Pre-conference workshop

2025 IWA Resource Recovery Conference: From novel concepts to business

The 2025 IWA Resource Recovery (IWA RR) Conference is a dynamic platform for sharing best practices, driving scientific progress, and unveiling cutting-edge innovations and real-world case studies in resource recovery from water. Join the pre-conference workshops, exploring resource recovery through diverse topics, including technology, logistics, business models, and the artistic interpretation of resource recovery.

Date: Monday, 19 May 2025
Time: 13:15 – 16:15 CEST
Location: Harmonie or Wetsus, Leeuwarden
Cost: €30
Registration: The registration will open in January 2025, alongside the conference registration

Workshop 1: Clean products from waste? Leveraging biotechnology to turn complex waste streams into high-purity products

This workshop is organized by the Centre for Microbial Ecology and Technology, Ghent University, in collaboration with the AgriLoop and Manurefinery HEU projects.
Contact person: Ángel Estévez, angel.estevezalonso@ugent.be

The circular bioeconomy envisions wastewater as a critical raw material, with growing interest in focusing on converting organic compounds in wastewater into usable chemicals and biomaterials. This pre-conference workshop will cover advanced biological and physico-chemical technologies to transform complex streams into high-purity products, from innovative concepts to full-scale applications. The workshop combines keynote presentations and hands-on activities to equip researchers from diverse fields with the tools to tackle challenges in biological resource recovery from complex streams. Participants will learn how to transform complex feedstocks into valuable products through mixed culture bioprocesses, integrate these processes for in situ product separation, explore the integration of these technologies with other materials recovery, and apply insights from biological recovery technologies that are currently being scaled-up.
This workshop is limited to 40 attendees.

Workshop 2: Resource recovery by phototrophic organisms

This workshop is organized jointly by TU Delft and IHE Delft Institute for Water Education
Contact person: Emine Kayahan, e.kayahan@tudelft.nl

Phototrophic organisms offer a sustainable approach to recovering nutrients and high-value products from wastewater. This workshop will explore various resource recovery pathways involving phototrophic species, while also addressing the techno-economic challenges that hinder the commercialization of these technologies and proposing potential solutions.
Participants will gain insights into the resource recovery potential of photogranules, purple bacteria, and algae, along with an overview of the industrial products that can be derived from both pure species and mixed cultures. Furthermore, the workshop aims to bridge the gap between academia and industry by discussing the techno-economic evaluation of the biorefinery concept, including various scale-up strategies.

Workshop 3: Logistics and business models for resource recovery

This workshop is organized by BlueTech Research
Contact person: Rhys Owen, rhys.owen@bluetechresearch.com

Although existing technologies are functional, scaling them up presents challenges, primarily due to the lack of suitable market models and partnerships for recovered resources, which are often obtained in small volumes. To effectively advance resource recovery, a diverse skill set is essential, including expertise in business, negotiation, marketing, and communication, in addition to technical capabilities.

The workshop will focus on identifying these skill gaps and discussing key issues related to various technologies and markets. It will feature case studies, particularly on phosphorus recovery from municipal wastewater and brine mining from desalination processes. Participants will engage in presentations, skill gap identification, group discussions, and co-creation exercises aimed at designing market strategies and addressing challenges related to market and communication failures to achieve an integrated supply chain that meets market demand.

Workshop 4: Unlocking circular innovation in the water sector: Navigating End-of-Waste and innovative business models

This workshop is organized jointly by BIOAZUL and Aquaminerals. The workshop is supported by BOOST-IN project (GA 101135239), funded by the European Commission under the Horizon Europe programme
Contact persons: Rafael Casielles Restoy, rcasielles@bioazul.com or Jouke Boorsma, boorsma@aquaminerals.com

The workshop addresses the challenges of bringing circular economy innovations in the water sector to market. Traditional markets rely on virgin materials that are abundant, affordable, and widely accepted, while residuals from wastewater face barriers such as contamination concerns, legal restrictions, and limited market acceptance. These obstacles make circular alternatives less appealing, as residuals retain a waste status unless they meet EU "end-of-waste" criteria – a complex and often unclear process that varies across countries.

The workshop will focus on two main topics: End-of-Waste criteria and innovative business models for circular products. Attendees will participate in interactive sessions designed to reflect on key barriers and limitations while learning from real-world experiences. The goal is to foster productive discussions and collaborative thinking to effectively navigate the challenges of bringing circular products to market.

The workshop also aims to create a Community of Practice centered on End-of-Waste criteria and innovative business models for circular products. This community will promote ongoing dialogue and knowledge exchange, continuing to convene in future events such as BOOST-IN webinars and workshops

Workshop 5: Seeing through the dark side of extracellular biopolymers from waste sludge in an artistic way

This workshop is organized jointly by Yuemei Lin (TU Delft) and Nesie Wang (a freelance artist for NWO LIFE closed cycle exhibition)
Contact person: Yuemei Lin, yuemei.lin@tudelft.nl

Extracellular biopolymers (EPS) recovered from waste sludge represent a remarkable and underappreciated resource. Often dismissed due to their dark color, which makes people doubt their potential applications. This workshop aims at explaining the multifaceted nature and value of EPS, showcasing its significance not only from a scientific standpoint but also through an artistic aspect.

In this workshop, participants will discover how the unique characteristics of EPS can inspire creativity and innovation through presentation, group discussion and hands-on trial. By exploring the interplay between art and science, attendees will appreciate the value of EPS, viewing its dark color as a symbol of transformation and creativity rather than a barrier.

This workshop is limited to 20 attendees.