

WATER

Water Quality Management
Salt Water Purification
and Desalination



Short Learning Programme (SLP) Water and the Environment

The UJ Water Testing Laboratory, established through a collaboration between UJ PEETS and the Water Health Research Centre (WHRC), plays a crucial role in advancing water quality research and waste characterisation. With a mission to enable innovation and knowledge in the water sector, the lab focuses on scientific principles to serve both the broader community and the environmental sector.

Here's an overview of the key initiatives and areas of focus:

Water Testing and Laboratory Accreditation

The UJ Water Testing Laboratory is involved in rigorous proficiency testing schemes with reputable bodies such as the National Laboratory Association and the South African Bureau of Standards (SABS). The lab's goal is to obtain SANAS accreditation, a key milestone for ensuring quality and reliability in water analysis.

Vision & Mission

- To be an accredited water reference laboratory that contributes dynamically to the analysis of water.
- To serve the broader community by enabling the water sector to innovate and generate knowledge grounded in scientific principles.

Collaboration and Focus Areas

The laboratory is part of a multidisciplinary team that brings together experts in physicochemical characterization and biochemical analyses, particularly under anaerobic conditions. The laboratory's current focus for waste characterisation includes:

- Putrescible waste. Biodegradable waste that decomposes in landfills, often creating environmental issues.
- Lignocellulosic biomass. Organic materials like wood, agricultural residues and other plant-based materials that are of interest for waste-to-energy projects.

As the lab expands its capacity, it plans to explore other fractions of municipal solid waste for further research.

Water, Sanitation, and Hygiene (WaSH)

The WHRC's main area of research focuses on WaSH, particularly examining the impact of WaSH on public health. This work supports sustainable development goals related to clean water access, sanitation, and hygiene education, which are critical for improving community health and well-being.

Sustainable Urban Drainage Systems (SuDS) SLP

In collaboration with other stakeholders, UJ PEETS is developing a Sustainable Urban Drainage Systems (SuDS) SLP. SuDS are designed to manage urban surface water in an environmentally sustainable way, addressing challenges like:

- Flooding (water quantity)
- Pollution (water quality)
- Biodiversity (wildlife and plant life)
- Amenity (public spaces for leisure and liveability)

Community Collaboration and Engagement

UJ PEETS and the WHRC initiatives actively involve local communities in their work. By linking water management and waste characterization with community engagement, they ensure that research and innovations have practical, real-world applications that can improve public health and environmental outcomes.

This collaboration is designed to address the complexities of urban water management, waste treatment, and community health, reflecting the intertwined nature of environmental science and public policy.

The UJ Water Testing Laboratory and its associated research initiatives are crucial for advancing sustainable water management, waste characterization, and urban planning. With a focus on scientific integrity, community impact and sustainability, these efforts will help tackle some of the most pressing environmental challenges of our time.

The video links hereunder highlight some of the community collaborations, providing additional context on their practical applications.

[Community_Engagement_Collaborations](#) / [Water_Harvesting_Eastern_Cape](#)

For further enquiries send an email to peetstraining@uj.ac.za

