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An analysis of the methodology for building the environmental potential of urban areas

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The United Nations (UN) predicts that until 2050 the urbanization rate in the world will be almost 70%. At the same time, the Intergovernmental Panel on Climate Change (IPCC) estimates that the average temperature on Earth will increase by 2 degrees by 2050. The effects of global warming and past harmful urban activities are visible today and include negative phenomena such as urban heat islands and urban floods. Polish Academy of Sciences specialists estimate that between 2011 and 2020 heat stress was the direct and indirect cause of nearly 28,000 annual deaths in Poland.

Today's cities exhibit low resistance to the stress caused by climate changes and low adaptation potential. It is therefore necessary to implement new solutions that will satisfy the living and existential needs of human beings, and at the same time focus on the use of natural processes. Contemporary city management should deviate from a sectoral approach to solving global warming problems and begin work on a system-evolutionary approach. It is essential to implement holistic concepts such as the blue-green network (Zalewski 2010). On this basis, effective and firm nature-based solutions should be constructed, such as rain gardens, green bus stops, and green roofs and facades of buildings. All these solutions eliminate the urban heat island effect, reduce surface runoff and improve the city's microclimate.

The aim of this study is to analyse the strategies and methods currently used to minimize the negative effects of climate change and improve the quality of life of urban residents. The latest methods of managing water resources in cities and their further development in the light of strategic UN documents will be presented.

References

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