

WATER CONSERVATION AND REUSE POLICY

SUBMITTED TO MANAGEMENT

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ABBREVIATIONS AND ACRONYMS

DVC	Deputy Vice-Chancellor
MUBAS	Malawi University of Business and Applied Sciences
VC	Vice-Chancellor
HVAC	Heating, Ventilation and Air Conditioning

DEFINITIONS

1.	**Water Reuse**	The process of using treated wastewater or other reclaimed water sources for beneficial purposes such as agriculture, industrial processes, or landscape irrigation
2.	**Reclaimed Water**	Wastewater that has been treated to remove contaminants and is safe for specific reuse applications
3.	**Greywater**	Household wastewater from sinks, showers, and washing machines, excluding toilet discharge. Often reused for irrigation or flushing;
4.	**Blackwater**	Wastewater containing human waste, typically from toilets. Requires more intensive treatment before reuse
5.	**Treated Wastewater**	Effluent that has undergone physical, chemical, and/or biological processes to meet specific quality standards for reuse
6.	**Potable Reuse**	The use of reclaimed water for drinking purposes, either directly (after advanced treatment) or indirectly (via aquifer recharge)
7.	**Non-Potable Reuse**	Use of reclaimed water for purposes not involving human consumption, such as irrigation, industrial cooling, or toilet flushing
8.	**Effluent Quality Standards**	Regulatory benchmarks that define acceptable levels of contaminants in treated wastewater for various reuse applications
9.	**Water Safety Plan**	A comprehensive risk assessment and management approach to ensure the safety of water reuse systems from source to end-use

10.	**Source Separation**	The practice of separating different types of wastewater at the point of generation to facilitate targeted treatment and reuse
11.	**Environmental Buffer**	A natural or engineered system (e.g., aquifer, reservoir) used to store and further purify reclaimed water before reuse
12.	**Circular Water Economy**	A sustainable water management model that emphasizes reuse, recycling, and resource recovery to minimize waste and maximize efficiency.
13.	**Rainwater**	Water that has fallen from the atmosphere
14.	**Affiliates**	Refers to all individuals or entities associated with the University other than its staff or enrolled students. These may include but not necessarily limited to collaborators, partners, exchange students, visiting scholars, consultants and alumni
15.	**Advanced water treatment**	Refers to the use of high-level, often technology-intensive processes to remove contaminants that conventional treatment cannot, ensuring very high purity and safety standards.

1. Purpose

The purpose of this Policy is to establish a sustainable framework for the recovery, treatment, and reuse of water within the University. It aims to reduce reliance on freshwater sources, minimise environmental impact, and promote efficient water use across academic, residential, and administrative facilities. This policy supports MUBAS' strategic vision of becoming a model institution in environmental stewardship, applied research, and ethical governance, while contributing to national efforts in climate resilience and sustainable development.

2. Policy Statement

The Malawi University of Business and Applied Sciences affirms its commitment to environmental stewardship and responsible resource management as integral to its academic mission and operational ethos. In recognition of the critical importance of water security to Malawi's socio-economic development and ecological resilience, MUBAS is advancing a comprehensive Water Reuse Policy to guide sustainable water practices across the institution.

This policy outlines strategic measures to reduce reliance on freshwater sources, minimise environmental impact, and promote the safe and efficient reuse of water within University facilities and activities. It aligns with national priorities under the Malawi 2063 Agenda, particularly enabler number 7 of environmental sustainability. It reflects MUBAS' role in innovative, ethical, and forward-thinking solutions for resource conservation.

3. Scope

This policy shall apply to all functional areas of the MUBAS campus, including, but not limited to, academic facilities, research laboratories, administrative offices, student housing, recreational spaces, and landscaped environments. It shall govern water reuse practices in both operational and developmental activities, ensuring consistent implementation of sustainable water management throughout the university's infrastructure. It shall focus on the

water saving technologies, water treatment and harvesting of rainwater, greywater and blackwater for non-potable uses

4. Authority

This policy derives its authority from the Malawi National Water Policy (2005), the first 10-year implementation plan for the Malawi 2063 Vision (MIP-1), the National Research Agenda 2023, the MUBAS Act of 2019, the MUBAS Statutes, and the MUBAS Strategic Plan.

5. Principles

a) The University management shall embed water conservation and reuse within MUBAS' strategic objectives to promote sustainable campus operations and environmental stewardship.
b) The University management shall prioritize climate-resilient systems, including rainwater harvesting, greywater recycling, and water-efficient plumbing, in infrastructure development
c) The University shall ensure that all water-related initiatives are aligned with Malawi 2063's Enabler 1 (Mindset Change), and Enabler 7 (Environmental Sustainability); and foster a culture of responsible water stewardship across the University community.
d) The University shall promote applied research on water saving and water reuse technologies.
e) The University shall pursue strategic partnerships with local and international institutions to enhance technical capacity, policy benchmarking, and collaborative innovation.
f) The University shall conduct community engagement and sensitisation campaigns to promote awareness of water conservation and reuse.
g) The University shall empower student leadership structures to participate in water conservation and reuse policy implementation and oversight, reinforcing participatory governance and ethical leadership principles.

6. Priority Areas

6.1. Water Saving Initiatives

The University shall continuously assess the wasteful water supply technologies and practices and replace them with water saving technologies and practices.

6.2. Water Reuse Initiatives

The University shall establish and maintain systems for the collection, treatment, and reuse of water for non-potable applications in alignment with its commitment to environmental stewardship and resource efficiency. Reused water shall be applied to the following uses:

a) Landscape irrigation
b) Toilet and urinal flushing
c) Heating, Ventilation and Air Conditioning (HVAC) systems
d) Cleaning and wash-down activities, including vehicle washing and outdoor surface maintenance
e) Other suitable applications as shall be identified through ongoing assessment and review

All water reuse practices shall comply with applicable safety, health, and environmental standards to ensure responsible and sustainable implementation. Treated blackwater shall only be reused where advanced treatment has been employed to ensure adherence to health and environmental standards.

6.3. Infrastructure Development

The University shall enhance its infrastructure to support and advance water saving and reuse initiatives. This shall include the establishment of water saving programs, water treatment facilities, distribution pipelines, and storage systems, as well as the deployment of appropriate technologies that shall ensure the efficiency, reliability, and safety of water reuse operations. All new infrastructure projects shall integrate water reuse systems into their design.

6.4. Research and Innovation

The University shall actively promote and support interdisciplinary research, innovation, and project-based learning that focus on water conservation technologies, treatment methods, and sustainable management practices relevant to the Malawian context. The institution shall foster collaboration with departments, research centres, and industry partners to advance innovation and knowledge generation in this critical domain.

6.5. Education and Awareness

The University shall implement continuous education and awareness initiatives targeting students, staff, affiliates and the wider community. These initiatives shall include the organisation of lectures, workshops and seminars, and the implementation of campus-wide campaigns that shall foster a pervasive culture of responsible and sustainable water use.

7. Implementation

The University shall implement the Water Reuse Policy through a structured, multi-phase approach that integrates infrastructure development, stakeholder engagement, and continuous monitoring. The institution shall designate responsible units to oversee planning, execution, and evaluation of water reuse initiatives, ensuring alignment with national environmental standards and institutional sustainability goals. The University shall conduct awareness campaigns to help change wasteful water practices among both staff and students as well as affiliates and visitors.

Roles and Responsibilities

To ensure the effective implementation of water reuse initiatives, the following roles and responsibilities shall be observed:

a) Management

Management shall provide strategic oversight, allocate necessary resources, and ensure institutional compliance with water reuse policies and standards. Management shall also facilitate infrastructure

development, support research and innovation, and monitor progress through regular evaluations.

b) University staff, students and all its affiliates

University staff, students and all its affiliates shall adopt responsible water-use practices and actively participate in educational and awareness programmes. They shall support campus-wide water conservation efforts, report inefficiencies or misuse, and contribute to a culture of sustainability through daily actions and engagement. They shall also carry out research on water collection, reuse, treatment and quality control.

Implementation shall include:

a) Development and maintenance of water reuse infrastructure
b) Integration of water reuse principles into operational, and community programs
c) Capacity-building through training, education, and technical support
d) Establishment of performance indicators and reporting mechanisms to track progress
e) Collaboration with government agencies, industry partners, and research institutions to enhance impact and scalability

All implementation efforts shall be guided by MUBAS' commitment to ethical governance, innovation, and stewardship of natural resources.

8. Monitoring and Evaluation

The implementation and effectiveness of this Water Reuse Policy shall be monitored under the overall accountability of the Vice-Chancellor (VC) and Deputy Vice-Chancellor (DVC). Periodic reviews, informed by reports from the Office of the VC, shall evaluate institutional commitment to water reuse, adherence to ethical standards, and alignment with health, safety, and accountability frameworks. The University management shall implement robust monitoring and evaluation mechanisms to track water usage, efficiency, and policy compliance, ensuring transparency and continuous improvement in line with its governance and accountability frameworks.

9. Review

The policy shall be reviewed every three (3) years or following institutional restructuring, or regulatory change.