presented, which underline the need of a different approach to minority groups. It is theorized that involving a broad spectrum of social groups into spatial planning procedures is an area worth exploring.

Key words: Children in participation; Children in spatial planning; Minority needs in spatial planning; Participation; Spatial planning; Spatial planning procedures; Social participation.

FIGURES

Fig. 1. Table illustrating the differences in definitions of participation regarding adults and children / The right column is an interpretation of the definitions provided by the chapter's authors

Fig. 2. Part of the final exhibition of the project showing drawings created during the workshop

Fig. 3. Part of the after- workshop report as part of the project "New quality of social consultations in spatial planning"

Fig. 4. Final presentation of the workshops results in Trzemeszno

Krzysztof KAFKA, Helena SZEWIOLA

PARTYCYPACJA DZIECI W PROCEDURACH PLANISTYCZNYCH

Streszczenie

W rozdziale przedstawione zostały możliwości i ograniczenia procedur planowania przestrzennego w Polsce w odniesieniu do partycypacji dzieci. Wskazane zostały obszary, w których można wprowadzić usprawnienia, oraz pokazano możliwości dostosowania istniejących procedur. Na podstawie przedstawionych różnic pomiędzy partycypacją dorosłych i dzieci podkreślona została potrzeba lepszego, bardziej różnorodnego podejścia do grup mniejszościowych, w tym dzieci. Wysunięto tezę, że włączenie szerokiego spektrum grup w procedury planowania przestrzennego jest obszarem wartym zbadania i może przynieść korzyści wszystkim stronom.

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Zbigniew J. KAMIŃSKI

NEW WAYS OF SPATIAL PLANNING IN THE SILESIAN VOIVODESHIP (POLAND)

Abstract

The basic question posed in this article is as follows: In the context of rapid changes taking place and the "fluid reality" and the "rigid" formal spatial planning system, established in Poland at the beginning of the twenty-first century, are there any new ways of spatial planning in the Silesian Voivodeship, fundamentally different from the way of traditional planning and responding to contemporary challenges?

In search of an answer to the above question, a method of comparing the three spatial development plans of the Silesian Voivodeship, adopted in 2004 and 2016, and the plan currently being prepared, with the previous ones in the area of the Silesian Voivodeship, developed in the years 1945 - 1989, i.e., during 45 years of spatial planning in the times before the Polish transformation.

Conclusions relate to new ways of spatial planning in the Silesian Voivodeship and the key concepts and the institutional context of planning.

Key words: spatial planning, Silesian Voivodeship, new approaches to planning.

FIGURES

Fig. 1. Model of the spatial structure of the Silesian Voivodeship

Fig. 2. Planning process

Fig. 3. The implementation mechanism

Zbigniew J. KAMIŃSKI

NOWE SPOSOBY PLANOWANIA PRZESTRZENNEGO W WOJEWÓDZTWIE ŚLĄSKIM

Streszczenie

Podstawowe pytanie stawiane w tym artykule jest takie: Czy w kontekście zachodzących gwałtownych zmian i „płynnej rzeczywistości” oraz „sztywnego” formalnego systemu planowania przestrzennego, założonego w Polsce jeszcze na początku XXI wieku, są jakieś nowe sposoby planowania przestrzennego w województwie śląskim, zasadniczo różne od sposobu tradycyjnego planowania i odpowiadające na współczesne wyzwania?

W poszukiwaniu odpowiedzi na postawione powyżej pytanie przyjęto metodę porównania trzech planów zagospodarowania przestrzennego województwa śląskiego, przyjętych w latach 2004 i 2016, oraz planu aktualnie będącego w opracowaniu, z ich poprzednikami w obszarze województwa śląskiego, opracowanymi w latach 1945-1989, to jest w ciągu 45 lat planowania przestrzennego w czasach sprzed transformacji Polski.

Wnioski dotyczą nowych sposobów planowania przestrzennego w województwie śląskim i kluczowych pojęć oraz instytucjonalnego kontekstu planowania.

Pojęcia kluczowe: planowanie przestrzenne, województwo śląskie, nowe podejście do planowania.

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Rys. 1. Model struktury przestrzennej województwa śląskiego

Rys. 2. Proces planowania

Rys. 3. Mechanizm wdrożeniowy

Marta KIRAGA, Beata FORMAL-PIENIAK

HYDROTECHNICAL DEVELOPMENT WITH VEGETATION AS OPPORTUNITIES FOR LIFE QUALITY IN CITIES ABSTRACT

Abstract

Hydrotechnical development in many cases is necessary to the water balance improvement. The introduction of water structures may lead to the decrease of natural landscape values. However, the durability, aesthetics, and ecological potential of the watercourse may be increased by biotechnical structures introduction. The small water structures introduction in the urban landscape translates into the economic aspect of using urban space, the expansion potential, and the city image.

FIGURES

Fig. 1. Examples of concrete hydrotechnical structures: a) weir on Świder river, b) bridge piers on Świder river

Fig. 2. Life quality main domains and component's structure.

Fig. 3. Environmentally friendly solutions for water regulation: a) stone sill (Park im. Edwarda Szymańskiego in Warsaw), b) stone sills cascade (Park im. Edwarda Szymańskiego in Warsaw), c) wooden Palisade (Park Arcadia in Warsaw), d) wooden sill (Park im. Edwarda Szymańskiego in Warsaw)

Fig. 4. Well-developed city river vegetation zone, where: 1 – deciduous trees, 2 – coniferous trees, 3 – alnus trees, 4 – high grass, 5 – low grass and shrubs, 6 – emergent plants, roots in water, 7 – floating species, 8 – submerged species, 9 – rooted floating species, Q_{min} – minimal flow, Q_{mean} – mean flow, Q_{max} – maximal flow.

Fig. 5. City reservoirs: a) Staw Służewiecki in Warsaw, b) Park Moczydło in Warsaw

Fig. 6. Small hydropower plants equipped with Archimedean screw: a) Staw Służewiecki in Warsaw, b) Run-of-the-River hydropower plant in Wolica, built-up on old mills ruins, Świętokrzyskie voivodship

Fig. 7. Office building patio arrangements: a) Platinum Business Park in Warsaw, b) Konstruktorska Business Center in Warsaw

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Table 2. Stream velocity limitations for various types of bed reinforcement materials

Marta KIRAGA, Beata FORMAL-PIENIAK

ZABUDOWA HYDROTECHNICZNA Z ROŚLINNOŚCIĄ JAKO SZANSA NA POPRAWĘ JAKOŚCI ŻYCIA W MIASTACH

Streszczenie

Rozwój hydrotechniki w wielu przypadkach jest niezbędny do poprawy bilansu wodnego. Wprowadzenie budowli wodnych może jednak prowadzić do obniżenia naturalnych walorów krajobrazowych. Jednakże trwałość, estetyka i potencjał ekologiczny cieku mogą zostać zwiększone przez wprowadzenie budowli biotechnicznych. Wprowadzanie małych budowli wodnych w krajobrazie miejskim przekłada się na ekonomiczny aspekt wykorzystania przestrzeni miejskiej, potencjał rozwojowy i wizerunek miasta.

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Marta LIP-KORNATKA

CRITERIA OF EVALUATION OF MONUMENTS IN THE CONTEXT OF PRESERVING EXISTING BUILDING STOCK

Abstract

The aim of this paper is to show how the valuation of historic buildings can support the sustainable development of cities, especially in terms of preserving the structures that form the urban fabric. Regarding the fact that evaluation is a basis for conservation activities, the criteria in this respect in Polish law will be analysed. In order to set these considerations in the history of doctrine, the basic text for the discipline – "Der Moderne Denkmalkultus" by Alois Riegl – will be reviewed. The analysis of the text will answer the question whether there are tools in the text that can be used in conservation doctrine today to support sustainable urban development based on the preservation of the existing building stock.

FIGURES

Fig. 1. 1 Maja Street in Zabrze – frontage of historic street with buildings dating after 1945

Fig. 2. Charles de Gaulle Street in Zabrze – central space in the city built by contemporary and historical objects

Fig. 3. A scheme of division of contemporary important values according to Alois Riegl's theory

Fig. 4. A scheme of the possibilities of incorporating the use value into the evaluation system

Marta LIP-KORNATKA

KRYTERIA WARTOŚCIOWANIA OBIEKTÓW ZABYTKOWYCH A OCHRONA TKANKI BUDOWLANEJ MIAST

Streszczenie

Celem artykułu jest pokazanie, w jaki sposób wartościowanie obiektów zabytkowych może wspierać zrównoważony rozwój miast, zwłaszcza w zakresie zachowania struktur tworzących tkankę miejską. Wobec faktu, że wartościowanie stanowi podstawę działań konserwatorskich, przeprowadzona zostanie analiza jednego z podstawowych tekstów dyscypliny – "Der Moderne Denkmalkultus" Aloisa Riegla – pod kątem znalezienia narzędzi, które można dziś wykorzystać w doktrynie konserwatorskiej, aby efektywnie ocalać istniejącą zabudowę miast.

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Rys. 4. Schemat możliwości włączenia wartości użytkowej do systemu wartościowania zabytków w ramach prawa polskiego

Sandra PICHLAK

REUSE OF POST-INDUSTRIAL AREAS AS AN OPPORTUNITY TO SAVE INDUSTRIAL HERITAGE

Abstract

Post-industrial areas located in city centers are qualified to revitalization usually preceded by the liquidation of infrastructure. Partially empty areas, containing historic buildings and structures whose liquidation is impossible, become problematic. The article aims to present the adaptation impact of post-industrial heritage on its technical condition, which is confirmed by the conclusions of the conducted research. The revitalization of post-industrial sites allows maintaining the historic buildings in a valid technical condition and may contribute to limiting the spillover of urbanized areas into open spaces.

FIGURES

Fig. 1. View of the Orzegów Coking Plant in Ruda Śląska, left side: tar tank and coal tower, right side: inside of the coke oven battery

Fig. 2. View of the „Prezydent” hoist tower park, left side source: author, right side source: TVS: <<https://tvs.pl/informacje/industriada-2016-chorzow-program-wejdz-na-szyb-prezydent-albo-zagraj-w-gre>>

Fig. 3. View of the KWK Polska hoist towers

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Fig. 5. View of Loft Aparts (in the middle). Source: Lofts Aparts <<https://loftaparts.pl>>

View of Platinum Lofts (right side). Source: Archicom <<https://archicom.pl>>

Fig.6. View of historical buildings in Silesia City Center site

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Table 3. Conversion into residential buildings

Table 4. Adaptation to commercial use

Sandra PICHLAK

PONOWNE WYKORZYSTANIE PRZESTRZENI POPRZEMYSŁOWYCH SZANSĄ NA OCALENIE DZIEDZICTWA PRZEMYSŁOWEGO

Streszczenie

Tereny poprzemysłowe zlokalizowane w centrach miast kwalifikują się do rewitalizacji zwykle poprzedzonej likwidacją infrastruktury. Problematyczne stają się tereny częściowo puste, zawierające zabytkowe budynki i budowle, których likwidacja jest niemożliwa. Celem artykułu jest przedstawienie wpływu adaptacyjnego dziedzictwa poprzemysłowego na jego stan techniczny, co potwierdzają wnioski z przeprowadzonych badań. Rewitalizacja terenów poprzemysłowych pozwala na utrzymanie obiektów zabytkowych w należyłym stanie technicznym i może przyczynić się do ograniczenia rozlewania się terenów zurbanizowanych na przestrzeń otwartą.

SPIS FOTOGRAFII

Fot. 1. Opracowanie własne: Widok na Koksownię Orzegów w Rudzie Śląskiej, zbiornik smoły i wieża węglowa, wnętrze baterii koksowniczej

Fot. 2. Opracowanie własne: Widok na park wieży wyciągowej "Prezydent"TVS: <<https://tvs.pl/informacje/industriada-2016-chorzow-program-wejdz-na-szyb-prezydent-albo-zagraj-w-gre>> : Widok na park wieży wyciągowej "Prezydent"

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Fot. 5. Loft Aparts <https://loftaparts.pl>: Widok na lofty Aparts Archicom <https://archicom.pl>: Widok na lofty Platinum

Fot. 6. Opracowanie własne: Widok na historyczne budynki Silesii City Center

Fot. 7. Łódź travel <https://lodz.travel.pl>: Widok na Manufakturę w Łodzi Galerie handlowe <https://galeriehandlowe.pl>: Centrum handlowe Focus Park

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Tab. 4. Opracowanie własne: Przystosowanie do użytku komercyjnego

Agata PIĘT

CAN HOUSING ON THE WATER BECOME AN ANSWER TO THE PROBLEMS OF THE CONTEMPORARY CITIES?

Abstract

The aim of the study is to analyse housing developments on the water and find an answer to the question if floating neighbourhoods might become a solution to the problems of the contemporary cities regarding the land scarcity, overpopulation, and flood risk. The analysis is based on field research and literature studies. The presented conclusions might be useful for future developments of the housing neighbourhoods on the water as a way of potential reinvention of the cities.

FOTOGRAPHIES

Photo. 1. View of the project-based western part of Waterbuurt (author)

Photo. 2. View of the project-based western part of Waterbuurt, the Kadegebouw on the right (author)

Photo. 3. View of Schoonschip neighbourhood, the common floating garden and basin on the left (author)

Photo. 4. View of Schoonschip neighbourhood (author)

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Ill. 1. Scheme of the site plan of the western part of the Waterbuurt neighbourhood (author)

Ill. 2. Scheme of the site plan of the Schoonschip neighbourhood (author)

Agata PIĘT

CZY MIESZKALNICTWO NA WODZIE MOŻE STAĆ SIĘ ODPOWIEDZIĄ NA PROBLEMY WSPÓŁCZESNYCH MIAST?

Streszczenie

Celem pracy jest analiza zabudowy na wodzie i znalezienie odpowiedzi na pytanie, czy pływające osiedla mogą stanowić rozwiązanie problemów współczesnych miast w zakresie niedoboru gruntów, przeludnienia i zagrożenia powodziowego. Analiza opiera się na badaniach terenowych i studiach literaturowych. Przedstawione wnioski mogą być przydatne przy tworzeniu przyszłej zabudowy mieszkaniowej na wodzie jako sposobu na wymyślanie miast od nowa.

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Fot. 2. Widok na zrealizowaną zgodnie z projektem zachodnią część Waterbuurt, budynek Kadegebouw po prawej stronie (autor)

Fot. 3. Widok na osiedle Schoonschip, wspólny pływający ogród i basen po lewej stronie (autor)

Fot. 4. Widok na osiedle Schoonschip (autor)

Il. 1. Schemat zagospodarowania terenu zachodniej części osiedla Waterbuurt (autor)

Il. 2. Schemat zagospodarowania terenu osiedla Schoonschip (autor)

Sylwia WIDZISZ-PRONOBIS

THE SOCIAL STRATEGY FOR HOUSING INVESTMENT PLANNING ON THE EXAMPLE OF PARTICIPATORY ACTIONS IN CHEŁMNO (POLAND)

Abstract

In order to conduct the Study of Conditions and Directions of Spatial Development in Chełmno (Development Plan in Chełmno), a series of analyses were carried out. The results of these analyses showed an urgent need to organise space for new housing investments. Actions were planned and implemented to involve stakeholders in the process of drawing up the planning document, along with strategic documents concerning the housing policy and revitalization of the town. Residents involved in the participatory process expressed their needs and expectations. The study aimed to determine the extent to which inhabitants influenced the condition of the housing policy, urban planning, and architectural guidelines. The research was carried out among the residents of Chełmno and the surrounding area using tools that involve and build a sense of urban identity. The whole process partly took place during the Covid-19 pandemic, which had an impact on the research and the operational activities undertaken in Chełmno. The data obtained show the complexity of the issue and the limitations that the municipality faces in creating a strategy to develop a city based on the intelligent use of human resources. Inhabitants' involvement in the process of spatial planning also brought to light the potential of social energy to dynamically influence the directions of strategic changes in the municipality and thus the potential for creating urban resilience to the emerging crisis phenomena.

Keywords: participatory process, housing policy, spatial planning

FIGURES

Fig. 1. Market Square in Chełmno

Fig. 2. Diagram of the participatory municipal process in Chełmno

Fig. 3. Informative poster "Let's plan our town #Chelmno 2050"

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Fig. 5. Hanging questions in the town square

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Table 1. Summary of tools used by the municipality with potential effects and reference to participation and possible risks

Sylwia WIDZISZ-PRONOBIS

SPOŁECZNA STRATEGIA PLANOWANIA INWESTYCJI MIESZKANIOWYCH NA PRZYKŁADZIE DZIAŁAŃ PARTYCYPACYJNYCH W CHEŁMNIE

Streszczenie

W celu przeprowadzenia studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Chełmna (Plan zagospodarowania przestrzennego miasta Chełmna) zrealizowano wiele analiz. Ich wyniki wykazały pilną potrzebę zorganizowania przestrzeni dla nowych inwestycji mieszkaniowych. Zaplanowano i wdrożono działania mające na celu włączenie interesariuszy w proces sporządzania dokumentu planistycznego wraz z dokumentami strategicznymi dotyczącymi polityki mieszkaniowej i rewitalizacji miasta. Mieszkańcy zaangażowani w proces partycypacyjny wyrazili swoje potrzeby i oczekiwania.

Celem badania było określenie, w jakim stopniu mieszkańcy wpłynęli na stan polityki mieszkaniowej, urbanistyki i wytycznych architektonicznych. Badania zostały przeprowadzone wśród mieszkańców Chełmna i okolic z wykorzystaniem narzędzi angażujących i budujących poczucie tożsamości miejskiej. Cały proces częściowo odbywał się w czasie pandemii covid-19, która miała wpływ na badania i działania operacyjne podejmowane w Chełmnie.

Uzyskane dane pokazują złożoność zagadnienia i ograniczenia, jakie stoją przed władzami miasta w tworzeniu strategii rozwoju miasta opartej na inteligentnym wykorzystaniu zasobów ludzkich. Zaangażowanie mieszkańców w proces planowania przestrzennego ujawniło również potencjał energii społecznej do dynamicznego wpływania na kierunki zmian strategicznych w gminie, a tym samym potencjał tworzenia odporności miejskiej na pojawiające się zjawiska kryzysowe.

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