Lingnan University 嶺南大學 香港 Hong Kong

2025/2026

Sustainable Development Goals Report



EDUCATION for SERVICE
作育英才・服務社會

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Lingnan University is committed to advancing the United Nations' 17 Sustainable Development Goals (SDGs) through education, research, knowledge transfer, community engagement and sustainable campus operations. Ranked **No. 1 globally for SDG 4: Quality Education in the Times Higher Education (THE) Sustainability and Impact Ratings for two consecutive years, 2025 and 2026**, Lingnan places quality education at the heart of its contribution to sustainable development. As a comprehensive, research-oriented university in the digital era, Lingnan combines its liberal arts strengths with technological innovation to address societal challenges and nurture socially responsible graduates. This consolidated report brings together the University's contributions across all 17 SDGs, highlighting initiatives, achievements and partnerships that translate institutional commitments into meaningful impact. Together, these reports demonstrate Lingnan's dedication to fostering an inclusive, equitable and sustainable future through collaboration with local communities and partners across the world.









Lingnan University 2025/2026 SDG Report
SDG 1 – NO POVERTY



65th in the World
(THE Sustainability Impact Ratings 2026)

No. 1 in Hong Kong
(THE Sustainability Impact Ratings 2026)

31
Undergraduate Courses

566
Research Outputs

As Lingnan University transforms into a comprehensive, research-oriented university in the digital era, it remains rooted in its strong liberal arts heritage and commitment to education for service and social responsibility. Lingnan advances **SDG 1: No Poverty** through research, policy dialogue and community engagement that support poverty reduction, social protection and equitable access to opportunities. Guided by its mission to transform lives and society through impactful scholarship and experiential learning, the University integrates teaching, research and practice to address poverty and its underlying challenges, including inequality, unemployment and social exclusion, across Hong Kong and beyond.

Addressing Gaps in Social Protection for China's Veterans

Research led by Professor Yang Kai, Assistant Professor (Presidential Early Career Scholar) in Lingnan University's Department of Government and International Affairs, contributes to SDG 1: No Poverty by examining structural gaps in social protection for China's veterans.

While poverty is often understood in material terms, veterans may also experience marginalisation arising from the gap between state resettlement promises and lived realities. Inadequate social protection, mismatched employment support and unresolved grievances can undermine their long-term well-being and social cohesion, highlighting the importance of effective support for vulnerable groups.

Published in *China Review* (2025), Professor Yang's research examines the evolution of China's veterans-resettlement policies and the establishment of the Ministry of Veterans Affairs. Drawing on extensive fieldwork, petition letters and policy documents, the study identifies a pattern of "performative accommodation": while

the state provides visible symbolic responses to veterans' demands, substantive redress of underlying grievances often remains limited. This finding helps explain why veterans' activism and protest continue to recur despite institutional reforms. It also highlights the structural limits of top-down social protection mechanisms when these are not matched by genuine capacity or political will.

The research supports SDG 1 by providing an evidence-based framework for understanding why certain groups remain excluded from the full benefits of social protection even when formal policies exist. It shifts attention from the presence of welfare institutions to their actual capacity to address inequality, respond to needs and restore dignity.

By making these gaps visible, the study offers a foundation for more effective, need-responsive social protection policies. It also contributes to public understanding of poverty and social exclusion in contemporary China, reinforcing the importance of equitable access to support and policies that address the needs of vulnerable populations.

Scholarly research addressing poverty related issues

Academic staff are actively engaged in a broad range of research addressing poverty and social inequality [link]. Research studies cover issues on platform workers and welfare protection, work-family reconciliation on gender inequality, family care, older workers and retirement protection, migration, race and labour inadequate housing and well-being among disadvantaged social groups in Hong Kong, East Asia and Southeast Asia, and some African countries [link].

Research collaborations are not limited to local and regional universities but also extended to international universities. Research outputs (2025-2026) are related to employment support and older workers, anti-poverty policies, poverty and health inequalities, platform economy and social protection, digital transformation of welfare, child poverty and cognitive performance in East Asian (e.g., Hong Kong), Southeast Asian, Sub-Saharan African countries and China [link].

Funding support for student learning opportunities

Lingnan University provides a variety of funding and scholarship schemes based on academic merit and financial need to ensure equitable access to higher education for students around the world, including those from low- and middle-income countries such as Ghana, Nigeria, Bangladesh, and Pakistan. These sponsorships and scholarships — including Postgraduate Studentships, Research Postgraduate Student Conference/Field Trip Sponsorships, and Research Postgraduate Scholarships for Overseas Research Visits — offer transformative learning opportunities and help

nurture the next generation of scholars [please refer to Funding and Scholarships for postgraduate students].

Taught postgraduate programmes also provide various forms of financial assistance, such as entrance scholarships and exchange sponsorships, to attract capable and diverse candidates. In 2026, for example, 18 outstanding postgraduate students received scholarships to attend the Postgraduate Summer School at Oxford (28 June – 12 July 2026), broadening their academic horizons and deepening intercultural understanding [link].



Experiential Learning Raising Awareness about the SDGs

Through the Lingnan Entrepreneurship Initiative (LEI), the University offers students experiential learning projects that connect innovation and social responsibility to poverty alleviation and sustainable development. One major initiative encourages students to explore entrepreneurship as a sustainable career pathway, equipping them with the skills to create meaningful social and economic impact. **[**link**].**

The University has established various forms of funding support, such as the Startup Trial Fund, the Student Entrepreneurial Exploration Development Fund, and Lingnan University Entrepreneurship Fund (LUEF). These initiatives empower students to develop innovative solutions to address poverty and promote economic inclusion through social entrepreneurship.


SUSTAINABLE DEVELOPMENT GOALS

Lingnan University 2025/2026 SDG Report
SDG 2 – ZERO HUNGER



No. 1 in Hong Kong (THE Sustainability Impact Ratings 2026)

117 Research Outputs

18 Undergraduate Courses

84% Internationally Collaborated Papers

Lingnan University is committed to advancing Sustainable Development Goal 2 (SDG 2): Zero Hunger through innovative, evidence-based research that supports sustainable food systems and community resilience. As it transforms into a comprehensive, research-oriented university in the digital era, Lingnan brings together science, technology and social inquiry to address challenges in food security, resource efficiency and agricultural sustainability. Its researchers explore approaches to reducing waste, improving productivity and supporting circular economies, with a focus on contributing to the wellbeing of communities in Hong Kong and beyond. The following research and impact cases illustrate Lingnan's contributions to a more sustainable and food-secure future.

Upcycling Fruit Waste into Nutritious and Sustainable Aquaculture Feeds to Enhance Fish Health

Research led by Professor Ip Chi Ho, Associate Professor (Presidential Early Career Scholar) in Lingnan University's Division of Science, supports SDG 2: Zero Hunger by developing sustainable aquaculture feed additives that enhance fish health and contribute to local food security and sustainable food production.

Hong Kong's aquaculture sector is central to local food security. The government aims to expand Fish Culture Zones to 800 hectares and raise marine fish production tenfold to 6,000 tonnes within 15 years. However, feed costs already account for 50–70% of operating expenses, while rising fishmeal and soybean meal prices constrain expansion. Fruit-processing

waste, especially orange peels rich in polyphenols, flavonoids, vitamins and minerals, offers an underused feedstock for sustainable feed additives.

Supported by the LNG-Fisheries Enhancement Fund (FEF23101), the research team developed a simple, replicable process for producing fermented fruit waste (FFW). Fresh orange peels from local juice factories underwent 30-day submerged fermentation in 50-litre containers. Temperature, pH and dissolved oxygen monitoring, combined with 16S rRNA sequencing and metabolomics, confirmed a stable process. By day 30, *Acetobacter* and yeasts dominated, 3,633 metabolites were identified, anti-nutritional factors were reduced, and growth-promoting, antioxidant and immune-related compounds were enriched.

A 180-day field trial with gilthead seabream at Sai Kung fish rafts—three cages per treatment, with approximately 350 fish per cage—showed that FFW supplementation increased weight gain to 71.91%, compared with 59.65% for commercial feed controls, and lowered the feed conversion ratio to 7.82 from 9.09. Antioxidant capacity improved markedly, with glutathione reductase activity increasing by 96.4% and malondialdehyde decreasing by 83.4%. Lysozyme and immunoglobulin M levels also rose significantly. Multi-omics analyses revealed adaptive gut-microbiome remodelling, fewer opportunistic pathogens on gills, higher flavour nucleotide levels in muscle, and enhanced energy-production and detoxification pathways in the liver.

Four outreach seminars reached over 100 participants, including fishermen, government officials and academics, with trial fish and FFW samples distributed free of charge. The project establishes a “waste valorisation–performance validation–industry adoption” pathway, demonstrating the potential of FFW as a low-cost, easy-to-produce functional feed additive. By supporting resource-efficient aquaculture, reducing feed costs and improving fish health and product quality, the research contributes to resilient food production systems and provides evidence to inform sustainable aquaculture policy in Hong Kong and beyond.

Fish raft photographic record















Figure X. Photos of the FFW results-sharing seminar held at the Sai Kung fish raft; (A) Guests traveling to the fish raft by shuttle boat from Wong Shek Pier; (B) Professor Yip Chi-ho of Lingnan University presenting the research findings of the FFW project; (C) Mr. Wong Chin-ming, agricultural expert from Hong Yat Farm, demonstrating FFW usage techniques; (D) Professor Yip Chi-ho and Mr. Wong Chin-ming discussing FFW details with participating fishermen; (E) Guests taking their seats at the seminar; (F) Group photo of FFW project staff, fish raft staff, and seminar guests.

Leveraging Pineapple-Derived Eco-Enzyme for Sustainable Microbiome Modulation to Manage Tomato Leaf Spot Disease

Research led by Professor Ip Chi Ho, Associate Professor (Presidential Early Career Scholar) in Lingnan University's Division of Science, advances SDG 2: Zero Hunger through sustainable agriculture, crop resilience and protection of food production. Accepted for publication in the *Journal of Agriculture and Food Research*, the study explores a pineapple waste-derived eco-enzyme (PEE, also known as "Jiaosu") for managing tomato leaf spot disease.

Fungal leaf spot diseases threaten global tomato production, causing severe defoliation, reduced photosynthetic capacity and yield losses of up to 50% under humid conditions.

Conventional synthetic fungicides can lead to pathogen resistance, environmental harm and disruption of beneficial microbial communities. In collaboration with a local farm, the researchers developed PEE as a sustainable, circular bioagent.

PEE is produced through controlled fermentation of pineapple peel and core residues, representing 50–60% of the fruit mass, with water and a starter culture. This process enriches beneficial microbes, particularly *Lactobacillus* and *Acetobacter*, and generates antimicrobial metabolites such as isorhamnetin and succinic acid.

In a 30-day field trial on naturally infected tomato plants, daily foliar and soil applications of 2% PEE reduced leaf spot lesion area by 74.6% compared with untreated diseased controls. Photosynthetic efficiency and chlorophyll content recovered to levels comparable with healthy plants. Metagenomic analyses showed that PEE restructured leaf- and root-associated microbiomes, enriching beneficial bacteria while suppressing pathogenic fungi. More complex microbial co-occurrence networks indicated improved community stability.

PEE acts through direct pathogen suppression by bioactive metabolites and indirect protection through microbiome reconfiguration, enhancing plant defence functions and induced systemic resistance. Functional profiling also revealed restored defence-related metabolic pathways.

By converting fruit-processing waste into a low-cost biocontrol agent, this research offers a pathway to reduce reliance on synthetic fungicides and strengthen resilient food production systems. It supports resource-efficient farming and circular bioeconomy principles, with potential applications for smallholder and larger farms, while also contributing to SDG 12 and SDG 15.

Bridging the Gap: An eDNA Approach to Ecological Assessment and Conservation of Scleractinian Corals

Led by Professor Ip Chi Ho, Associate Professor (Presidential Early Career Scholar) in Lingnan University's Division of Science, this project investigates how to develop and apply a streamlined environmental DNA (eDNA) method to assess and conserve scleractinian (reef-building) coral communities in Hong Kong waters.

Shallow-water coral reefs are marine biodiversity hotspots with high socio-economic value. Healthy reef ecosystems also support fisheries and contribute indirectly to food security and sustainable livelihoods. However, climate change and anthropogenic activities have caused a global decline of over 50% in coral cover and associated marine life. Conventional monitoring relies heavily on time-consuming visual surveys that are impractical for rapid assessment

across many sites. Few eDNA studies have targeted reef-building corals, primarily because of the lack of robust primers and standardised methods.

To address this gap, the project develops novel scleractinian-specific primers against an enhanced DNA reference database encompassing over 100 coral colonies. These are validated through water sampling and visual surveys at Hoi Ha Wan Marine Park, known for hosting one of the best coral communities in Hong Kong waters. The streamlined eDNA approach is then applied at 33 Reef Check sites across Hong Kong over two seasons.

The findings contribute to SDG 14: Life Below Water by demonstrating the application of eDNA for coral reef monitoring and marine ecosystem conservation, revealing spatial and temporal variation in coral community composition, and informing evidence-based conservation measures and predictions of reef responses to climate change and anthropogenic disturbance. By supporting the protection of habitats that underpin marine resources, the project also has indirect relevance to SDG 2: Zero Hunger, particularly the ecological foundations of fisheries and food security.

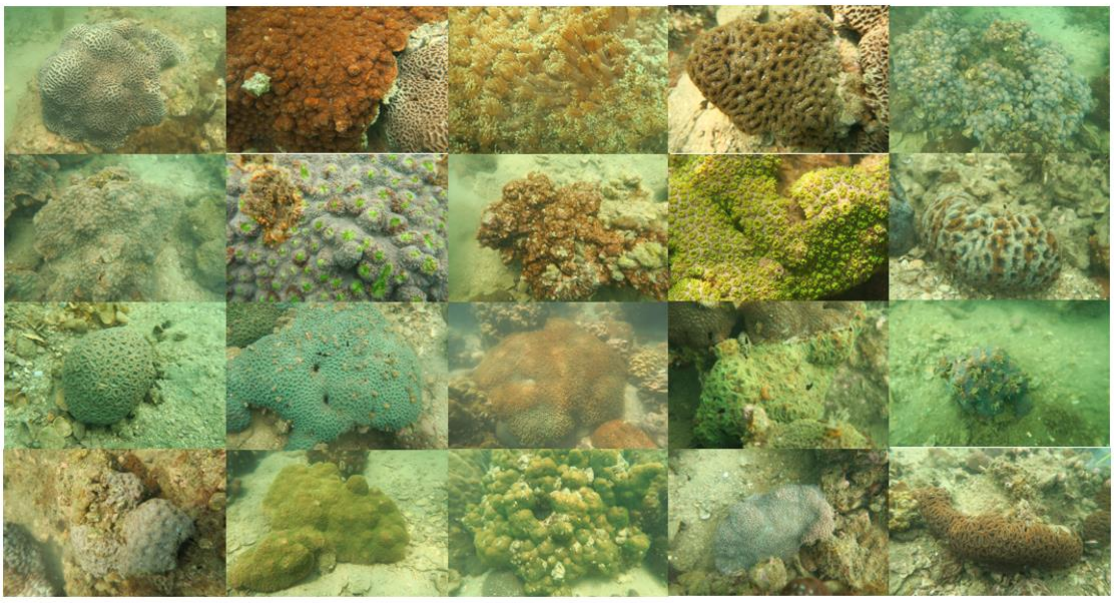
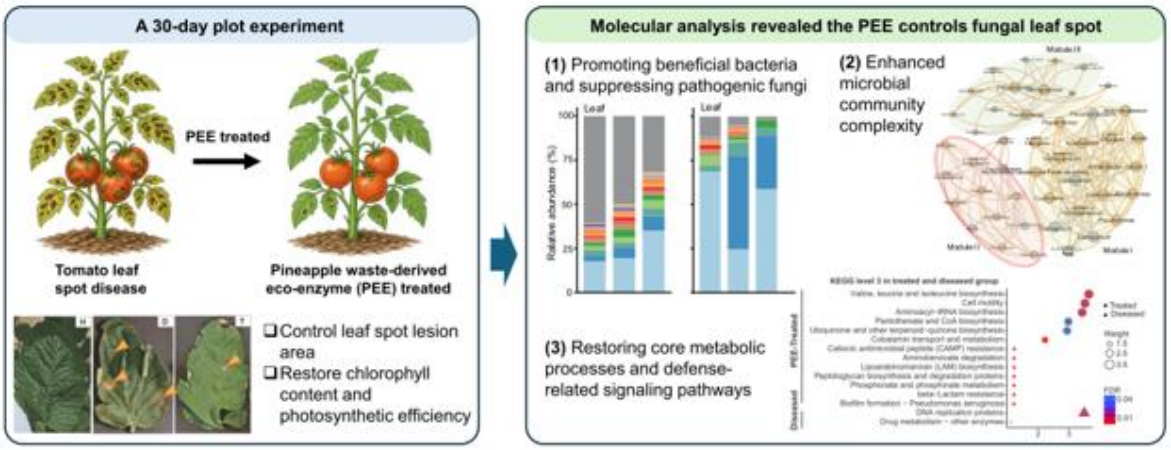


Figure 1. *In-situ* close-up photographs of scleractinian corals taken during field sampling.



Figure 2. Water sampling and filtering after survey. **(A and B)** Research assistant using water sampler to collect seawater at field site. **(C and D)** The setup of water filtering system, which are soaked with 10% bleach solution and rinsed with Milli-Q water before using. All collected seawater were stored in ice box temporarily and transfer to lab to filtering seawater. **(E)** The filtered membrane was storage at – 80 °C freezer.

Graphical abstract



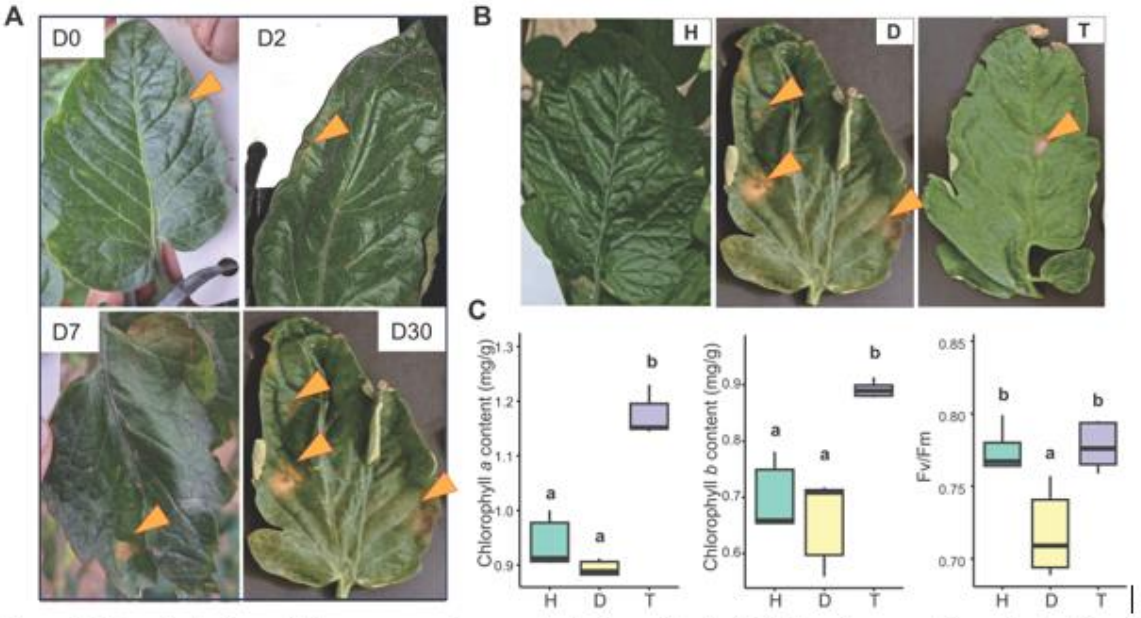


Figure X. Tomato leaf spot disease symptoms and photosynthesis. **(A)** The changes of tomato leaf spot disease symptoms on day 0 (D0), D2, D7 and D30, which showed the peak lesion expansion on day 30. **(B)** The healthy (H), diseased (D) and the PEE-treated (T) leaves on day 30. **(C)** The chlorophyll *a* and *b* content and photosystem II efficiency (Fv/Fm ratio) of H, D and T leaves on day 30.



Figure X. Photos showing the raw pineapple waste, grinded materials, and the finished eco-enzyme product, as well as the monitoring and sampling for downstream analysis.



Tomato photography

Enhancing food assistance services in Hong Kong: Addressing food poverty and promoting food security

This qualitative study, led by Professor AU YEUNG Tat Chor, Associate Professor in the Department of Sociology and Social Policy, aimed to examine the delivery of food assistance services in Hong Kong. The research aligns with SDG 2: Zero Hunger, particularly Target 2.1,

which calls for ending hunger and ensuring access to safe, nutritious and sufficient food for all, especially people experiencing poverty and vulnerability.

Despite the recent expansion of state-funded foodbank services outsourced to non-governmental organisations (NGOs), the provision of in-kind services to the poor has always been linked to means-testing and the stigmatisation of service users. This may reduce service uptake and adversely affect their social impact in preventing food poverty and insecurity. Therefore, it was important to investigate how NGOs and social workers deliver food assistance services, with a focus on equitable access.

This project was completed in 2023. Overall, the study conducted in-depth interviews with 24 social workers from 7 foodbank operating agencies and 7 non-funded food service projects. The findings reveal that food assistance policy and services were shaped by micro, meso and macro factors. First, everyday frontline interactions between workers and clients influenced how users perceived foodbanks and shaped their actual experiences of receiving food. Second, organisational settings, such as funding models and agencies' linkages with other social services, determined the delivery of food assistance, whether it was carried out on an individual basis or involved a range of community activities. Multiple-service approaches could reduce the stigma of using foodbanks. Finally, policy contexts and government-directed NGOs shaped service models and workers' caseloads in food services, defining the meanings, spaces and resources of service providers.

The service implications of this research lie in implementing a dignity-driven and needs-based approach to food assistance. As some service providers incorporated social innovation and empowerment that went beyond the policy objective of reducing food poverty, diversifying food service programmes would be necessary to de-stigmatise food assistance. Policy suggestions are also made to promote stronger participatory components in service design, including users' voices, food choices and mutual-help programmes, supporting inclusive and participatory food assistance services. Reforming the food assistance system at different levels; could effectively alleviate food poverty and insecurity, contributing to SDG 2's goal of ending hunger and improving food security.

Lingnan University 2025/2026 SDG Report
SDG 3 – GOOD HEALTH AND WELL-BEING



1,252
Research Outputs

347
Projects/ Grants

118
Undergraduate Courses

Lingnan University is a research-intensive liberal arts university in Hong Kong in the digital era. In support of **SDG 3: Good Health and Well-being**, LU is committed to promoting population health and well-being, particularly in response to population ageing, the needs of persons with disabilities, and the impacts of environmental and technological changes. Various university units have organised public events, conducted research and developed innovative initiatives to advance health and well-being. Selected examples are highlighted below.

Innovative approaches to disease prevention and health promotion

Researchers at LU have pursued different avenues to promote the health and well-being of populations. For instance, one public health concern in tropical areas is mosquitoes. People in places such as Hong Kong often suffer constant mosquito disturbances, causing bodily harm and inconvenience to those who spend time outdoors. Global public health measures have included mosquito repellent ointments and other mass-spraying chemicals to kill or repel the bugs. In support of such efforts to protect the public against mosquito bites and their associated diseases, such as dengue fever, Prof Paulina Wong of Lingnan University has developed a real-time GeoAI Platform for mosquito-borne disease control, which provides the public with a Mosquito Risk Index and Mosquito Risk Map so they can avoid going to areas with serious mosquito problems. The platform is accessible to all members of (geoaimq.ln.edu.hk) to obtain real-time and predicted mosquito conditions across districts in Hong Kong.

To protect the mental health of people required to quarantine as part of COVID-19 preventive measures, LU's Wofoo Joseph Lee Consulting and Counselling Psychology Research Centre (WJLCCPRC) designed a self-assessment questionnaire and intervention exercise to help people in quarantine cope better psychologically. The intervention aimed to help users "understand the implications of quarantine for individuals and society and improve their abilities to tackle loneliness". Research shows that isolation can trigger undesirable mental health outcomes. This was LU's contribution to promoting positive mental health outcomes. Even during implementation, the study benefited 125 people who used the intervention and demonstrated its practicality.

Creating platforms to consolidate and disseminate knowledge on health and well-being

Beyond developing resources to protect the public from disease, the LU community has also engaged in cross-national/regional collaborations to explore and expand knowledge on ways to sustain human health. A major international conference, organised by the Department of Psychology, explored the mental and cognitive dimensions of health and well-being. The conference brought together world-leading scholars and practitioners from three continents, along with nearly 200 participants, on 9 November 2025 to explore the theme. As the second time organising this event, Lingnan has created a platform to cultivate new knowledge on promoting population health and well-being from a psychological science perspective.

In a related event, another team from Lingnan University explored human health and well-being by emphasising sustainable health. The organisation of the 11th South-South Forum was held at Lingnan University from 30 June to 5 July 2024, with the theme "Health and the Road to Sustainability". The conference brought together scholars from all over the world, including Mainland China, Hong Kong SAR, Malaysia, India, Zimbabwe, Bhutan, Mexico, Venezuela, and Brazil, to discuss whether community building and human health can be achieved and sustained based on good community governance, ensuring the quality of people's livelihoods, valuing inclusiveness in community life, and building an ecological civilisation.

Promoting Healthy Ageing through Technology

With intensifying ageing in East Asia and many parts of the world, health systems face significant challenges in addressing service deficits for older populations and people approaching older age, as ageing brings complex health challenges such as comorbidities.

In their contribution to active and healthy ageing, researchers at Lingnan University have undertaken activities, projects, and collaborations to connect social, medical, and technological approaches that support and promote good health for older adults. Lingnan University co-organised the China Rehabilitation Medicine Association Guangdong-Hong Kong-Macao Greater Bay Area Rehabilitation

Conference held from 14 to 16 June 2024 at the Guangzhou Yuexiu International Congress Centre. The event featured 35 specialised academic sessions that attracted experts and guests from health services, medical insurance policy research, cutting-edge technology innovation, and the life sciences and healthcare industry to discuss comprehensive rehabilitation. The event served as a medium for Lingnan University to share and sensitise professionals and students about Home Rehabilitation and Gerontechnology as part of solutions to addressing the burden of ill health among older persons. Based on prior experience and research, researchers at Lingnan suggested that medical-social collaboration in home-based rehabilitation, supported by assistive technologies as are usually promoted and showcased at LU, is essential for providing better professional medical advice and successful case sharing for people needing rehabilitative care.

Some Lingnan scholars have also developed gerontechnology to aid caregivers of people living with dementia in location detection and accident prevention. With dementia prevalence on the rise in many societies, the salience of technology-assisted caregiving cannot be overstated. Advancing technology in these areas is crucial to supporting independent ageing and promoting caregivers' well-being. The new technology being developed at Lingnan University will make a significant contribution to this important social issue.

Moreover, promoting medical-social collaboration has become a key part of LU's approach to supporting health and well-being in the context of ageing populations. This approach is meant to collaborate with medical practices and social services providers to support effective healthcare and disease prevention. Starting March 2024, LU, as part of the Jockey Club Gerontechnology and Smart Ageing in Place (GTSA), has been collaborating with the largest hospital in its district, Tuen Mun Hospital, specifically the Tuen Mun Hospital Patient Resource Centre (TMH PRC), for a health promotion activity. These activities include strategies to train ambassadors (usually postgraduate students) who serve at the TMH PRC to provide health literacy and gerontechnology information to hospital staff, caregivers, and the community. This collaboration has benefited many health professionals and trained ambassadors, who are now equipped with the skills to support technology integration in ageing care and broader medical-social collaboration. The collaboration gives students valuable experience working closely with medical and health professionals and related services, and offers both theoretical and practical opportunities. To enhance the skills and awareness of young people and older adults about gerontechnology, the LU Jockey Club Gerontechnology and Smart Ageing Project has also introduced a Gerontechnology Practitioner Training Course to promote gerontechnology to the public. The course is designed for older adults, carers and young people. The content covers medicine, food, living and transportation, comprehensively explaining older adults' needs and the challenges they face every day. Graduates of the course can become specialists and ambassadors for the programme. To build on the momentum of promoting technology in ageing, a team from Lingnan University organised a symposium in April 2025, where over 100 public and private experts gathered to showcase and discuss the current state and future of promoting gerontechnology in ageing societies globally.

Recent research activities have also provided industries with significant feedback on ways to enhance digital inclusion for older adults. One study from Lingnan University found that although special features and modes were developed in general applications for older adults, they often made older adults feel excluded and added pressure to learn new skills.

Consistent with promoting gerontechnology and supporting healthy ageing, LU launched the Lingnan Entrepreneurship Initiative (LEI) in 2018 to drive innovation and entrepreneurship (I&E) initiatives within the Lingnan community, in line with the university's strategy to optimise liberal arts education to cultivate impactful entrepreneurial leadership. It aims to empower students, alumni, and faculty to think innovatively and act strategically to create solutions that address glocal challenges today and tomorrow, particularly in the digital age. At the core of all projects and programmes run through LEI are the Sustainable Development Goals (SDGs). LEI has partnered and worked with many community-based organisations to develop and disseminate many multi-award-winning humanitarian technologies, such as the affordable air purifier to improve air quality in subdivided units; 12° Mask: an innovative transparent mask for barrier-free communication; CREW Wheelchair: a carer-driven electric wheelchair; and Project Ultra Violite: rapid disinfection service for subdivided units. All these products are meant to relieve carers and people at risk of infectious diseases. The products have received multiple awards globally.

Lingnan University has maintained a successful project on age-friendly cities in Hong Kong, which has run for over 7 years across all 18 districts. The Asia Pacific Institute of Ageing Studies, which is one of the partners of the broader project sponsored by the Hong Kong Jockey Club Charities Trust, has organised a public event under the theme: "Show Capacity, Build an Age-friendly Community" to demonstrate the critical role that older adults themselves play in promoting healthy ageing. The event, which attracted over 540 participants and 120 older active ageing ambassadors, created a platform to educate the public and seek their views on ways to promote active ageing under thematic discussions such as "How to build an age-friendly community through promoting social participation." The older adults' ambassadors received training on ensuring the age-friendliness of their societies, and their role is to disseminate the knowledge they gain. The broader project has trained over 2500 ambassadors. Recently, colleagues at the School of Graduate Studies, led by Prof Padmore Adusei Amoah and Prof Maggie Lau, have been following up on this project through an age-friendly cities impact case through international collaboration to share Hong Kong's experiences on age-friendly cities in other countries in the region, such as Indonesia and places in the Hong Kong-Guandong-Macao Greater Bay Area. This project has benefited several institutions, including NGOs, universities, and local government agencies, as well as many young (e.g., university students) and older people, by helping them understand and apply age-friendly principles in their practice and everyday lives. Some older adults have been trained as age-friendly ambassadors as part of the project. This ambassadorial role helps promote active and productive ageing. The project has researched over 2000 individuals/institutions.

Thus, Lingnan University is aggressively promoting population health and well-being. Although the university does not have a medical school, it is strategically leveraging its research strengths to support the attainment of SG3 and will continue to do so in the coming years!

Extending Mental Health Promotion through the Wellness Ambassador Programme

During the 2025–2026 academic year, Lingnan University's Wellness Ambassador Programme (WAP) continued to promote mental health and well-being across university and school communities. Led by the Wofoo Joseph Lee Consulting and Counselling Psychology Research Centre, WAP translates psychological research into practical training in counselling skills, resilience, growth mindset and stress management, supporting participants' well-being and their capacity to help others through peer support.

WAP expanded its reach within and beyond the Greater Bay Area, engaging 83 participants at Beijing Institute of Technology, Zhuhai, and 150 students and 135 teachers at the Beihai campus of Guilin University of Electronic Technology. The teacher training addressed work-related stress, supporting workplace mental well-being. Both institutions have advanced WAP's integration into peer-counselling programmes. In Hong Kong, a WAP extension workshop at Shung Tak Catholic English College reached approximately 380 students and staff, addressing HKDSE examination stress and emotional management to support student mental well-being. WAP also trained 71 participants at NYU Shanghai. The Centre hosted a presentation and exchange session on WAP for 25 members of a Zhejiang teacher delegation. Following the session, the Centre received an invitation to deliver WAP in Zhejiang, with training planned for late 2026.

WAP also gained recognition through professional and institutional exchanges. On 29 November 2025, Professor Siu Oi-ling, Chair Professor in Lingnan University's Department of Psychology, presented WAP's evidence and outcomes to Vice Minister of Education Ren Youqun at South China Normal University, receiving positive feedback. In June 2026, she shared WAP's progress and future development at the Guangdong–Hong Kong–Macao University Psychological Counselling Alliance conference, hosted by the University of Macau, receiving support from participating colleagues.

More WAP courses are planned for the 2026/27 academic year, extending delivery to additional institutions beyond the Greater Bay Area. These plans include further collaboration with Suzhou University of Science and Technology. Through training and institutional collaboration, WAP continues to promote mental well-being, psychological resilience, stress management and peer support, contributing to SDG 3: Good Health and Well-Being, particularly Target 3.4's focus on promoting mental health and well-being.

Depression and Accuracy of Judgment: A Meta-analysis

Led by Professor Hodar Lam, Research Assistant Professor in Lingnan University's Department of Psychology, this study advances understanding of depression, mental health and cognitive processes. Depressive realism suggests that depressed individuals may make more accurate or realistic judgments than nondepressed counterparts. This meta-analytic study (130 articles, 151 samples, N = 33,043) synthesized findings on the relation between depressive mood and the accuracy of judgment, and investigated the conditions under which depressive realism or its opposite—depressive distortion—emerges.

Overall, results indicated a weak but significant depressive distortion effect (Hedges's g = 0.09). Moderator analyses showed that depressive realism was more likely when tasks involved control or contingency judgments, were analytically complex, and self-referent. By contrast, depressive distortion was more likely in severe clinical depression, with tasks that were non-self-referent, low in complexity, or involved ambiguous social information. Notably, distortion effects were more often observed in studies that did not acknowledge depressive realism.

This review clarifies mixed findings on the depression-accuracy relation by identifying task-specific moderators, offering implications for theory and evidence-informed clinical practice. The findings contribute to SDG 3: Good Health and Well-Being by advancing knowledge relevant to depression and mental health. They also have relevance to SDG 4: Quality Education by providing an evidence base that can inform mental health literacy, psychology education and critical evaluation of research evidence.

International Conference – Arts for Wellbeing: Creativity, Adaptability, Sustainability

The Wong Bing Lai Music and Performing Arts Unit successfully hosted its inaugural international conference, *Arts for Wellbeing: Creativity, Adaptability, Sustainability*, on 6 February 2026 at Lingnan@WestKowloon, M+, Hong Kong. Supported by the Tin Ka Ping Foundation, the conference brought together leading scholars, experts, and practitioners for in-depth interdisciplinary discussions on the theoretical, pedagogical, and practical dimensions of holistic wellbeing. The conference explored how creative practices, alongside medical and psychological support, can address urban stress and foster mental health and well-being, community engagement and social cohesion through community music and performing arts.

The conference attracted approximately 120 scholars, artists, educators, and cultural practitioners from Hong Kong, the Greater Bay Area, and overseas, fostering arts education, interdisciplinary learning, international collaboration and knowledge exchange. Participating institutions included Free University of Berlin, Rhode Island School of Design, West Chester University of Pennsylvania, The Chinese University of

Hong Kong, Hong Kong Metropolitan University, and Beijing Normal University-Hong Kong Baptist University (BNBU).

The conference contributed to SDG 3 through its focus on holistic well-being and mental health; SDG 4 through arts education and professional knowledge exchange; SDG 11 through discussions on the role of creative practices in fostering socially connected, inclusive urban communities; and SDG 17 through cross-institutional and international partnerships connecting academia, the arts and community practice.





Lingnan University 2025/2026 SDG Report
SDG 4 – QUALITY EDUCATION



No. 1 in the world (THE Sustainability Impact Ratings 2026)

1st United Nations University Hub in Asia

1,117 Research Outputs

73% First-Generation Students

Lingnan University advances **SDG 4: Quality Education**, recognising education's power to transform lives and support sustainable development. Ranked world No. 1 for Quality Education in the Times Higher Education Impact Rankings for two consecutive years, Lingnan demonstrates its commitment to inclusive, equitable and high-quality education. As it transforms into a comprehensive research-oriented university in the digital era, Lingnan combines teaching excellence, research innovation and community engagement to nurture socially responsible global citizens and lifelong learners. Through innovative learning opportunities and knowledge transfer, the University broadens educational access and contributes to a more equitable and sustainable society.

Advancing Quality Education Through Inclusive and Responsible AI Innovation

Aligned with Lingnan University's commitment to inclusive, equitable and high-quality learning (Lingnan University, 2025), Professor Haoran Xie, Associate Dean of the School of Data Science, combines artificial intelligence (AI), learning sciences and language education in his interdisciplinary research to advance Sustainable Development Goal 4 (SDG 4). His work focuses on strengthening teacher competence, enriching learning experiences, and promoting responsible and evidence-based educational innovation through learner-centred pedagogy, digital literacy and equitable learning opportunities.

Enhancing educators' capabilities is a central priority. Zou et al. (2025) proposed the Pedagogic AI Competence (PedAIComp) framework, comprising 12 competencies across four domains: AI-powered digital resources, AI-assisted teaching and learning, AI-enhanced assessment, and learner empowerment. Its six proficiency levels provide guidance for teacher self-assessment, professional development and inclusive instructional design, helping educators integrate AI purposefully rather than merely adopting new tools. The framework also offers a basis for continuous professional learning across different stages of educators' digital competence development, supporting teacher capacity building and lifelong learning.

Prof. Xie's empirical research explores how emerging technologies can address barriers to effective learning. In a study involving 49 undergraduates and eight sessions of robot-assisted English-speaking practice, Zhang et al. (2026) found statistically significant pre-post improvements in fluency, vocabulary, grammatical accuracy and pronunciation. Interviews highlighted the value of authentic interaction, responsive feedback and non-judgemental practice. These findings offer practical insights for expanding opportunities for individualised speaking practice when teacher time and resources are limited, supporting personalised learning and language skills development.

Further research addresses the reliability and educational value of AI systems. Li et al. (2025) surveyed retrieval-augmented generation in education, identifying applications in tutoring, assessment and student support alongside challenges involving accuracy and scalability. Wang et al. (2026) reviewed 474 studies of agentic AI in education and identified gaps in pedagogical grounding, long-term evaluation and human oversight. Only 138 studies explicitly drew on educational theory, underscoring the need to integrate technological innovation with sound pedagogy. Complementing these findings, Chen et al. (2026) analysed 5,226 articles in *Computers & Education*, mapping research themes across teacher competence, online learning and generative AI. Collectively, these studies offer evidence to guide educational research, system design and institutional decision-making, supporting evidence-informed educational innovation and quality enhancement.

Responsible AI adoption is equally important. Yang et al. (2024) developed a 16-principle ethical framework addressing the responsibilities of students, educators and administrators, including equitable access, bias, privacy, academic integrity and independent critical thinking. Together, these contributions support Lingnan's vision of quality education by connecting advances in AI with learner-centred pedagogy, educator development and inclusive, ethical practice, emphasising educational equity, human oversight and responsible digital transformation.

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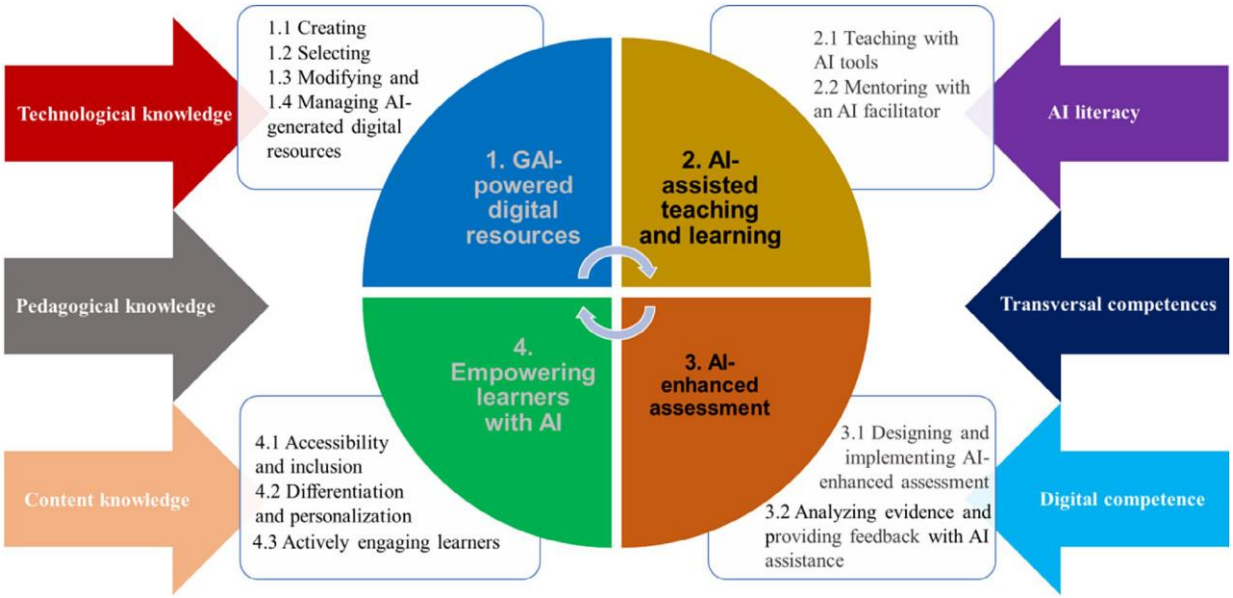


Figure 1. Educators' pedagogic AI competence framewor (reprinted from Zou et al., 2025)



Figure 2. Students engaged with NAO robot in language classes (reprinted from Zhang et al, 2026)

Funding Support to Promote Education Equality

In support of SDG 4, Lingnan University is committed to promoting equal access to quality education by offering a wide range of funding schemes based on academic merit and financial need. These initiatives provide research and taught postgraduate students from around the world with opportunities to enhance their international learning experiences and participate in academic exchanges. In the 2025/26 academic year, 122 PhD students received financial support from the University's Scholarship Scheme. Through these funding schemes, Lingnan ensures that talented students, regardless of their background, can pursue advanced education and contribute to the global academic community.

Engaging Students in Academic Exchange through Global Academic Events

Lingnan University actively promotes quality education and knowledge exchange in alignment with SDG 4 by organising diverse academic events such as the Postgraduate Summer School and Postgraduate Conference. The Postgraduate Conference 2026 attracted more than 300 postgraduate students, researchers, and academics from Australia, the Chinese Mainland, Ghana, Indonesia, Taiwan region, Thailand, and the United Kingdom. Serving as a dynamic platform for global dialogue, the conference enabled research and taught postgraduate students to share their research progress, future projects, and transformative learning experiences. Through

these initiatives, Lingnan fosters a vibrant international academic community, equips students with global perspectives, and enhances the inclusiveness and excellence of higher education [link].



The three-week Postgraduate Summer School 2026, co-organised by Lingnan University and the University of Oxford, features academic exchange, research collaboration, and workshops led by renowned scholars, fostering a vibrant global community of postgraduate learners. The programme attracts over 260 postgraduate students from local and international universities, including 18 outstanding Lingnan students who received top scholarships to participate in the UK session of the summer school at the University of Oxford [link].



Experiential Learning and Raising Awareness of the SDGs

The Lingnan Entrepreneurship Initiative (LEI) provides students with diverse experiential learning opportunities to develop their problem-solving abilities and entrepreneurial skillsets. Beyond engagement with local communities, students also gain regional and global exposure, enabling them to apply and transfer knowledge in real-world contexts aligned with the Sustainable Development Goals (SDGs).

The Lingnan University Entrepreneurship Fund (LUEF) provides seed funding and support to foster innovation and entrepreneurship within the Lingnan community. It is open to current students, recent alumni, and faculty/staff, offering up to HKD500,000 in funding for innovative and meaningful entrepreneurial initiatives based on the project's stage of development [link].

The Innovation and Impact Fund provides seed funding and support to foster innovation and entrepreneurship within the Lingnan community. It is open to all full-time students, offering up to HKD30,000 in funding for innovative and meaningful entrepreneurial initiatives [link].

Lingnan University also offers both undergraduate and postgraduate programmes in environmental education. The Minor in Environmental and Scientific Literacy focuses on cultivating science literacy as a lifelong skill applicable to a broad range of scientific and technological issues, rather than promoting content mastery in a single discipline.

Participants strengthen their critical thinking, communication, and debate skills through the core curriculum and complete a Capstone Experience in their final year.

At the postgraduate level, Lingnan offers a unique Environmental Science programme that integrates the expertise in the Division of Science with the three faculties (Arts, Social Sciences, and Business), as well as partnerships with local and international NGOs. This programme provides a strong theoretical foundation in environmental science while equipping students with diverse hands-on, experiential learning opportunities essential for success in this field.

Advancing Sustainability through Education and Research

Lingnan University actively advances SDG 4 (Quality Education) by integrating sustainability principles into its teaching, research, and community initiatives. The University currently has 27 research profiles aligned with SDG 4 [link], with related projects and outputs covering topics such as artificial intelligence, health inequality and the digital divide, digital competence, environmental education, education qualifications and employability, and quality assurance in higher education [link].

Sustainability is embedded within Lingnan's academic programmes, with specialised curricula in energy materials and technologies designed to prepare students to address global environmental challenges. The University's research initiatives pursue innovative solutions in critical areas such as carbon capture and utilisation, contributing to advancements in direct air capture technologies and the development of a carbon-negative industrial park.

Lingnan also fosters strategic partnerships with industry, government, and international institutions to enhance the impact of its sustainability-focused education and research. Through these efforts, the University continues to strengthen its commitment to advancing quality education, promoting sustainable development, and nurturing future leaders who will drive positive global change.

Enhancing Educational Opportunities and Community Engagement at Lingnan University

Lingnan University is committed to advancing Quality Education (SDG 4) through a wide range of initiatives that expand educational opportunities and strengthen community engagement. Key projects include the Lingnan University Elder Academy Sit-in Programme, which promotes intergenerational learning; the Secondary School Engagement Programme, which offers tailored activities to inspire younger students; and the Digital Commons, a free online learning platform that provides open access to valuable educational resources.

In addition, the Gerontechnology Practitioner Training Course addresses the challenges of an ageing population by equipping participants with relevant knowledge and practical skills, while the Youth Ambassador Programme connects students with community service opportunities that help them develop leadership and civic responsibility [link].

Depression and Accuracy of Judgment: A Meta-analysis

Led by Professor Hodar Lam, Research Assistant Professor in Lingnan University's Department of Psychology, this study advances understanding of depression, mental health and cognitive processes. Depressive realism suggests that depressed individuals may make more accurate or realistic judgments than nondepressed counterparts. This meta-analytic study (130 articles, 151 samples, N = 33,043) synthesized findings on the relation between depressive mood and the accuracy of judgment, and investigated the conditions under which depressive realism or its opposite—depressive distortion—emerges.

Overall, results indicated a weak but significant depressive distortion effect (Hedges's g = 0.09). Moderator analyses showed that depressive realism was more likely when tasks involved control or contingency judgments, were analytically complex, and self-referent. By contrast, depressive distortion was more likely in severe clinical depression, with tasks that were non-self-referent, low in complexity, or involved ambiguous social information. Notably, distortion effects were more often observed in studies that did not acknowledge depressive realism.

This review clarifies mixed findings on the depression-accuracy relation by identifying task-specific moderators, offering implications for theory and evidence-informed clinical practice. The findings contribute to SDG 3: Good Health and Well-Being by advancing knowledge relevant to depression and mental health. They also have relevance to SDG 4: Quality Education by providing an evidence base that can inform mental health literacy, psychology education and critical evaluation of research evidence.

International Conference – Arts for Wellbeing: Creativity, Adaptability, Sustainability

The Wong Bing Lai Music and Performing Arts Unit successfully hosted its inaugural international conference, *Arts for Wellbeing: Creativity, Adaptability, Sustainability*, on 6 February 2026 at Lingnan@WestKowloon, M+, Hong Kong. Supported by the Tin Ka Ping Foundation, the conference brought together leading scholars, experts, and practitioners for in-depth interdisciplinary discussions on the theoretical, pedagogical, and practical dimensions of holistic wellbeing. The conference explored how creative practices, alongside medical and psychological support, can address urban stress and

foster mental health and well-being, community engagement and social cohesion through community music and performing arts.

The conference attracted approximately 120 scholars, artists, educators, and cultural practitioners from Hong Kong, the Greater Bay Area, and overseas, fostering arts education, interdisciplinary learning, international collaboration and knowledge exchange. Participating institutions included Free University of Berlin, Rhode Island School of Design, West Chester University of Pennsylvania, The Chinese University of Hong Kong, Hong Kong Metropolitan University, and Beijing Normal University-Hong Kong Baptist University (BNBU).

The conference contributed to SDG 3 through its focus on holistic well-being and mental health; SDG 4 through arts education and professional knowledge exchange; SDG 11 through discussions on the role of creative practices in fostering socially connected, inclusive urban communities; and SDG 17 through cross-institutional and international partnerships connecting academia, the arts and community practice.





Let's Talk: Co-Designing Empathic Retrieval-Augmented Generation (RAG) Chatbots for the Media Arts Classroom

Let's Talk integrates generative AI into design-thinking teaching to accelerate empathy training and AI literacy, supporting SDG 4: Quality Education through interdisciplinary learning and innovative, human-centred pedagogy. This media arts strand sits within the wider Let's Talk Teaching Development Grant, which also includes empathy training in design thinking for global sustainable development across the Global Development and Sustainability Programme's teaching.

Across six interdisciplinary courses, students co-design chatbots that simulate conversational partners, practise perspective-taking and active listening, and learn to verify outputs through citations and "NOT IN CORPUS" rules in safe, repeatable scenarios. The sequence moves from zero-shot roleplay and "sticky questions" to attachment-only, self-check, and two-bot relay workflows, culminating in a student-built RAG chatbot with controllable sources and parameters. Baseline and follow-up surveys, artefacts and reflections capture changes in communication skills and critical, responsible use of AI, producing widely transferable resources for other disciplines and educators.

The project develops empathy, digital literacy, curatorial skills and prompt-engineering proficiency while fostering equity, diversity and inclusion (EDI), cultural sensitivity and inclusive learning environments. These dimensions are relevant to SDG 10: Reduced Inequalities. Its interdisciplinary approach connects technology and design thinking with social and sustainability challenges, while adaptable chatbots and shared teaching resources support knowledge exchange and capacity building

among educators. These resource-sharing activities can also support SDG 17: Partnerships for the Goals through future educational collaboration.

Organising Units:

- Global Development and Sustainability Programme, Wu Jieh Yee School of Interdisciplinary Studies - Professor Grace Chou, Programme Director and Professor of Teaching
- Wong Bing Lai Music and Performing Arts Unit, Wu Jieh Yee School of Interdisciplinary Studies - Dr Enrico Bertelli, Associate Professor of Practice

Advancing Quality Education through AI Innovation and Global University Partnerships

Lingnan University is advancing SDG 4: Quality Education and SDG 17: Partnerships for the Goals through international collaboration, AI-enabled educational innovation and joint talent development.

On 6–7 November 2026, Prof S. Joe Qin, President and Wai Kee Kau Chair Professor of Data Science, participated in the Beijing Forum and a thematic forum on digital intelligence education. These engagements strengthened dialogue on higher education transformation and expanded opportunities for collaboration between Beijing and Hong Kong.

During the forum, Lingnan signed a Memorandum of Understanding with the Digital Intelligence International Development Education Alliance (DI-IDEA), initiated by Peking University and comprising more than 30 higher education institutions worldwide. As a founding member, Lingnan contributes to this international knowledge-sharing network exploring innovation in higher education. The partners will explore establishing the “Lingnan-DI-IDEA Joint Centre cum DI-IDEA Asia Pacific Centre” and its potential location in Hong Kong’s Northern Metropolis University Town. Proposed collaboration will focus on industry–academia–research partnerships, educational technology development and the practical application of research outcomes.

President Qin also presented perspectives on AI’s impact on higher education at a university presidents’ roundtable, exchanging insights with local and international leaders on educational value and institutional transformation.

Building on their longstanding partnership, Lingnan and Peking University’s Yuanpei College have jointly organised the Lingnan-Yuanpei STEM Summer Academy for three consecutive years since 2024. They are further developing cooperation in STEM education, innovation and entrepreneurship education, and collaborative talent development.

The delegation also visited Beijing Normal University to discuss AI for Education, joint education programmes and cooperation through the Beijing-Hong Kong University Alliance.

Through its “Liberal Arts + Technology” and “AI +” initiatives, Lingnan connects educational innovation with cross-institutional partnerships, knowledge exchange and capacity building, supporting quality education and strengthening collaboration across Hong Kong, the Chinese Mainland and the wider international higher education community.





Lingnan University 2025/2026 SDG Report
SDG 5 – GENDER EQUALITY



476
Research Outputs

105
Undergraduate Courses

10.43
Field Weighted Citation Impact

60%
Female Academic Staff

Lingnan University advances **SDG 5: Gender Equality** through inclusive education, interdisciplinary research and community partnerships. By examining gender disparities in housing, health and well-being, Lingnan scholars contribute evidence to inform policy and practice. Through collaboration with NGOs and public engagement, the University supports women's empowerment and helps address barriers to a more equitable and gender-inclusive society.

Historical Agricultural Systems, Gender Equality and Strong Institutions

Led by Professor Plamen Akaliyski, Assistant Professor (Presidential Early Career Scholar) in Lingnan University's Department of Sociology and Social Policy, the study "The Main Global Cultural Differences Today Evolved from Environment-Related Historical Agricultural Patterns," published in *World Development*, examines how historical forms of agriculture have contributed to enduring differences in contemporary societies. The research shows that agricultural systems prevalent more than a century ago are strongly associated with present-day individualism–collectivism, including important societal outcomes directly relevant to SDG 5: Gender Equality and SDG 16: Peace, Justice and Strong Institutions. The study's objective measure explicitly incorporates gender inequality and rule of law alongside other societal indicators, providing insights into gender equity, institutional quality and the protection of rights.

For SDG 5, the research highlights how different agricultural systems historically created different economic and social roles for women. In dairy-farming societies such as those in Northern Europe and parts of North America, Australia and New Zealand, women often played economically valuable roles in milk processing and trade, providing opportunities for greater economic independence and social status. The paper connects these historical patterns to comparatively greater gender equality at present, offering insights into the historical conditions associated with women's economic empowerment and equal economic opportunities. By contrast, some pastoral and shifting-cultivation systems were associated with practices and institutions that restricted women's rights and economic opportunities, highlighting historical barriers to gender equality and non-discrimination.

For SDG 16, the study demonstrates how modes of subsistence were linked to the historical development of political institutions. Agricultural systems differed in their capacity to create and sustain centralized states, effective law enforcement, property rights, and protection from violence. The research therefore contributes to understanding why rule of law and inclusive institutions developed differently across societies and why these differences remain visible today. These findings are relevant to effective institutions, rights protection and violence prevention.

By identifying deep historical roots of contemporary gender equality and institutional quality, the study provides a comparative perspective on the long-term conditions that support more equal, inclusive, and rights-protecting societies. It strengthens the evidence base for understanding women's empowerment, the rule of law and inclusive institutional development, connecting historical research with contemporary sustainable development priorities.

Lingnan University 2025/2026 SDG Report
SDG 6 – CLEAN WATER AND SANITATION



21
Drinking Fountains on Campus

28
Undergraduate Courses

435,312
plastic bottles (500mL) saved

Lingnan University advances **SDG 6: Clean Water and Sanitation** through interdisciplinary research, innovation and community engagement that support water conservation, pollution prevention and sustainable water management. Working with partners, the University explores solutions to improve water quality, address water scarcity and promote equitable access to safe water and sanitation. These efforts connect environmental protection with human well-being and help strengthen the resilience of vulnerable communities.

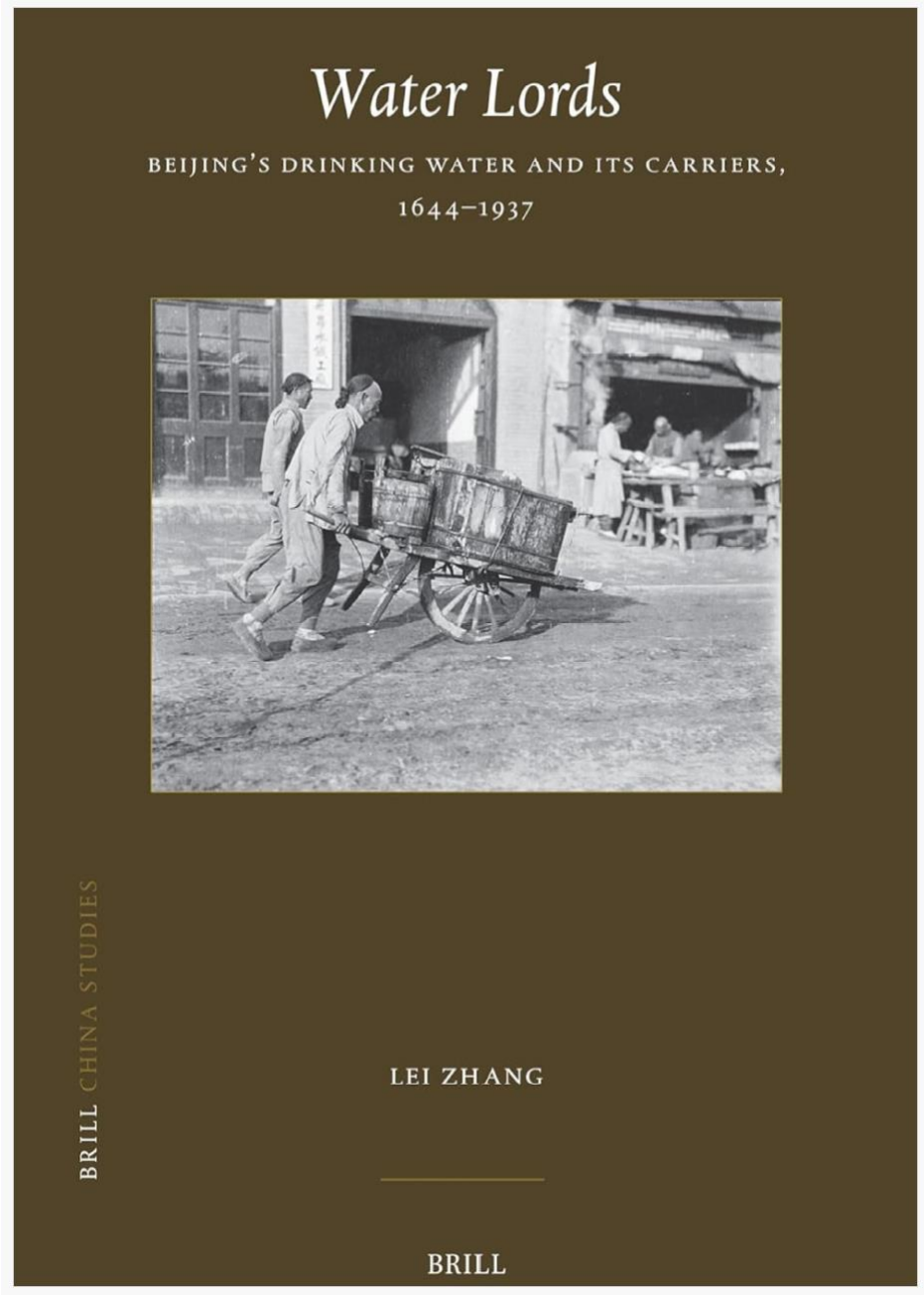
Water Lords: Beijing's Drinking Water and Its Carriers, 1644–1937

In *Water Lords: Beijing's Drinking Water and Its Carriers, 1644–1937* (Brill, 2025), Professor Lei Zhang, Associate Professor in Lingnan University's Department of History, examines the historical organisation of Beijing's drinking water supply, offering insights relevant to SDG 6: Clean Water and Sanitation, particularly access to drinking water and water management.

Modern Beijing relied primarily on hand-dug wells as its principal source of drinking water. The predominance of well water required an organised distribution network: professional water carriers emerged early in the city's history to deliver water from neighbourhood wells to households, operating within a sophisticated delivery system that took shape under the Qing dynasty (1644–1912). This system highlights the importance of water distribution infrastructure and household access to drinking water.

The book tells the untold story of these “water lords” and how they sustained their influence from the late Qing through the Republican era, especially between 1900 and 1937, when Beijing underwent rapid modernisation and urbanisation. It argues that water carriers’ capacity to accommodate and negotiate the tensions between modernisation pressures and enduring traditions played a decisive role in shaping the city’s transition to modern drinking water.

By examining the interaction between water carriers, established distribution practices and urban transformation, the book provides a historical perspective on urban water provision, water governance and the role of local service providers. It deepens understanding of how drinking water systems evolve in response to social and economic change, contributing to discussions relevant to SDG 6.



Lingnan University 2025/2026 SDG Report
SDG 7 – AFFORDABLE AND CLEAN ENERGY



318
Solar Panels

190,000 kWh of renewable energy generated annually

26
Undergraduate Courses

563
Research Outputs

Lingnan University advances **SDG 7: Affordable and Clean Energy** through interdisciplinary research, education and collaborative partnerships. Bringing together expertise in battery technology, renewable energy, energy efficiency and circular economy practices with policy and social perspectives, the University supports the clean energy transition. These efforts equip students and researchers to contribute to a more sustainable, accessible and resilient energy future.

Affordable Seawater-Based Flow Batteries for Sustainable Energy Storage

Research by Professor Chen Ze, Assistant Professor (Presidential Early Career Scholar) at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, explores how seawater-based flow batteries can support SDG 7: Affordable and Clean Energy through cost-effective energy storage and renewable energy integration.

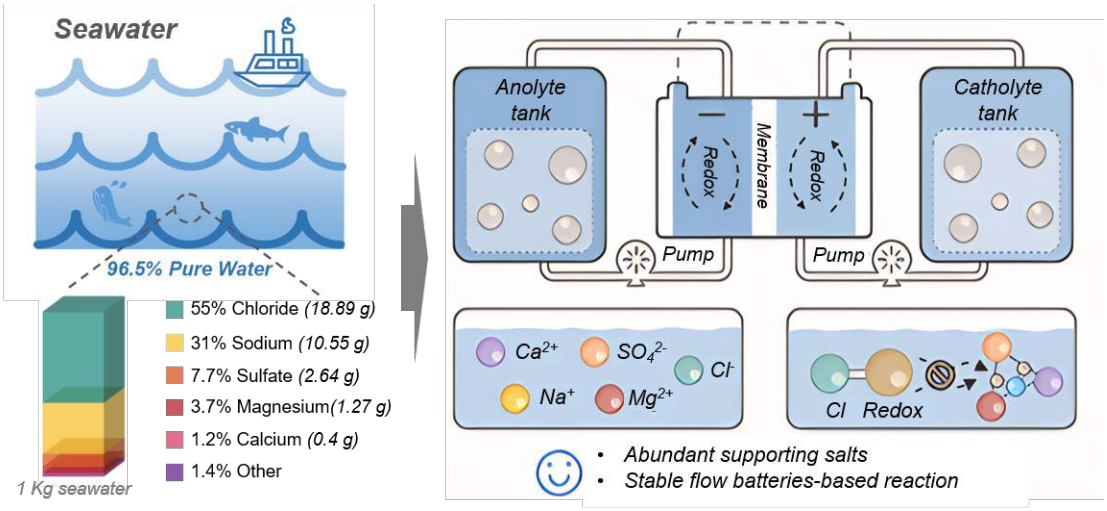
The global transition to renewable energy requires safe, affordable, and reliable ways to store electricity. Flow batteries are a promising solution. Unlike conventional batteries, they store energy in liquids that can be pumped through a battery system to store and release electricity. This makes them particularly suitable for large-scale energy storage, helping to provide a steady electricity supply even when the sun is not shining or the wind is not blowing. They therefore offer opportunities to enhance electricity supply reliability and the integration of solar and wind power. However, existing flow batteries often rely on expensive chemicals and purified water, increasing their cost.

To address these challenges, our research team developed an innovative flow battery using natural seawater as the main ingredient of its electrolyte. Instead of relying entirely on specially prepared chemical solutions, our approach takes advantage of the

naturally occurring salts and minerals in seawater. These components help maintain stable chemical reactions, allowing the battery to store and release electricity more efficiently and reliably. We also improved the battery's internal membrane to reduce unwanted chemical mixing and extend its lifetime, supporting durable and resource-efficient energy storage.

Using seawater collected from the Hong Kong coast, our battery successfully completed more than 3,500 charging and discharging cycles without significant capacity loss, achieving over 99% charge efficiency. Under higher-capacity conditions, the battery achieved 103.58 Ah per litre and maintained stable performance over 150 cycles. Further testing with seawater collected from California, England, and eastern China demonstrated consistent performance. Our preliminary economic analysis also estimated an electrolyte material cost of approximately US$42.46 per kWh of storage capacity, highlighting its potential cost advantages and contribution to energy storage affordability.

Supporting the United Nations Sustainable Development Goal 7, this research demonstrates how abundant natural resources can contribute to cleaner and more affordable energy technologies. By reducing reliance on purified water and potentially lowering energy storage costs, seawater-based flow batteries could support the wider adoption of renewable energy, strengthen sustainable energy infrastructure, and contribute to a more sustainable energy future.



Advisory Services for Hong Kong Power Sector's Participation in the Southern China Carbon Capture, Utilisation and Storage (CCUS) System

Undertaken by Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, this advisory project examines how Hong Kong's power sector could participate in regional carbon capture, utilisation and storage (CCUS) infrastructure in Southern China. Scheduled from August 2025 to February 2026, the project focuses on assessing potential CO_2 storage sites in Guangdong, comparing pipeline and shipping options, and developing commercial and cost models.

It aims to provide a strategic participation roadmap aligned with CLP's decarbonisation strategy and regional CCUS development timelines.

SDG 7 – Affordable and Clean Energy

The project supports power sector decarbonisation by exploring how Hong Kong's electricity generation sector could access regional CO_2 transport and storage infrastructure. Its assessment of technical feasibility and costs aims to inform commercially viable approaches to reducing power-sector emissions, contributing to the transition towards lower-carbon electricity generation.

SDG 9 – Industry, Innovation and Infrastructure

The project supports the planning of cross-border low-carbon infrastructure, including CO_2 pipelines, shipping routes and geological storage facilities. By evaluating infrastructure requirements, storage capacity and commercial arrangements, it aims to inform the development of regional CCUS networks and strengthen the evidence base for sustainable industrial infrastructure investment.

SDG 13 – Climate Action

The project explores potential pathways for large-scale carbon emissions reduction through Hong Kong's participation in regional CCUS hubs. Its technical, regulatory and economic assessments will inform a strategic roadmap for participation between 2025 and 2040, supporting evidence-based climate mitigation planning and alignment with regional decarbonisation efforts.

SDG 17 – Partnerships for the Goals

The project supports cross-border collaboration among CLP Power Hong Kong Limited, Guangdong CCUS stakeholders, China Southern Power Grid, academic and geological experts, and relevant government and regulatory agencies. By examining shared infrastructure, business arrangements and regulatory requirements, it aims to facilitate coordination between Hong Kong and Guangdong in pursuit of shared climate objectives and regional low-carbon development.

Monitoring Greenhouse Gas Emission Point Sources From China Space Station

With Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, participating in the research collaboration, this project aims to develop a greenhouse gas monitoring system using observations from the China Space Station and related satellite platforms. Running from August 2025 to August 2028, it will combine space-based observations, data analytics, ground-truth verification and blockchain technology to identify and quantify emission point sources and provide secure, transparent and traceable emissions data.

SDG 7 – Affordable and Clean Energy

The project aims to provide reliable greenhouse gas emissions data that can inform clean energy transition strategies. By identifying emission sources and analysing trends, it could help policymakers and industry stakeholders assess emissions associated with energy use and prioritise opportunities for lower-carbon energy systems.

SDG 9 – Industry, Innovation and Infrastructure

The project advances space-based environmental monitoring and secure digital infrastructure by integrating satellite observations, data analytics and blockchain technology. Its planned data-processing framework and geospatial visualisation platform will support the development of innovative tools for emissions monitoring, while blockchain integration aims to strengthen data integrity, transparency and traceability.

SDG 13 – Climate Action

The project aims to strengthen the capacity to identify, quantify and track greenhouse gas emissions, supporting evidence-based climate mitigation and carbon reduction strategies. By combining space-based observations with ground-truth verification, it seeks to provide validated emissions data for regulatory monitoring and compliance assessment, with potential future applications in carbon credit verification.

SDG 17 – Partnerships for the Goals

The project brings together expertise from Lingnan University, the Hong Kong University of Science and Technology, Hong Kong Baptist University, and the Technology and Engineering Center for Space Utilization of the Chinese Academy of Sciences, with support through the Innovation and Technology Commission's Innovation and Technology Support Programme. This cross-institutional collaboration combines capabilities in space technology, environmental monitoring and digital systems to advance climate technology development and support shared sustainable development goals.

Bio-Inspired, Scalable, and Tri-Mode Stimuli-Chromic Composite for Smart Window Multifunctionality

Professor KE Yujie, Assistant Professor, Wu Jieh Yee School of Interdisciplinary Studies contributed to this collaborative research on multifunctional smart windows, supporting SDG 7: Affordable and Clean Energy, particularly through building energy efficiency and energy-saving materials.

Smart windows offer a promising approach to saving building energy and reducing carbon emissions by regulating light transmission. As the technology develops, demand is increasing for multifunctional windows that provide not only energy savings but also privacy control and aesthetic flexibility. However, designing and fabricating materials that combine these functions remains challenging.

To address this challenge, the research presents a scalable method for producing a composite film with three modes of light regulation: thermochromism, mechanochromism, and hydro-/solvatochromism. These modes respond to changes in temperature, mechanical strain, and exposure to water or solvents, respectively. The film combines a bio-inspired, hierarchically structured surface with a functional elastomer base, enabling multiple optical responses within a single material system.

Through combined experiments and simulations, the researchers reveal the mechanisms underlying these responses: strain-induced deformation of surface structures, wettability-controlled refractive-index matching, and thermally responsive nanostructural resonances. These findings provide a scientific basis for designing adaptive light-regulating materials.

Alongside good energy-saving performance, the method offers several advantages. Energy-saving and privacy functions can be controlled independently, while the additional hydro-/solvatochromic mode provides another means of regulating privacy under extreme circumstances. Designable patterns and colours also allow the material to meet diverse aesthetic requirements.

By combining energy efficiency, privacy control, multifunctionality and scalable fabrication, this research demonstrates the potential of advanced materials to support more adaptable building technologies. It may inspire future developments in multifunctional smart windows and methods for controlling light across space and time, contributing to energy-efficient buildings and lower-carbon built environments.

Bio-Inspired Multifunctional Smart Windows: Surface Wrinkle-Crack for Dynamic Optical and Wettability Modulations

Professor KE Yujie, Assistant Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, contributed to this collaborative research on bio-inspired multifunctional smart windows. The study supports SDG 7: Affordable and Clean Energy through its focus on building energy efficiency, adaptive optical materials and energy-saving technologies.

Smart windows offer a promising approach to improving building energy efficiency. Bio-inspired designs aim to combine independent energy-saving and on-demand privacy functions, although further improvements in material performance are needed. This research presents an improved composite comprising tungsten-doped vanadium dioxide (W-VO_2), silica (SiO_2) nanospheres and polydimethylsiloxane (PDMS) elastomers. The composite can simultaneously deliver privacy and energy-saving modes at a relatively low temperature of approximately 45\,^\circ\mathrm{C}.

The study investigates how surface morphology influences optical regulation and wettability, providing insights into silica-based wrinkle formation. Diffraction patterns demonstrate that surface wrinkles are more effective than cracks in achieving privacy

control. Increasing surface wrinkles and cracks also changes the material from hydrophilic to hydrophobic, with the water contact angle increasing from $19°$to $115°$. This finding suggests potential for self-cleaning functionality, adding another useful feature to multifunctional smart windows.

The research further demonstrates that silica nanospheres are essential to wrinkle formation. Small gaps between neighbouring spheres promote localised strain and increase the overall Young's modulus, resulting in larger wrinkle amplitudes. These findings strengthen understanding of how material composition and surface structures can be designed to achieve desired optical and surface properties.

By combining an improved fabrication method with a deeper understanding of surface behaviour, the study provides a foundation for future developments in mechanochromic and thermochromic materials, multifunctional smart windows and bio-inspired optical design. Its integration of energy-saving performance, on-demand privacy and potential self-cleaning functionality could support more adaptable, energy-efficient buildings, contributing to a more sustainable built environment.

Highly Solar-Modulated and Robust PNIPAM/HEMC Smart Windows

Professor KE Yujie, Assistant Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, contributed to this collaborative research on energy-efficient smart windows. The study supports SDG 7: Affordable and Clean Energy by advancing building energy efficiency, thermal regulation and energy-saving materials.

Energy-efficient windows are considered one of the most promising strategies for reducing building energy consumption. An ideal thermochromic smart window should combine high stability, high luminous transmittance and outstanding mechanical properties. However, existing technologies face challenges in achieving these requirements simultaneously.

To address these limitations, the researchers synthesised composite hydrogels containing hydroxyethyl methyl cellulose (HEMC) and thermoresponsive poly(N-isopropylacrylamide) (PNIPAM) for application in smart windows. These materials respond to temperature changes, enabling adaptive control of solar transmission and supporting indoor temperature regulation.

The composite hydrogels exhibited excellent solar modulation of 74.97%, luminous transmittance of 84.98%, and strong mechanical performance, with a reversible compression ratio of up to 74%. They also offered faster response times and superior thermal stability compared with traditional hydrogels. Importantly, the materials retained excellent optical properties after 80 heating–cooling cycles, demonstrating their durability under repeated temperature changes.

The PNIPAM/HEMC smart windows demonstrated superior indoor temperature control. Compared with normal glass, calculations for a typical office building fitted

with these windows indicated annual energy reductions of 19.2, 28.2, 74.8 and $49.7\ \mathrm{kWh\ m^{-2}}$ in Beijing, Hong Kong, Bangkok and Kuala Lumpur, respectively. These findings highlight the potential for building energy savings across different climatic conditions.

By combining high optical performance, mechanical robustness and thermal stability, this study presents a reliable strategy for developing thermochromic smart windows. The research could support energy-efficient building design and reduced energy demand for indoor temperature control, contributing to more sustainable buildings and the broader objectives of SDG 7.

Scalable Hydrogel Smart Windows with Moisture Retention and Low Emissivity for Sustainable Buildings

Professor KE Yujie, Assistant Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, contributed to this collaborative research on scalable hydrogel smart windows for sustainable buildings. The study supports SDG 7: Affordable and Clean Energy through advances in building energy efficiency, adaptive solar regulation and reduced heating and cooling demand.

Thermochromic hydrogels show promise for smart windows but face challenges including high thermal emissivity and rapid water loss. This research presents a scalable hydrogel-based smart window that simultaneously addresses moisture retention, low long-wave infrared emissivity and large-area fabrication.

The hydrogel is synthesised by copolymerising the moisturising agent sodium pyrrolidone carboxylate (PCA–Na) with N-isopropylacrylamide (PNIPAM). This forms a stable structure that lowers the phase transition temperature to 25.7\,^\circ\mathrm{C} and improves water retention by 12% compared with pure PNIPAM hydrogels. Integrating the hydrogel with an indium tin oxide (ITO) layer further reduces long-wave infrared emissivity, supporting thermal management and energy-saving glazing.

The researchers produced a large-area demonstration window measuring $40 \times 45\ \mathrm{cm}$, achieving visible transmittance of 69.3%, solar modulation of 60.3%, and low long-wave infrared emissivity of 0.32. Demonstration testing showed an indoor temperature reduction of up to 9.0\,^\circ\mathrm{C} under daytime illumination compared with a glass-based window.

EnergyPlus simulations further indicated annual heating, ventilation and air conditioning (HVAC) energy savings of 44.9%, 46.1% and 10.1% in Bangkok, Phoenix and Changsha, respectively, outperforming conventional glazing systems. These results highlight the potential for climate-responsive building technologies to reduce energy consumption across different locations.

The integrated design maintained excellent optical performance over 100 cycles,

demonstrating durability alongside improved moisture retention. By combining scalable fabrication, solar modulation and low emissivity, the study provides a pathway towards practical energy-efficient building applications, contributing to sustainable buildings and the energy-efficiency objectives of SDG 7.

Integrated Multiband Smart Windows From UV to LWIR Based on Molecularly Engineered Thermochromic Hydrogels

Professor KE Yujie, Assistant Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, contributed to this collaborative research on integrated multiband smart windows. The study supports SDG 7: Affordable and Clean Energy through advances in building energy efficiency, adaptive solar regulation and reduced heating and cooling demand.

Smart windows offer energy-saving potential for buildings, but challenges remain in achieving multiband design across ultraviolet, visible, near-infrared and long-wave infrared wavelengths. This research presents a smart window integrating a thermochromic poly(EEEA-co-NIPAM) (PEN) hydrogel with an anti-UV layer and an indium tin oxide layer. The integrated design enables dynamic visible and near-infrared solar modulation alongside UV shielding and low long-wave infrared emissivity, supporting spectrally selective, energy-efficient glazing.

Combined experimental and theoretical analyses reveal that the 2-(2-ethoxyethoxy) ethyl acrylate (EEEA) comonomer strengthens the polymer network and forms favourable hydrogen-bonding interactions with N-isopropylacrylamide (NIPAM). These interactions promote rapid dehydration-driven chain collapse above a reduced lower critical solution temperature, accelerating the optical response during heating.

The produced window achieves solar modulation of 42.7%, nearly complete UV shielding with UV transmittance of 0.1%, and low indoor-facing long-wave infrared emissivity of 0.31. It maintains stable performance after 100 hours of UV exposure and 100 thermal cycles, demonstrating durability and reliable optical performance.

Outdoor tests demonstrate a cooling effect of 7.7\,^\circ\mathrm{C} compared with ordinary glass. EnergyPlus simulations across Singapore, San Francisco and Brisbane indicate building heating and cooling energy savings of up to 62.6%, highlighting the potential to reduce energy demand in different climatic settings.

By combining multiband light regulation with molecularly engineered thermochromic hydrogels, this research provides an effective strategy and deeper scientific understanding for developing advanced smart windows. It offers a promising pathway towards sustainable building technologies and energy-efficient building envelopes, contributing to the energy-efficiency objectives of SDG 7.

Lingnan University 2025/2026 SDG Report
SDG 8 – DECENT WORK AND ECONOMIC GROWTH



27th in the world (THE Sustainability Impact Ratings 2026)

1,046
Research Outputs

No. 1 in Hong Kong (THE Sustainability Impact Ratings 2026)

1% salary gap between female and male employees

Lingnan University advances **SDG 8: Decent Work and Economic Growth** through interdisciplinary research and initiatives that promote productive employment, fair working conditions and inclusive economic development. By examining contemporary workplace challenges, Lingnan scholars generate evidence to inform employment practices and policy discussions. These efforts support better work quality, equitable opportunities and sustainable livelihoods, contributing to an economy in which more people can participate and prosper.

Multinationality and Strategic Dynamic Capabilities During Sustainable Development Goals Adoption: Evidence From a Natural Experiment

Led by Professor Liane W.Y. Lee, Associate Professor of Teaching in the Department of Management, this research examines how multinational enterprises (MNEs) implement initiatives to adopt the Sustainable Development Goals (SDGs). The study is relevant to SDG 9: Industry, Innovation and Infrastructure, with additional connections to SDG 8: Decent Work and Economic Growth and SDG 12: Responsible Consumption and Production, through its focus on innovation, strategic adaptability and sustainable corporate practices.

The research investigates how two types of multinationality—degree of internationalisation and international diversification—affect MNEs' application of strategic dynamic capabilities. It enhances dynamic capabilities theory by incorporating institutional change, and examining the contextual impact of the global SDG initiative on corporate strategies.

Using a difference-in-differences approach, the study compares two groups across the three years before and after the launch of the SDGs in 2015. This natural experiment provides a basis for analysing institutional changes associated with SDG implementation.

The findings reveal that MNEs' degree of internationalisation is positively associated with three key strategic capabilities: ambidexterity, innovation and reconfiguration. However, international diversification has the opposite effect, highlighting the distinct implications of these two dimensions of multinationality.

The study suggests that adopting the SDGs can benefit MNEs by enabling them to leverage non-location-bound firm-specific advantages across geographies. However, diverse local challenges in emerging markets may increase transaction costs and impede the internal integration of dynamic capabilities.

These findings contribute to SDG 9 by deepening understanding of organisational innovation and adaptability. They also offer insights relevant to SDG 8, particularly the strategic capabilities that may support innovation-driven productivity and sustainable business development. The connection to SDG 12 lies in examining how multinational enterprises respond to the SDGs and integrate sustainability priorities into corporate initiatives. Together, these perspectives strengthen understanding of how enterprises navigate institutional change while aligning business strategies with sustainable development.

Raising concerns about platform-mediated care and domestic care workers: Advancing decent work under SDG 8

Echoing the International Labour Organization's global agenda of formalisation of paid domestic work, Professor AU YEUNG Tat Chor, Associate Professor in the Department of Sociology and Social Policy, has conducted a research project exploring the job quality and employment relations of care workers involved in platform-mediated temporary employment agencies. The research relates to SDG 8: Decent Work and Economic Growth, particularly the protection of labour rights and the promotion of safe and secure working environments for all workers.

The data revealed that care platforms, as digitised intermediaries, deprived care workers of labour rights by framing them as independent contractors while exercising employers' power over workers. The issues of informalisation, false self-employment and labour protection coverage appeared in the long-term care sector and were embedded in the marketised care model in Hong Kong. The research findings suggested that the logic of the platform economy, based on a fast and on-demand workforce, may undermine the quality-of-care work, including labour insurance coverage and protection against uncompensated risks.

Policy suggestions have been made to promote stronger regulation of care platforms, reclassification of workers' employment status, and better human resource planning

in the care sector, supporting decent work, formalisation of employment and stronger labour protections in line with SDG 8.

Understanding low-paid older workers and extended working lives: Promoting decent work and inclusive employment

-mid workforce ageing and pension reforms, the Hong Kong government has introduced policies to support mature-age employment. Professor AU YEUNG Tat Chor, Associate Professor in the Department of Sociology and Social Policy, has launched a study exploring older workers' lived experiences of extended working lives. The research aligns with SDG 8: Decent Work and Economic Growth, focusing on productive employment, decent work for all and the protection of labour rights.

The research examined low-paid workers aged over 65 and their work and welfare experiences, including their reasons for continued employment, perceptions of pension incomes, and expectations of future retirement. The findings suggest that some low-paid older workers accepted their weaker bargaining power due to their declining bodily functions and productivity, placing them at a disadvantage in the labour market. Many interviewees experienced multi-dimensional precarity, including income, job, health and cost-of-living precarity, leading to an uncertain future. These findings highlight challenges to decent work, income security and inclusive employment for older workers.

Older workers' policy preferences could inform better government policymaking. First, they expected more flexible working-time arrangements to support their later career development. Second, interviewees raised concerns about means-testing and eligibility issues concerning old-age welfare benefits. Without an insurance-based public pension, older workers may lose income protection because the welfare system excludes claimants with regular full-time incomes.

To achieve more and better mature-age employment, this research project argues that the government needs to review the current pension system and minimum wage arrangements that contribute to income inadequacy and precarity for older workers. This research also emphasises age-inclusive workplace diversity by encouraging more firms to adopt flexible retirement practices and improve work design, supporting decent working conditions and sustainable employment opportunities for older workers in line with SDG 8.

Let's Talk: Co-Designing Empathic Retrieval-Augmented Generation (RAG) Chatbots for the Media Arts Classroom

Let's Talk integrates generative AI into design-thinking teaching to accelerate empathy training and AI literacy, supporting SDG 4: Quality Education through interdisciplinary learning and innovative, human-centred pedagogy. This media arts strand sits within the wider Let's Talk Teaching Development Grant, which also includes empathy training in

design thinking for global sustainable development across the Global Development and Sustainability Programme's teaching.

Across six interdisciplinary courses, students co-design chatbots that simulate conversational partners, practise perspective-taking and active listening, and learn to verify outputs through citations and "NOT IN CORPUS" rules in safe, repeatable scenarios. The sequence moves from zero-shot roleplay and "sticky questions" to attachment-only, self-check, and two-bot relay workflows, culminating in a student-built RAG chatbot with controllable sources and parameters. Baseline and follow-up surveys, artefacts and reflections capture changes in communication skills and critical, responsible use of AI, producing widely transferable resources for other disciplines and educators.

The project develops empathy, digital literacy, curatorial skills and prompt-engineering proficiency while fostering equity, diversity and inclusion (EDI), cultural sensitivity and inclusive learning environments. These dimensions are relevant to SDG 10: Reduced Inequalities. Its interdisciplinary approach connects technology and design thinking with social and sustainability challenges, while adaptable chatbots and shared teaching resources support knowledge exchange and capacity building among educators. These resource-sharing activities can also support SDG 17: Partnerships for the Goals through future educational collaboration.

Organising Units:

- Global Development and Sustainability Programme, Wu Jieh Yee School of Interdisciplinary Studies - Professor Grace Chou, Programme Director and Professor of Teaching
- Wong Bing Lai Music and Performing Arts Unit, Wu Jieh Yee School of Interdisciplinary Studies - Dr Enrico Bertelli, Associate Professor of Practice

Lingnan University 2025/2026 SDG Report
SDG 9 – INDUSTRY, INNOVATION AND INFRASTRUCTURE



1,035
Research Outputs

2.35
Field Weighted Citation Impact

301
Research Projects and Grants

155
Undergraduate Courses

Lingnan University advances **SDG 9: Industry, Innovation and Infrastructure** through interdisciplinary research, responsible technological development and collaboration with industry and communities. Building on its strengths as a research-intensive liberal arts university in the digital era, Lingnan connects scientific and technological innovation with societal needs. Its work spans clean energy, advanced battery technologies, humanitarian design and responsible artificial intelligence, alongside research on enterprises' capabilities for sustainable development. Together, these initiatives support sustainable industrial practices, more resilient infrastructure and wider access to the benefits of innovation. The examples below illustrate how Lingnan combines research, practical solutions and partnerships to address local and global development challenges.

Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)

Research co-authored by Professor Xin Yao, Vice-President (Research and Innovation) at Lingnan University, and Changwu Huang explores how responsible artificial intelligence (RAI), environmental, social and governance (ESG), and the Sustainable Development Goals (SDGs) can reinforce one another. Their integration offers opportunities for organisations to enhance societal impact while increasing corporate value and fostering responsible innovation and sustainable business practices.

Through a systematic literature review, the study provides foundational knowledge of RAI, ESG and the SDGs, including their origins, core concepts and main implementation challenges. It then examines the connections and synergies among these frameworks, highlighting opportunities to align AI development, corporate responsibility and

sustainable development.

Based on this analysis, the researchers propose an integrated framework that synthesises the relationships among RAI, ESG and the SDGs. The framework demonstrates how these approaches can be mutually reinforcing when implemented cohesively, supporting organisations in incorporating sustainability and social responsibility into technological innovation and business decisions.

The paper also discusses implications for multiple stakeholders while acknowledging implementation challenges and tensions. It emphasises the importance of viewing RAI, ESG and the SDGs as interconnected frameworks rather than separate goals. Through this integrated perspective, organisations can align them collectively within strategic planning and operational practices, promoting more effective and sustainable outcomes while addressing complex societal challenges in the AI era.

The research contributes both theoretical understanding and practical guidance for holistic approaches that harness the transformative potential of AI while ensuring that its development and deployment serve broader sustainability and social responsibility objectives. It supports SDG 9 through responsible technological innovation, with additional relevance to SDG 12 through responsible corporate practices, SDG 16 through accountable governance, and SDG 17 through policy coherence and multi-stakeholder alignment.

C. Huang and X. Yao, "Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)," in *IEEE Computational Intelligence Magazine*, vol. 20, no. 4, pp. 20-41, Nov. 2025, doi: 10.1109/MCI.2025.3593452.

Multinationality and Strategic Dynamic Capabilities During Sustainable Development Goals Adoption: Evidence From a Natural Experiment

Led by Professor Liane W.Y. Lee, Associate Professor of Teaching in the Department of Management, this research examines how multinational enterprises (MNEs) implement initiatives to adopt the Sustainable Development Goals (SDGs). The study is relevant to SDG 9: Industry, Innovation and Infrastructure, with additional connections to SDG 8: Decent Work and Economic Growth and SDG 12: Responsible Consumption and Production, through its focus on innovation, strategic adaptability and sustainable corporate practices.

The research investigates how two types of multinationality—degree of internationalisation and international diversification—affect MNEs' application of strategic dynamic capabilities. It enhances dynamic capabilities theory by incorporating institutional change, examining the contextual impact of the global SDG initiative on corporate strategies.

Using a difference-in-differences approach, the study compares two groups across the

three years before and after the launch of the SDGs in 2015. This natural experiment provides a basis for analysing institutional changes associated with SDG implementation.

The findings reveal that MNEs' degree of internationalisation is positively associated with three key strategic capabilities: ambidexterity, innovation and reconfiguration. However, international diversification has the opposite effect, highlighting the distinct implications of these two dimensions of multinationality.

The study suggests that adopting the SDGs can benefit MNEs by enabling them to leverage non-location-bound firm-specific advantages across geographies. However, diverse local challenges in emerging markets may increase transaction costs and impede the internal integration of dynamic capabilities.

These findings contribute to SDG 9 by deepening understanding of organisational innovation and adaptability. They also offer insights relevant to SDG 8, particularly the strategic capabilities that may support innovation-driven productivity and sustainable business development. The connection to SDG 12 lies in examining how multinational enterprises respond to the SDGs and integrate sustainability priorities into corporate initiatives. Together, these perspectives strengthen understanding of how enterprises navigate institutional change while aligning business strategies with sustainable development.

Digital Innovation and Information Transparency for Sustainable Supply Chains

Led by Dr Tana Siqin, Research Assistant Professor, Office of the Faculty of Business, this research supports SDG 9: Industry, Innovation and Infrastructure by examining how digital technologies and information transparency can strengthen supply chain management. Her collaborative work connects technological innovation, digital transformation and responsible business practices, offering guidance for firms pursuing sustainable industrial development.

In a study published in *IEEE Transactions on Engineering Management*, Dr Siqin and her collaborator explore the integration of generative artificial intelligence and the Internet of Behaviors, which uses behavioural data to understand users' preferences and habits. Drawing on academic literature and business examples, the study proposes a framework for incorporating these technologies into supply chain management. It identifies opportunities to improve operational performance, examines implementation challenges and outlines priorities for future research. This work contributes to knowledge on industrial innovation and firms' technological capabilities.

A complementary study in the *Journal of Business Research* examines how information disclosure can strengthen environmental, social and governance (ESG) practices across supply chains. Through a systematic literature review, the authors develop the ETHICS framework, addressing misleading ESG claims, communication technology, visibility across supplier tiers, industry collaboration, adaptation of reporting frameworks and

integration of ESG metrics.

The framework helps managers consider what information to disclose, to whom and when. It offers a structured basis for improving supply chain transparency, ESG performance assessment and responsible supply chain governance. The study also identifies research priorities concerning the assessment and measurement of social information, disclosure timing and social responsibility within supply chain partnerships.

Together, these studies provide conceptual foundations and practical guidance for aligning digital transformation with sustainable supply chain governance. They contribute to SDG 9 by advancing research on industrial technologies and informing more sustainable ways of organising production and supply networks, with an emphasis on technology-enabled operational improvement, information transparency and sustainable industrial development.

FlexiBot: Autonomous Wireless Charging for Sustainable and Resilient EV Infrastructure

Led by Professor Tang Xiaopeng, Assistant Professor (Presidential Early Career Scholar), Division of Science, and developed with Wang Fangyu of Lingnan University, FlexiBot uses mobile robotics and wireless charging technology to address gaps in electric vehicle (EV) charging infrastructure. The project supports SDG 9: Industry, Innovation and Infrastructure through smart mobility, infrastructure innovation and resource-efficient charging.

As EVs become increasingly common, the shortage of charging facilities is becoming more pressing. In Hong Kong and many European countries, there is often fewer than one public charger for every eight EVs. In space- and resource-constrained cities, installing fixed chargers in older parking facilities requires costly excavation and cable laying. Existing chargers can also remain occupied long after vehicles are fully charged, particularly overnight. This mismatch between supply and demand creates a “last-mile” bottleneck for green transport.

FlexiBot is an autonomous wireless charging robot that navigates parking facilities, moves underneath a vehicle and automatically connects to its wireless charging module through a lifting platform. It supports compatible EVs from multiple brands. Its core innovation is to replace fixed charging arrangements with flexible, shared charging infrastructure: one robot serves multiple parking spaces, intelligently scheduling charging according to power demand and off-peak availability.

The project received the Jury Commendation Gold Medal at the Geneva International Exhibition of Inventions and a Gold Medal at the Silicon Valley International Invention Festival.

FlexiBot enables a single charging device to deliver utilisation approaching that of

three fixed chargers, substantially improving resource efficiency and reducing infrastructure costs. In older housing estates and locations where electrical capacity cannot be upgraded, its "zero-infrastructure" deployment approach minimises the need for additional fixed charging installations and transforms existing parking spaces into flexible charging areas.

Through intelligent charging schedules and off-peak energy management, the system helps reduce peak electricity demand and make better use of low-demand periods. By combining autonomous robotics with wireless charging, FlexiBot offers an innovative approach to sustainable and resilient infrastructure, supporting wider EV adoption, green transport and the transition towards low-carbon mobility.

Advisory Services for Hong Kong Power Sector's Participation in the Southern China Carbon Capture, Utilisation and Storage (CCUS) System

Undertaken by Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, this advisory project examines how Hong Kong's power sector could participate in regional carbon capture, utilisation and storage (CCUS) infrastructure in Southern China. Scheduled from August 2025 to February 2026, the project focuses on assessing potential CO_2 storage sites in Guangdong, comparing pipeline and shipping options, and developing commercial and cost models. It aims to provide a strategic participation roadmap aligned with CLP's decarbonisation strategy and regional CCUS development timelines.

SDG 7 – Affordable and Clean Energy

The project supports power sector decarbonisation by exploring how Hong Kong's electricity generation sector could access regional CO_2 transport and storage infrastructure. Its assessment of technical feasibility and costs aims to inform commercially viable approaches to reducing power-sector emissions, contributing to the transition towards lower-carbon electricity generation.

SDG 9 – Industry, Innovation and Infrastructure

The project supports the planning of cross-border low-carbon infrastructure, including CO_2 pipelines, shipping routes and geological storage facilities. By evaluating infrastructure requirements, storage capacity and commercial arrangements, it aims to inform the development of regional CCUS networks and strengthen the evidence base for sustainable industrial infrastructure investment.

SDG 13 – Climate Action

The project explores potential pathways for large-scale carbon emissions reduction through Hong Kong's participation in regional CCUS hubs. Its technical, regulatory and economic assessments will inform a strategic roadmap for participation between 2025 and 2040, supporting evidence-based climate mitigation planning and alignment with

regional decarbonisation efforts.

SDG 17 – Partnerships for the Goals

The project supports cross-border collaboration among CLP Power Hong Kong Limited, Guangdong CCUS stakeholders, China Southern Power Grid, academic and geological experts, and relevant government and regulatory agencies. By examining shared infrastructure, business arrangements and regulatory requirements, it aims to facilitate coordination between Hong Kong and Guangdong in pursuit of shared climate objectives and regional low-carbon development.

Monitoring Greenhouse Gas Emission Point Sources From China Space Station

With Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, participating in the research collaboration, this project aims to develop a greenhouse gas monitoring system using observations from the China Space Station and related satellite platforms. Running from August 2025 to August 2028, it will combine space-based observations, data analytics, ground-truth verification and blockchain technology to identify and quantify emission point sources and provide secure, transparent and traceable emissions data.

SDG 7 – Affordable and Clean Energy

The project aims to provide reliable greenhouse gas emissions data that can inform clean energy transition strategies. By identifying emission sources and analysing trends, it could help policymakers and industry stakeholders assess emissions associated with energy use and prioritise opportunities for lower-carbon energy systems.

SDG 9 – Industry, Innovation and Infrastructure

The project advances space-based environmental monitoring and secure digital infrastructure by integrating satellite observations, data analytics and blockchain technology. Its planned data-processing framework and geospatial visualisation platform will support the development of innovative tools for emissions monitoring, while blockchain integration aims to strengthen data integrity, transparency and traceability.

SDG 13 – Climate Action

The project aims to strengthen the capacity to identify, quantify and track greenhouse gas emissions, supporting evidence-based climate mitigation and carbon reduction strategies. By combining space-based observations with ground-truth verification, it seeks to provide validated emissions data for regulatory monitoring and compliance assessment, with potential future applications in carbon credit verification.

SDG 17 – Partnerships for the Goals

The project brings together expertise from Lingnan University, the Hong Kong University of Science and Technology, Hong Kong Baptist University, and the Technology and Engineering Center for Space Utilization of the Chinese Academy of Sciences, with support through the Innovation and Technology Commission's Innovation and Technology Support Programme. This cross-institutional collaboration combines capabilities in space technology, environmental monitoring and digital systems to advance climate technology development and support shared sustainable development goals.

Let's Talk: Co-Designing Empathic Retrieval-Augmented Generation (RAG) Chatbots for the Media Arts Classroom

Let's Talk integrates generative AI into design-thinking teaching to accelerate empathy training and AI literacy, supporting SDG 4: Quality Education through interdisciplinary learning and innovative, human-centred pedagogy. This media arts strand sits within the wider Let's Talk Teaching Development Grant, which also includes empathy training in design thinking for global sustainable development across the Global Development and Sustainability Programme's teaching.

Across six interdisciplinary courses, students co-design chatbots that simulate conversational partners, practise perspective-taking and active listening, and learn to verify outputs through citations and "NOT IN CORPUS" rules in safe, repeatable scenarios. The sequence moves from zero-shot roleplay and "sticky questions" to attachment-only, self-check, and two-bot relay workflows, culminating in a student-built RAG chatbot with controllable sources and parameters. Baseline and follow-up surveys, artefacts and reflections capture changes in communication skills and critical, responsible use of AI, producing widely transferable resources for other disciplines and educators.

The project develops empathy, digital literacy, curatorial skills and prompt-engineering proficiency while fostering equity, diversity and inclusion (EDI), cultural sensitivity and inclusive learning environments. These dimensions are relevant to SDG 10: Reduced Inequalities. Its interdisciplinary approach connects technology and design thinking with social and sustainability challenges, while adaptable chatbots and shared teaching resources support knowledge exchange and capacity building among educators. These resource-sharing activities can also support SDG 17: Partnerships for the Goals through future educational collaboration.

Organising Units:

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- Wong Bing Lai Music and Performing Arts Unit, Wu Jieh Yee School of Interdisciplinary Studies - Dr Enrico Bertelli, Associate Professor of Practice

Lingnan University 2025/2026 SDG Report
SDG 10 – REDUCED INEQUALITIES



11th in the world (THE Sustainability Impact Ratings 2026)

No. 1 in Hong Kong (THE Sustainability Impact Ratings 2026)

73%
First-Generation Students

132
Undergraduate Courses

Lingnan University advances **SDG 10: Reduced Inequalities** through interdisciplinary research into the social, psychological and structural drivers of inequality. Grounded in its liberal arts tradition, the University examines how disparities shape people's opportunities, perceptions and well-being. The following studies offer evidence-based insights to inform policies and practices that foster social inclusion, equal opportunities and shared prosperity.

Addressing Caregiving Burdens and Inequalities in Hong Kong and East Asia

Research projects, publications and public seminars were delivered to examine caregiving burdens and care-related inequalities across Hong Kong and East Asian welfare states. These activities support SDG 10: Reduced Inequalities by promoting equitable access to support, social inclusion and stronger social protection for disadvantaged carers.

In 2026, the Asia-Pacific Institute of Ageing Studies (APIAS) concluded a research project funded by the Research Grants Council of Hong Kong. Study findings reveal that many carers experience substantial caregiving burdens that adversely affect their physical and mental well-being. Additional expenses for transport, specialised therapeutic diets and healthcare supplies push many into financial hardship. Accordingly, the research team urges the government to expand financial support for low-income carers and introduce formal care management arrangements to respond

to their diverse needs, helping to reduce socioeconomic disparities and barriers to accessing services.

The *Research Report on Challenges Faced by Multiple Role Carers in Hong Kong* was released in March 2026. Copies were circulated to Legislative Council members, government advisory committees on social welfare and ageing, and senior management of non-governmental organisations. A public research seminar on 3 March 2026 brought together the research team, carer representatives and frontline social workers. Key findings and policy recommendations also received mainstream media coverage, strengthening public awareness and carers' representation in policy discussions.

APIAS additionally published the *Carer's Guide 2026* to help informal carers navigate welfare services and alleviate their caregiving load. The guide explains care arrangements and provides information on financial assistance, emotional support, transport, equipment rental, home adaptations and training. It was disseminated through elderly centres, day care centres and District Council members to vulnerable families, supporting more equitable access to information and care resources.

The research team also produced the edited volume *Carers' Policies in East Asia: Challenges, Responses and Well-being*. Covering Mainland China, Japan, South Korea, Singapore, Taiwan and Hong Kong, it calls for expanded financial assistance, carer leave and case management to address caregiving inequalities. Together, these activities provide evidence and practical guidance for inclusive welfare policies and reduced financial and practical burdens among disadvantaged carers.

Spatial Optimization and Evaluation of Community Living Rooms

Optimizing Shared Care Infrastructure to Alleviate Inadequate Housing and Subdivided Unit Precarity

Led by Prof. HUANG Yaoxuan Virginia, Assistant Professor of Teaching, School of Graduate Studies, this research supports SDG 11: Sustainable Cities and Communities and SDG 10: Reduced Inequalities through equitable access to communal facilities, inclusive urban planning and shared care infrastructure.

Subdivided units (SDUs) represent one of Hong Kong's most severe manifestations of housing precarity, leaving low-income families trapped in cramped, poorly ventilated and socially isolated spaces. To alleviate these spatial limitations, decentralized communal facilities, such as government-backed "Community Living Rooms," have emerged as a crucial social intervention. Research titled "Beyond Four Walls: Community Living Rooms and Neighbourhood Filtering in Hong Kong's Subdivided Housing Communities" provides a data-driven evaluation of how these shared spaces mitigate severe indoor deprivation and support social inclusion.

The study first establishes the empirical effectiveness of community living rooms, demonstrating that grassroots residents genuinely value these facilities, a strong endorsement reflected in measurable housing market price premiums for units with convenient access. Building upon this validated demand, the research then deploys spatial analytics and socio-spatial optimization models to determine the most cost-effective and equitable spatial allocation for future facilities. This provides a blueprint for delivering the minimum necessary intervention required to achieve maximum accessibility, social support and service coverage across high-density SDU clusters.

By demonstrating how communal facilities serve as vital "care infrastructure," this research offers policymakers and non-governmental organizations an evidence-based toolkit to maximize the impact of public welfare investments. Lingnan University supports SDG 11 and SDG 10 by delivering data-backed spatial solutions that transform informal housing challenges into actionable, community-oriented urban welfare strategies, advancing inclusive neighbourhoods, equitable resource allocation and support for underserved communities.

Lingnan University 2024/2025 SDG Report
SDG 11 – SUSTAINABLE CITIES AND COMMUNITIES



66th in the world
(THE Sustainability Impact Ratings 2026)

2nd in Hong Kong
(THE Sustainability Impact Ratings 2026)

711
Research Outputs

164
Undergraduate Courses

Lingnan University advances **SDG 11: Sustainable Cities and Communities** through interdisciplinary education, applied research and community partnerships. Working with government, industry and NGOs, the University addresses urban challenges in housing, ageing, energy efficiency and cultural preservation. Its initiatives connect smart city innovation with age-friendly environments, sustainable arts and heritage conservation to support inclusive, safe, resilient and sustainable communities. Through community-centred solutions and opportunities for students to engage with urban issues, Lingnan contributes to more liveable and equitable cities.

Enhancing Post-Pandemic Community Resilience and Addressing Institutional Resistance in Ageing Public Housing Estates

Led by Prof. HUANG Yaoxuan Virginia, Assistant Professor of Teaching, School of Graduate Studies, this research supports SDG 11: Sustainable Cities and Communities, with a focus on inclusive urban communities, age-friendly neighbourhoods and community resilience.

High-density public housing estates represent the backbone of Hong Kong's social safety net, housing a significant proportion of the city's vulnerable older adults. However, external shocks and top-down public health measures often expose complex socio-ecological frictions in these communities. Grounded in Panarchy theory, research titled "Urban Resilience during COVID-19: Examining Public Housing with Older Adult Street Blocks through Panarchy Theory in Hong Kong" investigates how localised urban systems navigate systemic disruptions and public interventions.

Analysing demographic spatial data and community-level behaviours across ageing public housing blocks, the study reveals that resilience is not merely a passive absorption of external shocks, but an active, dynamic negotiation. Top-down mandates—such as mandatory group testing and enforced physical distancing—frequently generated friction and community resistance among elderly residents, ultimately slowing down systemic resilience. This resistance highlighted a critical mismatch between rigid, standardised public health protocols and the established daily routines, social reliance and informal coping mechanisms of older adult neighbourhoods, underscoring the importance of inclusive and age-sensitive urban responses.

Rather than viewing resistance as a mere bottleneck, the research demonstrates that it signals a vital need to shift away from one-size-fits-all enforcement towards customised, place-based care systems. Fostering true urban resilience requires building hyper-local support networks directly within public housing street blocks that respect the socio-spatial habits of older residents while delivering targeted welfare interventions. This approach aligns with SDG 11's emphasis on inclusive, safe, resilient and sustainable communities, particularly by responding to the needs of vulnerable older adults.

Spatial Optimization and Evaluation of Community Living Rooms

Optimizing Shared Care Infrastructure to Alleviate Inadequate Housing and Subdivided Unit Precarity

Led by Prof. HUANG Yaoxuan Virginia, Assistant Professor of Teaching, School of Graduate Studies, this research supports SDG 11: Sustainable Cities and Communities and SDG 10: Reduced Inequalities through equitable access to communal facilities, inclusive urban planning and shared care infrastructure.

Subdivided units (SDUs) represent one of Hong Kong's most severe manifestations of housing precarity, leaving low-income families trapped in cramped, poorly ventilated and socially isolated spaces. To alleviate these spatial limitations, decentralized communal facilities, such as government-backed "Community Living Rooms," have emerged as a crucial social intervention. Research titled "Beyond Four Walls: Community Living Rooms and Neighbourhood Filtering in Hong Kong's Subdivided Housing Communities" provides a data-driven evaluation of how these shared spaces mitigate severe indoor deprivation and support social inclusion.

The study first establishes the empirical effectiveness of community living rooms, demonstrating that grassroots residents genuinely value these facilities, a strong endorsement reflected in measurable housing market price premiums for units with convenient access. Building upon this validated demand, the research then deploys spatial analytics and socio-spatial optimization models to determine the most cost-effective and equitable spatial allocation for future facilities. This provides a blueprint

for delivering the minimum necessary intervention required to achieve maximum accessibility, social support and service coverage across high-density SDU clusters.

By demonstrating how communal facilities serve as vital "care infrastructure," this research offers policymakers and non-governmental organizations an evidence-based toolkit to maximize the impact of public welfare investments. Lingnan University supports SDG 11 and SDG 10 by delivering data-backed spatial solutions that transform informal housing challenges into actionable, community-oriented urban welfare strategies, advancing inclusive neighbourhoods, equitable resource allocation and support for underserved communities.

Exploring the Spatiotemporal Patterns and Economic Impacts of Road Traffic Accidents in Hong Kong

Led by Prof Paulina Wong, Head of Division of Science, this research supports SDG 11: Sustainable Cities and Communities, with a focus on road safety, smart mobility and evidence-based urban planning.

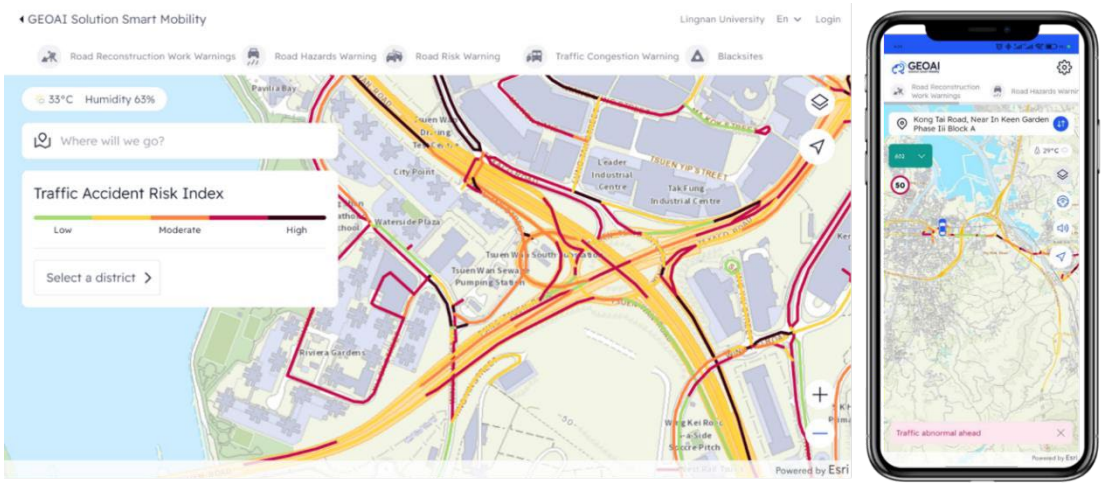
This research extends the Smart Traffic Fund project, which develops an AIoT- and GeoAI-based transport system to improve traffic efficiency and road safety in Hong Kong. Hong Kong is one of the world's most densely populated cities. Limited road space and a growing number of vehicles have worsened congestion and made road safety an urgent concern, highlighting the need for safe, efficient and sustainable urban transport.

The study analyzes historical accident data spanning up to 15 years to examine where and when different types of traffic accidents occur and to estimate their economic impacts. These impacts include medical costs, productivity loss, property damage and traffic delay. The analysis identifies high-risk areas, down to individual road segments, and high-risk time periods. It also shows which accident types impose the greatest economic burden, providing evidence for targeted road safety interventions and effective resource allocation.

Contribution to SDG 11:

- Target 11.2 — Safe and sustainable transport: The findings show where and when accidents cluster. Authorities can use them to prioritize interventions such as road design improvements, enforcement and traffic management, helping to reduce injuries, protect lives and strengthen urban transport safety.
- Target 11.3 — Inclusive and sustainable urbanization: Segment-level evidence on accident patterns and costs supports integrated, evidence-based transport and urban planning, contributing to safer and more sustainable urban environments.
- Targets 11.a and 11.b — Planning and policy: Quantifying the economic costs of accidents gives policymakers a clearer basis for investment in road safety

and integrated transport policies. It also supports Hong Kong's Smart City development and the "Smart Mobility Roadmap for Hong Kong".



From Research to Reality: Enhancing the Impact of the Mosquito Risk Index and GeoAI Platform

Led by Prof Paulina Wong, Head of Division of Science, this project supports SDG 11: Sustainable Cities and Communities, with a focus on predictive early warning, environmental health and community resilience.

This project builds on earlier ITF-funded research and translates the forecasted Mosquito Risk Index from an academic study into practice. The index is developed using Geospatial Artificial Intelligence (GeoAI) and provides forecasts of up to three days in advance. This lead time allows stakeholders to plan and implement preventive measures before risk escalates, supporting proactive, risk-informed vector management. The forecasts are disseminated to the public through a map-based dashboard. In a high-density, subtropical city such as Hong Kong, mosquito-borne diseases, including dengue fever and Japanese encephalitis, pose a continuing public health risk. Communities with older or more vulnerable living environments are particularly exposed.

Contribution to SDG 11:

- Target 11.1 — Adequate and safe housing: Risk-informed vector management improves environmental health conditions in public and transitional housing, supporting safe and healthy housing environments.
- Target 11.3 — Inclusive and participatory urbanization: Collaboration with NGOs, residents and industry practitioners promotes participatory community action and shared responsibility for local environmental health.
- Target 11.5 — Resilience to hazards: The three-day predictive early warning strengthens community capacity to prevent and respond to vector-borne disease risks, particularly in vulnerable communities.

- Target 11.6 — Environmental impact of cities: Targeted, forecast-driven intervention reduces reliance on blanket pesticide application, supporting environmentally responsible vector control.
- Target 11.b — Integrated policies and resilience: The platform supports risk-informed decision-making and integrated urban resilience planning, aligning with Hong Kong's Smart City development.

International Conference – Arts for Wellbeing: Creativity, Adaptability, Sustainability

The Wong Bing Lai Music and Performing Arts Unit successfully hosted its inaugural international conference, *Arts for Wellbeing: Creativity, Adaptability, Sustainability*, on 6 February 2026 at Lingnan@WestKowloon, M+, Hong Kong. Supported by the Tin Ka Ping Foundation, the conference brought together leading scholars, experts, and practitioners for in-depth interdisciplinary discussions on the theoretical, pedagogical, and practical dimensions of holistic wellbeing. The conference explored how creative practices, alongside medical and psychological support, can address urban stress and foster mental health and well-being, community engagement and social cohesion through community music and performing arts.

The conference attracted approximately 120 scholars, artists, educators, and cultural practitioners from Hong Kong, the Greater Bay Area, and overseas, fostering arts education, interdisciplinary learning, international collaboration and knowledge exchange. Participating institutions included Free University of Berlin, Rhode Island School of Design, West Chester University of Pennsylvania, The Chinese University of Hong Kong, Hong Kong Metropolitan University, and Beijing Normal University-Hong Kong Baptist University (BNBU).

The conference contributed to SDG 3 through its focus on holistic well-being and mental health; SDG 4 through arts education and professional knowledge exchange; SDG 11 through discussions on the role of creative practices in fostering socially connected, inclusive urban communities; and SDG 17 through cross-institutional and international partnerships connecting academia, the arts and community practice.





Alumni Cultural Tour to Tai Hang: Connecting Alumni and Promoting Cultural Heritage Awareness

The "Alumni Cultural Tour – Tai Hang Fire Dragon Dance" brought around 30 alumni, together with their family and friends, to Tai Hang to discover the century-old Tai Hang Fire Dragon Dance—a traditional custom listed as a National Intangible Cultural Heritage. The event aimed to connect Lingnan University alumni through cultural-

themed activities and raise awareness of the importance of protecting and safeguarding local historic buildings, community heritage and cultural traditions, in alignment with SDG 11: Sustainable Cities and Communities, particularly Target 11.4 on safeguarding cultural and natural heritage.

Participants first visited the Tai Hang Fire Dragon Heritage Centre to learn about the century-long history of this Grade III historic building, from its construction and wartime destruction to reconstruction and revitalisation. They also explored the origins and cultural significance of the Tai Hang Fire Dragon Dance. Under an instructor's guidance, participants gained hands-on experience of related traditional craftsmanship, deepening their appreciation of intangible cultural heritage and the transmission of traditional skills.

A guided neighbourhood walking tour introduced participants to Tai Hang's historical development and key landmarks. These included the Tai Hang Residents' Welfare Association, organiser of the Fire Dragon Dance; Wun Sha Street, the site of Tai Hang's original nullah; Fire Dragon Path; the declared monument Lin Fa Kung Temple; and Ormsby Street, the starting point of the Fire Dragon Dance. The tour highlighted the connections between historic buildings, living traditions and local community identity.

Through heritage education, hands-on cultural experiences and neighbourhood exploration, the event deepened alumni's understanding of local heritage and the importance of its preservation. It also strengthened community–university connections and social bonds within the Lingnan alumni community, supporting SDG 11 through greater awareness and appreciation of Hong Kong's tangible and intangible cultural heritage.




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Lingnan University 2025/2026 SDG Report
SDG 12 – RESPONSIBLE CONSUMPTION AND PRODUCTION



5th in Hong Kong
(THE Sustainability Impact Ratings 2026)

50
Undergraduate Courses

15%
Proportion of Waste Recycled

357
Research Outputs

Lingnan University advances **SDG 12: Responsible Consumption and Production** through research, education and community engagement that support resource efficiency, waste reduction and circular economy practices. By developing environmentally friendly materials, exploring green technologies and encouraging responsible consumption on campus and beyond, the University contributes to more sustainable production and consumption patterns. These initiatives connect innovation with everyday action to promote the responsible use of resources.

Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)

Research co-authored by Professor Xin Yao, Vice-President (Research and Innovation) at Lingnan University, and Changwu Huang explores how responsible artificial intelligence (RAI), environmental, social and governance (ESG), and the Sustainable Development Goals (SDGs) can reinforce one another. Their integration offers opportunities for organisations to enhance societal impact while increasing corporate value and fostering responsible innovation and sustainable business practices.

Through a systematic literature review, the study provides foundational knowledge of RAI, ESG and the SDGs, including their origins, core concepts and main implementation challenges. It then examines the connections and synergies among these frameworks, highlighting opportunities to align AI development, corporate responsibility and sustainable development.

Based on this analysis, the researchers propose an integrated framework that

synthesises the relationships among RAI, ESG and the SDGs. The framework demonstrates how these approaches can be mutually reinforcing when implemented cohesively, supporting organisations in incorporating sustainability and social responsibility into technological innovation and business decisions.

The paper also discusses implications for multiple stakeholders while acknowledging implementation challenges and tensions. It emphasises the importance of viewing RAI, ESG and the SDGs as interconnected frameworks rather than separate goals. Through this integrated perspective, organisations can align them collectively within strategic planning and operational practices, promoting more effective and sustainable outcomes while addressing complex societal challenges in the AI era.

The research contributes both theoretical understanding and practical guidance for holistic approaches that harness the transformative potential of AI while ensuring that its development and deployment serve broader sustainability and social responsibility objectives. It supports SDG 9 through responsible technological innovation, with additional relevance to SDG 12 through responsible corporate practices, SDG 16 through accountable governance, and SDG 17 through policy coherence and multi-stakeholder alignment.

C. Huang and X. Yao, "Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)," in *IEEE Computational Intelligence Magazine*, vol. 20, no. 4, pp. 20-41, Nov. 2025, doi: 10.1109/MCI.2025.3593452.

Multinationality and Strategic Dynamic Capabilities During Sustainable Development Goals Adoption: Evidence From a Natural Experiment

Led by Professor Liane W.Y. Lee, Associate Professor of Teaching in the Department of Management, this research examines how multinational enterprises (MNEs) implement initiatives to adopt the Sustainable Development Goals (SDGs). The study is relevant to SDG 9: Industry, Innovation and Infrastructure, with additional connections to SDG 8: Decent Work and Economic Growth and SDG 12: Responsible Consumption and Production, through its focus on innovation, strategic adaptability and sustainable corporate practices.

The research investigates how two types of multinationality—degree of internationalisation and international diversification—affect MNEs' application of strategic dynamic capabilities. It enhances dynamic capabilities theory by incorporating institutional change, examining the contextual impact of the global SDG initiative on corporate strategies.

Using a difference-in-differences approach, the study compares two groups across the three years before and after the launch of the SDGs in 2015. This natural experiment provides a basis for analysing institutional changes associated with SDG implementation.

The findings reveal that MNEs' degree of internationalisation is positively associated with three key strategic capabilities: ambidexterity, innovation and reconfiguration. However, international diversification has the opposite effect, highlighting the distinct implications of these two dimensions of multinationality.

The study suggests that adopting the SDGs can benefit MNEs by enabling them to leverage non-location-bound firm-specific advantages across geographies. However, diverse local challenges in emerging markets may increase transaction costs and impede the internal integration of dynamic capabilities.

These findings contribute to SDG 9 by deepening understanding of organisational innovation and adaptability. They also offer insights relevant to SDG 8, particularly the strategic capabilities that may support innovation-driven productivity and sustainable business development. The connection to SDG 12 lies in examining how multinational enterprises respond to the SDGs and integrate sustainability priorities into corporate initiatives. Together, these perspectives strengthen understanding of how enterprises navigate institutional change while aligning business strategies with sustainable development.

Lingnan University 2025/2026 SDG Report
SDG 13 – CLIMATE ACTION



17.09%
Reduction in Carbon Emission (Scope 1 & 2)

59
Undergraduate Courses

317
Research Outputs

83%
Internationally Collaborated Papers

Lingnan University advances **SDG 13: Climate Action** by integrating climate awareness and sustainability education into its liberal arts learning environment. Through interdisciplinary programmes, hands-on practicum experiences, interactive science activities and inter-university collaboration, students develop the knowledge and skills to respond to climate challenges. These opportunities foster global competence, civic responsibility and informed action, preparing students to contribute to a more sustainable and climate-resilient future.

Climate Policy, Green Innovation and Financial Market Stability

Led by Professor Michal Wojewodzki, Associate Professor of Teaching in Lingnan University's Department of Finance, this research supports SDG 13: Climate Action by exploring the intersection of climate policy, corporate green innovation and financial market stability. As Lingnan advances its Climate Action Plan, the research examines how regulatory environments and market mechanisms drive the transition to a sustainable, low-carbon economy.

The research highlights the critical role of stable climate policies in fostering corporate sustainability. Findings on the Paris Agreement reveal that corporate research and development (R&D) investments significantly enhance firms' ability to align carbon emissions reductions with financial profitability. However, this positive moderating effect diminishes during periods of climate policy instability, such as the U.S. withdrawal from the Paris Agreement, underscoring the importance of consistent regulatory frameworks for green innovation.

Analysis of climate policy uncertainty (CPU) and geopolitical risks also demonstrates

that CPU has a prolonged and diffuse impact on energy market volatility. These findings emphasise the need to accelerate the global transition to renewable energy and strengthen climate risk management and energy resilience.

The research also investigates market-based solutions, including Emissions Trading Schemes (ETS). A bibliometric analysis reveals growing global interest in how these schemes promote renewable energy innovation. Evidence from China's ETS pilot projects generally supports the Porter hypothesis, suggesting that well-designed environmental regulations can stimulate technological innovation rather than merely impose compliance costs.

Together, these studies provide actionable insights into how consistent climate policies, strategic R&D investments and robust emissions trading frameworks can accelerate global decarbonization. The research reinforces Lingnan University's commitment to sustainability and offers empirical evidence to inform climate policy and low-carbon investment decisions in an increasingly uncertain global market.

Advancing Space-Based Greenhouse Gas Monitoring for Climate Action

In support of SDG 13: Climate Action and global climate governance, Professor Li Jia, Associate Professor (Presidential Early Career Scholar) at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, has built and optimized a professional carbon database to facilitate high-precision space-based greenhouse gas monitoring. This database serves as the core data foundation for MUSICO, also known as the Tianyun Camera, Hong Kong's first scientific payload operating on China's Tiangong Space Station.

MUSICO is the world's first compact, high-resolution detector designed for synchronous observation of carbon dioxide and methane, two major greenhouse gases driving global climate change. Deployed via the Tianzhou-10 cargo spacecraft, the instrument delivers accurate orbital detection of atmospheric gas concentrations and localized emission sources, supporting emissions monitoring and source identification.

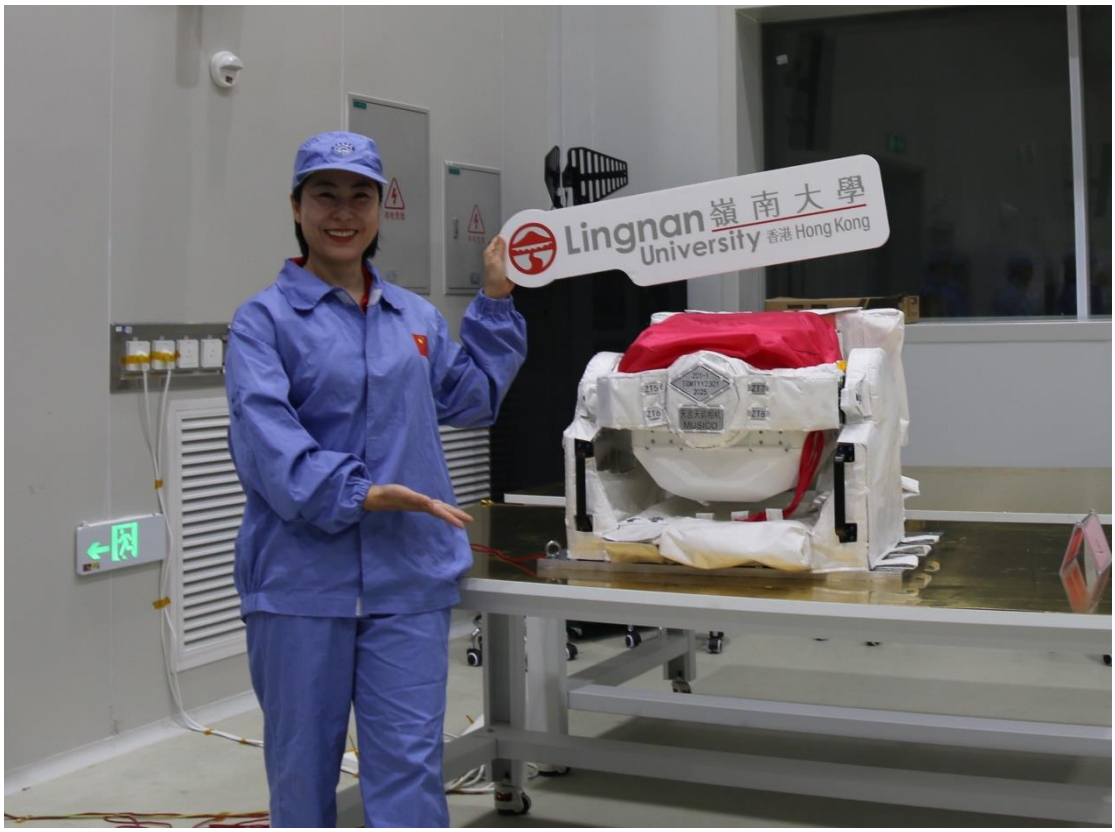
Professor Li's structured database integrates standardized atmospheric baseline data, historical emission records and terrestrial validation datasets. It calibrates real-time spectral readings, corrects orbital observation deviations and improves the precision of global greenhouse gas inversion and emission tracing. This strengthens data reliability, scientific validation and evidence-based climate monitoring.

The synergy between MUSICO and Professor Li's data framework supports continuous in-orbit monitoring and stable, long-term climate surveillance across global mid- and low-latitude regions, enhancing understanding of greenhouse gas distributions and emission patterns.

This data-driven initiative provides scientific evidence for carbon accounting, climate

trend analysis and low-carbon policy formulation. By enhancing the reliability of space-based climate observation and strengthening global climate data transparency, the project provides technical support for climate mitigation and sustainable environmental governance, aligning with SDG 13's objectives to combat climate change.

Alongside this research, Professor Li teaches ESG536 Green Finance and Investment, complementing her contributions to climate monitoring with education in sustainable finance. Together, these research and teaching activities reflect her engagement with climate action and the transition towards a low-carbon economy.



Advisory Services for Hong Kong Power Sector's Participation in the Southern China Carbon Capture, Utilisation and Storage (CCUS) System

Undertaken by Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, this advisory project examines how Hong Kong's power sector could participate in regional carbon capture, utilisation and storage (CCUS) infrastructure in Southern China. Scheduled from August 2025 to February 2026, the project focuses on assessing potential CO_2 storage sites in Guangdong, comparing pipeline and shipping options, and developing commercial and cost models. It aims to provide a strategic participation roadmap aligned with CLP's decarbonisation strategy and regional CCUS development timelines.

SDG 7 – Affordable and Clean Energy

The project supports power sector decarbonisation by exploring how Hong Kong's electricity generation sector could access regional CO_2 transport and storage infrastructure. Its assessment of technical feasibility and costs aims to inform commercially viable approaches to reducing power-sector emissions, contributing to the transition towards lower-carbon electricity generation.

SDG 9 – Industry, Innovation and Infrastructure

The project supports the planning of cross-border low-carbon infrastructure, including CO_2 pipelines, shipping routes and geological storage facilities. By evaluating infrastructure requirements, storage capacity and commercial arrangements, it aims to inform the development of regional CCUS networks and strengthen the evidence base for sustainable industrial infrastructure investment.

SDG 13 – Climate Action

The project explores potential pathways for large-scale carbon emissions reduction through Hong Kong's participation in regional CCUS hubs. Its technical, regulatory and economic assessments will inform a strategic roadmap for participation between 2025 and 2040, supporting evidence-based climate mitigation planning and alignment with regional decarbonisation efforts.

SDG 17 – Partnerships for the Goals

The project supports cross-border collaboration among CLP Power Hong Kong Limited, Guangdong CCUS stakeholders, China Southern Power Grid, academic and geological experts, and relevant government and regulatory agencies. By examining shared infrastructure, business arrangements and regulatory requirements, it aims to facilitate coordination between Hong Kong and Guangdong in pursuit of shared climate objectives and regional low-carbon development.

Monitoring Greenhouse Gas Emission Point Sources From China Space Station

With Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, participating in the research collaboration, this project aims to develop a greenhouse gas monitoring system using observations from the China Space Station and related satellite platforms. Running from August 2025 to August 2028, it will combine space-based observations, data analytics, ground-truth verification and blockchain technology to identify and quantify emission point sources and provide secure, transparent and traceable emissions data.

SDG 7 – Affordable and Clean Energy

The project aims to provide reliable greenhouse gas emissions data that can inform clean energy transition strategies. By identifying emission sources and analysing

trends, it could help policymakers and industry stakeholders assess emissions associated with energy use and prioritise opportunities for lower-carbon energy systems.

SDG 9 – Industry, Innovation and Infrastructure

The project advances space-based environmental monitoring and secure digital infrastructure by integrating satellite observations, data analytics and blockchain technology. Its planned data-processing framework and geospatial visualisation platform will support the development of innovative tools for emissions monitoring, while blockchain integration aims to strengthen data integrity, transparency and traceability.

SDG 13 – Climate Action

The project aims to strengthen the capacity to identify, quantify and track greenhouse gas emissions, supporting evidence-based climate mitigation and carbon reduction strategies. By combining space-based observations with ground-truth verification, it seeks to provide validated emissions data for regulatory monitoring and compliance assessment, with potential future applications in carbon credit verification.

SDG 17 – Partnerships for the Goals

The project brings together expertise from Lingnan University, the Hong Kong University of Science and Technology, Hong Kong Baptist University, and the Technology and Engineering Center for Space Utilization of the Chinese Academy of Sciences, with support through the Innovation and Technology Commission's Innovation and Technology Support Programme. This cross-institutional collaboration combines capabilities in space technology, environmental monitoring and digital systems to advance climate technology development and support shared sustainable development goals.

Media Sentiment on Corporate Climate Action and Business Performance: Insights from FTSE 100 Firms

This study, with contributions from Prof Liane W. Y. Lee, Associate Professor of Teaching in the Department of Management, examines whether media coverage of climate change action by FTSE 100 firms is associated with business performance in the following year. It relates to SDG 13: Climate Action, highlighting the relationship between corporate climate engagement, stakeholder perceptions and business performance.

Drawing on 406,052 news articles published between 2013 and 2022, the study adopts a novel bibliometric keyword-extraction approach to identify the valence of SDG 13-related coverage of these firms. A dynamic panel model estimated using the generalized method of moments estimator shows that adverse SDG 13 media coverage

of a firm is negatively associated with its sales, net profit and Tobin's Q. In contrast, positive coverage is associated with improved sales and Tobin's Q.

Viewed through the lens of integrated thinking as a holistic framework linking institutional and stakeholder theories, the findings suggest that SDG 13-related media coverage is associated with corporate reputation and performance. The study highlights the relevance of climate-related communication and stakeholder engagement to understanding how corporate climate action is perceived and its association with business outcomes. Several implications are drawn from the study, alongside avenues for future research.

Lingnan University 2025/2026 SDG Report
SDG 14 – LIFE BELOW WATER



28
Undergraduate Courses

120 Ocean Environmental Pioneers (OEPs) Reached

83
Projects/Grants

Lingnan University advances **SDG 14: Life Below Water** through research, education and community engagement focused on marine biodiversity conservation and the sustainable use of coastal ecosystems. Collaborating with government agencies, NGOs and international partners, the University combines ecological knowledge with nature-based approaches to support ecosystem protection and resilience. These efforts foster awareness and shared responsibility for safeguarding marine environments.

Bridging the Gap: An eDNA Approach to Ecological Assessment and Conservation of Scleractinian Corals

Led by Prof. Ip Chi Ho, Associate Professor (Presidential Early Career Scholar) of Lingnan University's Division of Science, this project supports SDG 14: Life Below Water through marine biodiversity monitoring and evidence-based coral conservation.

The project investigates how a streamlined environmental DNA (eDNA) method can be developed and applied to assess and conserve scleractinian (reef-building) coral communities in Hong Kong waters. Shallow-water coral reefs are biodiversity hotspots with high socio-economic value, yet climate change and anthropogenic activities have caused a global decline of over 50% in coral cover and associated marine life. Conventional monitoring relies heavily on time-consuming visual surveys that are impractical for rapid assessment across many sites. Few eDNA studies have targeted reef-building corals, primarily due to the lack of robust primers and standardized methods.

To address this gap, the project develops novel scleractinian-specific primers using an enhanced DNA reference database encompassing over 100 coral colonies. These are

validated through water sampling and visual surveys at Hoi Ha Wan Marine Park, known for hosting the best coral community in Hong Kong waters. The streamlined eDNA approach is then applied at 33 Reef Check sites across Hong Kong over two seasons, supporting systematic, large-scale ecological assessment.

The findings contribute to SDG 14 by demonstrating the application of eDNA for coral reef monitoring and revealing spatial and temporal variation in coral community composition. They inform evidence-based conservation measures and predictions of reef responses to climate change and anthropogenic disturbance, supporting the protection of marine ecosystems and climate-resilient conservation planning.

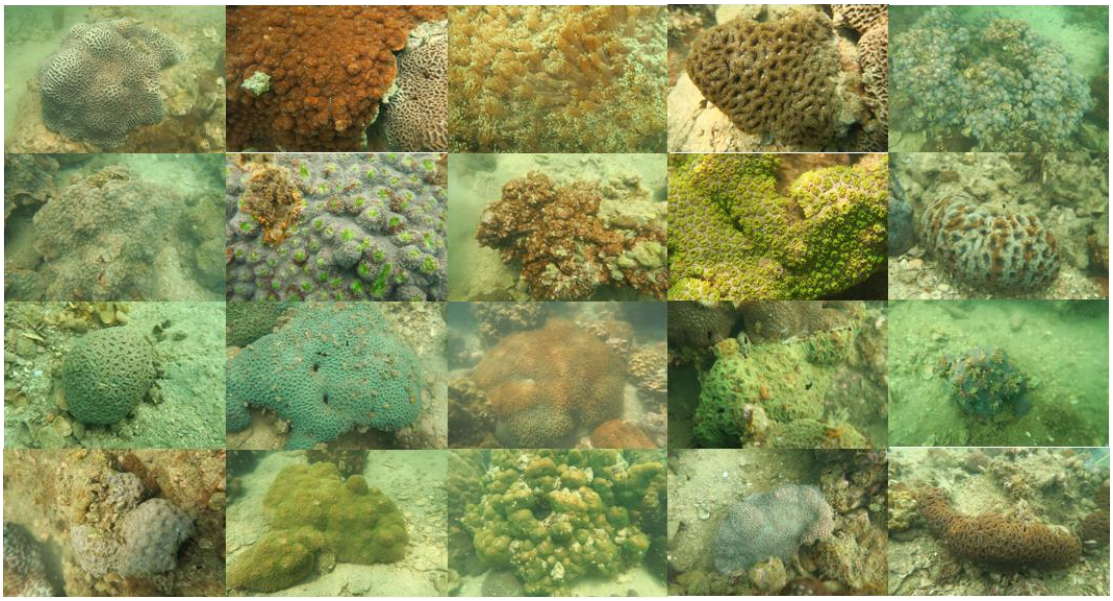


Figure 1. *In-situ* close-up photographs of scleractinian corals taken during field sampling.

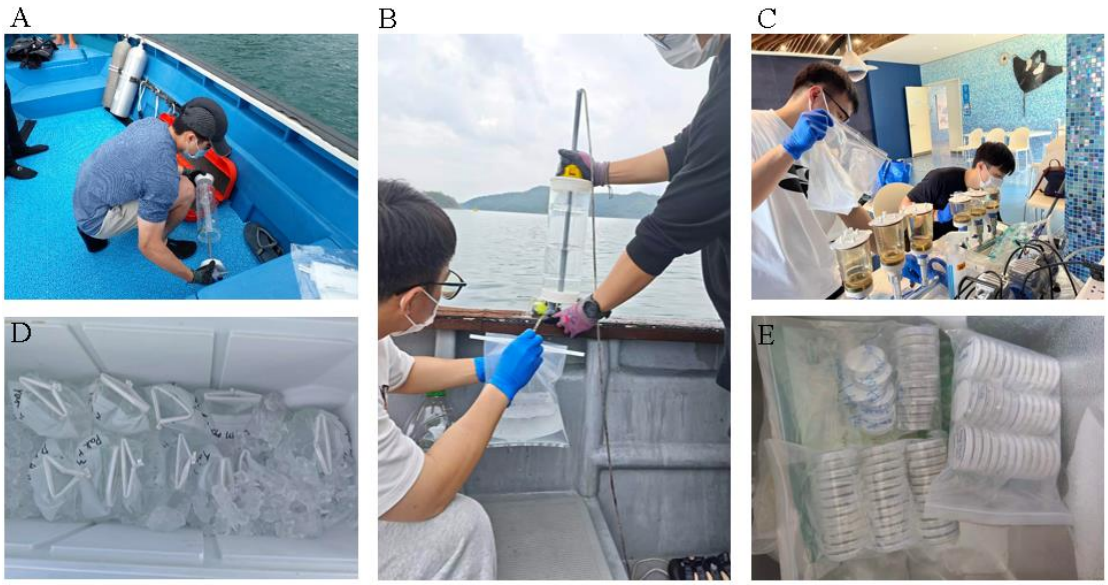


Figure 2. Water sampling and filtering after survey. **(A and B)** Research assistant using water sampler to collect seawater at field site. **(C and D)** The setup of water filtering system, which are soaked with 10% bleach solution and rinsed with Milli-Q water before using. All collected seawater were stored in ice box temporarily and transfer to lab to filtering seawater. **(E)** The

filtered membrane was storage at – 80 °C freezer.

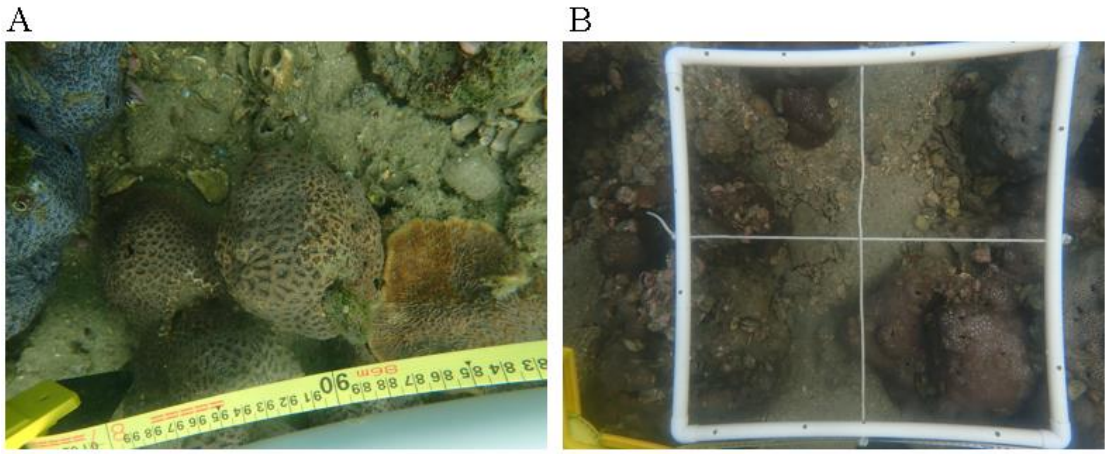


Figure 3. In-situ photographs showing coral communities obtained during UVC transect surveys. **(A)** A 100-m measuring tape deployed underwater. **(B)** corals captured within a 50 cm x 50 cm quadrat.

Restoring Freshwater Ecosystems Through the Reintroduction of Turtles

Led by Prof Anthony Lau, Assistant Professor of Lingnan University's Division of Science, this project advances aquatic biodiversity conservation and ecosystem restoration, complementing the broader conservation aims of SDG 14: Life Below Water.

Globally threatened species—such as Beale's Eyed Turtle (*Sacalia bealei*), Big-headed Turtle (*Platysternon megacephalum*), and Golden Coin Turtle (*Cuora trifasciata*)—rely on freshwater streams in Hong Kong, but poaching has dramatically reduced their populations. To support their recovery, the team is assessing habitat quality, poaching vulnerability, and turtle occurrence across several Hong Kong streams.

The research combines ecological field surveys, environmental DNA (eDNA) techniques, watershed modeling, and geospatial analyses to identify priority sites for future reintroduction of captive-bred turtles. It also evaluates food availability, water quality, stream structure, and accessibility to poachers, providing a science-based conservation framework to restore threatened turtle populations and strengthen the ecological resilience of freshwater ecosystems.

In 2026, the First International Conference on the Integrated Conservation of Asian Turtles was also organized, bringing together nearly 500 participants from 19 countries and regions. The conference strengthened international collaboration and knowledge exchange to support coordinated action on turtle conservation.





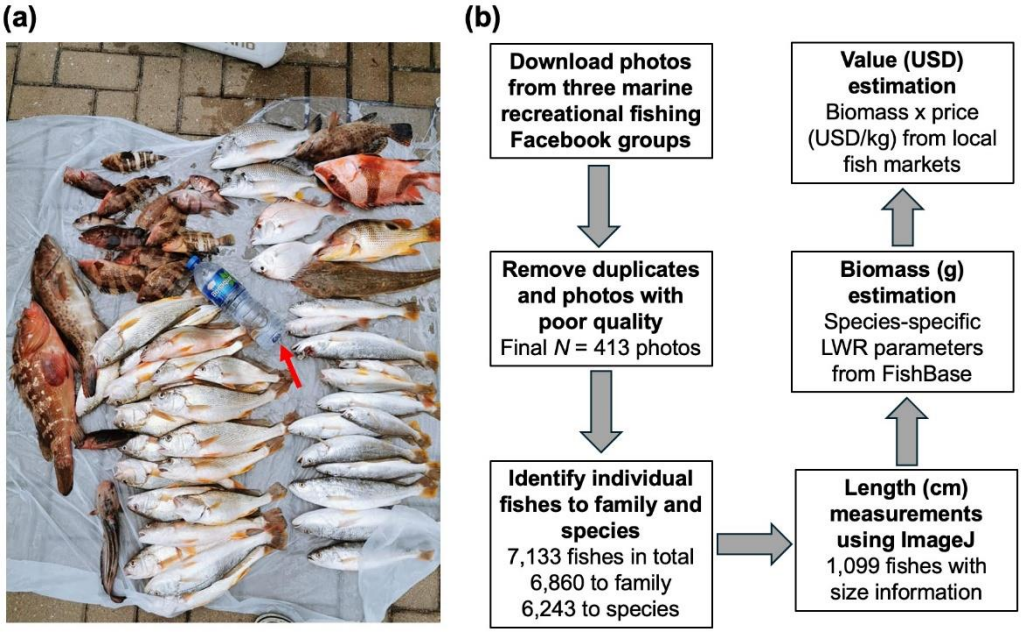
Quantifying the Impacts of Recreational Anglers

Led by Prof Anthony Lau, Assistant Professor of Lingnan University's Division of Science, this research supports SDG 14: Life Below Water through sustainable fisheries management and marine biodiversity conservation.

In a recent study of Hong Kong's recreational fishery, researchers used social media-derived data to document fish species and assess the scale, population size structure,

and monetary value of fish landed by recreational anglers. The study identified substantial fishing pressure on large predatory fishes—including groupers, snappers, and seabreams—and highlighted the need for improved fisheries management, monitoring, and conservation measures to protect marine ecosystems.

These findings demonstrate how innovative digital data sources can support evidence-based fisheries management, inform conservation priorities, and promote the sustainable use of marine resources.





Tiny Substances, Big Impacts: Investigating Microplastic Pollution in Hong Kong's Streams

Led by Prof. Tsang Hin Fat, Assistant Professor of Lingnan University's Division of Science, this project supports SDG 14: Life Below Water by investigating land-based pollution pathways and microplastic contamination in aquatic ecosystems.

The project examines the occurrence, seasonal dynamics, and faunal trophic uptake of microplastics in Hong Kong's lowland streams. While river systems serve as major conduits transporting plastic waste into coastal waters, empirical data on seasonal fluctuations and organismal ingestion in local freshwater habitats remain scarce.

By sampling lowland streams across wet and dry seasons, the study quantifies environmental microplastic concentrations and determines tissue contamination levels across different trophic positions, spanning primary consumers (*Baetis* mayflies), predatory insects (*Euphaea* damselflies), and freshwater fish (*Rhinogobius duospilus*). By correlating environmental microplastic levels with animal tissue burdens, the

research provides critical baseline data on how plastics infiltrate aquatic food webs and move through upstream systems toward marine environments. The findings can inform evidence-based pollution management and efforts to reduce land-based marine pollution, supporting the protection of freshwater and coastal ecosystems.

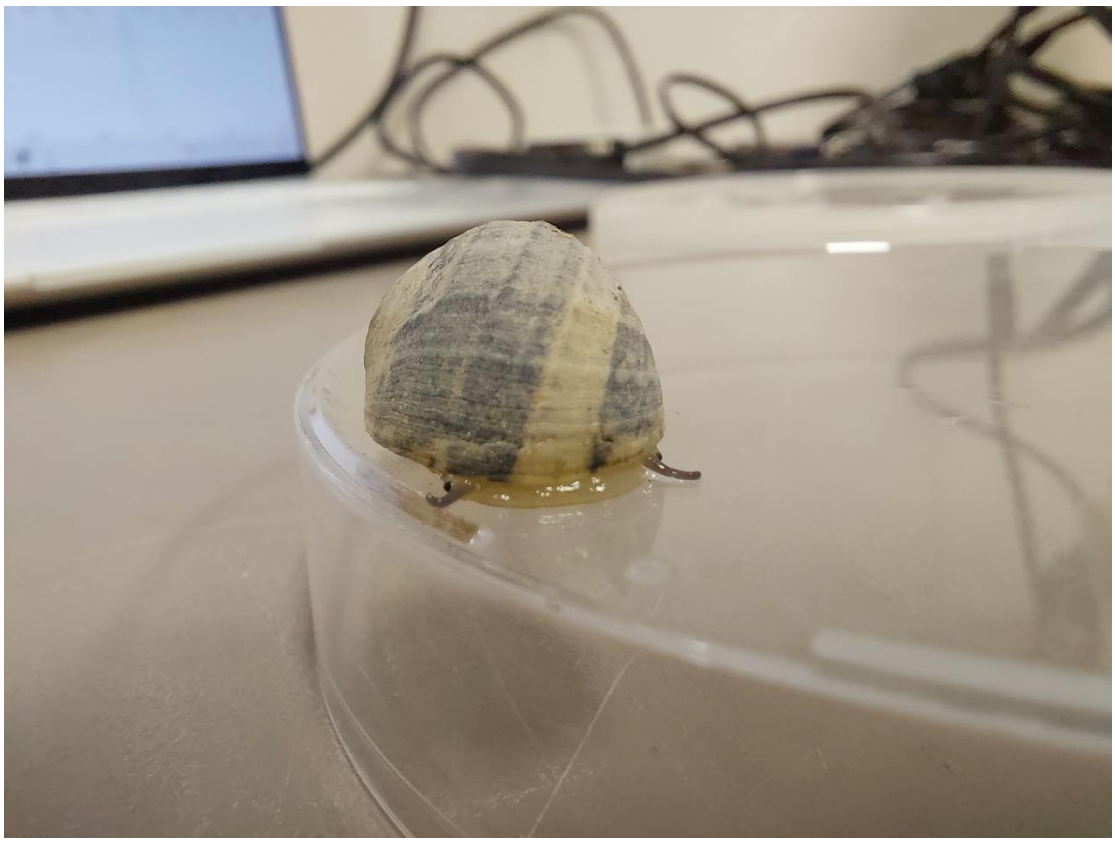
How Does Local Temperature Shape Thermal Tolerance? A Test Using Congeneric Snails on Tropical Rocky Shores

Led by Prof Tommy Hui, Assistant Professor of Lingnan University's Division of Science, this project supports SDG 14: Life Below Water by examining marine biodiversity vulnerability and thermal resilience under climate change.

The project investigates variation in thermal tolerance among and within closely related snail species that are key grazers on tropical rocky shores in Hong Kong and Singapore. Using habitat temperatures and individual heart rate as a proxy for performance, the study found that snail performance varied with habitat temperature in a complex way. Under moderate thermal stress, the snails exhibited higher tolerance to cope with hotter habitats. However, under severe thermal stress, they were unable to increase their tolerance further and therefore faced heightened thermal risk.

This limited thermal plasticity could be driven by impaired body functions, such as feeding, at high temperatures, constraining further increases in thermal tolerance. The findings highlight the vulnerability of tropical rocky shore fauna to ocean warming and the importance of considering local thermal regimes when assessing climate-related risks. They provide evidence to inform climate-sensitive marine conservation and coastal ecosystem management.





From Shell to Meadow: Is the Oyster *Saccostrea cucullata* Beneficial to the Seagrass *Halophila ovalis* on the Western Coast of Hong Kong?

Led by Prof. Tommy Hui, Assistant Professor of Lingnan University's Division of Science, this study supports SDG 14: Life Below Water through research on seagrass restoration, species interactions, and coastal ecosystem conservation.

The study investigates whether the rock oyster *Saccostrea cucullata* facilitates the growth of the seagrass *Halophila ovalis* on soft-sediment shores. Through water filtration and biodeposition, oysters are expected to facilitate photosynthesis and enhance nutrient availability in benthic environments. The team conducted a manipulative experiment, varying oyster densities within seagrass patches to test whether more oysters would result in faster seagrass growth.

The findings showed that oysters altered the local species pool by providing hard substrate surfaces for snails and crabs. These associated species may, in turn, regulate seagrass growth by consuming epibionts living on seagrass surfaces, highlighting the importance of ecological interactions and habitat complexity.

The study reveals how interactions between seagrass and bivalves depend on the behaviour of associated species. It also clarifies the mechanisms through which oysters may influence the seagrass restoration programme currently underway on Hong Kong's western coast, informing evidence-based restoration and sustainable coastal habitat management.







Lingnan University 2025/2026 SDG Report
SDG 15 – LIFE ON LAND



64th in the world
(THE Sustainability Impact Ratings 2026)

3rd in Hong Kong
(THE Sustainability Impact Ratings 2026)

40%+
Trees on Campus are Native Species

87
Projects/Grants

Lingnan University advances **SDG 15: Life on Land** through research, education and community engagement that support biodiversity conservation, sustainable land use and terrestrial ecosystem protection. Connecting scientific knowledge with policy and practice, the University explores ways to conserve insect pollinators and farmland ecosystems while strengthening environmental learning through field-based research. These initiatives encourage responsible stewardship of natural habitats and equip students to contribute to a more sustainable relationship between people and nature.

Protecting and Restoring Hong Kong's Terrestrial Ecosystems

Dr Roger Ho, Assistant Professor at Lingnan University's Division of Science, leads research advancing SDG 15: Life on Land. His work addresses ecological challenges in urban and rural environments, promoting biodiversity conservation, ecosystem restoration, and sustainable habitat management in Hong Kong and across the region.

Urban Greening and Farmland Conservation

To combat biodiversity loss in human-modified landscapes, Dr. Ho champions nature-based solutions. In urban settings, he is developing a pollinator preference database and planting guide to help municipal agencies select pollinator-friendly plants, directly supporting wild pollinators.

Extending these efforts to rural areas, his lab leads farmland conservation initiatives in Mui Wo, Lantau Island. By revitalizing agricultural habitats and evaluating plant–pollinator interaction networks and microclimate buffering, the project enhances

essential floral and nesting resources to safeguard wild insect populations within farming landscapes. These efforts support pollinator conservation, sustainable agriculture, and ecological resilience.



Researchers conducting field surveys in an agricultural habitat to evaluate plant-pollinator interaction networks and support the conservation of wild insect populations in human-modified landscapes.

Functional Urban Forests and Ecosystem Health

Dr Ho investigates how urban environments reshape fundamental ecosystem processes, including leaf litter decomposition. Through a Research Grants Council-funded project, his team examines how soil detritivores drive decomposition across natural and urban forests.

By isolating the effects of microclimate and leaf litter quality, this work highlights the critical role of soil biodiversity and ecosystem functioning. The findings inform urban forest management and plant selection, strengthening conservation efforts to build functional, resilient, and healthy urban ecosystems.



The research team setting up leaf litter decomposition experiments to investigate how soil detritivores and microclimate contribute to the health and resilience of forest ecosystems.

Wetland Conservation and the East Asian–Australasian Flyway

Dr. Ho's lab also addresses regional biodiversity challenges, emphasizing the protection of vulnerable wetland ecosystems. Recently published in the *Journal of Applied Ecology*, his collaborative research advocates evidence-based habitat management to secure the future of waterbirds along the East Asian–Australasian Flyway.

By evaluating how human-modified wetlands can be optimized for conservation, this work provides actionable, data-driven frameworks to protect critical resting and wintering grounds. It supports migratory waterbird conservation, wetland habitat protection, and ecological connectivity, helping ensure the long-term survival of migratory waterbird populations.



A flock of waterbirds foraging in a drained fishpond, highlighting the importance of optimizing human-modified habitats to conserve waterbirds along the East Asian-Australasian Flyway.

Lingnan University 2025/2026 SDG Report
SDG 16 – PEACE, JUSTICE AND STRONG INSTITUTIONS



219
Undergraduate Courses

770
Research Outputs

114
Projects/Grants

Lingnan University is committed to advancing **SDG 16 – Peace, Justice and Strong Institutions** through research, education, and community initiatives that promote transparency, inclusiveness, and accountability. By addressing issues of governance, social justice, and institutional reform, Lingnan scholars contribute to building fairer and more resilient societies. Through interdisciplinary collaboration and evidence based research, the University supports the creation of effective, rights-respecting institutions that foster peace and justice locally and globally.

Strengthening Public Institutions Through Citizen Insights and Strategic Management

Professor Richard M. Walker, Lee Shau Kee Foundation Chair Professor of Public Administration and Director of the Lingnan University Institute for Advanced Study, advances research supporting SDG 16: Peace, Justice and Strong Institutions. His work explores how understanding citizens' experiences and applying evidence-informed strategic management can improve public services and organisational performance. Together, these complementary research areas offer insights into building effective, accountable and responsive public institutions.

Citizen satisfaction and strong institutions

Professor Richard M. Walker's research examines how public institutions can better understand citizens' experiences and use satisfaction data to improve public services. Two co-authored articles offer guidance on measuring citizen satisfaction more meaningfully. Their insights are relevant to SDG 16: Peace, Justice and Strong Institutions, by helping institutions interpret public feedback and identify where

services fall short of citizens' standards.

In "The expectancy-disconfirmation model and citizen satisfaction with public services: A meta-analysis and an agenda for best practice" (Public Administration Review, 2022, 82[1], 147–159), Jiasheng Zhang, Wenna Chen, Nicolai Petrovsky and Walker synthesise 163 correlations from 17 studies. They find broad support for the idea that satisfaction reflects not only perceived service performance but also how that performance compares with citizens' expectations. Satisfaction scores alone therefore cannot provide a complete picture of service quality.

The study recommends that surveys capture expectations alongside satisfaction, particularly normative expectations: the standards citizens believe services should meet. It also recommends directly asking whether services met, exceeded or fell short of expectations, rather than simply subtracting expectation scores from performance ratings. Tracking the same citizens over time, measuring expectations at the relevant point, and asking about specific services can improve understanding of changing experiences. Extending research to human services would also strengthen the evidence base.

In "The next generation of citizen satisfaction research: Theoretical and methodological advancements" (Public Management Review, 2026), Petrovsky, Walker, Miyeon Song and Nathan Favero develop this agenda further. They call for clearer definitions that distinguish satisfaction itself from the processes producing it, and greater attention to minimally acceptable service standards rather than predictions of likely performance. They also emphasise that citizens differ from commercial customers: many public services offer little choice, and some are compulsory.

The authors propose moving beyond survey responses to examine actual behaviour, including complaints, disengagement and continued service use. Linking satisfaction surveys with administrative records and using field experiments could help establish whether changes in satisfaction lead to changes in behaviour.

For strong institutions, the practical message is to listen carefully, measure consistently and interpret feedback in context. Better measurement can help public organisations distinguish perceived performance from expectations, recognise unmet standards and learn from citizens' experiences. These studies provide a foundation for more responsive service management and evidence-informed accountability, without treating satisfaction as a substitute for other measures of institutional performance.
This research has been cited in policy and practice, including the Analysis and Policy Observatory in Australia, Dutch Government, Finish Government and the PublicPolicy.ie think tank in Ireland.

Citizen Satisfaction Research: Policy Citation Records (Excel)

Strategic management and strong institutions

Professor Richard M. Walker's research at Lingnan University examines how strategic

management can strengthen public institutions by improving organisational performance. His work offers insights relevant to SDG 16: Peace, Justice and Strong Institutions, particularly the ambition to develop effective institutions. Over two decades, Walker has investigated how public organisations choose strategic directions, formulate plans, implement decisions and learn from experience. Two studies bring together evidence on the contributions of strategic choices and planning to public service performance.

In “Revisiting the venerable debate on strategy content and public service performance” (International Public Management Journal, 2026), Walker and Bert George analyse 88 effect sizes from 22 studies. They examine three strategic orientations: prospectors, which prioritise innovation; defenders, which concentrate on core services; and reactors, which respond to external instructions rather than pursue a coherent strategy.

The findings associate prospecting with better performance and reacting with poorer performance, although the overall relationships are modest. Defending has no statistically significant overall association with performance, but shows benefits in particular settings. Context matters: prospecting has a stronger positive association with performance in multipurpose organisations, such as city governments, while defending is positively associated with performance in single-purpose organisations, such as school districts. These findings suggest that institutions should align their strategic orientation with their responsibilities rather than adopt a universal model.

In “Does strategic planning improve organizational performance? A meta-analysis” (Public Administration Review, 2019, 79[6], 810–819), Bert George, Walker and Joost Monster synthesise 87 correlations from 31 studies. They find a positive, small-to-moderate relationship between strategic planning and organisational performance across public and private sectors and US and non-US settings.

The relationship is strongest when planning involves systematic internal and external analysis and the formulation of goals, strategies and plans, and when performance is measured as effectiveness: achieving organisational goals. Planning should therefore not be treated simply as producing a document or as a guaranteed route to efficiency savings.

Together, these studies show how evidence-informed strategic management can support stronger institutions. Their practical message is to combine clear goals and rigorous planning with strategic choices suited to organisational purpose. For public institutions addressing societal challenges, innovation and reliable core services are complementary priorities, supported by implementation and continuous learning. The evidence supports informed managerial judgement, not a single prescription for every institution.

This research has been widely cited in policy and practice, including the Belgian Federal Public Service, French Ministry of the Economy, Government of Finland, OCED, State of California, Swedish Transport Administration, UNESCO, and the US Institute for

Defense Analysis (source Overton), and in US President Biden's Financial Year 2023 Budget (https://www.cityu.edu.hk/class/media_events/news_item.aspx?ref=367) and the official US Budget Guidance for Federal Agencies (https://www.govinfo.gov/content/pkg/BUDGET-2023-PER/pdf/BUDGET-2023-PER-3-1.pdf).

Strategic Planning Research: Policy Citation Records (Excel)
Strategic Management Research: Policy Citation Records (Excel)

Addressing Global Cultural Inequalities Through Decolonizing Knowledge Production

Prof Matthew Chew, Associate Professor in Lingnan University's Department of Digital Arts and Creative Industries, addresses global cultural inequalities and exclusion through his research publications and co-editorship of *The Palgrave Handbook of Decoloniality in Asia*. This work supports SDG 16: Peace, Justice and Strong Institutions by promoting cultural inclusion, epistemic justice, and equitable participation in knowledge production.

These publications critically examine global cultural injustice and suggest ways to address it. The first paper explores why and how Hong Kong scholars have failed or neglected to legitimize Hong Kong's local popular culture, highlighting issues of cultural marginalization and intellectual recognition. The second paper—a collaborative work by five minority and non-Western scholars—outlines a general programme for decolonizing intellectual production, advancing diverse perspectives and inclusive scholarship.

The third paper examines a practical mechanism of epistemic coloniality: how "juniority effects" disrupt the formation of intellectual lineages in modern Japan and China. This research illuminates the processes through which intellectual imperialism and unequal knowledge hierarchies are reproduced.

The first, fourth, and fifth publications emerged from an international decolonial intellectual project focusing on Asian contributions to decolonial thought and the specific forms of epistemic coloniality in Asia. Together, these works strengthen cross-cultural dialogue and international scholarly collaboration, offering perspectives on challenging exclusion and fostering a more inclusive and equitable global intellectual community.

1. How Coloniality Operates Differently in the Global East Than the Global South: The Intellectual Delegitimation of "Lowbrow" Local Culture in Hong Kong.
2. Schöpf CM, Daduya JFD, Kitossa T, Purkayastha B, and Chew MM (2025) Decolonizing epistemologies—Introduction to the special issue. *Third World Quarterly*. 46(18), 2433-2450.

3. Chew MM (2025) Meso-level processes of intellectual imperialism: The disruption of intellectual lineage formation in modern Japan and China by 'juniority effects.' *Third World Quarterly* 46(18), 2610-2628.
4. Sanchez PZ, Imbong RA, Chew MM, and Schöpf CM (eds) *The Palgrave Handbook of Decoloniality in Asia* (pp. 603-619). Palgrave Macmillan.
5. Sanchez PZ, Imbong RA, Chew MM, and Schöpf CM (2025) Conclusion. In: Sanchez PZ, Imbong RA, Chew MM, and Schöpf CM (eds) *The Palgrave Handbook of Decoloniality in Asia* (pp. 603-619). Palgrave Macmillan.

Historical Agricultural Systems, Gender Equality and Strong Institutions

Led by Professor Plamen Akaliyski, Assistant Professor (Presidential Early Career Scholar) in Lingnan University's Department of Sociology and Social Policy, the study "The Main Global Cultural Differences Today Evolved from Environment-Related Historical Agricultural Patterns," published in *World Development*, examines how historical forms of agriculture have contributed to enduring differences in contemporary societies. The research shows that agricultural systems prevalent more than a century ago are strongly associated with present-day individualism–collectivism, including important societal outcomes directly relevant to SDG 5: Gender Equality and SDG 16: Peace, Justice and Strong Institutions. The study's objective measure explicitly incorporates gender inequality and rule of law alongside other societal indicators, providing insights into gender equity, institutional quality and the protection of rights.

For SDG 5, the research highlights how different agricultural systems historically created different economic and social roles for women. In dairy-farming societies such as those in Northern Europe and parts of North America, Australia and New Zealand, women often played economically valuable roles in milk processing and trade, providing opportunities for greater economic independence and social status. The paper connects these historical patterns to comparatively greater gender equality at present, offering insights into the historical conditions associated with women's economic empowerment and equal economic opportunities. By contrast, some pastoral and shifting-cultivation systems were associated with practices and institutions that restricted women's rights and economic opportunities, highlighting historical barriers to gender equality and non-discrimination.

For SDG 16, the study demonstrates how modes of subsistence were linked to the historical development of political institutions. Agricultural systems differed in their capacity to create and sustain centralized states, effective law enforcement, property rights, and protection from violence. The research therefore contributes to understanding why rule of law and inclusive institutions developed differently across societies and why these differences remain visible today. These findings are relevant to effective institutions, rights protection and violence prevention.

By identifying deep historical roots of contemporary gender equality and institutional quality, the study provides a comparative perspective on the long-term conditions that support more equal, inclusive, and rights-protecting societies. It strengthens the evidence base for understanding women's empowerment, the rule of law and inclusive institutional development, connecting historical research with contemporary sustainable development priorities.

Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)

Research co-authored by Professor Xin Yao, Vice-President (Research and Innovation) at Lingnan University, and Changwu Huang explores how responsible artificial intelligence (RAI), environmental, social and governance (ESG), and the Sustainable Development Goals (SDGs) can reinforce one another. Their integration offers opportunities for organisations to enhance societal impact while increasing corporate value and fostering responsible innovation and sustainable business practices.

Through a systematic literature review, the study provides foundational knowledge of RAI, ESG and the SDGs, including their origins, core concepts and main implementation challenges. It then examines the connections and synergies among these frameworks, highlighting opportunities to align AI development, corporate responsibility and sustainable development.

Based on this analysis, the researchers propose an integrated framework that synthesises the relationships among RAI, ESG and the SDGs. The framework demonstrates how these approaches can be mutually reinforcing when implemented cohesively, supporting organisations in incorporating sustainability and social responsibility into technological innovation and business decisions.

The paper also discusses implications for multiple stakeholders while acknowledging implementation challenges and tensions. It emphasises the importance of viewing RAI, ESG and the SDGs as interconnected frameworks rather than separate goals. Through this integrated perspective, organisations can align them collectively within strategic planning and operational practices, promoting more effective and sustainable outcomes while addressing complex societal challenges in the AI era.

The research contributes both theoretical understanding and practical guidance for holistic approaches that harness the transformative potential of AI while ensuring that its development and deployment serve broader sustainability and social responsibility objectives. It supports SDG 9 through responsible technological innovation, with additional relevance to SDG 12 through responsible corporate practices, SDG 16 through accountable governance, and SDG 17 through policy coherence and multi-stakeholder alignment.

C. Huang and X. Yao, "Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals

(SDGs)," in *IEEE Computational Intelligence Magazine*, vol. 20, no. 4, pp. 20-41, Nov. 2025, doi: 10.1109/MCI.2025.3593452.

Lingnan University 2025/2026 SDG Report
SDG 17 - PARTNERSHIPS FOR THE GOALS



55th in the world
(THE Sustainability Impact Ratings 2026)

No. 1 in Hong Kong
(THE Sustainability Impact Ratings 2026)

280+
Partners around the world

1st
United Nations University Hub in Asia

Lingnan University advances **SDG 17: Partnerships for the Goals** by strengthening collaboration across sectors, disciplines and borders. As it transforms into a comprehensive research-oriented university in the digital era, Lingnan connects academic expertise with partners in government, industry, international organisations and local communities to support knowledge exchange, research innovation and sustainable development. The following initiatives demonstrate how these partnerships harness shared expertise and digital opportunities to address societal challenges, strengthen global cooperation and create a more inclusive and sustainable future.

Advancing Global Partnerships for Sustainable Development Through Times Higher Education (THE) Engagements

During academic year 2025/2026, Lingnan University strengthened its engagement with Times Higher Education (THE) through the THE World Academic Summit 2025, THE Global Sustainable Development Congress 2026, and THE Digital Universities Asia 2026. These international platforms offered opportunities to connect with universities and stakeholders worldwide, exchange knowledge, and explore collaboration in higher education, sustainable development, and digital transformation. Supporting SDG 17: Partnerships for the Goals, these engagements reflect Lingnan's commitment to building global partnerships and advancing collective responses to shared challenges.

1. Connecting Global Partners for Human-Centred AI in Higher Education

Lingnan University contributed to international dialogue on responsible digital transformation at the **THE World Academic Summit 2025**, held from **7–9 October**

2025 in Thuwal, Saudi Arabia. Through a well-received morning roundtable and a panel organised in partnership with Lingnan, the University brought together perspectives from academia and industry to explore how AI can enhance higher education. These exchanges embodied SDG 17's emphasis on multi-stakeholder partnerships and knowledge-sharing.

During the panel, Professor Joe Qin, President of Lingnan University, joined representatives from Tsinghua University, the University of Bristol and Siemens to discuss opportunities and challenges in AI adoption. He shared Lingnan's human-centred approach, including campus-wide access to ChatGPT and a compulsory core course in generative AI. The discussion connected complementary expertise in education, research and technology, highlighting the importance of collaboration in ensuring that digital transformation serves students, educators and communities.

Professor Qin also highlighted Lingnan's collaboration with other Hong Kong universities on a shared AI platform that supports faculty in preparing teaching materials. This practical example demonstrated how pooling expertise and resources across institutions can strengthen teaching capacity and extend the benefits of educational innovation.

The Summit enabled Lingnan both to contribute its experience and to learn from international partners, providing a foundation for further cooperation. Lingnan's subsequent rise to **joint 257th globally in the THE World University Rankings 2027** reflects its growing international standing. Its engagement at the Summit underscored a broader commitment to translating global connections into shared learning and collaborative action—central to the spirit of SDG 17.

Post-event summary





2. Advancing Global Partnerships for Quality Education in the AI Era

Lingnan University shared its approach to delivering quality education in the age of artificial intelligence at the **THE Global Sustainable Development Congress 2026**, **held from 22–25 June 2026 in Jakarta, Indonesia**. Its engagement provided a platform for international knowledge exchange on responsible AI adoption,

interdisciplinary collaboration and educational transformation, supporting SDG 17: Partnerships for the Goals.

In the accompanying THE feature, Professor S. Joe Qin, President of Lingnan University, highlighted the **University's achievement of world No. 1 for SDG 4: Quality Education for two consecutive years—in the 2025 THE Impact Rankings and the 2026 Sustainability Impact Ratings**. This recognition reflects Lingnan's commitment to holistic, whole-person liberal arts education while equipping students to navigate a rapidly changing digital world.

Professor Qin outlined how Lingnan has embedded generative AI across its curriculum, providing campus-wide access to tools and training students in their effective and responsible use. Critical thinking remains central: students are encouraged to question AI-generated outputs, verify information and use technology to enhance rather than replace their own judgement. Training also addresses data privacy, copyright, intellectual property and transparent acknowledgement of AI-assisted work.

Lingnan's experience offers insights for universities seeking to align educational innovation with societal and workplace needs. Its undergraduate employment rate of around 99 per cent in the 2023–24 academic year demonstrates strong graduate employability.

The University also promotes collaboration across disciplinary boundaries, bringing computer scientists and STEM scholars together with experts in philosophy, humanities, social sciences and business. Its School of Data Science and Wu Jieh Yee School of Interdisciplinary Studies support these connections.

Through its engagement with THE and the Congress, Lingnan contributed its experience to global discussions on sustainable higher education. This knowledge-sharing supports SDG 17 by encouraging collaborative approaches to responsible innovation and inclusive, future-ready education.

Post-event summary





3. Strengthening Global Partnerships for Responsible AI at THE Digital Universities Asia 2026

Lingnan University participated in **THE Digital Universities Asia 2026, held in Chengdu on 24–25 September 2026**, joining higher education stakeholders to exchange insights on digital transformation and the evolving role of AI in universities. Lingnan's engagement included a fireside chat with THE's APAC Director and a panel discussion featuring Professor Joe Qin, President of Lingnan University. These exchanges provided opportunities for cross-institutional dialogue, knowledge-sharing and exploration of collaborative approaches to responsible AI adoption. Supporting SDG 17: Partnerships for the Goals, Lingnan's participation underscored its commitment to

strengthening international connections and working with global partners to address shared challenges in higher education.

In a feature prepared by THE, Professor S. Joe Qin, President of Lingnan University, outlined the University's approach to adapting liberal arts education for the digital era while maintaining its commitment to whole-person development. Lingnan's achievement of world No. 1 for SDG 4: Quality Education in the 2025 THE Impact Rankings underscores its commitment to equitable educational opportunities, lifelong learning and preparing students for the future.

Lingnan provides free, campus-wide access to generative AI tools and has introduced a compulsory first-year course combining AI literacy with critical thinking and ethical awareness. These initiatives offer experience for international peers seeking to harness technology responsibly while preserving human judgement and educational values.

Beyond campus, Lingnan connects with communities through free online learning resources, gerontechnology training and engagement with local schools. These activities extend access to knowledge and support lifelong learning across generations.

International collaboration also underpins Lingnan's development. The Lingnan University Institute for Advanced Study connects faculty, students and the wider community with leading scholars worldwide, supporting interdisciplinary research and knowledge exchange. The Lingnan-60 Global Talent Recruitment scheme further strengthens its international academic network.

Through its partnership with THE and its hosting of Digital Universities Asia 2025, Lingnan brought diverse stakeholders together around shared educational challenges. These engagements advance the spirit of SDG 17 by fostering global dialogue and opportunities for collective action towards inclusive, human-centred digital education.

Post-event Summary


Presidential fireside chat | AI across disciplines: Creating new models for collaboration
Elevating university excellence to power Asia's digital future


2026



International Conference – Arts for Wellbeing: Creativity, Adaptability, Sustainability

The Wong Bing Lai Music and Performing Arts Unit successfully hosted its inaugural international conference, *Arts for Wellbeing: Creativity, Adaptability, Sustainability*, on 6 February 2026 at Lingnan@WestKowloon, M+, Hong Kong. Supported by the Tin Ka Ping Foundation, the conference brought together leading scholars, experts, and practitioners for in-depth interdisciplinary discussions on the theoretical, pedagogical, and practical dimensions of holistic wellbeing. The conference explored how creative practices, alongside medical and psychological support, can address urban stress and foster mental health and well-being, community engagement and social cohesion through community music and performing arts.

The conference attracted approximately 120 scholars, artists, educators, and cultural practitioners from Hong Kong, the Greater Bay Area, and overseas, fostering arts education, interdisciplinary learning, international collaboration and knowledge exchange. Participating institutions included Free University of Berlin, Rhode Island School of Design, West Chester University of Pennsylvania, The Chinese University of Hong Kong, Hong Kong Metropolitan University, and Beijing Normal University-Hong Kong Baptist University (BNBU).

The conference contributed to SDG 3 through its focus on holistic well-being and mental health; SDG 4 through arts education and professional knowledge exchange; SDG 11 through discussions on the role of creative practices in fostering socially connected, inclusive urban communities; and SDG 17 through cross-institutional and international partnerships connecting academia, the arts and community practice.





Monitoring Greenhouse Gas Emission Point Sources From China Space Station

With Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, participating in the research collaboration, this project aims to develop a greenhouse gas monitoring system using observations from the China

Space Station and related satellite platforms. Running from August 2025 to August 2028, it will combine space-based observations, data analytics, ground-truth verification and blockchain technology to identify and quantify emission point sources and provide secure, transparent and traceable emissions data.

SDG 7 – Affordable and Clean Energy

The project aims to provide reliable greenhouse gas emissions data that can inform clean energy transition strategies. By identifying emission sources and analysing trends, it could help policymakers and industry stakeholders assess emissions associated with energy use and prioritise opportunities for lower-carbon energy systems.

SDG 9 – Industry, Innovation and Infrastructure

The project advances space-based environmental monitoring and secure digital infrastructure by integrating satellite observations, data analytics and blockchain technology. Its planned data-processing framework and geospatial visualisation platform will support the development of innovative tools for emissions monitoring, while blockchain integration aims to strengthen data integrity, transparency and traceability.

SDG 13 – Climate Action

The project aims to strengthen the capacity to identify, quantify and track greenhouse gas emissions, supporting evidence-based climate mitigation and carbon reduction strategies. By combining space-based observations with ground-truth verification, it seeks to provide validated emissions data for regulatory monitoring and compliance assessment, with potential future applications in carbon credit verification.

SDG 17 – Partnerships for the Goals

The project brings together expertise from Lingnan University, the Hong Kong University of Science and Technology, Hong Kong Baptist University, and the Technology and Engineering Center for Space Utilization of the Chinese Academy of Sciences, with support through the Innovation and Technology Commission's Innovation and Technology Support Programme. This cross-institutional collaboration combines capabilities in space technology, environmental monitoring and digital systems to advance climate technology development and support shared sustainable development goals.

Advisory Services for Hong Kong Power Sector's Participation in the Southern China Carbon Capture, Utilisation and Storage (CCUS) System

Undertaken by Professor LI Jia, Associate Professor at Lingnan University's Wu Jieh Yee School of Interdisciplinary Studies, this advisory project examines how Hong Kong's

power sector could participate in regional carbon capture, utilisation and storage (CCUS) infrastructure in Southern China. Scheduled from August 2025 to February 2026, the project focuses on assessing potential CO_2 storage sites in Guangdong, comparing pipeline and shipping options, and developing commercial and cost models. It aims to provide a strategic participation roadmap aligned with CLP's decarbonisation strategy and regional CCUS development timelines.

SDG 7 – Affordable and Clean Energy

The project supports power sector decarbonisation by exploring how Hong Kong's electricity generation sector could access regional CO_2 transport and storage infrastructure. Its assessment of technical feasibility and costs aims to inform commercially viable approaches to reducing power-sector emissions, contributing to the transition towards lower-carbon electricity generation.

SDG 9 – Industry, Innovation and Infrastructure

The project supports the planning of cross-border low-carbon infrastructure, including CO_2 pipelines, shipping routes and geological storage facilities. By evaluating infrastructure requirements, storage capacity and commercial arrangements, it aims to inform the development of regional CCUS networks and strengthen the evidence base for sustainable industrial infrastructure investment.

SDG 13 – Climate Action

The project explores potential pathways for large-scale carbon emissions reduction through Hong Kong's participation in regional CCUS hubs. Its technical, regulatory and economic assessments will inform a strategic roadmap for participation between 2025 and 2040, supporting evidence-based climate mitigation planning and alignment with regional decarbonisation efforts.

SDG 17 – Partnerships for the Goals

The project supports cross-border collaboration among CLP Power Hong Kong Limited, Guangdong CCUS stakeholders, China Southern Power Grid, academic and geological experts, and relevant government and regulatory agencies. By examining shared infrastructure, business arrangements and regulatory requirements, it aims to facilitate coordination between Hong Kong and Guangdong in pursuit of shared climate objectives and regional low-carbon development.

Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)

Research co-authored by Professor Xin Yao, Vice-President (Research and Innovation) at Lingnan University, and Changwu Huang explores how responsible artificial intelligence (RAI), environmental, social and governance (ESG), and the Sustainable

Development Goals (SDGs) can reinforce one another. Their integration offers opportunities for organisations to enhance societal impact while increasing corporate value and fostering responsible innovation and sustainable business practices.

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Based on this analysis, the researchers propose an integrated framework that synthesises the relationships among RAI, ESG and the SDGs. The framework demonstrates how these approaches can be mutually reinforcing when implemented cohesively, supporting organisations in incorporating sustainability and social responsibility into technological innovation and business decisions.

The paper also discusses implications for multiple stakeholders while acknowledging implementation challenges and tensions. It emphasises the importance of viewing RAI, ESG and the SDGs as interconnected frameworks rather than separate goals. Through this integrated perspective, organisations can align them collectively within strategic planning and operational practices, promoting more effective and sustainable outcomes while addressing complex societal challenges in the AI era.

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C. Huang and X. Yao, "Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)," in *IEEE Computational Intelligence Magazine*, vol. 20, no. 4, pp. 20-41, Nov. 2025, doi: 10.1109/MCI.2025.3593452.

Advancing Quality Education through AI Innovation and Global University Partnerships

Lingnan University is advancing SDG 4: Quality Education and SDG 17: Partnerships for the Goals through international collaboration, AI-enabled educational innovation and joint talent development.

On 6–7 November 2026, Prof S. Joe Qin, President and Wai Kee Kau Chair Professor of Data Science, participated in the Beijing Forum and a thematic forum on digital intelligence education. These engagements strengthened dialogue on higher education transformation and expanded opportunities for collaboration between Beijing and Hong Kong.

During the forum, Lingnan signed a Memorandum of Understanding with the Digital Intelligence International Development Education Alliance (DI-IDEA), initiated by Peking University and comprising more than 30 higher education institutions worldwide. As a founding member, Lingnan contributes to this international knowledge-sharing network exploring innovation in higher education. The partners will explore establishing the "Lingnan-DI-IDEA Joint Centre cum DI-IDEA Asia Pacific Centre" and its potential location in Hong Kong's Northern Metropolis University Town. Proposed collaboration will focus on industry–academia–research partnerships, educational technology development and the practical application of research outcomes.

President Qin also presented perspectives on AI's impact on higher education at a university presidents' roundtable, exchanging insights with local and international leaders on educational value and institutional transformation.

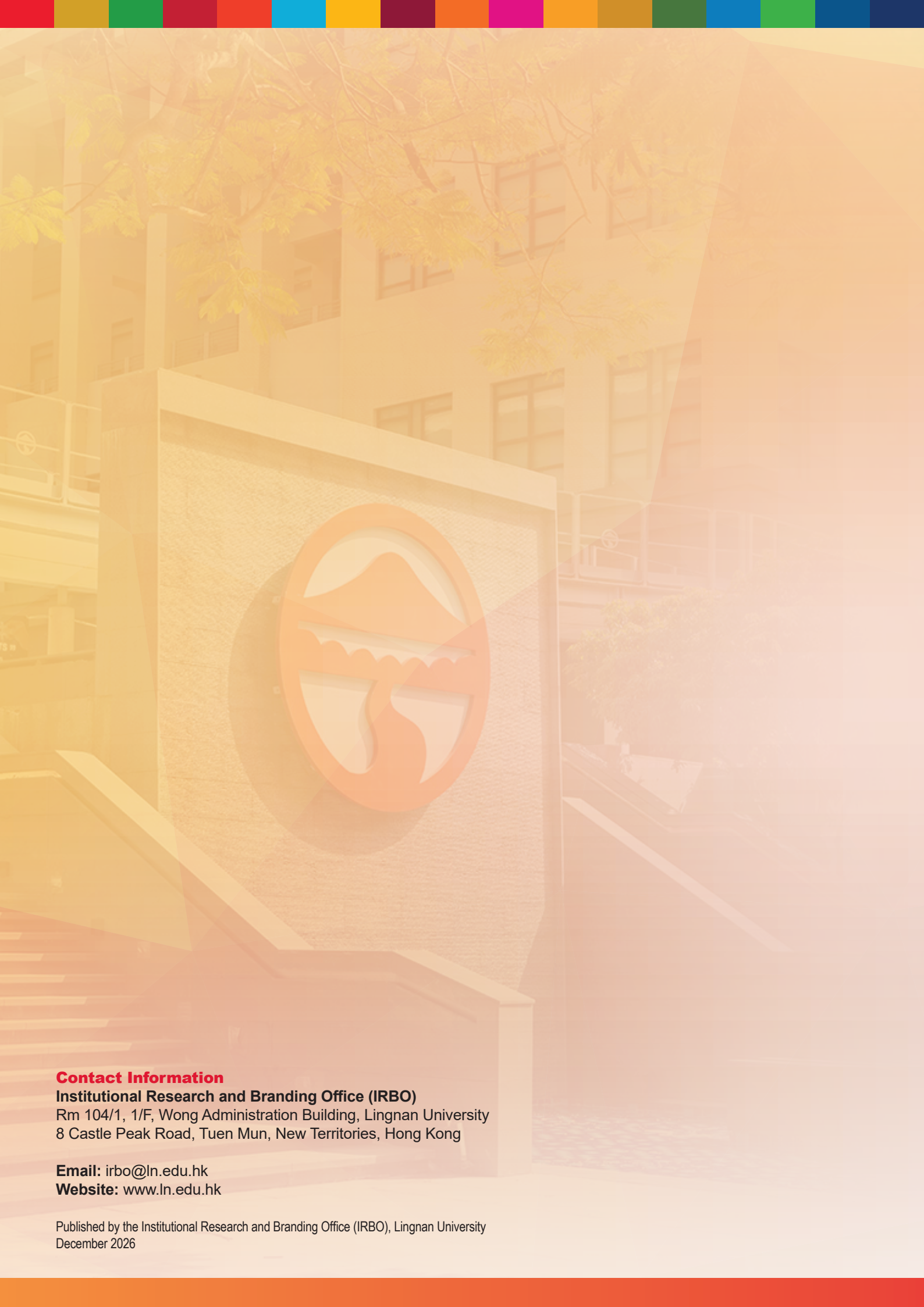
Building on their longstanding partnership, Lingnan and Peking University's Yuanpei College have jointly organised the Lingnan-Yuanpei STEM Summer Academy for three consecutive years since 2024. They are further developing cooperation in STEM education, innovation and entrepreneurship education, and collaborative talent development.

The delegation also visited Beijing Normal University to discuss AI for Education, joint education programmes and cooperation through the Beijing-Hong Kong University Alliance.

Through its "Liberal Arts + Technology" and "AI +" initiatives, Lingnan connects educational innovation with cross-institutional partnerships, knowledge exchange and capacity building, supporting quality education and strengthening collaboration across Hong Kong, the Chinese Mainland and the wider international higher education community.


文明的和谐与共同繁荣
科技变革与多元文明
THE HARMONY OF CIVILIZATIONS AND PROSPERITY FOR ALL


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