How to use the potential of the environment to improve the quality of life in urbanized areas

The increasing pressure on the natural environment in cities, especially large cities and their suburban zones, caused, inter alia, by disordered and intensive development, new terrain-absorbing infrastructure, and an increase in car traffic and exposure to other sources of pollution result in a deterioration of the quality of life for people. Climate change (e.g. heat waves, flash floods) poses a significant threat to highly urbanized areas, the negative effects of which for city dwellers are additionally reinforced by the urban heat island effect and soil sealing as well as deterioration of the quality or loss of urban green space. Therefore, green spaces play a significant role in the game for urban space, and urban ecosystems should be perceived through the wide range of services they provide. The perception of green space through the prism of the benefits that ecosystems give to humans is particularly important for changing the approach to spatial planning in Poland. Although the concept of ecosystem services is not yet widely implemented in the national planning system, and is mainly the subject of scientific discourse, it was referred to in the National Urban Policy 2023. This policy recommends that local governments, when preparing their studies and spatial development plans, take into account indications regarding the use of the concept of ecosystem services in planning developed under the project "Urban MAES - ecosystem services in urbanized areas" conducted by the Ministry of the Environment. Such an approach is in line with the EU biodiversity strategy for the period until 2020, which stressed the need to maintain and strengthen ecosystems and their services. This is also reflected in the current 2030 EU strategy, which points to the need to restore and increase resilience of biodiversity for the benefit of people and the climate.

The aim is to show some indicators of key urban ecosystem services adapted to three spatial scales: national, regional, and local. On a national scale, the indicators were calculated for all 20 functional urban areas (FUAs) in Poland with a population of over 250 thousand. On the regional scale, the indicators were developed for the city area within the administrative boundaries (on the example of Warsaw), and for the local scale for a part of the city. The proposed indicators include provisioning, regulating and cultural services. The selection of services and the indicators was based on the analysis of the most significance of phenomena and processes taking place in the urbanized space from the point of view of the well-being of residents. Indicators refer to ecosystem service potential, use or unmet demand.

Scientific research was carried out as part of the project "Services provided by the main types of ecosystems in Poland - the approach used" by the team: M. Degórski (scientific coordinator), A. Affek, B. Degórska, A. Kowalska, E. Regulska, J. Wolski, J. Solon.