



# Water – at the center of the climate crisis

Department of Chemistry, Biochemistry and Environmental Protection  
Faculty of Sciences  
University of Novi Sad



Djurdja Kerkez, PhD  
-associate professor-

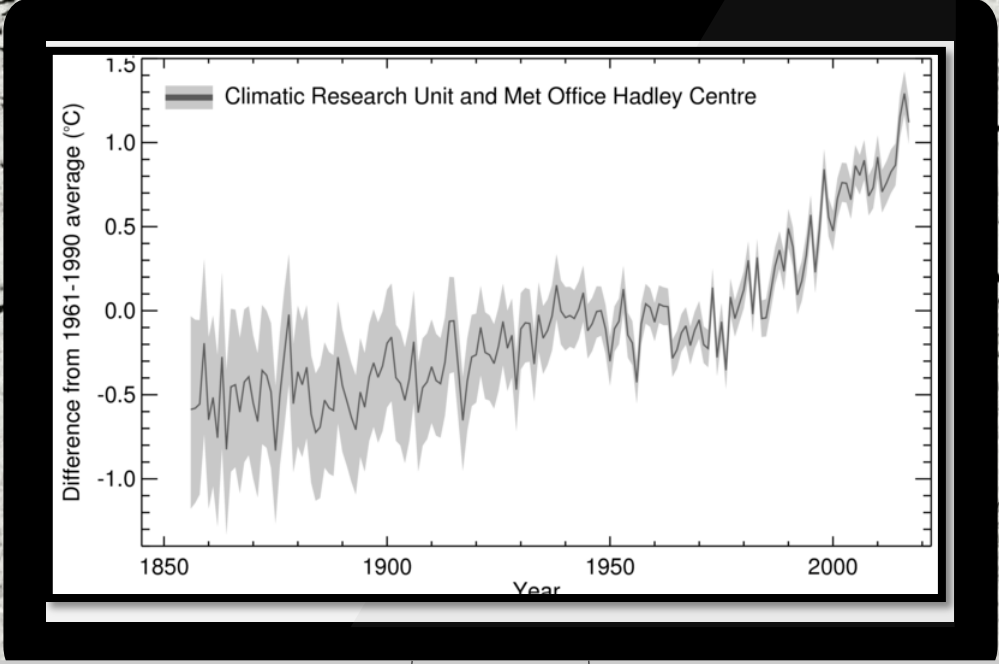


**0.3-0.7°C** Global mean temperature increase (2016-2035)

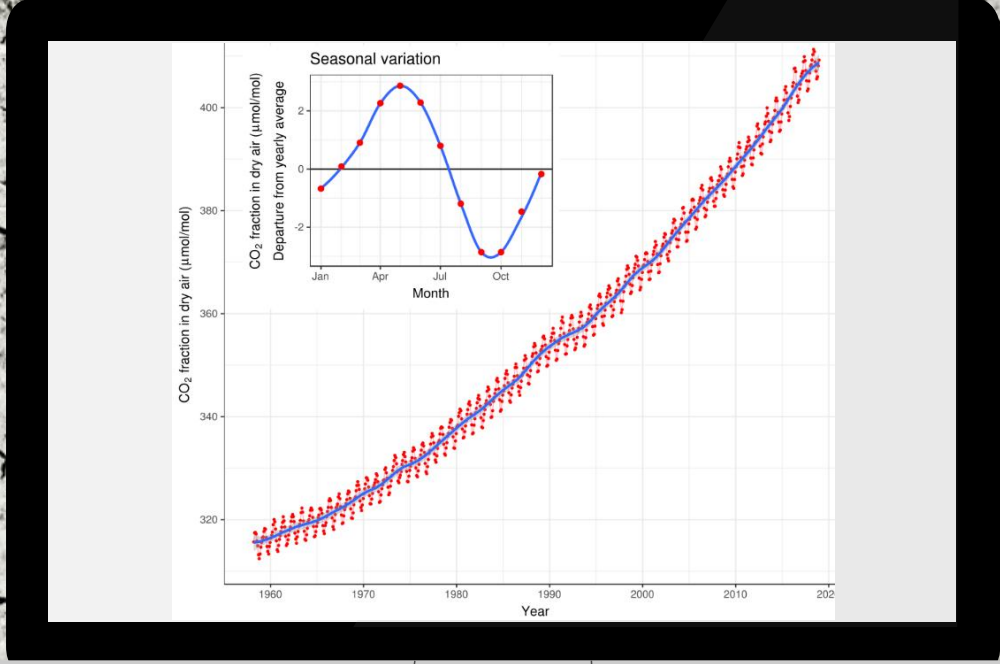
**0.2-0.6 m** Sea level rise (by 2100)

**Increasing demand for water, while water resources will decrease.**



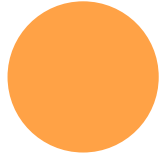


**Global temperature deviations from 1856 to 2020**

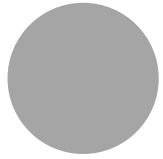


**Increasing levels of atmospheric CO<sub>2</sub>**

# Climatic changes in the regions of Europe



In Europe, climate change is leading to higher temperatures, less precipitation and rising sea levels.



Although the world's climate has been fairly stable for the past 10,000 years and has provided a suitable environment for the development of human civilization, there are now clear signs that the climate is changing.

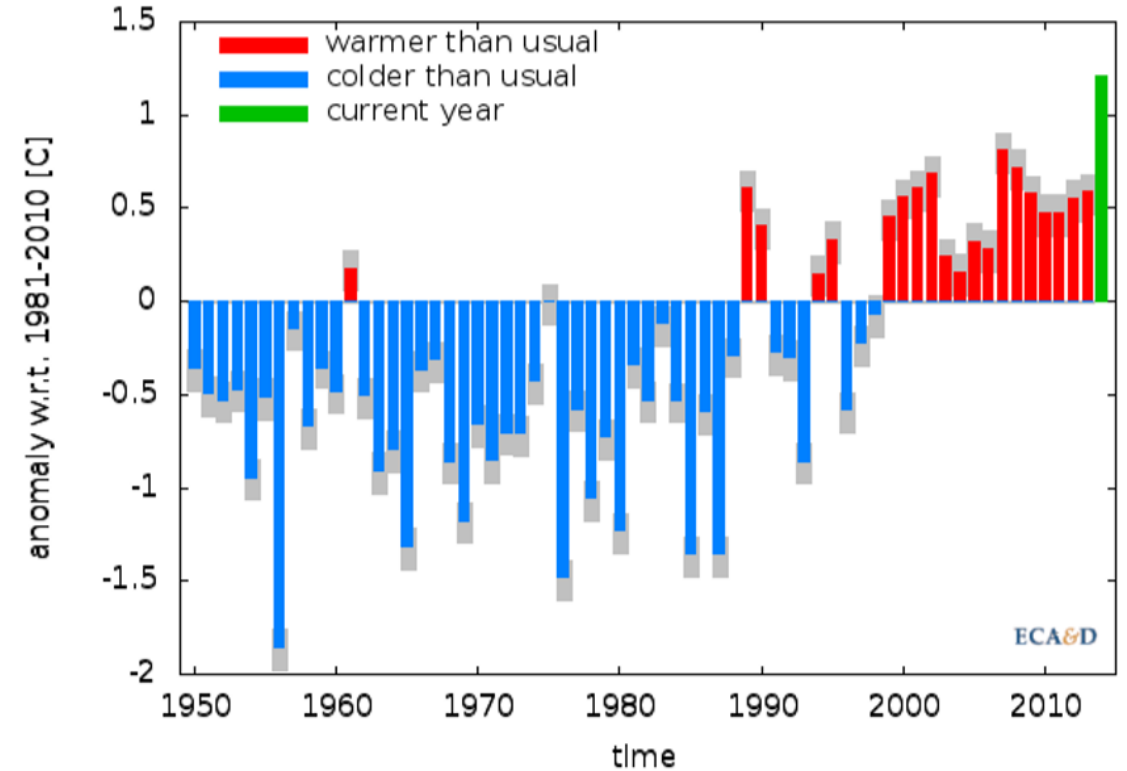


GHGs - show a significant increase in gas concentrations since before the Industrial Revolution, and carbon dioxide (CO<sub>2</sub>) levels far exceed natural amounts over the past 650,000 years.



**Industrial era - 280 ppm**  
**2015 - 400 ppm**

E-OBS European temperature



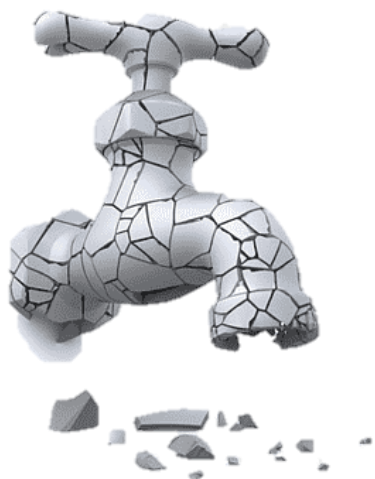
**Average mean annual temperatures in Europe compared to the 30-year average from 1981 to 2010.**

Temperatures below normal are marked in blue, those above normal in red

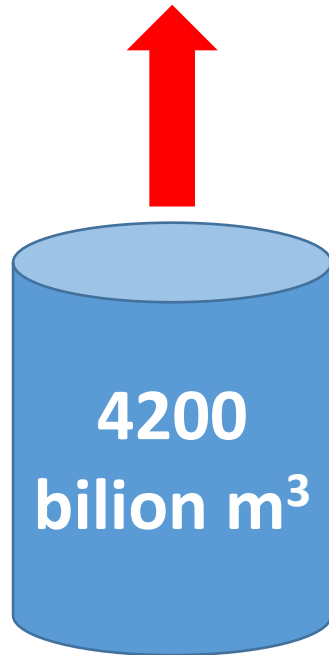




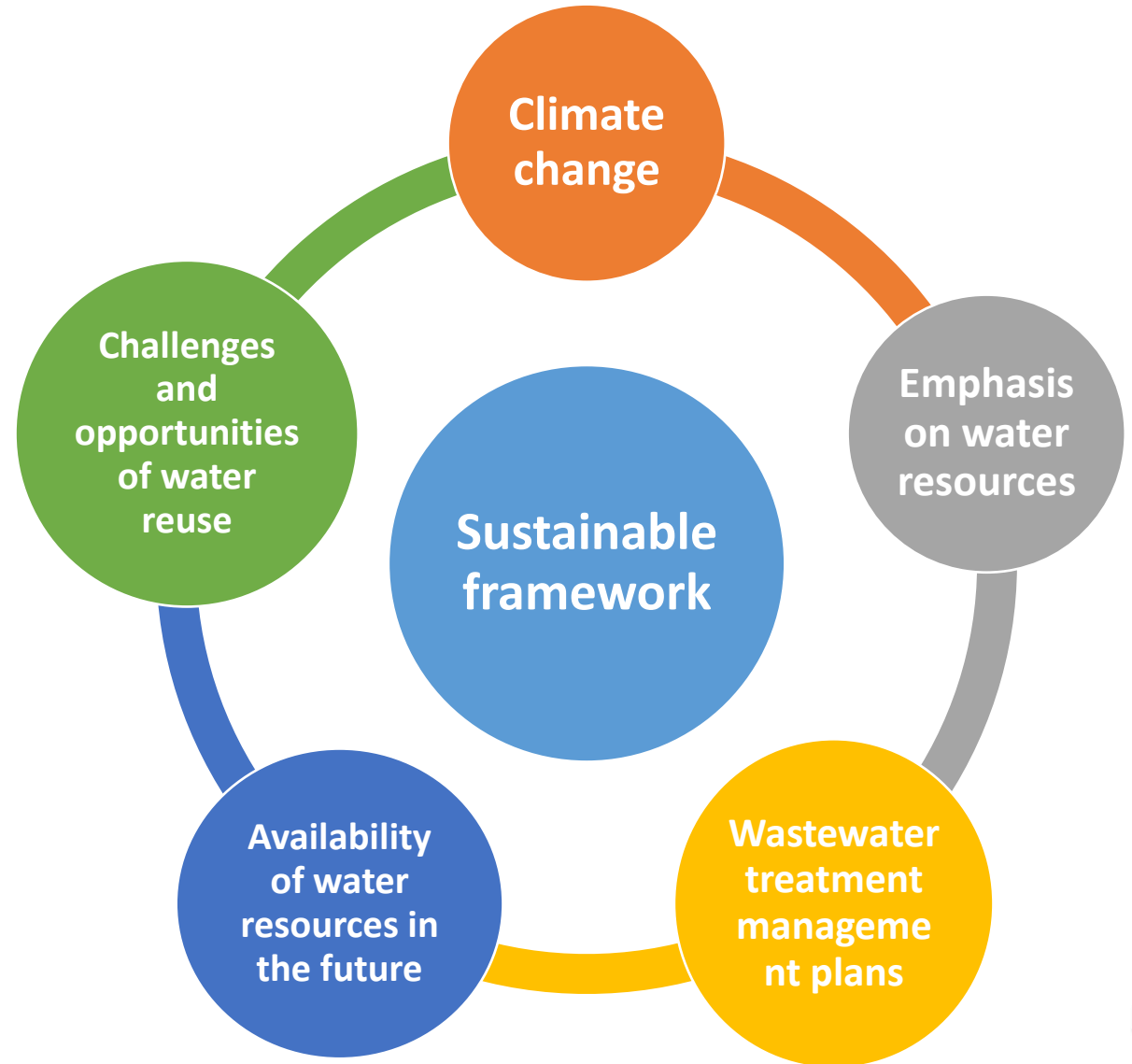
# What about water?



Global annual water requirements



Total available and reliable sources of water



# Basic elements of assessing the impact of climate change on water resources

## Climate elements:

- Temperature variations during the day/year
- Amount of precipitation

Availability of water

Extreme hydrological conditions

Water consumption

Ecosystems and biodiversity



# THE WATER CRISIS AND THE PRINCIPLES OF SUSTAINABLE DEVELOPMENT



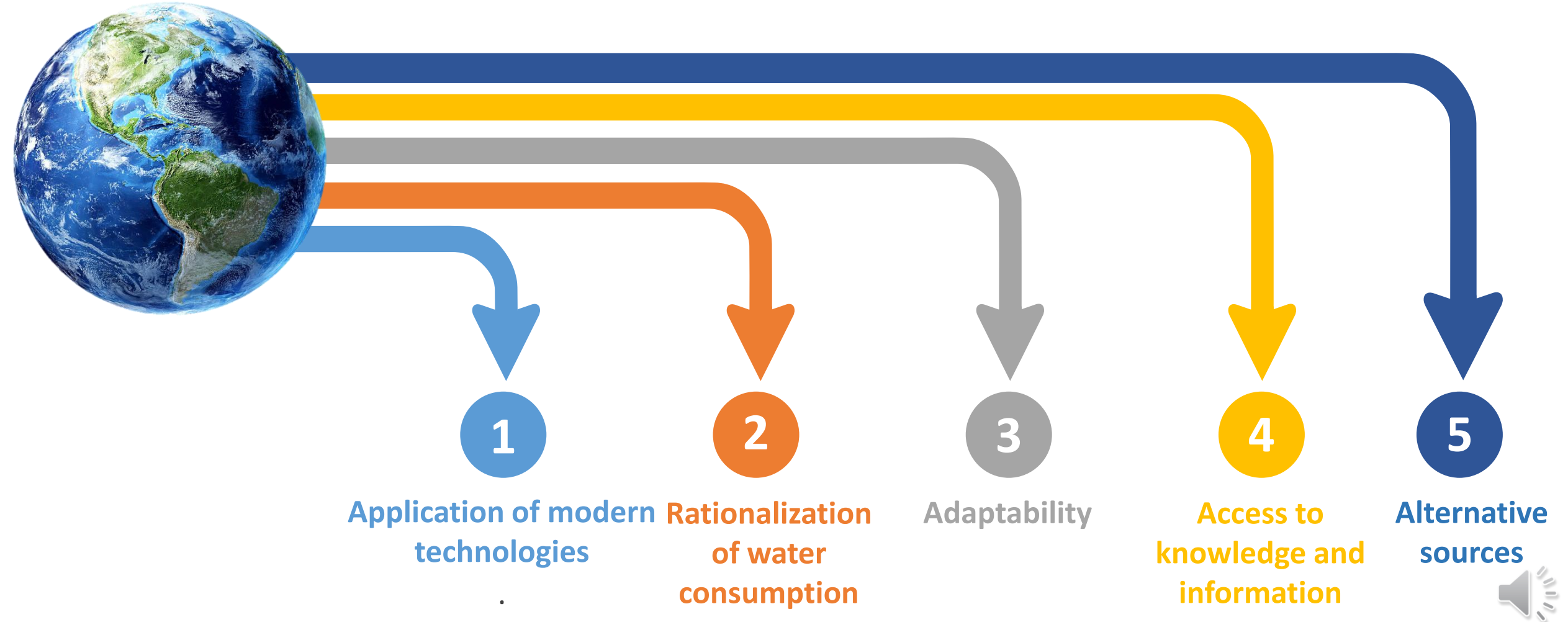
A **WATER CRISIS** is considered present if any of the following crisis factors are not met:

- If the water resources are not sufficient in terms of quantity and quality for the planned purposes of use.
- If the water resource is not distributed to a given location at the appropriate time.
- If the costs of construction and exploitation are unacceptable according to economic criteria.



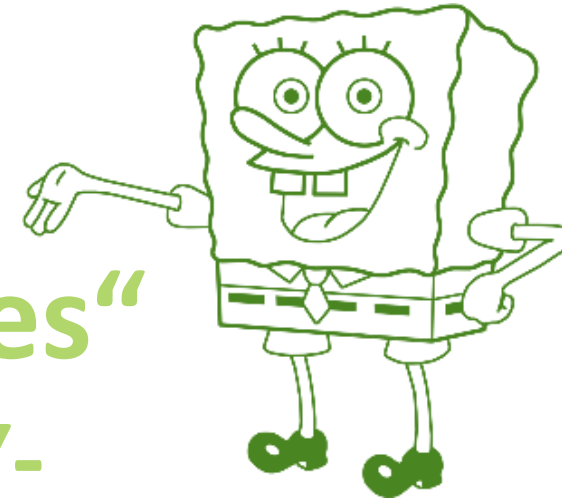


# Five key conclusions related to increasing resilience to climate change





# „Sponge cities“ -SMART CITY-

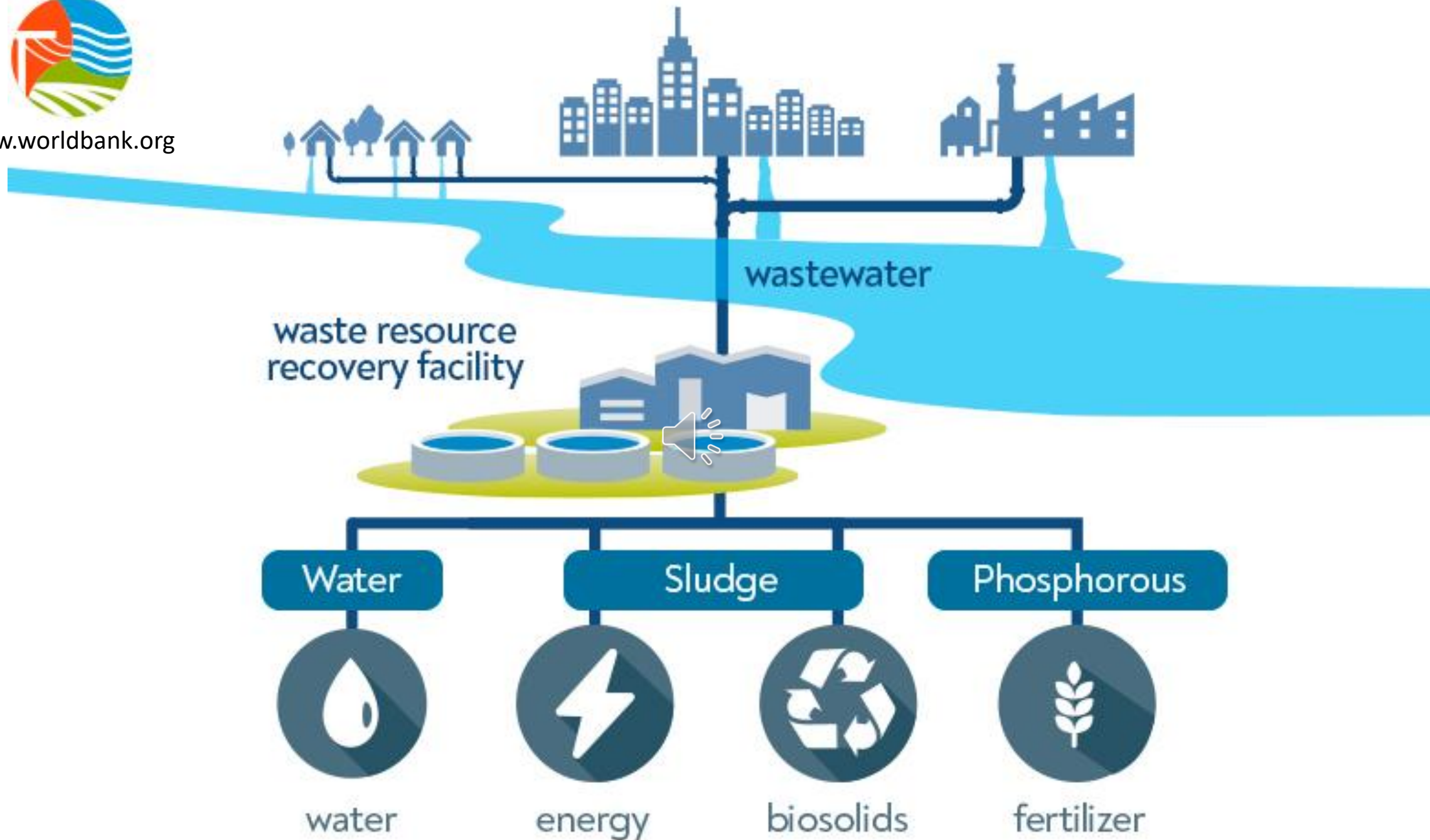








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MARCH  
2023

**BE THE**  
**CHANGE**  
**YOU WANT**  
**TO SEE IN**  
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**TODAY**  
**I AM**  
**DOING**  
**SOMETHING**  
**SMALL.**  
**HOW ABOUT**  
**YOU?**



# MY ACTION LIST



- ✓ **Save water:** Take shorter showers and don't let the tap run when brushing my teeth, doing dishes and preparing food.
- ✓ **Break taboos:** Talk about the critical connection between toilets, water and menstruation.
- ✓ **Make it equal:** Share water fetching between women and men, girls and boys.
- ✓ **Flush safe:** Fix leaking water and waste pipes, empty full septic tanks and report dumping of sludge.
- ✓ **Stop polluting:** Don't put food waste, oils, medicines and chemicals down my toilet or drains.
- ✓ **Eat local:** Buy local, seasonal food and look for products made with less water.
- ✓ **Be curious:** Find out where my water comes from and how it is shared, and visit a treatment plant to see how my waste is managed.
- ✓ **Protect nature:** Plant a tree or create a raingarden – use natural solutions to reduce the risk of flooding and store water.
- ✓ **Build pressure:** Write to my elected representatives about budgets for improving water at home and abroad.
- ✓ **Clean up:** Take part in clean-ups of my local rivers, lakes, wetlands or beaches.





# Water saving tips & tricks

## Be water smart!

### Turn off the water while brushing your teeth

Before brushing, wet your brush and fill a glass for rinsing your mouth.



### Take shorter showers

A typical shower uses 20 to 40 liters of water a minute. Limit your showers to the time it takes to soap up, wash down and rise off.



### Check taps and pipes for leaks

Even a small drip can waste 190 or more liters of water a day.



### Stop using your toilet as an ashtray or wastebasket

Every cigarette butt or tissue you flush away also flushes away 19 to 26 liters of water.



### Use your automatic washing machine only for full loads only

Your automatic washer uses 115 to 135 liters per cycle.



### Don't let the tap run while you clean vegetables and fruits

Rinse your vegetables and fruits instead in a bowl or sink full of clean water.



### Keep a bottle of drinking water in the refrigerator

This puts a stop to the wasteful practice of running tap water to cool it for drinking.

### Install water-saving shower heads or flow restrictors

Your hardware or plumbing supply store stocks inexpensive shower heads or flow restrictors that will cut your shower flow to about 11 liters a minute instead of 19 to 38. They are easy to install, and your showers will still be cleansing and refreshing.



### Use a broom to clean driveways, sidewalks and steps

Using a hose wastes hundreds and hundreds of gallons of water.

### Deep-soak your lawn

When you do water your lawn, water it long enough for water to seep down to the roots where it is needed. A light sprinkling that sits on the surface will simply evaporate and be wasted.



### Don't run the hose while washing your car

Soap down your car from a pail of soapy water. Use a hose only to rinse it off.



*“Be the change you wish to see in the world.”*  
- Mahatma Gandhi



[www.smartwatertwin.pmf.uns.ac.rs](http://www.smartwatertwin.pmf.uns.ac.rs)  
[smartwatertwin@pmf.uns.ac.rs](mailto:smartwatertwin@pmf.uns.ac.rs)



Smart Water Twin HEProject

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