

BERLIN

Recycling treated wastewater for commercial use

Type of pilot measure:

Feasibility study

Location:

Berlin (Germany), Ruhleben district

Water source:

Treated wastewater from urban wastewater treatment plant

Type of treatment:

coagulation, flocculation, UV disinfection, ozonation or adsorption onto activated carbon, other fit-for-purpose treatments

Target water quality:

Fit-for-purpose water of varying quality

Utilisation:

Process water, cleaning water and cooling water for industry and commerce, optional: urban irrigation

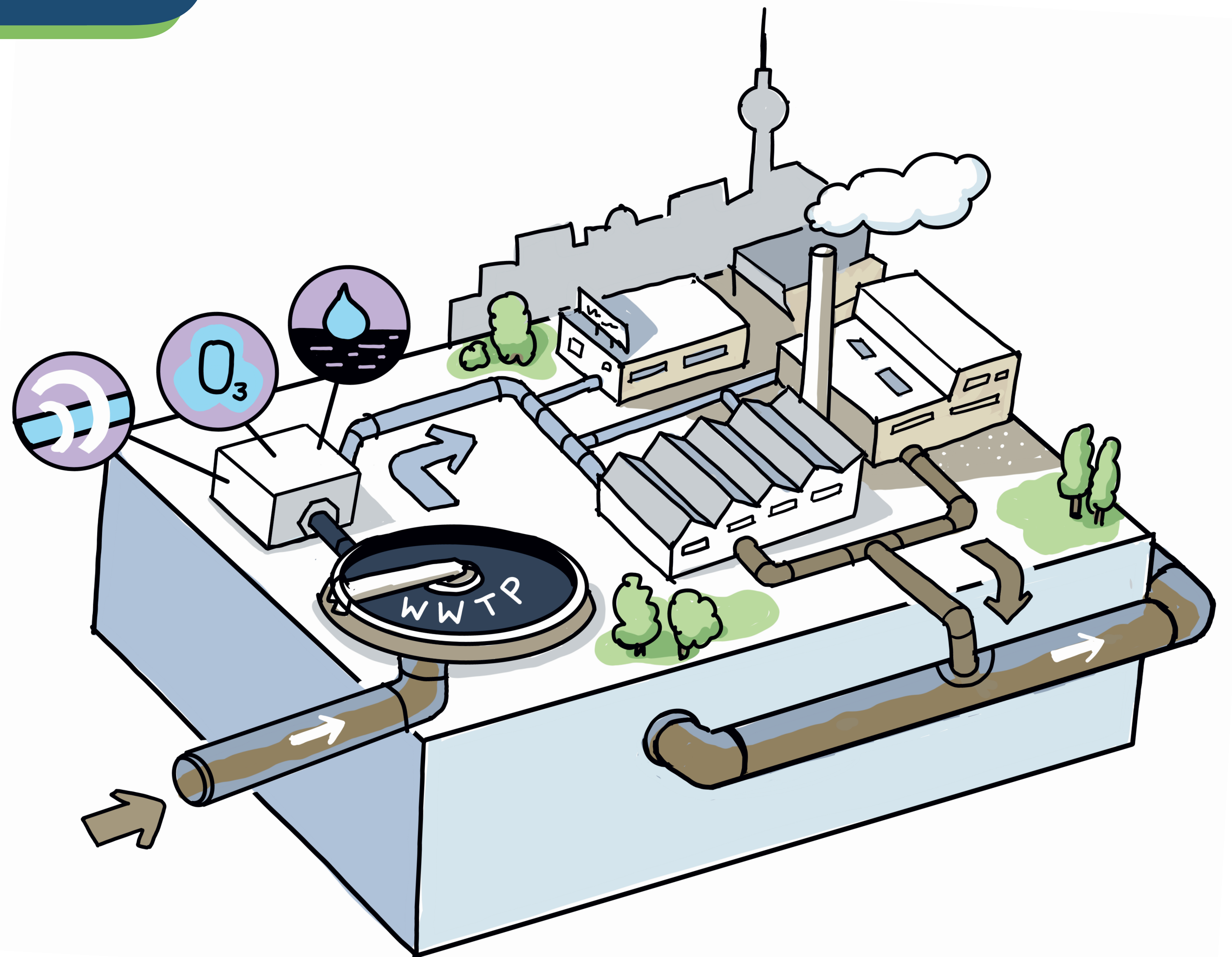
Return to natural cycle:

Discharge into sewage system, evaporation (in cooling towers)

Responsible:

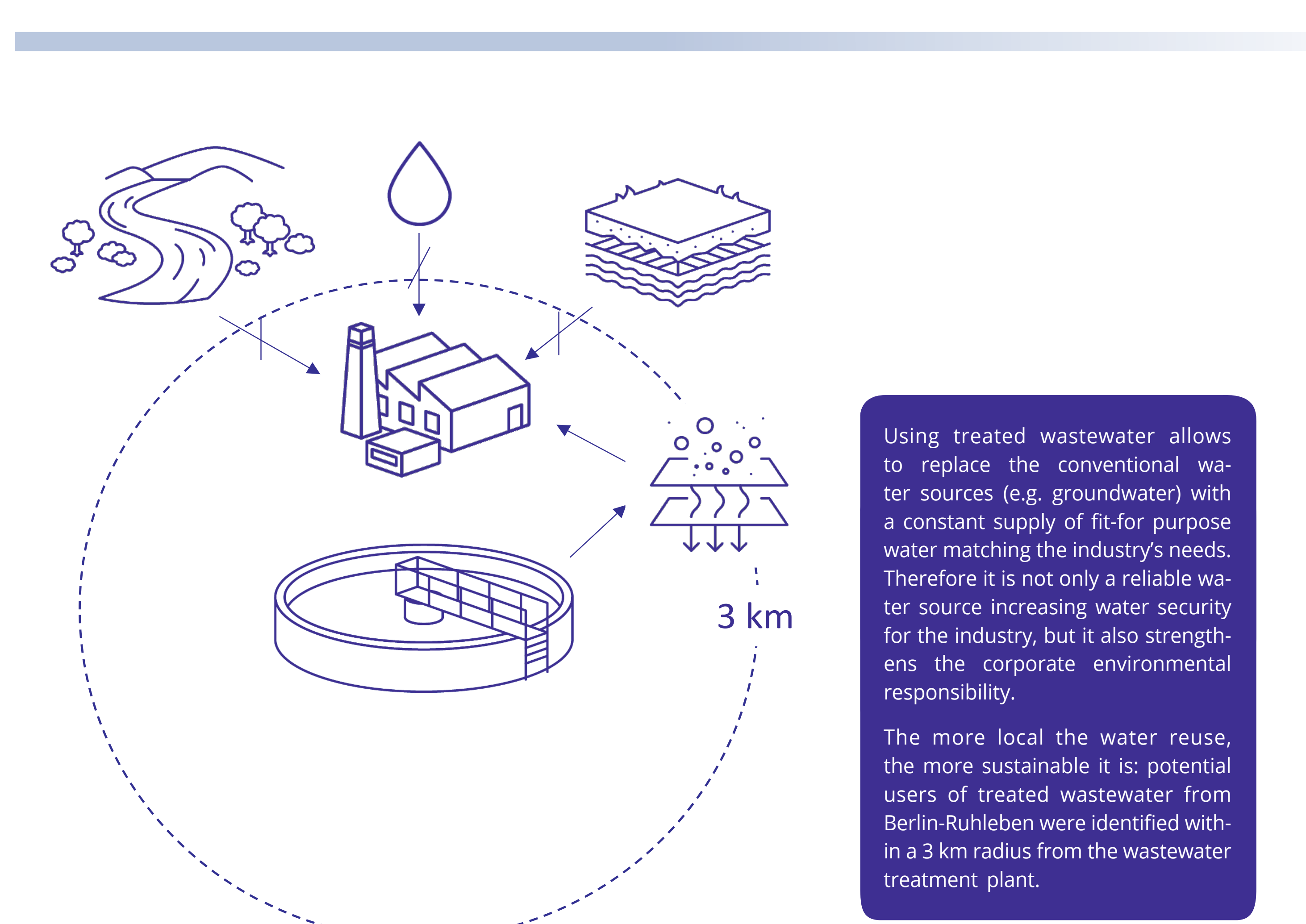
KWB – Berlin Centre of Competence for Water gGmbH

Completion of the study: November 2025



The feasibility study evaluates the potential for using recycled water in industrial applications close to the Berlin-Ruhleben wastewater treatment plant, one of the largest in Berlin. As part of this assessment, the study examines how the planned additional treatment processes improve the effluent quality, thereby reducing efforts to implement water reuse: coagulation and flocculation further reduce nutrient emissions, UV disinfection lowers the bacterial content, while ozone or activated carbon adsorption remove micropollutants. Additionally, the study identifies whether further treatment is necessary for specific reuse scenarios. Risk assessment and management aspects are also considered.

In order to maximise the sustainability of water recycling, the project is geared towards local utilisation. The wastewater treatment plant is located in an industrial area, and potential commercial customers have already been identified within a radius of just three kilometres – making short distribution routes feasible and supporting a circular use of water on site.



Using treated wastewater allows to replace the conventional water sources (e.g. groundwater) with a constant supply of fit-for purpose water matching the industry's needs. Therefore it is not only a reliable water source increasing water security for the industry, but it also strengthens the corporate environmental responsibility.

The more local the water reuse, the more sustainable it is: potential users of treated wastewater from Berlin-Ruhleben were identified within a 3 km radius from the wastewater treatment plant.

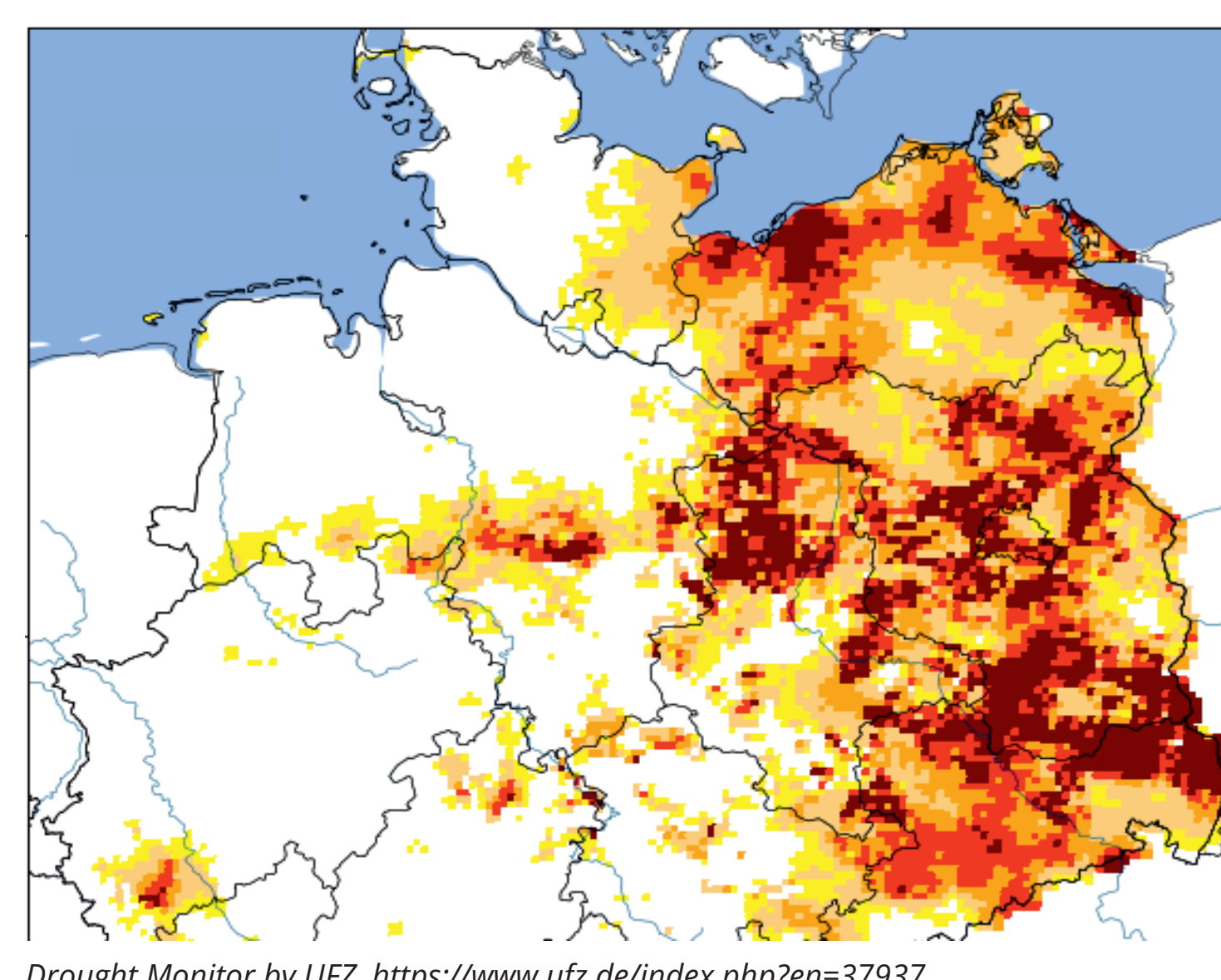
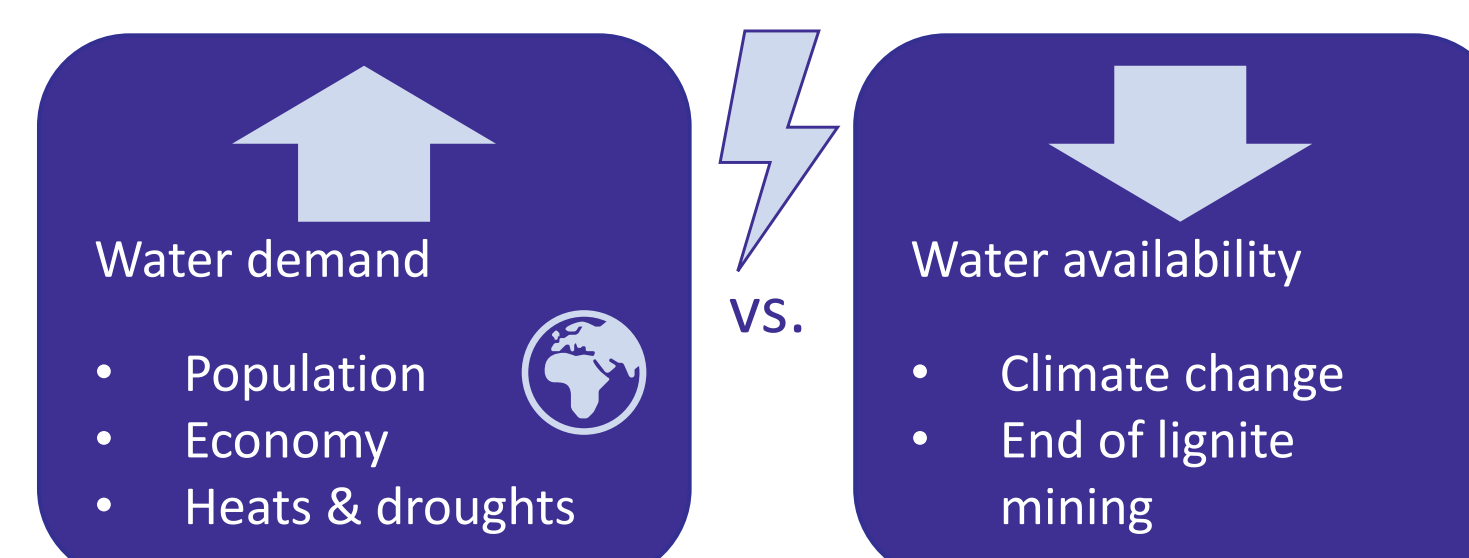
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Resilient water management introducing new elements, including water reuse, becomes increasingly important in the Berlin-Brandenburg region, as depicted by the drought situation in 2023: map by Drought Monitor for the total soil column of 1.8m on 21 Sep 2023.

- Unusually dry
- Moderate drought
- Severe drought
- Extreme drought
- Exceptional drought