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NEWSLETTER

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Sustainable
Development
Office

ZIELONY
WSŁIZ



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6 CLEAN WATER
AND SANITATION



ISSUE TOPIC:

WATER QUALITY

Sustainable Development Goal 6: Clean water and sanitation

Water scarcity, poor quality and poor sanitation have a negative impact on food security and livelihoods. There is enough water on our planet for everyone to have access to.

Unfortunately, due to, among other things, the poor condition of infrastructure, millions of people, especially children, die every year from diseases related to inadequate water resources, poor sanitation and poor hygiene.*

* <https://sdgs.un.org/goals/goal6>

Bottled or Tap Water?

Urszula Binduga, M.A.

Assistant at the Department of Civilization Diseases and Regenerative Medicine

Tap water is generally a more sustainable choice than bottled water – it is cheaper, easily available and does not generate plastic waste. However, it is worth remembering that it has a long journey before it reaches our homes – often from open sources, through treatment processes (e.g. chlorination), to insufficient renovation of water pipes. Therefore, although it is subject to control, it is a good idea to additionally filter it.

Let's also pay attention to the mineral content – tap water contains fewer minerals and is often classified as spring water, so it may be worth considering supplementing minerals in the diet. Bottled water meets high standards as a food product, but choosing it also comes with environmental consequences that should be taken into account.

Chemicals

from detergents and pharmaceuticals

are increasingly being detected in drinking water¹, and **microplastics** found in products such as PET bottles pose a potential health risk.

¹ WHO, *Pharmaceuticals in drinking-water*

**More about plastic
and drug pollution in articles
on the UITM Green Blog (PL):**

*Leki jako odpady – cichy wróg środowiska i zdrowia ↗
Mikroplastik powoli zabija nas od środka! ↗*

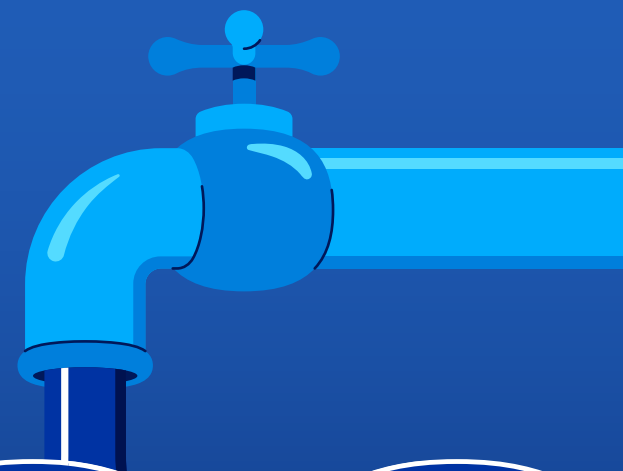
The best water is one that is individually tailored to your needs:

- ✕ physical activity,
- ✕ possible illnesses,
- ✕ nutritional deficiencies.

It is therefore worth familiarizing yourself with the products available on the market and choosing the right water for yourself.

Take care of what goes into your glass.

Take care of yourself!



GOAL 6.3 commits countries to:



- **halving** the amount of untreated sewage;
- **improving water quality** by reducing pollution and safely reusing water;
- **eliminating illegal dumping** and reducing the use of harmful chemicals.

Why is it important?

By **2050,**

global **water demand**

will increase by **55%**²



More than

3.6 billion

people worldwide

lack access to safe sanitation systems³, and almost

2 billion

use contaminated

water sources⁴

Every year, about **0.5 million people**

die from diarrhea⁵, and **3.4 million deaths** are recorded

from water-borne diseases (such as dysentery, typhoid fever and polio), many of the victims being children⁶.



² OECD (2012), *Environmental Outlook to 2050*

³ WHO & UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene

⁴ WHO & UNICEF (2023), *Progress on household drinking water, sanitation and hygiene 2000–2022*

⁵ WHO, *Water-related diseases factsheet*

⁶ *Where do waterborne diseases rank in causing human health problems?*

Nitrates and phosphates



from agricultural fertilizers are among the main sources of **groundwater and surface water pollution**⁷

In 2022, **more than 60% of lakes in Europe** exceeded nutrient standards (nitrogen and phosphorus)⁸

⁷ European Commission, *Nitrates*

⁸ European Environment Agency (EEA), *Eutrophication of Europe's waters*

Traces of

antibiotics, hormonal drugs and painkillers



have been detected in surface waters around the world, which may contribute to antibiotic resistance⁹

Studies have shown that **83% of tap water samples** from around the world contained microplastics¹⁰,

and 100% of Atlantic fish tested also contained **heavy metals and endocrine disrupting compounds** in their tissues, affecting fertility¹¹



⁹ UNEP, *Pharmaceuticals in the environment*

¹⁰ Badanie Orb Media

¹¹ L. Alberghini, A. Truant, S. Santonicola, G. Colavita, V. Giaccone

What solutions are used around the world?

Denmark

is changing its sewage system from combined to separate, which prevents sewage from flowing into rivers after heavy rainfall (thus reducing the level of pollution) ↗

The Netherlands

is implementing water purification using floating wetlands ↗

Plant-based purification systems are becoming more common – they work biologically and do not require electricity ↗

New Zealand

uses DNA testing of faecal bacteria in some rivers to pinpoint the source of contamination ↗

Israel

uses so-called dynamic water tariffs, i.e. water payment rates that vary depending on the level of consumption and availability of resources – after exceeding the tariff threshold, the fee increases ↗

Singapore

has created the NEWater system, which purifies wastewater at a molecular level and reuses it as drinking water ↗

Not all water is the same

The most popular division of waters is their classification based on origin



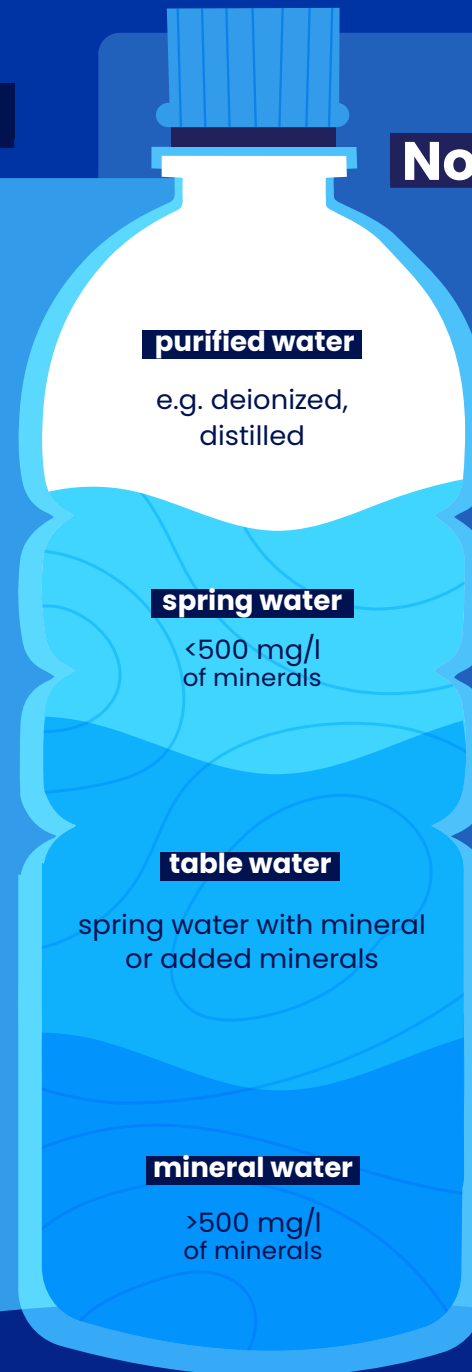
Can water dehydrate you?

Not all water has the same hydrating effect. If it contains a lot of sodium (e.g. medicinal or highly mineralized waters), it can:

- **increase thirst,**
- **retain water** in the body,
- **put a strain on the kidneys,** which can lead to dehydration in sensitive people (e.g. the elderly, those with kidney disease).

Curious?

Our next issue will focus on the health benefits and minerals found in drinking water



University activities under Goal 6

One of the actions undertaken by UITM as part of sustainable water management is the installation of rainwater tanks and accompanying drip irrigation systems.

Using rainwater is an optimal solution due to its chemical composition and temperature, which meets the needs of plants. It is therefore a solution that not only reduces water consumption, but also supports the optimal growth of cultivated vegetables, herbs and fruits. This year, due to the exceptionally abundant rainfall in spring, the water collected in tanks can be stored for longer.

**This allows water to be supplied to plants grown in the show garden*
– both in boxes and directly in the field.**

*As part of the Field Laboratories, visitors have access to a garden and an educational trail that serve an educational purpose in the field of species recognition and observation of natural processes.

More:

Nowe laboratoria Katedry Bioróżnorodności i Zrównoważonego Rozwoju (PL) ⁷
Laboratorium Terenowe (PL) ⁷



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**Every drop counts,
especially the one we drink**

– let's make sure it's safe

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Any suggestions regarding the Newsletter, including proposals for interesting topics and initiatives, to: bzr@wsiz.edu.pl



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