

Lingnan University 2024/2025 SDG Report

SDG 15 – LIFE ON LAND



40%+
Trees on Campus are Native Species



32
Undergraduate Courses



118
Research Outputs



71
Research Projects and Grants

Lingnan University is committed to advancing SDG 15 – Life on Land through research, education, and community engagement that protect biodiversity and promote sustainable land use. By bridging science, policy, and practice, Lingnan addresses key ecological challenges and fosters harmony between people and nature. From conserving insect pollinators and farmland ecosystems to expanding sustainability education and field-based research, the University actively contributes to preserving terrestrial ecosystems and nurturing future environmental leaders.

Research Projects and Publications

From 2018 to 2025, the Science Unit (SU) at Lingnan University has conducted over 130 research projects, supported by more than HK\$30.6 million in external funding. These projects advance understanding of Hong Kong's ecosystems and underscore the urgent need for stronger action to protect biodiversity and the environment. Highlighted below are two major ongoing projects (2024–25) contributing directly to SDG 15 – Life on Land.

Revitalising Farmland Ecology to Conserve Insect Pollinators and Ecosystem Services in Mui Wo

This project enhances biodiversity and ecosystem services on Lantau Island by establishing a certification programme for pollinator-friendly farms. It gathers baseline data on key insect

pollinators, identifies nectar-providing plant species, and promotes sustainable farming practices that reduce pesticide use. By demonstrating the economic and ecological benefits of pollination, the project encourages nature-based, sustainable agriculture that supports both farmers and local ecosystems.



Nature-Based Greening Solutions for Insect Pollinator Conservation and Sustainable Agriculture Development

Focusing on urban biodiversity and sustainable agriculture, this project develops nature-based greening solutions to support insect pollinators in Hong Kong. It seeks to generate the first comprehensive understanding of six major pollinator groups and their floral preferences, producing a plant-insect interaction catalogue to guide effective greening and conservation strategies. The outcomes will inform urban farming and landscape planning, ensuring that green spaces contribute to both pollinator conservation and sustainable food systems.

Together, these projects reflect Lingnan University's strong commitment to advancing SDG 15 by integrating ecological research with practical conservation and sustainable land-use strategies.

Highlighted on-going projects in 2024-25: (Lingnan staff in bold):

- 1) Wise use of wetlands - understand novel community assembly processes across a human-modified landscape
- 2) The Impact of Urban Microclimate and Built Environment on Indoor Air-Conditioning Energy Efficiency in Hong Kong

- 3) Revitalising farmland ecology to conserve insect pollinators and ecosystem services in Mui Wo
- 4) Investigating nutrient assimilation and transfer in the lichen symbiosis
- 5) Refining conservation genetics and wildlife forensic methods to combat the illegal wildlife trade

Academic Programmes and Courses:

The Master of Science in Sustainability and Environmental Analytics (SEA)

Lingnan launched the Master of Science in Sustainability and Environmental Analytics (SEA) in 2024-25, accumulative with a total of approximately 80 students enrolled in the programme. The programme includes courses centered on sustainability, environmental science, and data analysis, designed to provide students with the essential knowledge and skills to address the challenges of sustainable development and environmental management. With the support of the Postgraduate Student Learning Enhancement Fund (PSLE) for two consecutive years, students have enhanced opportunities to participate in various sustainability initiatives, such as the Bamboo Afforestation Workshop in Sheung Shui, which examines the connection between environmental protection and bamboo afforestation in Hong Kong, as well as the Wetland Management Training Camp at Mai Po Nature Reserve, which deepens students' understanding of waterbird and wetland conservation, environmental education, ecotourism, and wetland research and monitoring by utilizing the Nature Reserve as a "living case study."

MPhil and PhD in Environmental Science

Lingnan University established its MPhil Programme in Environmental Science in 2020–21 and the PhD Programme in 2024–25 to train researchers with strong theoretical and practical foundations in addressing environmental challenges. The programmes combine rigorous academic training with hands-on research, preparing students for impactful careers in sustainability, ecology, and conservation.

Supervised by a team of eight distinguished faculty members, students engage in independent research spanning three key areas:

1. Evolution, Ecology, and Conservation
2. Geographic Information Systems and Urban Climate
3. Environmental Health, Renewable Energy, and Applications

To date, nine graduates have completed the programme and now contribute to NGOs and government agencies promoting biodiversity conservation and environmental education.

Students specializing in Terrestrial Ecology investigate local species and ecosystems to advance understanding of Hong Kong's biodiversity. Current research includes assessing toxin variation

and parasite burdens in the Hong Kong Newt (*Paramesotriton hongkongensis*), exploring the diversity of Hong Kong's opiliones (harvestmen), and studying the population and taxonomic status of blind snakes and Bogadek's burrowing lizards. These studies generate valuable data on species distribution, adaptation, and conservation, contributing to regional and global biodiversity knowledge.

By combining theoretical insight with field-based learning, Lingnan's Environmental Science research programmes equip students to become scientists, educators, and policy contributors who promote sustainable environmental management. The University's commitment to training the next generation of environmental leaders underscores its broader mission to support Sustainable Development Goal 15 – Life on Land, advancing both scientific discovery and stewardship of the natural world.

Minor in Environmental and Scientific Literacy

In response to the rapid growth of the human population and ongoing technological advancements, Lingnan introduced the Minor in Environmental and Scientific Literacy in 2020–21. This minor programme prepares students to tackle various scientific and technological challenges related to the natural environment by examining nature conservation through both artistic and scientific perspectives, improving their understanding of climate change and sustainability, and engaging with controversial topics in earth science.

Undergraduate courses

Among the courses recently offered in Lingnan, 32 undergraduate-level courses address SDG15 Life on Land, with 11 out of the 32 highly focus on nature understanding and environmental conservation. Example courses include:

- Nature Appreciation through Arts and Creative Media
- Ecology: The Science of Environmental Issues
- Natural History of Hong Kong
- Global Environmental Politics
- Human-Animal Relationship In History
- Conservation and Biodiversity