Szkoła Podstawowa im. Marii Konopnickiej w Jabłonicy

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STEM for Water

Water shortage in Poland and the Subcarpathian area



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Why is water important?

There’s no life without water - we need it for food, drinking, energy and hygiene.

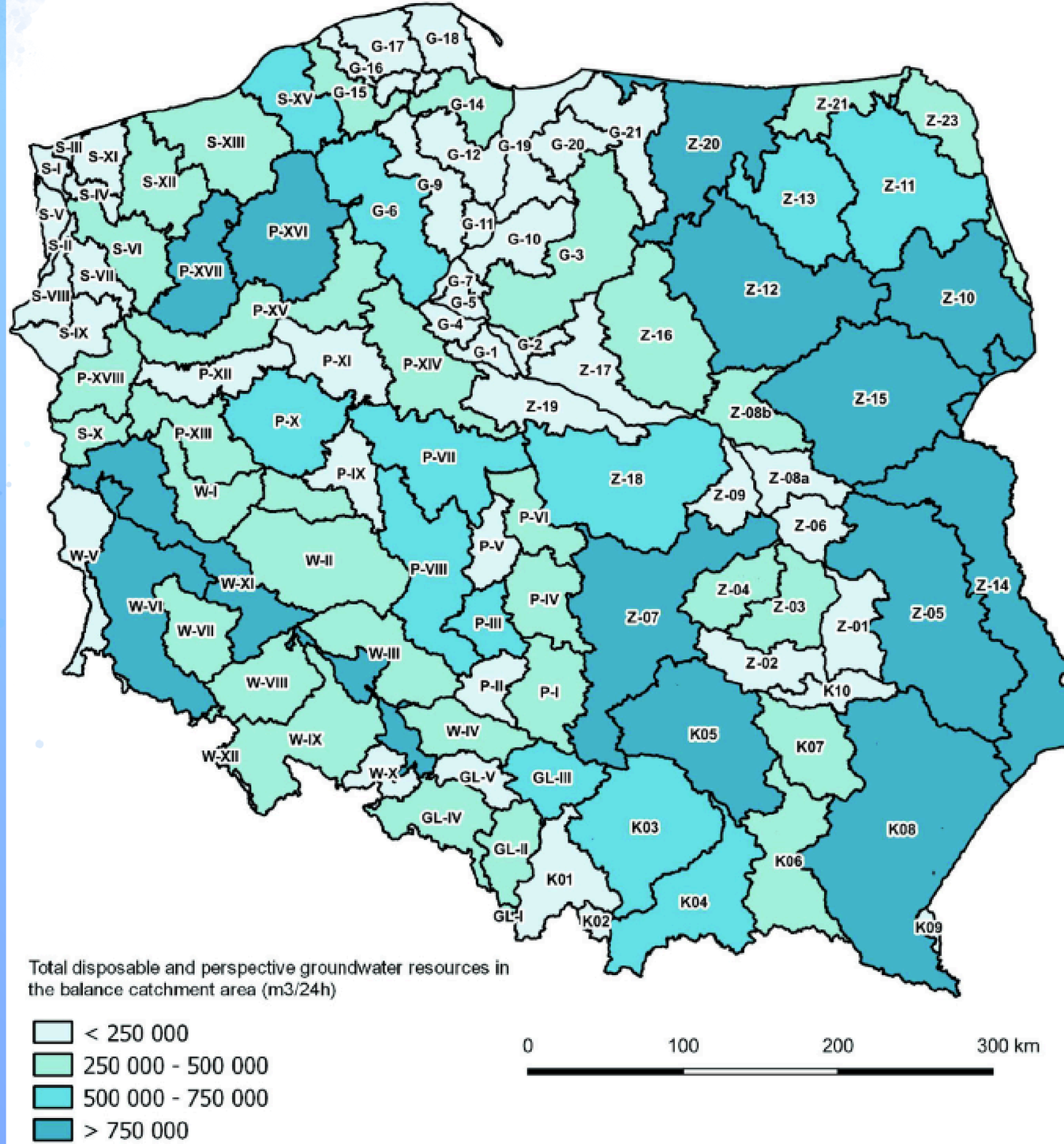
Water resources on Earth are limited - we must protect them.

Only 2.5% of Earth’s water is fresh water, and just 0.3 % is accessible to humans.

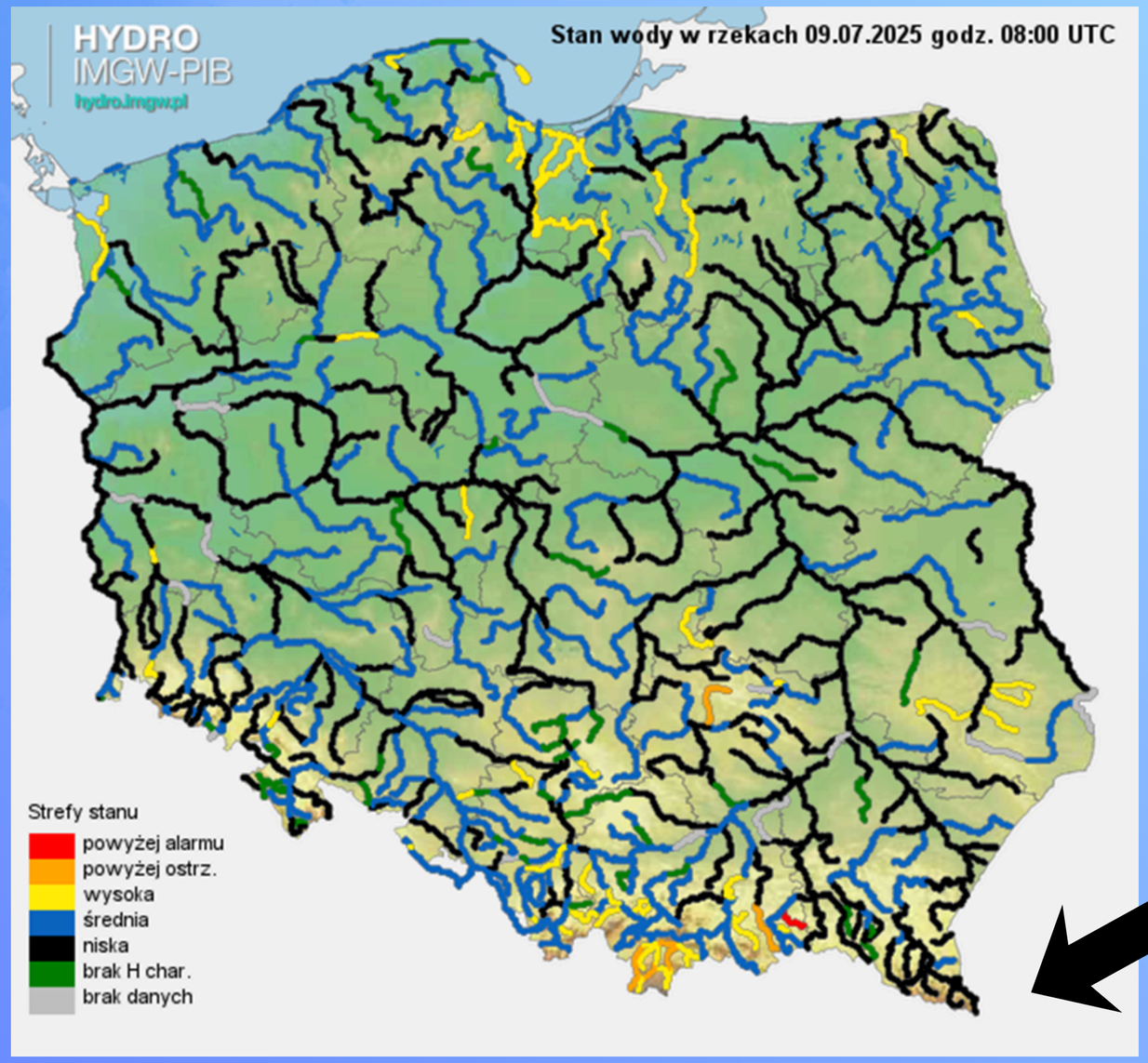


Where does Poland get its water from?

When it comes to drinking water, the main source in our country is underground water. In 2021, it accounted for 73% of the water supplied to households. Other sources of drinking water were surface waters, such as lakes, rivers, and artificial reservoirs. However nowadays people do not care about the environment too much, and these sources have become more and more polluted.



Water levels in Subcarpathian area and Poland



In our Podkarpackie Voivodeship, since the end of June this year a hydrological warning concerning drought has been in effect, issued by the Podkarpackie Crisis Management Centre. Unfortunately, the situation in the region still has not improved.

The black colour here means low water level in rivers.

Causes of water shortage in Poland

High water utilisation:

- Agriculture, industry, and cities demand a lot of water, especially in summer.



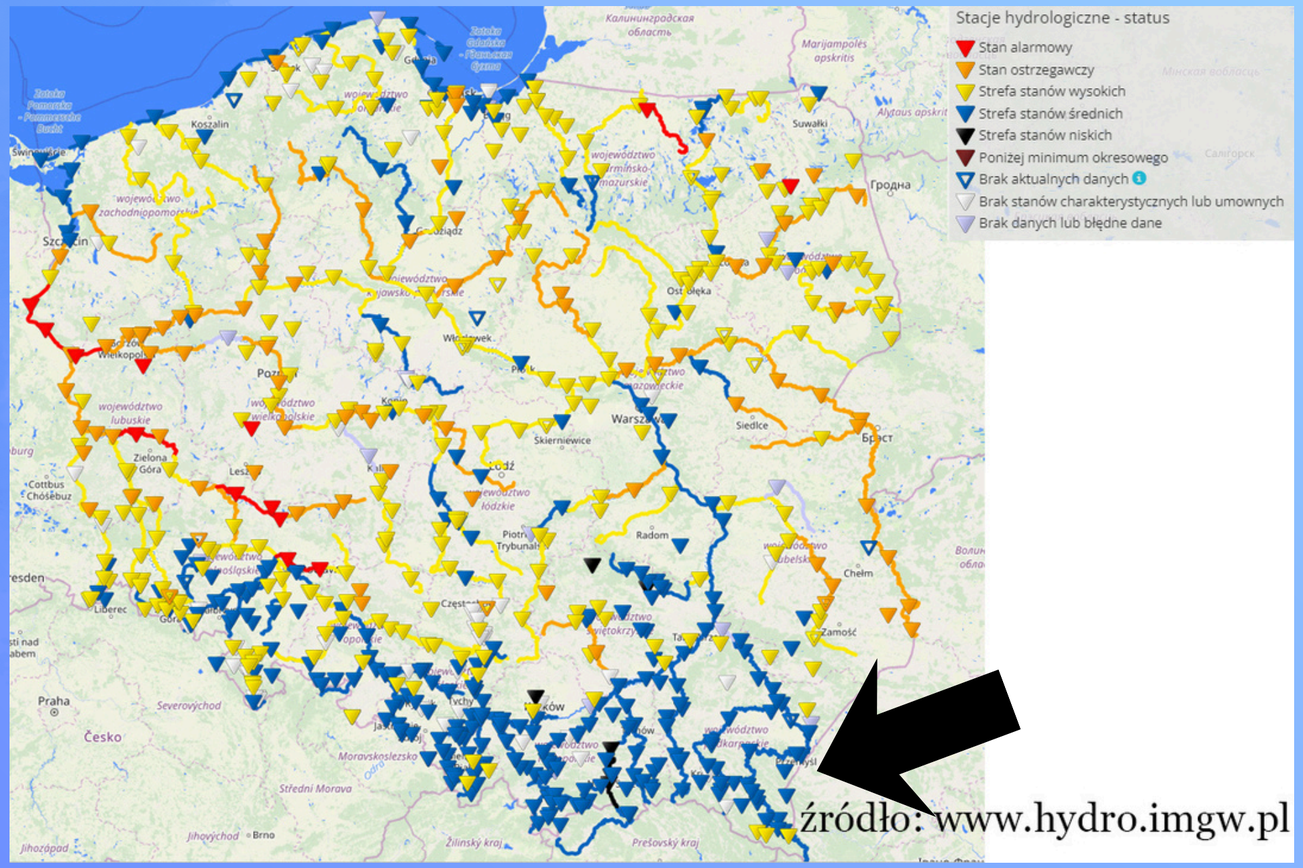
Climate change and droughts:

- More often droughts in Poland are intensifying water shortages.

Low natural water resources:

- Intensive agriculture or construction activities - such as the construction of a gas pipeline, affect the availability of these natural water resources.

Water management in our voivodeship



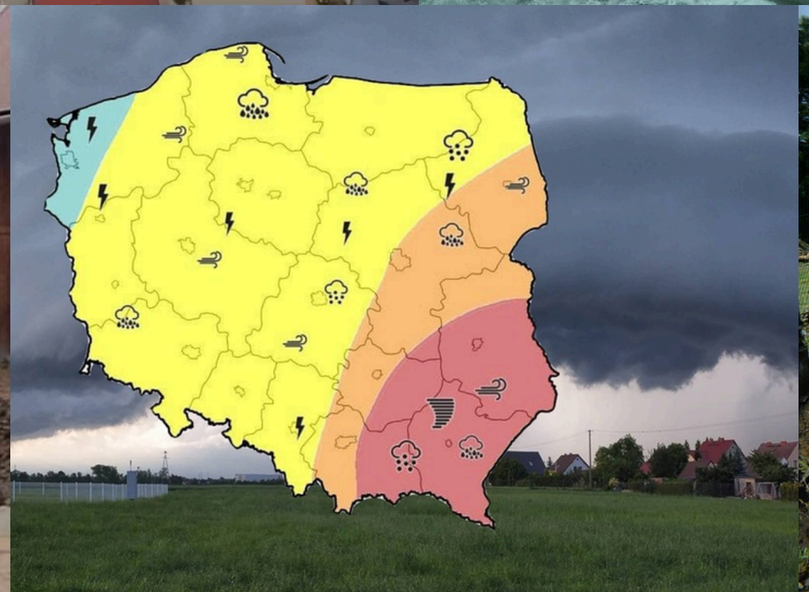
In 2023, water consumption for the national economy and population increased in the Podkarpackie Voivodeship compared to 2022. Overall water consumption was higher primarily due to increased industrial water use. In households, water consumption was slightly lower than in 2022.

Dangerous weather phenomena in Subcarpatia

Recently, Subcarpathia has experienced dangerous weather conditions, including severe storms, floods, tornadoes, hail, and heavy rainfall.






The largest river in Poland - the Vistula

This year Vistula reached its lowest level ever, which is caused by hydrological drought, climate change and human interference (sand mining).

Consequences:

- degradation of waterbird and amphibian habitats,
- reduced groundwater availability,
- difficulties in agriculture,
- possible historical / archeological discoveries





Klimkówka Reservoir

In the past :

In the past the reservoir was about 15.5 million cubic meters of water, and its depth ranged 25 meters.



National Geographic says:

By August 2025, the reservoir had lost nearly 80% of its original water content. This means a drop from approximately 43 million cubic meters to less than 10 million cubic meters.

At present :

The water level in the Klimkówka Reservoir in 2025 is low due to a multi-year drought that has affected the Ropa River, from which the reservoir draws its water. The reservoir's capacity is approximately one-third of its maximum, or less than 5 million cubic meters.

Klimkówka Reservoir





The lake in the past

Klimkówka Reservoir





The lake at present

The impact of water shortage on agriculture and people

Agriculture:

- Crop failures: Farmers struggle to grow crops like wheat, potatoes, and corn during dry seasons.
- Lower yields = higher food prices for everyone.
- Soil degradation: Drought can damage soil quality and reduce long-term productivity.



People:

- Stress and costs: Droughts increase living costs for families, especially in farming communities.
- Health risks: Less water means problems with hygiene, sanitation, and access to clean drinking water.

Drying out wells in our area

Drying wells in the region are a serious problem, caused by lower groundwater levels. Causes include prolonged droughts and climate change, but also excessive water withdrawals, for example, through intensive agriculture or construction activities such as the construction of a gas pipeline. That sometimes requires water to be transported by tanker trucks.





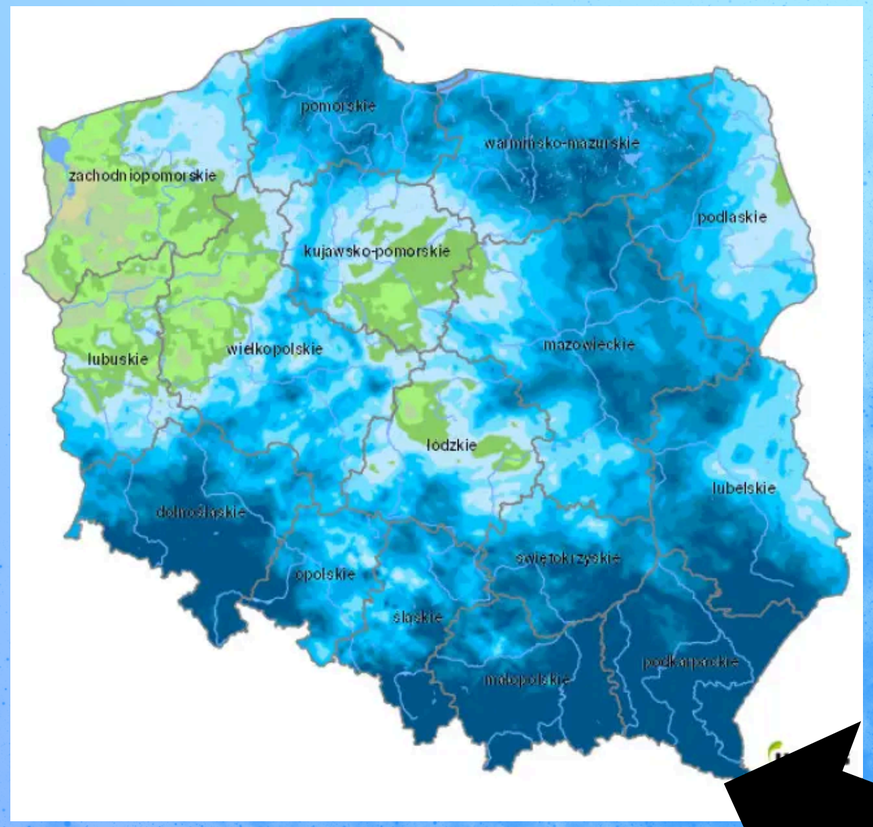




How can we prevent hydrological drought?

To reduce hydrological drought, water retention should be increased by building reservoirs and sustainable agricultural practices such as no-till farming (a farming technique that does not disturb the soil) and urban greenery should be implemented. Activities such as water conservation and rainwater harvesting are also very important.





What is the "My Water" program?

The "My Water" program is a government initiative aimed at protecting water resources by increasing the retention and utilization of rainwater and meltwater on single-family homes. It offers subsidies for installations such as rainwater tanks and infiltration systems, allowing rainwater to be managed instead of drained. Single-family homeowners can apply for a subsidy of up to PLN 6,000 for the purchase and installation of these solutions.





Outdoor water conservation

How can we save water outdoors?

- collecting rainwater,
- watering at the right time,
- using a watering can instead of a garden hose,
- drip irrigation,
- loosening the soil,
- selecting drought-resistant plants.



Indoor water conservation

Some of the basic steps to save water are: turning off the water while brushing your teeth, taking a shower instead of a bath, washing dishes in the dishwasher instead of by hand.















Thanks for watching!!!

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