



**CONSERVATION OF GROUNDWATER RESOURCES THROUGH
COW WATER REUSE IN THE DAIRY INDUSTRY AS AN
ALTERNATIVE WATER SOURCE:**

**POTENTIAL, CONTROL AND OPTIMIZATION OF A
PILOT PLANT AND DIGITAL PROCESS MONITORING**

26.09.2023

b-watersmart.eu

B-WaterSmart



Niedrigwasser an der Elbe bei Magdeburg Foto: Peter Gercke / dpa

Problems:

- Increasing water scarcity
- Increasing water demand (economy, population growth etc.)
- Overexploitation of freshwater resources
- Regional imbalances in water availability

B-WaterSmart

Approaches:

- wastewater reuse
- alternative raw water sources
- water-smart society and economy

<https://b-watersmart.eu/>



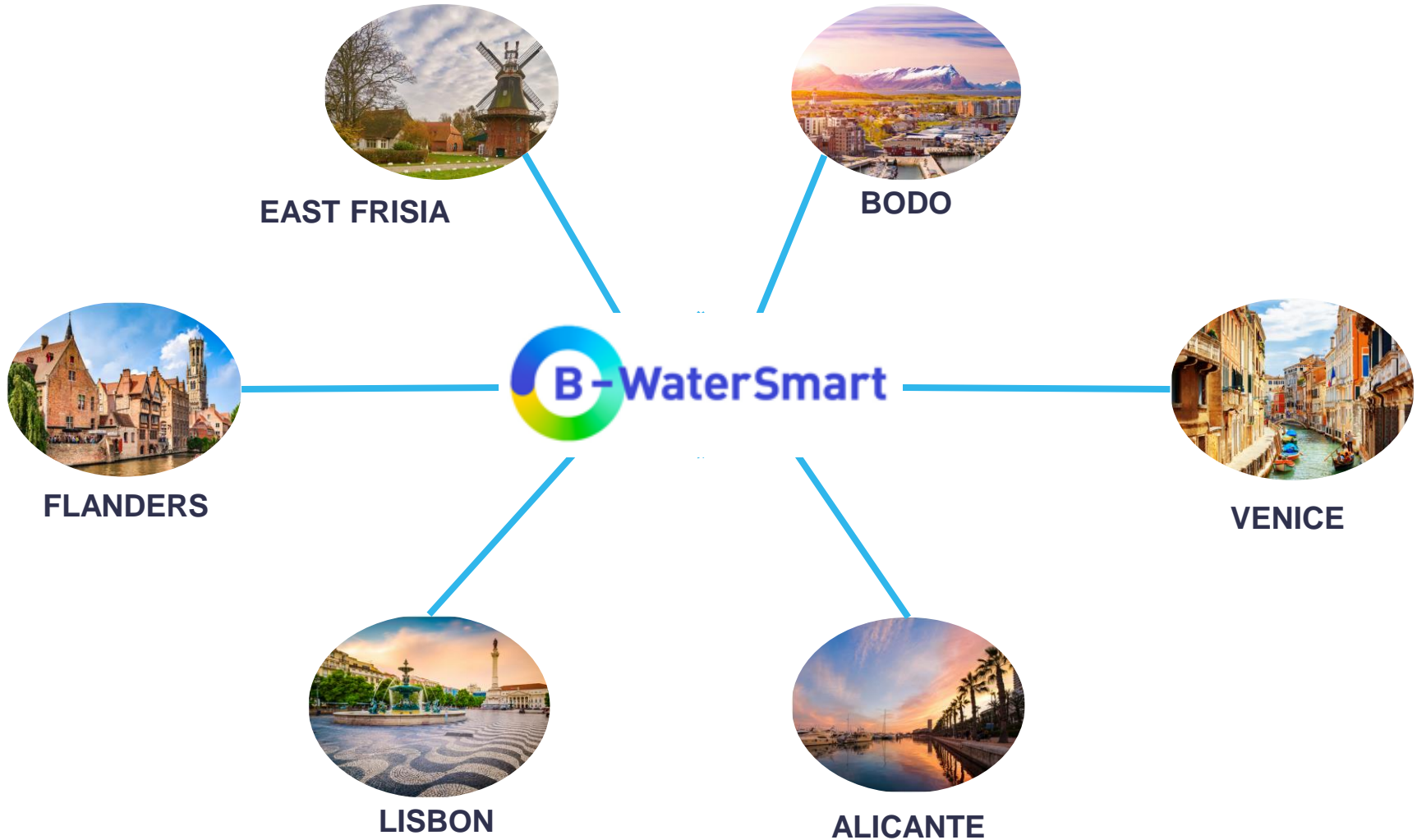
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 869171.



The B-WaterSmart consortium



The B-WaterSmart consortium



The B-WaterSmart consortium



B-WaterSmart: Alicante

WWTP for production of:

- energy
- nutrients (esp. NO_3 and NH_4)
- minerals and salts (e.g. chlorine)



Smart wastewater management as part of circular economy

B-WaterSmart: Bodø

Develop plan for a water-smart new district using blue-green infrastructure with potable water only used for drinking purposes.

The development takes place on the area of an old airport which has been relocated.



B-WaterSmart: Flanders

Regional circularity in the water system:

- effluent as an additional drinking water source
- multi-stage membrane treatment to improve the robustness of drinking water production
- urban stormwater reuse for agriculture



B-WaterSmart: Lisbon

- build trust in water reuse through information and pilot projects
- craft beer from treated wastewater
- certification mechanisms for buildings



B-WaterSmart: Venice

- boosting reuse of water at multiple levels (industrial, urban and agricultural)
- fostering energy production and nutrient recovery from wastewater
- Develop integrated digital platforms for integrated evaluation of sustainability



B-WaterSmart: East Frisia

Treatment of vapour condensates

Project partners:

- Deutsches Milchkontor (DMK)
- Envirochemie
- Oldenburgisch-Ostfriesische Wasserverband (OOWV)
- IWW Water Centre



Programme

-
- **Introduction of B-WaterSmart**
-
- Presentation 1: **Potential of Water Reuse in the Dairy Industry**
 - Lars Dammann, Deutsches Milchkontor (DMK)
 -
- Presentation 2: **Treatment technology and pilot plant**
 - Tibor Kretschmann, EnviroChemie
 -
- Presentation 3: **Control strategies and process optimization**
 - Barbara Zimmermann and Andreas Nocker (both IWW)
 -
- Presentation 4: **Digital asset management**
 - EnviroChemie
-
- **Open discussion and questions**

Survey

- Thanks for your participation:
- <https://forms.gle/Wc2jppqEgShuQYCdn6>





This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 869171. The publication reflects only the authors' views and the European Union is not liable for any use that may be made of the information contained therein.