

6 CLEAN WATER AND SANITATION



SDG 06

Ensure availability and sustainable management of water and sanitation for all

Through a combination of specialised education, responsible campus management, and a commitment to research, the Education University of Hong Kong is nurturing a new generation of environmentally conscious leaders and actively contributing to the sustainable future of water for all.

Fostering Water Sustainability Through Education

The University actively equips students with the knowledge and skills to address pressing water and environmental challenges. Two highlighted courses exemplify our dedication in this area. The **Pollution Control and Waste Management** course, offered by the Department of Science and Environmental Studies, provides students with a comprehensive understanding of pollution sources, control strategies, and waste management techniques. It emphasises practical approaches for minimising environmental impacts and promotes responsible practices aligned with sustainable development goals. The course curriculum includes case studies, technological innovations, and policy frameworks to prepare students to tackle real-world environmental issues. This course directly supports multiple SDGs, including SDG 6, by focusing on the prevention and management of water pollution.

Furthermore, the **Assessing Environmental Impacts: Policies and Approaches** module offers an in-depth exploration of methodologies for evaluating the environmental consequences of various projects and policies. It underscores the importance of environmental impact assessments (EIAs) as a critical tool for sustainable decision-making. Students learn to analyse potential environmental risks, develop mitigation strategies, and understand the policy frameworks that govern environmental protection. This equips them with the necessary skills to contribute to the responsible planning and execution of projects, minimising their impact on water resources and the wider environment.



5



7



97
FWCI:1.56

732
participants



3
events

Advancing Coastal Sustainability

As part of its commitment to global sustainability, The University actively supports and conducts research that addresses critical environmental challenges. A recent study by university scholars, published in *Forest Ecology and Management*, sheds new light on the complex dynamics of mangrove ecosystems, which are vital for carbon storage and protecting coastlines from storms.

The research, titled "**Machine learning-based monitoring of mangrove ecosystem dynamics in the Indus Delta**," employed advanced remote sensing and machine learning techniques to analyse changes in mangrove coverage over 35 years, from 1988 to 2023. The investigation revealed a significant expansion of mangrove areas within the delta, with an average annual growth rate of nearly 19%. This growth is primarily attributed to natural processes, such as tidal currents influenced by monsoon waves that help create suitable habitats, alongside targeted restoration efforts in certain areas.

However, the study also underscores the persistent threats these essential ecosystems face, particularly from rising sea levels and erosion caused by powerful storms. The findings emphasise the critical importance of understanding the interplay between natural and human-led factors that shape these coastal forests. This research from EdUHK provides invaluable insights that support global strategies to protect and restore these crucial ecosystems, aligning with international conservation goals and the principles of sustainable environmental management.

Source: Zhou, Y., Dai, Z., Liang, X., & Cheng, J. (2024). Machine learning-based monitoring of mangrove ecosystem dynamics in the Indus Delta. *Forest Ecology and Management*, 571, Article 122231



Promoting Water Stewardship Through Smart Technology and Best Practices

The University is dedicated to upholding the highest standards of water quality and promoting responsible consumption across campus. In line with this commitment, the University has participated in the Water Supplies Department's Quality Water Supply Scheme for Buildings since 2020. This involvement highlights our dedication to implementing comprehensive water safety plans and maintaining our plumbing systems, ensuring the health and well-being of the entire University community.

As a key part of our sustainable water management strategy, we have introduced innovative behaviour-activated showerheads in a joint-university pilot programme at the Grantham and Robert Black student halls. These smart showerheads are equipped with integrated LED lighting and water usage monitors that provide real-time visual feedback. The light changes colour based on the volume of water used, which serves as a gentle behavioural nudge to encourage conservation and discourage overuse.

By integrating smart water-saving technologies into residential life, this initiative aims to significantly reduce water consumption on campus. It not only conserves a valuable natural resource and minimises our environmental impact but, more importantly, promotes a lasting culture of sustainable living for the next generation.



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