



BIP on

# Water and Wastewater Reuse Solutions for Small Communities

6-10 July 2026 (in-person) + 13-14 July 2026 (online)

FORMAT

Hybrid

CREDITS

3 ECTS

PLACES

30

## Why this BIP matters

The CE&E; UNITA Blended Intensive Programme (BIP) "Water and Wastewater Reuse Solutions for Small Communities (ReUseWater)" addresses one of the main environmental and societal challenges of the coming decades: how to provide safe, affordable and sustainable water and sanitation services in small, rural, peri-urban and isolated communities. The programme focuses on decentralised and nature-based solutions for drinking water treatment, wastewater treatment, stormwater management and water reuse, with particular attention to resilience, circular economy and climate adaptation. Through lectures, case studies, technical sessions and collaborative group work, participants will explore how to select, design and evaluate context-appropriate solutions for small communities. The BIP combines an international and interdisciplinary perspective with practical problem solving, enabling students to engage with real-world challenges and exchange experiences across different countries and institutional contexts.

## Why join?

- Learn from an international network UNITA universities.
- Explore decentralised and nature-based solutions with real-world relevance.
- Work in mixed international teams on case-study-based challenges.
- Develop practical, sustainability-oriented skills in water reuse.

## Target participants

- Advanced undergraduate students, master's and doctoral students in environmental engineering, civil engineering, water engineering, sanitary engineering, environmental sciences, environmental chemistry, economy and related areas.
- Intermediate level of English (B1/B2 CEFR).

## What you will explore

### 1. Water challenges in small communities

Water scarcity, dispersed settlements, governance, affordability, resilience and public health.

### 2. Drinking water solutions for small communities

Source protection, small-scale treatment technologies, storage and distribution, operation and monitoring.

### 3. Decentralised wastewater treatment

Treatment options; compact systems; modular systems; low-cost and low-energy solutions.

### 4. Nature-based solutions and reuse

Constructed wetlands, soil-based systems, evapotranspiration basins, ponds, green filters, reuse for irrigation and non-potable uses, health and environmental safety.

### 5. Sludge and residuals management

Small-scale sludge handling, valorisation opportunities, circular-economy approaches.

## Learning experience

The BIP combines expert lectures, real case studies, technical visits and laboratory demonstrations, collaborative teamwork in international groups, and a final challenge in which participants develop and present a reuse solution for a small community.

Assessment will be based on participation in group work, contribution to the case study, and the final presentation or poster.

## Key takeaways

- International teamwork and intercultural exchange.
- Final presentation or poster of the proposed solution.
- Case-study proposal for a small-community reuse solution.
- Certificate and 3 ECTS upon successful completion.