

Lingnan University SDG Report



Lingnan, as an advocate of sustainable environment and green living, put great effort in and support to research projects and educational programmes related to smart consumption and energy saving. These projects and programmes enhance the staff's, students' and public's awareness of environmental challenges nowadays and their implications to our daily life.

Sustainable Campus Development

Solar panels around campus

Lingnan is committed to combating climate change and achieving carbon neutrality before 2050. As part of this commitment, it has recently installed 290 solar panels on the Chan Tak Tai Auditorium, Wong Administration Building, and Lau Chung Him Building, generating approximately 200,000 kWh of renewable energy annually. Besides the PV panel installation, Lingnan adopted different equipment which is powered by solar energy, such as solar mosquito magnet, solar bollard light and solar high-level light. To enhance community engagement and awareness, 3 digital panel with real-time dashboard have been set up at the Lau Lee Yuen Haan Amenities Building, Lau Chung Him Building and Main Building for real-time visualizing the information and performance of the PV system.

More detailed information is available at:

<https://www.ln.edu.hk/ocdm/sustainability/renewable-energy>

Energy saving measures

Along with the installation of technological devices including lighting sensors and LED lighting, the Office of Campus Development and Management has taken university-wide energy saving measures to reduce unnecessary energy consumption and promote green habits.

More detailed information is available at: <https://www.ln.edu.hk/ocdm/sustainability/energy>

Cross-institutional Collaboration on Sustainable Development under the Hong Kong Sustainable Campus Consortium (HKSCC)

The Hong Kong Sustainable Campus Consortium (HKSCC) was formed in 2010 as a joint effort of the eight UGC-funded universities to promote the development and implementation of sustainability solutions through research and teaching, campus policies and operations, local and international outreach, and knowledge exchange. The HKSCC facilitates cross-institutional communication in green events and encourage co-creation of a supporting network in design, execution, and evaluation of environmental campaigns and social media influence.

Smart Campus Technology on Responsible Consumption

In 2022–23, Lingnan has collaborated with other universities on numerous installations and facilities to encourage responsible consumption of energy and resources. Data collected will be of immediate visualization for the university community through Internet of Things (IoT) platforms, such that a sense of behavioural change will be driven towards a greener lifestyle. Installations include “Smart Electricity Metre” in eight hostels on Lingnan campus that measures real-time electricity data on campus. Data Consumption Dashboards and Displays has been set up in the lobby of the eight hostels to raise awareness on sustainability among staff and students.

Research

Lingnan scholars has been active in research related to sustainability and carbon neutrality. Three highlighted projects are (1) “A Smart Intelligent GeoAI Solution to Predict & Tackle Mosquito-borne Diseases in Hong Kong” funded by Innovation and Technology Fund (ITF), (2) “Exploring the role of big data analytics (BDA) in promoting smart low-carbon cities: A human-centered, community-based, and deep engagement approach in Hong Kong” (in the capacity of Co-I) funded by UGC Research Impact Fund (RIF), and (3) Carbon Neutral Action Programme funded by the Sustainable Development Fund (SDF) from the Environment and Ecology Bureau.

The ITF Project

The ITF project aimed at utilizing AIoT sensors and GeoAI technology to create a real-time smart and predictive mosquito monitoring solution in Hong Kong. Both the intelligent

mosquito killer lamps and the wireless intelligent weather stations are AIoT sensors that equipped with solar panels. The project will also examine the geographical area characterized by the lowest sunlight intensity in which the solar panels would be capable of sustaining uninterrupted operation for at least one week.

More detailed information available at: <https://geoaimq.ln.edu.hk/en/our-technology>

The RIF Project

The RIF research project led by the Hong Kong Baptist University aimed to test how energy behavioural change of 600 sampled households in four communities of Hong Kong could be catalysed by the combined use of app-based big data analytics and innovative engagement strategies. The study aims to develop and test a model of “Smart Low-carbon Community” for enabling behavioural change among residential electricity consumers. Lingnan University, in the capacity of Co-I has been involved in the GIS, energy modelling and energy behavioural study of communities in Sheung Shui. Lingnan students have also contributed by supporting community education on better household energy consumption.

More detailed project output available at:

<https://geog.hkbu.edu.hk/upload/files/1/file/62cb770cd9a3e.pdf>

The SDF Project

It aims to (1) enhance the youth’s understanding and reflection on the concepts of “carbon emission”, “waste reduction” and “low carbon lifestyle” including energy saving, (2) encourage the youth and their family members to practise low carbon living, and (3) promote sustainable low carbon living to the wider public and fostering community participation. A series of training, workshops and activities have been conducted and learnings from participants will be gathered to support the government on policy-making in climate education.

Outreach activities and study on various topics were conducted, e.g. the use of LED light bulbs and IoT based power adaptor. In 2022–23, 1,023 participants were engaged in 31 activities in the forms of workshops and exhibitions.

More detailed information available at: <https://www.ln.edu.hk/chs/lei/participatory-programmes/sdf>.

Academic Courses

Among the courses recently offered in Lingnan, 26 undergraduate-level courses address SDG7 Affordable and Clean Energy, with 5 out of the 26 highly focus on green energy and international environmental politics. The five courses are:

[CLC9019](#) Policy and Technology for Urban and Rural Development

[ECO4324](#) Environmental Economics and Policy

[GOV4303](#) Global Environmental Politics

[POL3203](#) International Politics

[SCI3005](#) Earth Science

More information about courses covering components related to SDGs:

<https://www.ln.edu.hk/scienceunit/SEI.php>