



Water is our common commodity. Krakow knows its water footprint

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This is an important step in building residents' awareness of the need for rational management of water resources. Krakow joined the small group of Polish cities that have already conducted such an analysis: Cieszyn, Ełk, Jasło, Kalisz, and Milanówek. At this point, it is the largest city in the group, which was important due to the much larger amount of data that had to be analyzed.

The water footprint of Krakow was created based on the *“Water footprint as a tool for education, integration and initiatives to protect the water resources of cities”* project carried out by the Association of Municipalities Polish Network *“Energie Cités”*, and financed by the European Union under the Operational Programme Infrastructure and Environment (OPI&E). One of its components is a water footprint calculator, a tool to improve data analysis (available at: <http://www.kalkulator.sladwodnymiast.pl/>)

What is the water footprint of a city?

A water footprint is the volume of water that has been lost, i.e., not returned to the catchment area from which it was taken, within the administrative boundaries of a city.*

The water footprint can be divided into a green footprint, blue footprint, and the gray footprint.

The green water footprint determines the consumption of the portion of rainwater that does not turn into surface runoff, but is captured by plants.

The blue water footprint determines the consumption of surface and ground water resources. It takes into account direct and indirect water consumption, i.e., the amount of water consumed directly by the consumer or producer, discharged through evaporation from the surface, stored as rainwater or exported outside the administrative boundaries of the analyzed area.

The gray water footprint determines water pollution and is defined as the volume of water that would be required to dilute the load of discharged pollutants to such a degree that the water quality of the receiving water body does not exceed applicable water quality standards.

Water footprint per resident

The analysis shows that the value of the water footprint converted per statistical resident per day was 722 liters in 2021 and 574 liters in 2022.

The analysis of the water footprint makes way for a comprehensive study of the relationship between the various elements affecting urban water management. The objective of this analysis is to identify areas where water can be saved, both locally and globally.

The findings can be used to:

- develop water management policies, especially in the context of new investment projects,
- assess the impact of local policies on water consumption,



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- optimize water and wastewater management systems,
- identify water-intensive areas and facilities,
- educate residents about water conservation,
- raise awareness of the fact that water is a limited resource.