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LIFE
ON LAND

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GOVERNANCE AND OPERATIONS

UCSI University supports Sustainable Development Goal 15 (Life on Land) through the conservation, restoration and sustainable use of terrestrial ecosystems guided by institutional policies, campus operations, educational programmes, research and community partnerships. The university organises and supports activities such as tree planting, biodiversity awareness campaigns, ecological fieldwork, reforestation programmes and conservation workshops that promote protection of forests, wildlife habitats and natural ecosystems.

Biodiversity considerations are incorporated into campus planning, landscaping and environmental management practices. UCSI University promotes the use of native plant species, responsible land stewardship and measures to reduce ecological disturbance, including efforts to minimise the impact of alien species. The university also implements operational practices and policies related to sustainable food sourcing, plastic waste reduction, hazardous waste management and water quality protection to safeguard ecosystems, wildlife and human health.

In addition, UCSI University works directly with local communities, NGOs, industry and government agencies to maintain and restore shared land ecosystems through outreach, environmental education and collaborative conservation initiatives. These efforts demonstrate the university's commitment to biodiversity protection, ecosystem management, sustainable land use and institutional responsibility in advancing SDG 15: Life on Land.

TEACHING AND LEARNING

1. PLANT AND EXPLORE – ECO ADVENTURE AT TAMAN TUGU

UCSI University, through the Society of Petroleum Engineers Student Chapter, organised Plant and Explore – Eco Adventure on 8 February 2025 at Taman Tugu Nursery, Kuala Lumpur, addressing land degradation, biodiversity loss and low public awareness of terrestrial ecosystem protection. The programme aimed to cultivate environmental stewardship and promote forest conservation, directly supporting SDG 15.



Participants engaged in tree planting and experiential learning on ecosystem restoration and biodiversity. Immediate outcomes included increased awareness of terrestrial ecosystem protection, stronger appreciation for native species and enhanced commitment to conservation efforts. At a broader level, the initiative contributes to ecosystem restoration, fosters environmentally responsible behaviour and encourages community involvement in conservation, while also advancing SDG 4 by providing hands-on learning experiences.

2. LIFE WORTH LIVING

UCSI University organised the Life Worth Living Retreat on 25 February 2025 at Garden Spring Cheras for students enrolled in the Religions in Malaysia course, in partnership with Yale University, Blue Ribbon Global and Rumah Empati. This three-hour workshop directly supports SDG 15, as it aimed to cultivate reflective leadership, ethical awareness and values-driven decision-making. These efforts address the broader sustainability challenge of nurturing socially responsible individuals who contribute to environmental stewardship.



3. COMMUNITY-LED REFORESTATION AT SUNGAI BESI FOREST RESERVE

The Community-Led Reforestation at Sungai Besi Forest Reserve was organised by The Blue Ribbon on 12 April 2025, with participation from 14 Accenture AIOCM staff and five UCSI University UniTrust students. The initiative addressed land degradation and biodiversity loss caused by urbanisation, aligning with SDG 15, as it aimed to restore native forest ecosystems, enhance biodiversity and foster collaborative environmental action among community, corporate and higher education stakeholders.



RESEARCH AND DISCOVERY (ECOSYSTEM HEALTH)

1. PARAMETRIC VISUALISATION, CLIMATE ADAPTABILITY EVALUATION, AND OPTIMISATION OF STRATEGIES FOR THE SUBTROPICAL HAKKA ENCLOSED HOUSE: THE GUANGLUDI CASE IN MEIZHOU

(Buildings, Volume 15, (2025). Prof Ts Dr Nangkula Utaberta)

Hakka traditional vernacular dwellings embody regionally specific climatic adaptation strategies. This study takes the Meizhou Guangludi enclosed house as a case study to evaluate its climate adaptability with longevity and passive survivability factors of the Hakka three-hall enclosed house under subtropical climatic conditions. A mixed research method is employed, integrating visualised parametric modeling analysis and on-site measurement comparisons to quantify wind, temperature, solar radiation/illuminance and humidity, along with human comfort zone limits and building environment. The results reveal that natural erosion in the Guangludi enclosed house is most pronounced during winter and spring, particularly on exterior walls below 2.8 m. Key issues include bulging, spalling, molding and fractured purlins caused by wind-driven rain, exacerbated by low wind speeds and limited solar exposure, especially at test spots like the E8-E10 and N1-N16 southeast and southern walls below 1.5 m. Fungal growth and plant intrusion are severe where surrounding trees and fengshui forests restrict wind flow and lighting. In terms of passive survivability, the Guangludi enclosed house has strong thermal insulation and buffering, aided by the Huatai mound; however, humidity and day illuminance deficiencies persist in the interstitial spaces between lateral rooms and the central hall. To address these issues, this study proposes strategies such as adding ventilation shafts and flexible partitions, optimising patio dimensions and window-to-wall ratios, retaining the spatial layout and Fengshui pond to enhance wind airflow and reinforcing the identified easily eroded spots with waterproofing, antimicrobial coatings and extended eaves. Through parametric simulation and empirical validation, this study presents a climate-responsive retrofit framework that supports the sustainability and conservation of the subtropical Hakka enclosed house.

2. ASSESSING SEASONAL RAINFALL EROSIVITY VARIABILITY IN EAST MALAYSIA: A TREND ANALYSIS APPROACH

(Theoretical and Applied Climatology, Volume 156, (2025). Asst Prof Ir Dr Lee Jin Chai)

Rainfall erosivity is defined as the parameter that measures the potential impact of rainfall causing soil erosion. Soil erosion is a major global hazard that often results in landslides, infrastructure damage and high mortality rate. It is crucial to consider both the temporal and spatial rainfall distribution because this will assist the professional bodies in improving soil conservation planning to mitigate soil erosion risk. Therefore, this research aims to analyse the temporal and spatial trend of seasonal rainfall erosivity in East Malaysia between 1989 and 2018. The Man-Kendall (MK), Modified Mann-Kendall (MMK) and Sens's slope methods were utilised to compute the temporal trends of rainfall erosivity, whereas Ordinary Kriging (OK) and Thiessen polygon were employed to interpolate the spatial trend of rainfall erosivity. The result showed that the majority of rainfall stations exhibited an upward trend during the northeast monsoon, southwest monsoon and first intermonsoon. Contrarily, East Malaysia experienced a downward trend in rainfall erosivity during the second intermonsoon. The spatial trend of rainfall erosivity revealed that the highest rainfall erosivity was concentrated in the southern and central regions of Sarawak during the northeast monsoon. The findings of this paper highlight that East Malaysia is susceptible to landslides, especially during northeast monsoon. Therefore, the implementation of effective erosion control is crucial in reducing landslide hazards.

COMMUNITY AND PARTNERSHIP

1. 502 INDIGENOUS SAPLINGS PLANTED IN SABAL FOREST RESERVE CONSERVATION DRIVE

UCSI University, in collaboration with the Forest Department Sarawak and the UCSI Leo Club, organised a large-scale conservation drive to address deforestation and biodiversity loss in Sarawak. The initiative aimed to promote forest restoration, environmental stewardship and youth engagement, directly supporting SDG 15.



UCSI University, in collaboration with the Department of Environment, CSR Majlis Penghijauan Malaysia and WWF-Malaysia, concluded the three-year Sungai Besi Reforestation Programme, addressing deforestation, habitat loss and ecosystem degradation. The initiative aimed to restore biodiversity, enhance carbon sequestration and promote sustainable land management, aligning with SDG 15.

