

# Assessment of access to public green areas

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## SUMMARY

The thesis presents the subject of public green areas and public access to them. The research focuses on 18 voivodeship cities, and mainly concerns multi-family housing areas in Wrocław.

The dissertation pursues one main research goal: an attempt to develop guidelines for assessing the accessibility of public green areas for city residents and to define the rules for formulating recommendations for the needs of local policy in the field of planning and shaping green areas, striving to improve the quality of life in cities.

This assessment was divided into several smaller stages:

- Getting acquainted with the methods of measuring access to public green areas;
- List of methods used in Polish cities with voivodeship status,
- Conducting in-depth research in Wrocław (survey among residents and detailed analysis and assessment of access to green areas for residents of Wrocław).

The conducted considerations confirmed the four hypotheses, assuming that:

- measures of accessibility to green areas are different depending on the adopted definitions of public green areas and the method of calculating accessibility, and thus do not translate into the spatial policy of administrative units;

- the choice of green areas by residents depends on both their size and distance from their place of residence, as well as elements of equipment. The most frequently visited areas were 2-20 ha parks, located within 1 km from the place of residence. Areas within a radius of up to 1.6 km were also very popular, provided that their area was over 10 ha, and there was attractively arranged and conducive to physical activity;

- the COVID-19 pandemic changed the approach to green areas and contributed to more frequent visits to this areas. Over 63% of respondents indicated that they spend more time in green areas, and almost 26% of the remaining group had already visited green areas every day. The data obtained also showed a large variety of leisure activities;

- The conducted research allowed to propose directions and ways of modifying the definition of green areas, as well as their access for various types of development, which ultimately led to the formulation of guidelines that will contribute to improving the quality of life of city residents. The Wrocław example shows the relationship between the structure of greenery and the quality of life as well as regularities in the use of green areas by city residents. There was no relationship between the adopted morphological typology of individual Wrocław housing estates and the availability of green areas. However, differentiation in access to greenery due to the type of housing development was noticed. The research requires further in-depth analysis.

The theoretical part of the work discusses in detail Polish legal regulations related to the requirements for shaping green areas, definitions defining biologically active areas, as well as provisions in force in individual provincial capitals. The stories of green areas around the world are also cited.

The practical part of the work concerned the assessment of discrepancies in the results in the methods of calculating access to green areas in voivodeship cities. Based on the analysis of the conducted research and available data, the results describing the assessment of accessibility in individual cities were compared. An awareness survey was also carried out among the inhabitants of Wrocław to better understand their preferences regarding the visited areas. Then, an inventory and analyses of multi-family housing and green areas in its immediate vicinity were carried out. Then the collected data was used to map the green areas and determine their accessibility for residents and divided into 4 categories of area: from 0.1 to 2 ha, from 2 to 20 ha, from 20 to 100 ha and over 100 ha. For each housing estate, the average distances and the size of the areas, divided into the categories of area described above, taking into account the various types of buildings selected by the author, were presented. Based on the results, the availability of green areas for each housing estate was assessed.

The research work allowed to formulate the guidelines that should be taken into consideration during planning and establishing new green areas.

**Key words:** public green areas, accessibility, multi-family housing, spatial planning, social participation