



DRINKING WATER QUALITY FROM SOURCE TO TAP – THE REVISED EU DRINKING WATER DIRECTIVE (DWD)

Resource efficiency,
effective water
consumption and
drinking water quality
from source to tap

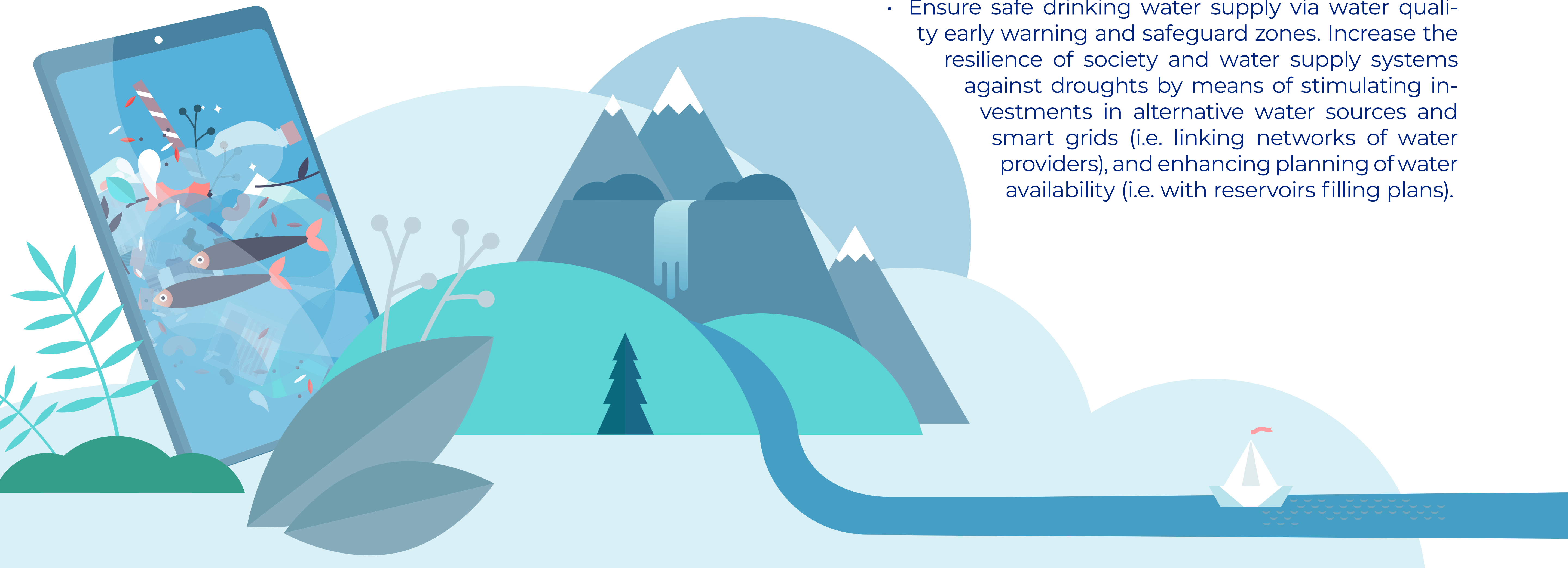


EUSDR WATER QUALITY PRIORITY AREA – RELEVANCE OF DRINKING WATER

The Water Quality Priority Area (PA4) is one of the eleven priority areas of the EU Strategy for the Danube Region (EUSDR) with the main objective to achieve good water quality in the Danube Region via integrated river basin management measures in line with the EU Water Framework Directive and with the International Danube River Basin Management Plan (DRBMP) in order to save human health and freshwater ecosystems.

The EUSDR PA4 puts a strong emphasis on the protection of water resources and safeguarding drinking water supply in line with the relevant EU regulation the Drinking Water Directive (DWD). PA4 aims to promote measures towards reducing knowledge deficits and to

- Contribute to resource efficiency and encourage deliberate and effective water consumption and a water saving culture by the civil and industrial consumers,
- Raise public awareness towards the environment friendly, economic, efficient and safe water uses as well as strengthening the environmental consciousness of the public using social media, information materials and targeted guidance documents,
- Promote water protection and pollution reduction from the source to tap, according to the proposed revision of the Drinking Water Directive,
 - Ensure safe drinking water supply via water quality early warning and safeguard zones. Increase the resilience of society and water supply systems against droughts by means of stimulating investments in alternative water sources and smart grids (i.e. linking networks of water providers), and enhancing planning of water availability (i.e. with reservoirs filling plans).



The Drinking Water Directive

Title of the new Directive: DIRECTIVE (EU) 2020/2184 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2020

Its entry into force: 12 January 2021

Deadline for Member States to transpose into national legislation: The Member States shall bring it into force by 12 January 2023 and take the necessary measures by 12 January 2026.

The previous Council Directive 98/83/EC set the legal framework to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.

Lately the EU recasted the Directive and extended its scope. The objective to protect human health remains valid but the scope of the revised Directive 2020/2184 is extended to protection of water for drinking purposes, namely **“protection from source to tap”**. This approach replies to the needs of moving towards integrated water management.

The new elements of the recasted Directive are the following:

- Update of existing safety standards and establishment of a watch list mechanism;
- Introduction of ‘risk-based approach’ (RBA) covering the whole supply chain;
- Enhanced consumer information will ensure more transparency for consumers on water suppliers’ efficiency and effectiveness and measures for their improvement, including requirements for leakages reduction;
- Provisions on substances/materials in contact with drinking water;
- Access to water: obligation for Member States to improve or maintain access to safe drinking water for all, in particular to vulnerable and marginalised groups.



Opportunities and challenges in implementation of the recasted Drinking Water Directive in the Danube Countries

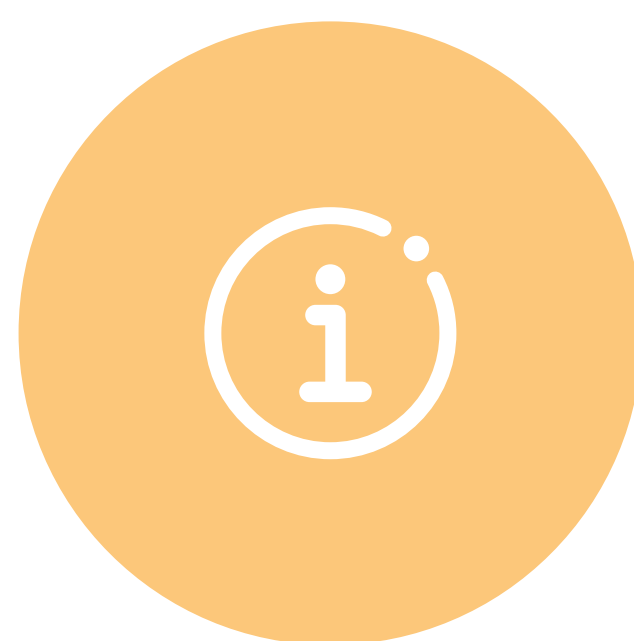
- **Update of existing safety standards and establishment of a watch list mechanism**, in order to address growing public concern about the effects of hazardous and emerging compounds on human health through use of water intended for human consumption. Another goal is to address new emerging compounds in the supply chain. This resulted in a stricter monitoring requirements



for protecting potable water as a resource and new substances will be placed on a list called the watch list. The watch list substances like microplastics, pharmaceutical products or endocrine disruptors will be subject to further investigation.

- **Introduction of 'risk-based approach' (RBA) covering the whole supply chain**, as a key to controlling all processes along the entire supply chain. This is referred to as the "source-to-tap" approach. It is hoped that this approach will also guarantee a continuous exchange of information between the authorities and operators. Cooperation between relevant authorities is also important.

- **Enhanced consumer information** will ensure more transparency for consumers **on water suppliers' efficiency** and effectiveness and measures for their improvement, including requirements for **leakages reduction**.

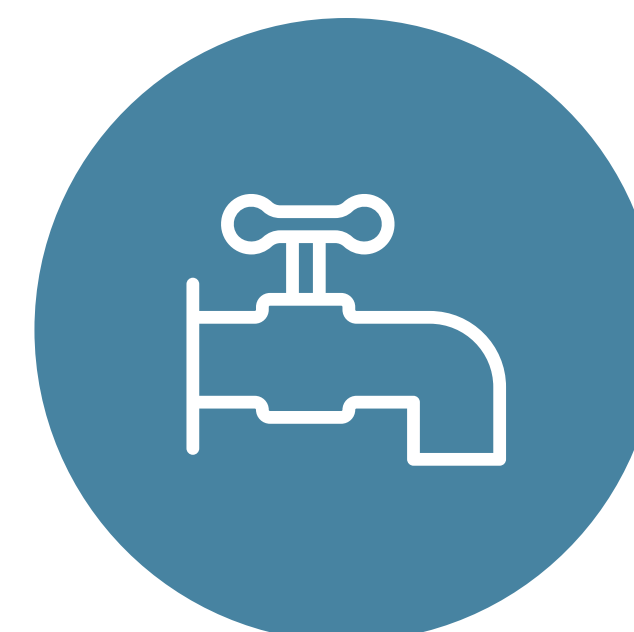


- **Provisions on substances/materials in contact with drinking water** - For the first time, harmonised requirements are being applied to materials that come into contact with potable water.



- **Access to water: obligation for Member States to improve or maintain access to safe drinking water for all, in particular to vulnerable and marginalised groups.**

The provisions of the new Directive are intended to ensure free water supply in public buildings and encourage restaurants to provide water to customers for a small fee or even without paying for it. The directive aims to facilitate access to drinking water for vulnerable and marginalised groups. The measures taken under the Directive are intended to encourage people to switch from drinking bottled water to tap water.



The revised DWD linked to WFD

In 2000, the 2000/60/EC Water Framework Directive (WFD) brought the integrated, river basin management approach to water management. The recasted Drinking Water Directive creates the link to the WFD.

WFD requires EU Member States to identify water bodies used for the abstraction of water intended for human consumption and to take necessary measures to avoid deterioration in its quality in order to reduce the level of purification treatment required.

← The new DWD requires EU Member States to make risk assessment and risk management of the catchment areas for abstraction points of water intended for human consumption by 12 July 2027. WFD also requires regular monitoring of the catchment areas of abstraction points. These data collected can be used to avoid overlaps.

The DWD 2020/2184 therefore puts an emphasis on the prevention of water pollution in a basin-approach.

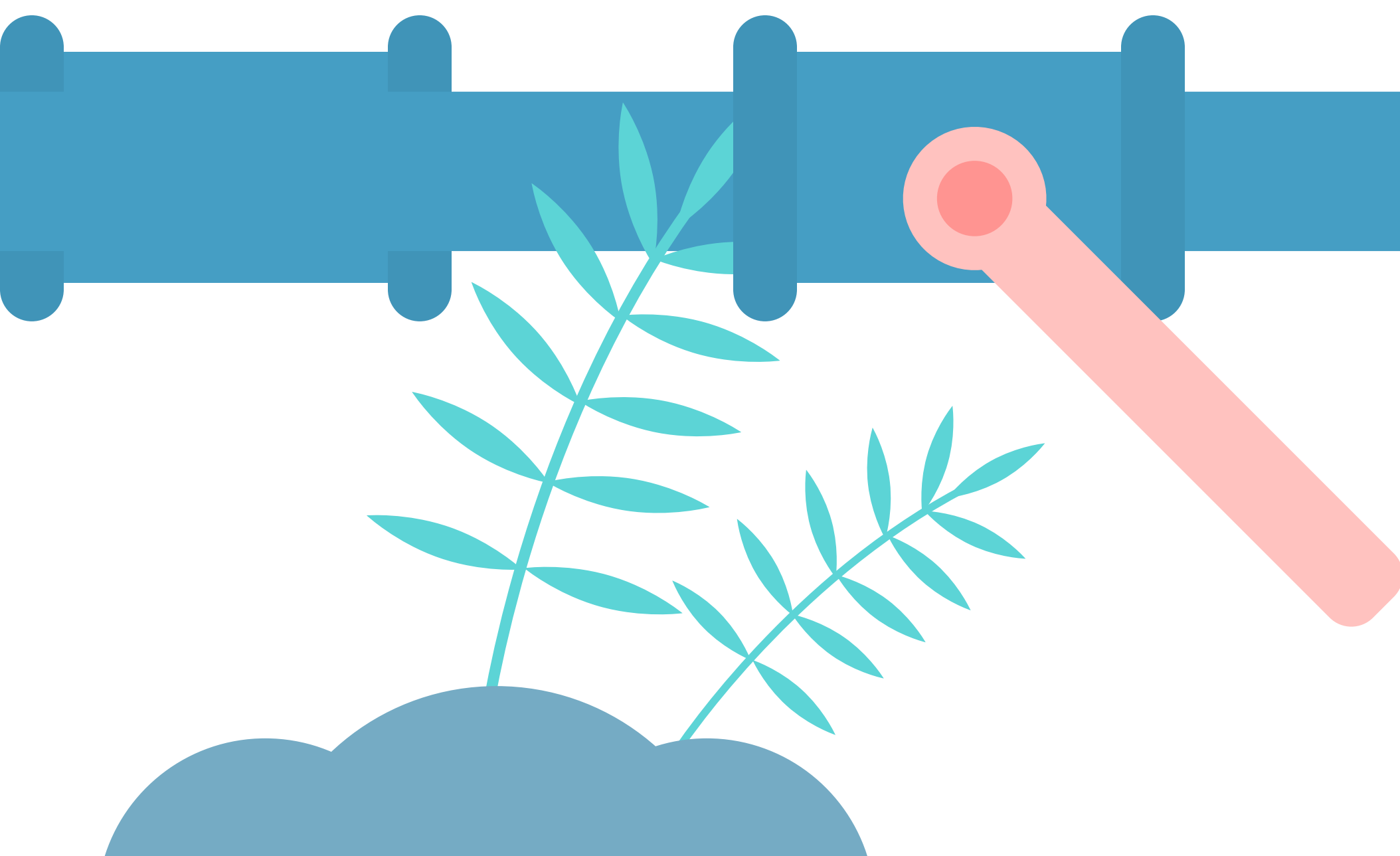


The EU Green Deal

The 2020 recast of the DWD is not only in line with the river basin perspective, but also with the EU Green Deal, the overarching commitment of the EU to transform its economy and society and put it on a more sustainable path.

The European Green Deal (2019) of the EU is a response to climate and environmental-related challenges. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient, and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from polluting resource use. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

The EU Green Deal includes objectives to achieve zero pollution (including water quality), circular economy (including water reuse) and increasing the resilience to climate change.



The main pillars of sustainable drinking water management, focusing on the to-do-s:

1. drinking water resources (aquifer, river, lake and reservoir) protection

- safeguard zones calculation and put under legislation in case of vulnerability (risk-based approach)
- pollution control at the source by monitoring according to kind of contamination (communal, industrial, agricultural)
- appropriate land use for natural protecting
- transboundary cooperation in case of cross-border aquifers or rivers

2. water purification in the waterworks

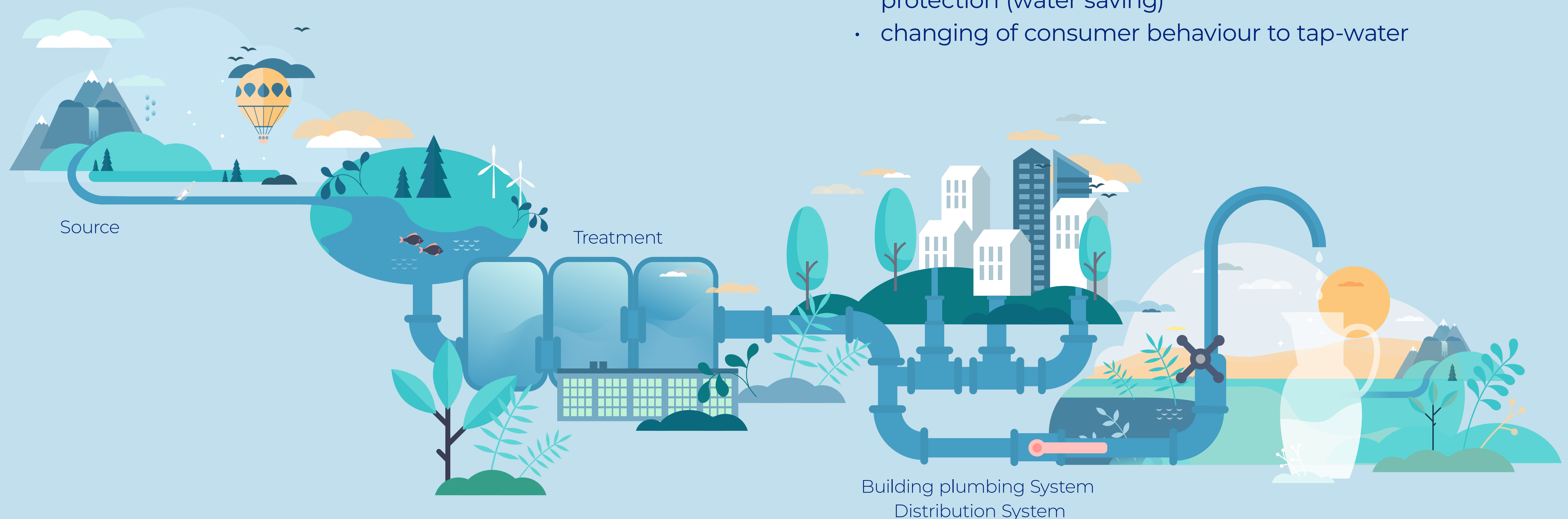
- appropriate raw water purification mainly according to the new WHO parameters (see in the Directive)
- cutting edge tech using in water purification (fewer chemicals as such as possible)

3. appropriate pipeline system for transportation and distribution network of purified drinking water

- appropriate material of pipelines to prevent unhealthy deposits of minerals and bacteria – Legionella bacteria, asbestos, Fe-Mn deposits
- appropriate quality of pipeline to prevent breakage and further pollution coming from outside
- no leakage – quantity question

4. responsibility of consumers (from the meter until the tap in the households, and changing of consumer behaviour from pet-water to tap-water)

- appropriate material of pipelines – plumb changing (lead), replacement of old pipes with new and appropriate material ones
- appropriate taps
- responsible water use for quantity protection (water saving)
- changing of consumer behaviour to tap-water



Key features of the revised Drinking Water Directive are:

- Reinforced water quality standards which are more stringent than WHO recommendations.
- Tackling emerging pollutants, such as endocrine disruptors and PFA's, as well as microplastics - for which harmonised analytical methods will be developed in 2021.
- A preventive approach favouring actions to reduce pollution at source by introducing the “risk based approach”. This is based on an in-depth analysis of the whole water cycle, from source to distribution.
- Measures to ensure better access to water, particularly for vulnerable and marginalised groups.
- Measures to promote tap water, including in public spaces and restaurants, to reduce (plastic) bottle consumption.
- Harmonisation of the quality standards for materials and products in contact with water, including a reinforcement of the limit values for lead. This will be regulated at EU level with the support of the European Chemicals Agency (ECHA).
- Measures to reduce water leakages and to increase transparency of the sector.

How households can participate?

Consumers are responsible to keep the water quality from the entry point (water meter) until the tap by good quality pipelines and taps. Pipes should be made from appropriate material and in good quality, to prevent leakage (quantity loss) and any contamination to get in.

Responsible water use contributes to quantity management.

Households should also ensure that sewage systems are not endangering groundwater and drinking water protection zones.

Consumer behaviour should be changed towards tap-water, which can be achieved by the increase of confidence of citizens to tap-water by communication and presentation of the advantages of tap-water over other sources of water and liquids.

