

# Sustainability Report

## 可持續發展報告

2006



香港中文大學  
The Chinese University of Hong Kong

Towards a More  
Sustainable Future  
邁向可持續未來

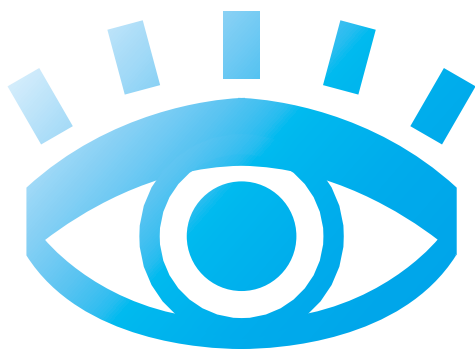


**Vision**  
前瞻



## Vision

### 前瞻



From this year, the *Sustainability Report* will take the place of the *Environmental Report* to better reflect the University's strategic measures for ensuring environmental sustainability. As there are fundamental differences between a sustainability and an environmental report in terms of coverage, content and processes involved, Business Environment Council Ltd. (BEC) had been invited to establish a set of Sustainability Indicators for the CUHK campus in 2005. These indicators will facilitate the transition of a focus on environmental conservation to one on the broader concept of sustainable development. This move is fully in line with the University's commitment to continuously improve the environmental quality of our campus, and to set a model in environmental education and environmental management. This set of indicators will also be used in future sustainability reports.

In 2006, the University Steering Committee on Environment (USCE) and the university communities were consulted on the identified set of indicators. In 2007, the Hong Kong Productivity Council (HKPC) was hired to pilot data collection for the indicators. The data were collected by means of interviews and site visits taking place over six months. They are summarized in this report.



由今年起，我們以《可持續發展報告》取代《環境報告》，以便更能反映大學為確保環境可持續發展而推行的策略性措施。由於可持續發展報告和環境報告在涵蓋範圍、內容和編撰過程上有根本分別，我們在二零零五年邀請商界環保協會為中大校園制訂一套可持續發展指標，幫助校方把關注重點從環境保育擴大至可持續發展概念。此舉與中大持續改善校園環境質素、在環境教育和環境管理方面樹立典範的努力完全一致。這套指標，也可供日後撰寫可持續發展報告之用。

二零零六年，我們就所定指標諮詢大學環境事務督導委員會和中大師生，二零零七年聘請了香港生產力促進中心開始按指標收集數據，在六個月內透過訪問和實地視察取得所需資料。現把所集數據總結成本報告。



**University Profile**  
大學概覽

## University Profile

### 大學概覽



The Chinese University of Hong Kong (CUHK), with its 134-hectare campus featuring over 130 buildings, has the largest campus among tertiary institutions in Hong Kong.

The University has her origin in three colleges: Chung Chi College, New Asia College and United College. In 1963, the three colleges were amalgamated to form The Chinese University of Hong Kong and a fourth College, Shaw College, was added in 1986. At present (2006), the University has seven faculties: Arts, Business Administration, Education, Engineering, Medicine, Science, Social Science and the School of Law. There are about 5,000 staff members and the total number of post-graduate and undergraduate enrolment stands at over 17,000. The University also provides more than 5,500 hostel places to students and has staff quarters comprising about 300 flats for staff and their families.

After the reversion to a four-year normative curriculum in 2012, the University will recruit an extra 3,000 undergraduates. To cater for these students, the University will build additional colleges. In May 2006, Morningside Foundation and Morningside Education Foundation and the S.H. Ho Foundation made generous donations to CUHK to establish Morningside College and S.H. Ho College. There are also plans to establish two other new hostels in the western part of the campus in preparation for the construction of a third college.

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香港中文大學（簡稱「中大」）校園面積達一百三十四公頃，共有一百三十多座樓宇，面積之大為香港專上學院之冠。

中大的前身，是崇基、新亞和聯合三所書院。一九六三年，三所書院合併成為香港中文大學，一九八六年更增添逸夫書院。中大現有八個學院，分別為文學院、工商管理學院、教育學院、工程學院、醫學院、理學院、社會科學院和法律學院，教職員約五千名，本科生和研究生總數保持在一萬七千人以上。大學亦為學生提供五千五百多個宿位，另設教職員宿舍，提供約三百個住宅單位供教職員及其家人居住。

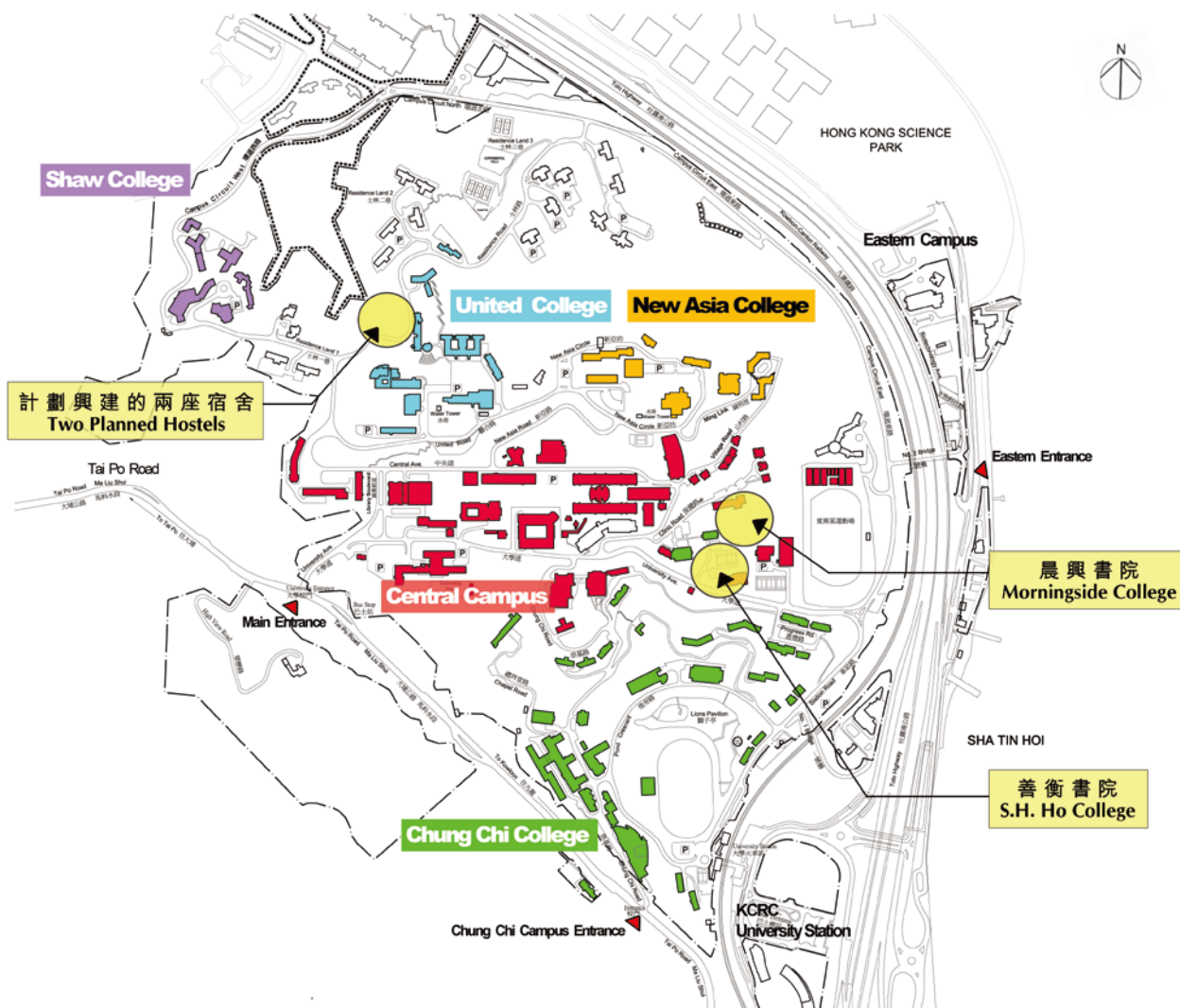
二零一二年回復四年制後，中大將多招收三千名本科生。為配合這些學生的需求，中大將興建更多書院。二零零六年五月，晨興基金、晨興教育基金以及何善衡慈善基金會慷慨捐款，分別成立晨興書院和善衡書院。中大也計劃在校園西部興建兩棟新宿舍，為興建第三所新書院作準備。

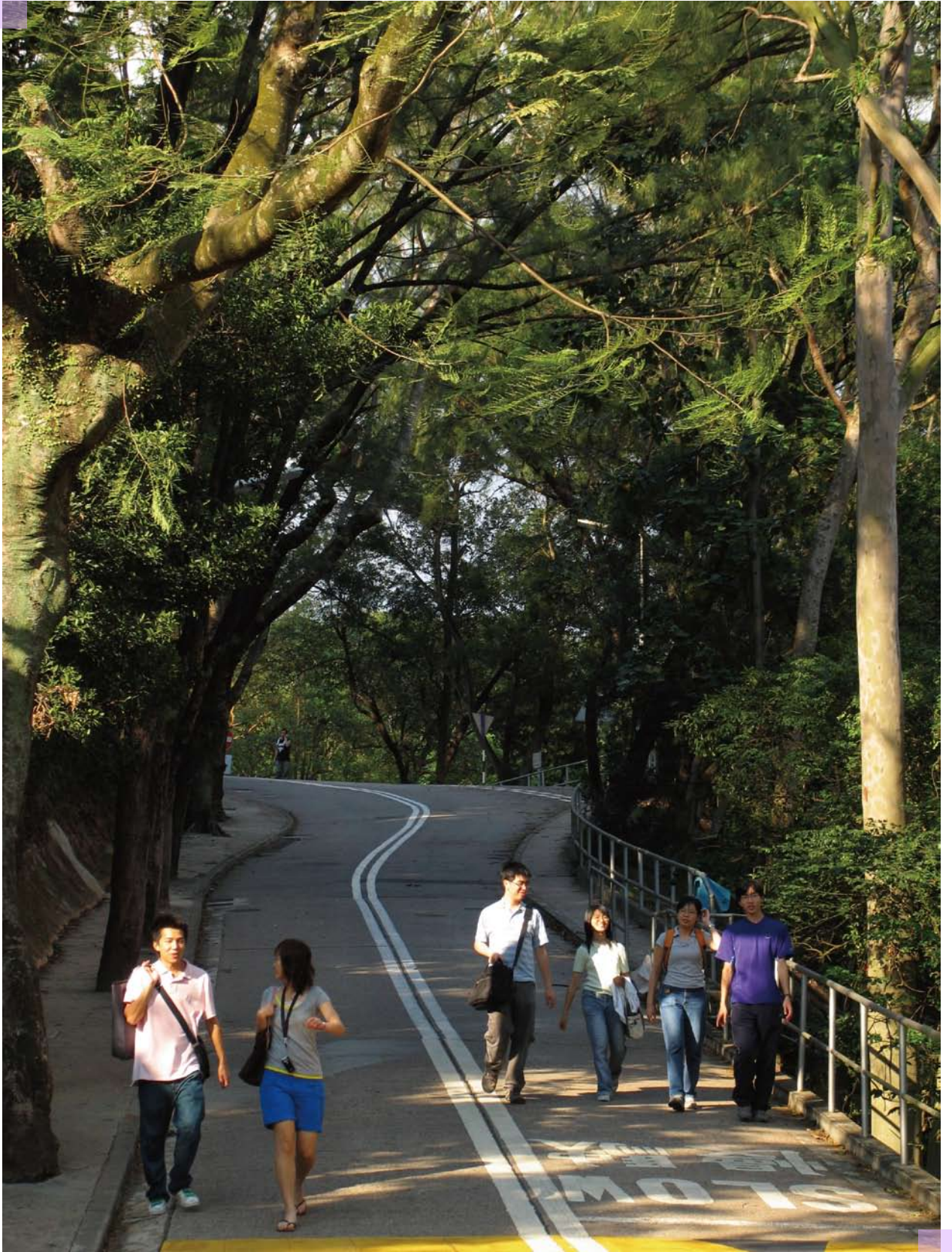
**Table 1. Total Number of Full-time Equivalent (FTE) Students & Total Number of Full-time Staff in CUHK**

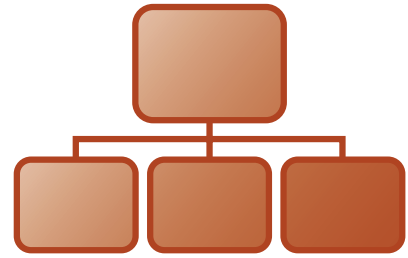
表1. 中大等全日制學生總數及全職教職員總數

	Number 人數
Total Number of FTE Students (including UGC-funded & Self-financed) 等同全日制學生總數 (包括大學教育資助委員會資助的學生及自費學生)	18,277.37
(kWh / total number of FTE students & full-time staff) 全職教職員總數	5,794.00

**Location of New Colleges 新書院位置**







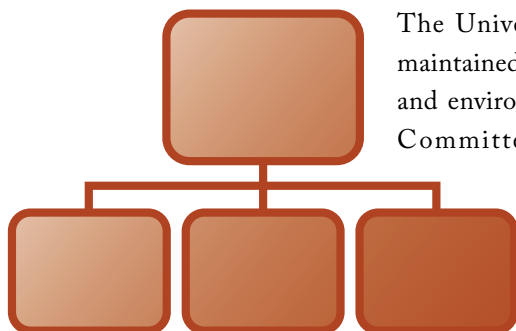
# Governance Structure

## 管治架構



## GOVERNANCE STRUCTURE

### 管治架構



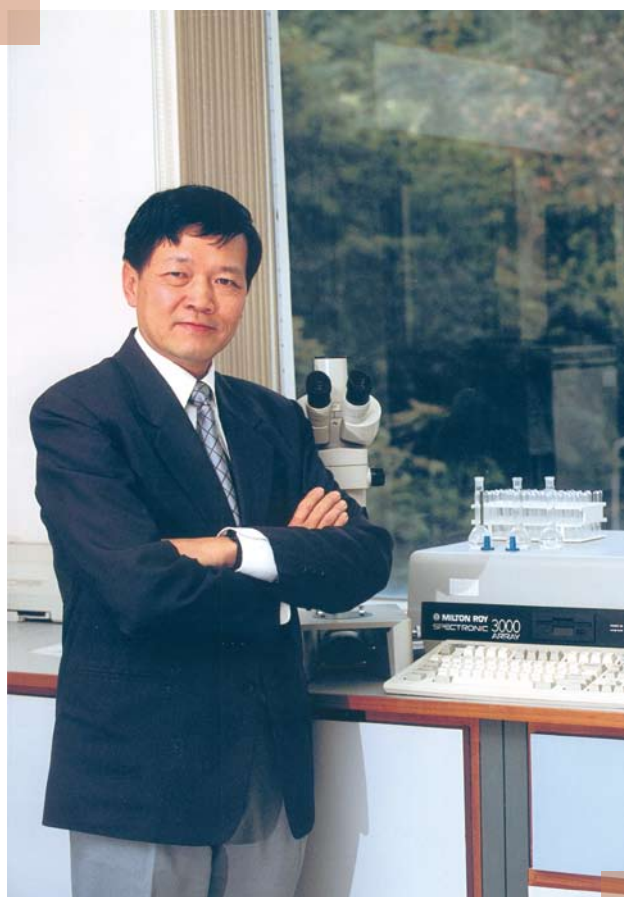
The University has established several committees to ensure balance is maintained among development needs, the safety of the campus community, and environmental conservation and enhancement. The University Steering Committee on Environment (USCE) is a subcommittee under the

Administrative Affairs Committee (AAC) whose major tasks are to promote environmental awareness among students and staff; recommend for consideration by AAC strategies and policies relating to environmental protection; stop any activity on campus that contravenes legislation; and undertake any other duties/

functions on environmental matters assigned by the Vice-Chancellor.

The Campus Planning Committee specializes in the future planning of campus development. The Standing Committee on Campus Geotechnical Matters monitors slope projects and has the right to approve slope improvement projects. The Building Committee is a project-based ad hoc committee that deals with issues relating particularly to building projects. The Campus Landscaping Enhancement Committee focuses on landscaping and greening issues.

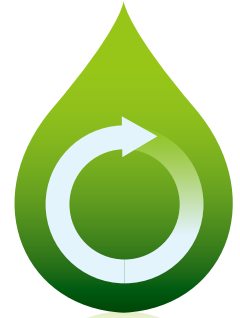
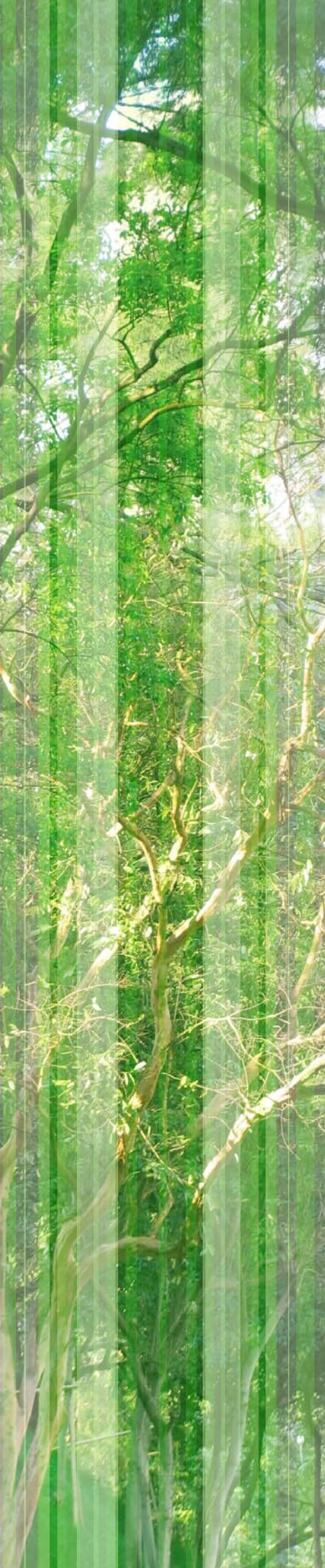
Meanwhile the relevant offices and units work to maintain the University's hygiene, safety and environmental standards consistently at above legally required levels, while the colleges and their environmental committees help to promote environmental awareness among students and staff, and maintain a high standard of environmental hygiene.



中大成立了多個委員會，確保在發展需要、師生安全、環境保育與改善等各方面取得平衡。大學環境事務督導委員會隸屬行政事務委員會，主要職責是促進教職員和學生的環保意識，向行政事務委員會建議環保策略，遏止校園內任何違反環保條例的活動，以及執行校長指示的環保工作。校園計劃委員會專門策劃校園的未來發展。大學校園岩土事務委員會監察斜坡安全，有權批核斜坡改善工程。建設委員會是因應個別項目而設立的專責委員會，處理與興建項目有關的事宜。校園景觀美化委員會專責環境美化和綠化事宜。

此外，各有關部門和單位致力確保中大的衛生、安全和環境均高於法例的要求，各書院及其環境委員會也協助提高師生環保意識，保持校園環境清潔。

◀  
Prof. K. C. Lam  
Chairman of the University Steering Committee on Environment  
大學環境事務督導委員會主席林健枝教授



# Performance Indicators

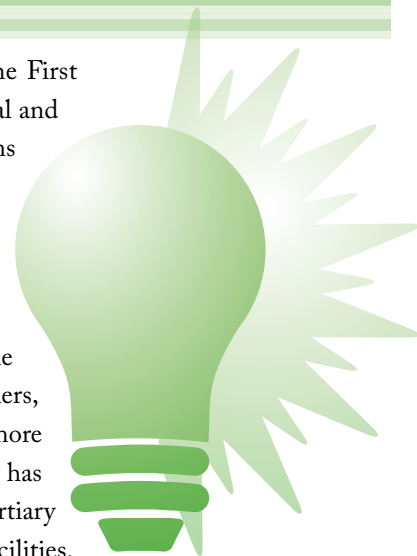
表現指標

## Energy Consumption

### 能源消耗

The University won the gold award in the Schools (Tertiary) Category of the First Hong Kong Energy Efficiency Awards organized by the Government's Electrical and Mechanical Services Department in 2006. We were also one of 30 organizations that pledged to comply with the 'Energy Conservation Charter 2006 - Suitable Room Temperature' of the 'Action Blue Sky' campaign launched by the Environmental Protection Department.

Since 1999, the University has implemented campus-wide energy saving measures which include a lighting retrofit programme using T5 neon lamps, the replacement of air-cooled chillers by high-energy-efficient water-cooled chillers, and the implementation of the Building Management System which imposes more complex, real-time controls and monitoring. Besides conserving energy, CUHK has been proactive in tapping renewable sources of energy. We were the first local tertiary institution to install an evacuated tube solar hot water system in showering facilities. We have also installed photovoltaic panels on the roof of buildings and bus stations for powering up lights and mosquito lamps, and a hydraulic ram pump in streams for irrigation and flushing purposes.



It is estimated that the energy generated from renewable energy facilities by photovoltaic panels, solar water heaters, mini-windmills was about 50,000 kWh in 2006.

Currently there are 38 blocks of staff residences, 27 blocks of student hostels and over 60 blocks of academic and administrative buildings housing facilities such as classrooms, libraries, laboratories and other communal amenities on campus. Electricity is the main source of energy consumed on campus. In 2006, each full-time equivalent (FTE) student consumed about 3,914.46 kWh electricity per annum.

二零零六年，中大榮獲政府機電工程署第一屆「能源效益獎」的大專院校組金獎，也參與環境保護署的「藍天行動」，是承諾參與「節約能源約章二零零六——適當室內溫度」的三十個機構之一。

自一九九九年，中大已在整個校園推行節約能源措施，包括翻新照明系統，改裝T5熒光燈；以水冷式空調系統取代風冷式系統，提高能源效益；以及實施樓宇設備自動化系統，實行更緊密的監控和實時遙控操作。中大除節約能源外，還積極開拓再生能源。我們是全港首所大學採用真空熱導管式熱水器，以太陽能加熱自來水供學生淋浴；又在建築物天台和巴士站頂安裝光伏板，為電燈和滅蚊燈提供能源；並利用水錘泵，輸送溪水作澆花和沖廁用途。

二零零六年由光伏板、太陽能熱水器和小型風車等再生能源設施產生的電力，約共五萬千瓦小時。

中大校園目前共有三十八座教職員宿舍、二十七座學生宿舍，以及六十多座教學及行政大樓，內有教室、圖書館、實驗室和其他公用設施。電力是校園使用的主要能源。二零零六年，每名等同全日制學生每年使用約3,914.46千瓦小時電力。



▲ A hundred Energy Conservation Coordinators were appointed in the opening ceremony of Environmental Protection Week 2006 Opening Ceremony. 在環保周2006開幕禮中，近百人被委任為能源協調員。

Table 2. Energy Consumption in Terms of FTE Student & Per Capita

表2. 按每名等同全日制學生及每人計算的能源消耗量

No. 編號	Indicator (Unit) 指標 (單位)	Definition / Remark 定義 / 備註	Results 結果
EN1	Electricity consumption per FTE student (kWh / FTE student) 每名等同全日制學生電力使用量 (千瓦小時 / 相當於全日制學生)	Total electricity consumption / Number of FTE students 電力總耗量 / 等同全日制學生數目	3,914.46 kWh/FTE student 3,914.46千瓦小時 / 等同全日制學生
EN2	Electricity consumption per capita (kWh / total number of FTE students & full-time staff) 人均電力使用量 (千瓦小時 / 等同全日制學生及全職教職員總數)	Total electricity consumption / Number of FTE students & Number of fulltime staff 電力總耗量 / 等同全日制學生及全職教職員數目	2,972.24 kWh/capita 2,972.24千瓦小時 / 人



◀ Solar lighting system at roadside  
路旁的太陽能照明系統



▲ ▶ Solar garden in the Lady Shaw Building  
邵逸夫人樓的太陽能花園



◀ Hydraulic ram pump  
水錘泵



◀ Solar hot water system on a rooftop  
天台的太陽能熱水系統

# Transportation

## 交通運輸



Currently the University owns more than 100 vehicles that are used to provide transport services. Apart from four private light buses and 18 private buses, we also hire bus services from a contractor. In 2006, the coach mileage and diesel consumption per FTE student were 38.62 km and 15.99 litres respectively.

目前中大有二百多部車輛提供交通服務。除擁有四輛小型巴士和十八輛巴士外，我們還向承判商租用巴士服務。二零零六年，按每名等同全日制學生計算的巴士行車里數和柴油消耗量，分別是38.62公里和15.99公升。

Table 3. Coach Mileage & Diesel Consumption in Terms of FTE Student & Per Capita

表3. 按每名等同全日制學生及每人計算的巴士行車里數及柴油消耗量

No. 編號	Indicator (Unit) 指標 (單位)	Definition / Remark 定義 / 備註	Results 結果
TP1	Mileage per FTE student (km / FTE student) 每名等同全日制學生行車里數 (公里 / 相當於全日制學生)	Total Mileage / Number of FTE students 總行車里數 / 等同全日制學生數目	38.62 km/FTE student 38.62公里 / 等同全日制學生
TP2	Diesel consumption by coach per FTE student (litres / FTE student) 每名等同全日制學生巴士柴油使用量 (公升 / 相當於全日制學生)	Total Diesel Consumption / Number of FTE students 柴油總耗量 / 等同全日制學生數目	15.99 litres/FTE student 15.99公升 / 等同全日制學生
TP3	Mileage per capita (km / total number of FTE student & full-time staff) 人均行車里數 (公里 / 等同全日制學生及全職教職員總數)	Total Mileage / Number of FTE students & Number of full-time staff 總行車里數 / 等同全日制學生及全職教職員數目	29.32 km/capita 29.32公里 / 人
TP4	Diesel consumption by coach per capita (litres / total number of FTE student & full-time staff) 人均巴士柴油使用量 (公升 / 等同全日制學生及全職教職員總數)	Total Diesel Consumption / Number of FTE students & Number of full-time staff 柴油總耗量 / 等同全日制學生及全職教職員數目	12.15 litres/capita 12.15公升 / 人

To reduce black smoke emissions, regular maintenance is performed to keep all university vehicles in top mechanical condition and minimize their impact on the environment. Older buses have been replaced with buses of Euro IV engines. The University also has a fleet of electric scooters that are quieter and more environmentally friendly than diesel-fueled scooters.

Buildings on campus have been designed with elevators providing access to different topographical levels and footpaths with enhanced streetscape have been constructed to promote walking and reduce vehicular traffic.

為減少排放黑煙，中大定期維修車輛，使所有車輛的機械性能保持最佳狀態，把對環境的影響減至最低。舊型巴士已汰換為使用歐盟四型引擎的巴士。中大也設有電動摩托車隊，比柴油摩托車更寧靜、更環保。

校園內的建築物，均設有升降機，方便往返地勢較高的區域；另建有景觀優美的行人徑，鼓勵步行，減少汽車交通量。

Shuttle bus with Euro IV engine  
裝設歐盟四型引擎的校巴



# 溫室氣體排放 Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere due to human activities are: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O) and fluorinated gases.

In CUHK, although combustion from automobiles and LPG combustion from boilers also produce N<sub>2</sub>O and CH<sub>4</sub>, only CO<sub>2</sub> emission is regarded as significant for this indicator. In 2006, the emission of CO<sub>2</sub> per FTE student was 3.63 tonnes.



▼ Elevators and a footbridge at the William Mong Man Wai Engineering Building and Ho Sin Hang Engineering Building provide access to different topographical levels and help reduce usage of shuttle buses. 蒙民偉樓、何善衡工程學大樓等建築物，全部按地形設計，升降機可到達校園高低不等的地面，務求校園方便步行，減少車輛造成的空氣污染。



所謂溫室氣體，是指會阻擋大氣層，令熱能無法散走的氣體。有些溫室氣體（例如二氧化碳）是天然產生的，經自然過程和人類活動排放到大氣層中。其他溫室氣體（例如氟化氣體）則純粹由人類活動產生和排放。因人類活動而排放至大氣層的溫室氣體主要有：二氧化碳、甲烷、一氧化二氮和氟化氣體。

在中大，車輛行走和鍋爐燃燒石油氣，均會產生二氧化碳和甲烷，但就溫室氣體排放這指標而言，只有二氧化碳排放量較多。二零零六年，每名等同全日制學生的二氧化碳排放量是3.63噸。

◀ Wind power is another form of renewable energy adopted on campus. 校園亦採用風力發電。

Table 4. Greenhouse Gas Emission in Terms of FTE Student & Per Capita

表4. 按每名等同全日制學生及每人計算的溫室氣體排放量

No. 編號	Indicator (Unit) 編號 指標 (單位)	Definition / Remark 定義 / 備註	Results 結果
GG1	Greenhouse gas (carbon dioxide) emission per FTE student (tonnes / FTE student) 每名等同全日制學生溫室氣體 (二氧化碳) 排放量 (噸 / 等同全日制學生)	Total carbon dioxide emission / Number of FTE students 二氧化碳總排放量 / 等同全日制學生數目	3.63 tonnes /FTE student 3.63噸 / 等同全日制學生
GG2	Greenhouse gas (carbon dioxide) emission per capita (tonnes / total number of FTE student & full-time staff) 人均溫室氣體 (二氧化碳) 排放量 (噸 / 等同全日制學生及全職教職員總數)	Total carbon dioxide emission / Number of FTE students & Number of full-time staff 二氧化碳總排放量 / 等同全日制學生及全職教職員數目	2.76 tonnes /capita 2.76噸 / 人

# Waste 廢物



EMO staff sorting waste in a refuse station.  
物業管理處在垃圾站將廢物分類。



Desk-side paper recycle bin and printer cartridge recycle bin  
桌旁回收箱及炭粉盒回收箱



Recycle bins for paper, aluminum can and plastic materials  
廢紙、鋁罐及塑膠物料回收箱

## Municipal Solid Waste

In 2006, municipal solid waste incurred by each FTE student was 103.84 kg.

Over the past few years, the University has implemented measures to reduce the volume of waste produced daily on campus. For instance, over 65 strategic recycling points were established to facilitate the recycling of paper, plastic, metals and toner cartridges. Over 2000 desk-side recycling bins were placed at offices to enhance office paper recycling. Recycling programmes were conducted to collect rechargeable batteries, CDs, old clothes, books and toys.

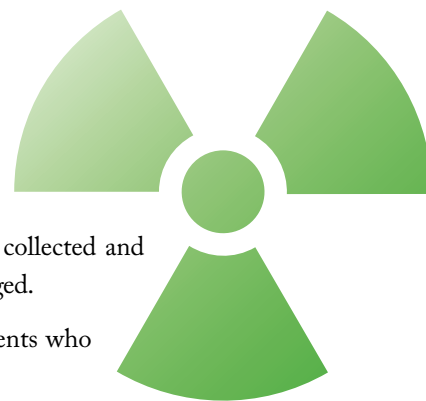
Last year, we collected 321,680 kg paper, 1,175 kg aluminum, 830 kg plastic and 567 pieces of printer cartridges for recycling. The overall recycling rate of municipal solid waste recycled was 17%.

## 都市固體廢物

二零零六年，每名等同全日制學生產生的都市固體廢物為103.84公斤。

過去數年，中大推行多項措施，以減少校園日常產生的廢物。例如在超過六十五個重點位置設立廢物回收點，以便回收廢紙、塑膠物料、金屬和影印機碳粉盒；又在辦公室內放置二千多個回收箱，鼓勵辦公室廢紙回收再用；另外推行回收計劃，收集充電電池、光碟、舊衣、書籍和玩具。

去年，我們收集了321,680公斤廢紙、1,175公斤鋁、830公斤塑膠和567個影印機碳粉盒供循環再造。都市固體廢物的整體回收率為17%。



## Hazardous Waste

In 2006, 1.67 kg of chemical waste including acid, alkali, solvent, spent lube oil, spent paint, pharmaceutical liquid, etc. was generated and 0.82kg of biological waste such as animal carcasses, clinical consumables and biological contaminated sharps was generated per FTE student. All these wastes were properly stored and then collected and transported by licensed collectors. A small amount of radioactive waste was also managed.

Waste disposal guidelines were prepared and communicated to the staff and students who need to dump hazardous waste as part of their duty.

### 有害廢物

二零零六年，每名等同全日制學生產生1.67公斤化學廢物，包括酸、鹼、溶劑、用過的潤滑油、用過的油漆、醫藥液體等，以及0.82公斤生物廢物，例如動物屍體、醫療消耗品和生物污染利器。這些廢物，都經妥善儲存，然後由持牌收集商收集搬運。另有少量輻射廢料，亦經妥善管理。

我們備有廢物處理指引，並已向工作上有需要棄置有害廢物的教職員和學生說明有關指引。

- ◀ Licensed collectors are employed to collect chemical and biological waste for disposal.  
化學及生物廢物由持牌的收集商收集、處理。



Table 5. Waste Volume in Terms of FTE Student & Per Capita

表3. 按每名等同全日制學生及每人計算的巴士行車里數及柴油消耗量

No. 編號	Indicator (Unit) 指標 (單位)	Definition / Remark 定義 / 備註	Results 結果
WM1	Municipal solid waste per FTE student (kg / FTE student) 每名等同全日制學生都市固體廢物量 (公斤 / 等同全日制學生)	Total municipal solid waste / Number of FTE students 都市固體廢物總量 / 等同全日制學生數目	103.84 kg/FTE student 103.84公斤 / 等同全日制學生
WM2	Chemical waste per FTE student (kg / FTE student) 每名等同全日制學生化學廢物量 (公斤 / 等同全日制學生)	Total chemical waste / Number of FTE students 化學廢物總量 / 等同全日制學生數目	1.67 kg/FTE student 1.67公斤 / 等同全日制學生
WM3	Biological waste per FTE student (kg / FTE student) 每名等同全日制學生生物廢物量 (公斤 / 等同全日制學生)	Total biological wastes / Number of FTE students 生物廢物總量 / 等同全日制學生數目	0.82 kg /FTE student 0.82公斤 / 等同全日制學生
WM4	Municipal solid waste per capita (kg / total number of FTE students & full time staff) 人均都市固體廢物量 (公斤 / 等同全日制學生及全職教職員總數)	Total municipal solid waste / Number of FTE students & Number of full-time staff 都市固體廢物總量 / 等同全日制學生及全職教職員數目	78.85 kg/capita 78.85公斤 / 人
WM5	Chemical waste per capita (kg / total number of FTE students & full time staff) 人均化學廢物量 (公斤 / 等同全日制學生及全職教職員總數)	Total chemical waste / Number of FTE students & Number of full-time staff 化學廢物總量 / 等同全日制學生及全職教職員數目	1.27 kg /capita 1.27公斤 / 人
WM6	Biological waste per capita (kg / total number of FTE students & full time staff) 人均生物廢物量 (公斤 / 等同全日制學生及全職教職員總數)	Total biological waste / Number of FTE students & Number of full-time staff 生物廢物總量 / 等同全日制學生及全職教職員數目	0.62 kg/capita 0.62公斤 / 人

## Electronic and Electrical Waste

To reduce the quantity of waste computers and waste electrical and electronic equipment disposed of at landfills, a recovery programme is organized each summer during hostel retreat. The items collected are delivered to charity or non-profit organizations, distributed to those in need, or resold.

### 電器及電子廢物

為減少堆填區的廢棄電腦、電器及電子用品，中大每年夏季退宿時，均舉行回收計劃。回收所得的物品，分別捐贈慈善團體或非牟利機構、送贈有需要的人士，或再賣出。



- ▲ Computers collected in the recycling programme in recycling activities.  
在回收活動中收集的舊電腦。



# Water 水

In 2006, each FTE student consumed about 50.78 m<sup>3</sup> of potable water per annum and the University continued its efforts at reducing water wastage in administrative and academic buildings by measures including the installation of automatic cut-off taps in bathrooms and the posting of notices. Contractors were encouraged to recycle water during construction, replumbing works were performed, and an automatic watergate was installed at Weiyuan Lake.

Meantime contaminated waste water generated by residences, student hostels, offices, laboratories, canteens, etc. was discharged to sewers and conveyed to Shatin Treatment Works, grease traps were installed at all canteens and restaurants, an external consultant was employed to conduct monthly water testing, oil and grease content, and the water quality of Chung Chi Stream was closely monitored.

二零零六年，每名等同全日制學生消耗約50.78立方米飲用水。中大繼續採取多項措施，減少行政和教學樓浪費食水，包括在洗手間安裝可自動關閉的水龍頭，以及張貼告示等。我們鼓勵承建商在建築工程中循環用水，又更換舊水管，並在未圓湖安裝自動水閘。

同時，由教職員住宅、學生宿舍、辦公室、實驗室、飯堂等產生的污水，均排放至污水管，輸送至沙田污水處理廠。所有飯堂和餐廳，均安裝隔油器。我們聘請了校外顧問，每月測試水質，並密切監察「小橋流水」的油污含量和水質。



Chung Chi Stream  
「小橋流水」

Table 6. Water Consumption in Terms of FTE Student &amp; Per Capita

表6. 按每名等同全日制學生及每人計算的耗水量

No. 編號	Indicator (Unit) 編號 指標 (單位)	Definition / Remark 定義 / 備註	Results 結果
WA1	Water consumption per FTE student (m <sup>3</sup> / FTE) 每名等同全日制學生耗水量 (立方米 / 等同全日制學生)	Total water consumption / Number of FTE students 總耗水量 / 等同全日制學生數目	50.78 m <sup>3</sup> /FTE student 50.78立方米 / 等同全日制學生
WA2	Water consumption per capita (m <sup>3</sup> / total number of FTE student & full-time staff) 人均耗水量 (立方米 / 等同全日制學生及全職教職員總數)	Total water consumption / Number of FTE student & Number of full-time staffs 總耗水量 / 等同全日制學生及全職教職員數目	38.56 m <sup>3</sup> /capita 38.56立方米 / 人



Monthly water monitoring by USEO staff  
大學安全及環境事務處職員每月監察水質



Automatic watergate in  
Wei Yuan Lake  
未圓湖自動水閘

## Indoor Air Quality 室內空氣質素



CUHK is committed to providing a safe and healthy environment to staff, students and visitors. 'No Smoking' statements and signs were put up at all vehicular entrances to the campus, the rail station entrance, bus stops, canteens and their outdoor areas, student hostels and guesthouses. The director of the Security and Transport Office was designated to be in charge of the management and control of no-smoking areas on campus. Department chairmen and unit heads were requested to alert their staff to the smoking ban.

In 2004-05, an examiner was hired to conduct indoor air quality (IAQ) measurements in selected locations in 17 buildings on campus. The data helped to identify areas requiring improvement. Last year, 27 buildings were selected to undergo an indoor air quality monitoring programme. The Estates Management Office regularly inspects and maintains the air-conditioning system on campus, and takes steps to improve it when it is found to be unsatisfactory. IAQ monitoring was also conducted on the new Centralized Science Laboratories Building before its official opening. In 2007, a comprehensive IAQ Programme was set up to formulate the approach and testing criteria for indoor air quality monitoring.

中大致力為教職員、學生和訪客提供安全健康的環境。校園每個汽車入口、港鐵站入口、巴士站、飯堂內及飯堂戶外範圍、學生宿舍和賓館，均設有「不准吸煙」說明和標誌。保安及交通事務處處長負責管理和監控校園內的非吸煙區。校方亦要求各系主任及單位主管提醒職員遵守禁煙規定。

二零零四至零五年，中大聘請了調查員，量度校園內十七座大樓內選定地點的室內空氣質素，所得數據有助找出需要改善之處。去年，校方選定二十七座大樓參與室內空氣質素監察計劃。物業管理處定期檢查保養校園內的空氣調節系統，發現狀況欠佳時，即採取行動加以改善。新建的科學實驗室專門大樓正式啟用前，也監察了室內空氣質素。二零零七年，校方推行了全面的室內空氣質素計劃，設定室內空氣質素監察的方法和測試標準。



IAQ monitoring in the computer room of Mong Man Wai Engineering Building  
蒙民偉工程學大樓的電腦室進行室內空氣質素監察

## LAND 土地

The University has a total campus area of 1,344,017m<sup>2</sup>. About 60% is greenery comprising slopes, landscaped areas and roof gardens, about 10% is covered by buildings, and other 30% consists of sport fields, roads, car parks, etc.

Enhancing the appearance of our campus through landscaping and greening has long been one of our priorities. Landscaping has been incorporated into road and building projects to improve the aesthetic appearance and quality of the campus environment. In 2006, a total of 352 trees, 11,634 shrubs, 5,086 floral plants, 6,835 ground cover and 4,556 m<sup>2</sup> of grass were planted on campus.

Our campus is home to about 188 tree species such as pine, willow, orchid and bauhinia, as well as a range of wildlife, in particular, birds. To protect its flora and fauna, the University adopts a variety of measures, such as maximizing greenery, planting native species and minimizing the use of pesticide.

中大校園總面積1,344,017平方米，約六成是綠化地帶，包括斜坡、園景美化區和天台花園，約一成是建築物，另外三成是運動場、道路、停車場等。

藉園景美化和綠化改善校園外觀，一直是中大的重點工作之一。在建造道路和大樓時，均包含園景美化的元素，以提升校園環境的質素和美感。二零零六年，校園內共種植352棵樹、11,634棵灌木、5,086株花卉植物、6,835處地被植物和4,556平方米青草。

中大校園共有一百八十八個樹種，包括松樹、柳樹、蘭花和洋紫荊，也有多種野生生物，雀鳥尤多。中大採取多項措施保護動植物，例如擴大綠化地帶、種植原生品種植物，以及盡量減少使用殺蟲劑。



▲ A steep slope was made more gentle and fixed by soil nails, hydro-seeded and covered with an erosion control mat. 陡峭的斜坡經過處理，減低斜度，並安裝泥釘，以濕法噴播植草，再鋪上保護席。

Wildlife on campus  
校園內的野生生物



## Tree

To strengthen tree preservation on campus, a new Policy on Tree Preservation on Campus ([www.cuhk.edu.hk/usce/](http://www.cuhk.edu.hk/usce/)) has been formulated in 2006. The policy includes the following:

- A comprehensive habitat map, to be updated every three years, will be prepared to provide systematic information for planning.
- A list of criteria for tree conservation.
- A pledge to avoid tree felling and, if felling cannot be avoided, to compensate by planting native species according to the appropriate ratio.
- A statement that trees should be properly protected during works is communicated to and a penalty system imposed on the contractor for intentional or inadvertent damage or destruction of trees.

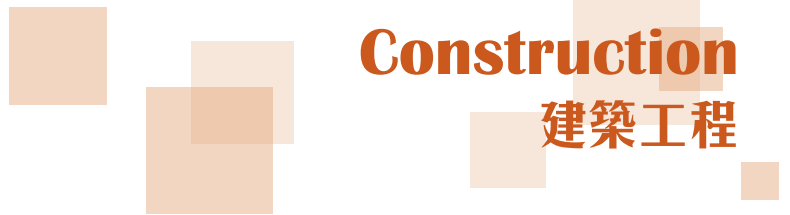
## 樹木

為加強保護樹木，中大在二零零六年制訂全新的校園樹木保育政策 ([www.cuhk.edu.hk/usce/](http://www.cuhk.edu.hk/usce/))。政策涵蓋以下範疇：

- 繪製完整的樹木分布圖，每三年更新一次，以提供有系統的資料，方便策劃工作。
- 訂立樹木保育的準則。
- 承諾避免砍伐樹木，如不得已必須砍樹，則按適當比例補種原生品種樹木。
- 向工程承建商說明，工程進行時應恰當保護樹木；並制定罰則，懲罰故意或不慎傷害或損毀樹木的承建商。



**Construction**  
建築工程



## Construction

### 建築工程

To minimize the environmental impact of construction and renovation activities, the University's environmental requirements are clearly stated in tender documents and contractors are instructed to follow Environmental Guidelines for Construction Sites. During works, contractors must minimize construction waste by reusing and recycling construction materials. The project team of work departments and specialists from USEO conduct regular inspection and monitoring of construction projects. In 2006, more than 50 audits were undertaken to assess the environmental health and safety of our construction and renovation sites. The number of environmental conviction and number of complaints received from construction activities from construction activities were 0 and 6 respectively.

The Centralized Science Laboratories Building which houses over 70 laboratories was completed in 2006. It has a total gross floor area of 11,000 m<sup>2</sup>. To conserve energy, a variable air volume design is adopted for the air-conditioning system and the fume cupboards of the laboratories. There are also heat exchangers for fresh/exhaust air to further save energy.



為減少建築和裝修工程對環境的影響，招標文件均清楚列明中大的環保要求，校方亦要求承建商遵從建築工地的環保指引。工程進行期間，承建商必須重用及循環再用建築物料，以減少建築廢料。負責工程的部門和大學安全及環境事務處專家組成的項目小組，會定期檢查和監察建築工程。二零零六年共從事五十多項審核，評定建築和裝修工地的環境健康和 safety。建築工程沒有因違反環保法例而被定罪，而接獲的投訴則有六宗。

科學實驗室專門大樓於二零零六年落成，設有七十多個實驗室，總樓面面積一萬一千平方米。為節省能源，實驗室的空氣調節系統和排風櫃，均採用變風量設計，並設有熱交換設備，大大增加能源效益。



▲ USEO staff measuring the environmental noise level and occupational noise level of construction sites and renovation works.  
大學安全及環境事務處職員到校內的建築工程地盤和施工場地，測量環境噪音水平和職業噪音水平。

▶ Centralized Science Laboratories Building  
科學實驗室專門大樓





**Green Purchasing**  
環保採購



## Green Purchasing 環保採購



'Green purchasing' or 'environmentally preferable purchasing' refers to the procurement of products and services that have less environmental impact over their life cycle of manufacturing, transportation, use and recycling or disposal. The main types of environmentally friendly products purchased include toilet rolls made of recycled paper, energy label for electrical appliances, electrical vehicles and pedestrian pavement blocks made of recycled plastic. Besides, the purchase of some harmful products was prohibited such as tungsten filament lamp and certain ozone depleting chemicals.

Due to the adverse effects of synthetic insecticide on human health and the natural environment, the Landscaping Section of the University uses home-made organic pesticide to do the job. It is made from Rotenone, an extract from the root of the plant *Derris elliptica*.

「環保採購」指採購一些在製造、運輸、使用和循環再造或棄置過程中對環境影響較小的產品及服務。所購買的環保產品，主要包括以再造紙製成的衛生紙、有能源效益標籤的電器、電動車輛，以及以再造塑料製成的行人路障等。此外，亦禁止採購一些有害的產品，例如鎢絲燈泡和會損害臭氧層的化學物品。

為免人工合成的農藥對人體健康和自然環境造成不良影響，中大園藝組使用自製農藥除蟲。農藥成份是魚藤酮，由毛魚藤的根部提煉而成。



▲ The Landscaping Section uses dried *Derris elliptica* to make environmentally friendly insecticide.  
園藝組以毛魚藤自製天然環保的殺蟲劑。



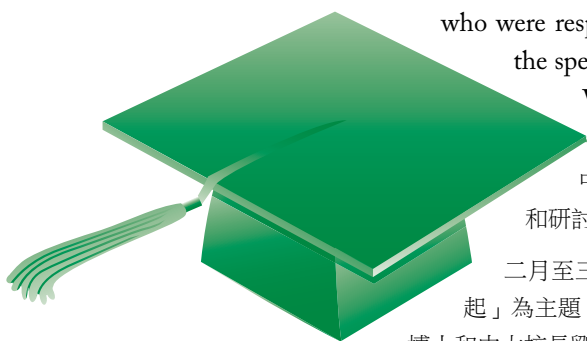
**Education**  
教育



## Education 教育

The University offers a wide range of courses to educate undergraduate and postgraduate students about the environment. Forums and seminars featuring experts from the world over are also organized to shed light on topics related to the environment.

From February to March, the University organized Environmental Protection Week 2006 under the theme 'Think Globally, Act Locally, Respond Individually'. Dr. Sarah Liao, Secretary for the Environment, Transport and Works, and Prof. Lawrence J. Lau, Vice-Chancellor of the University, officiated at the opening ceremony held on 28th February in Cho Yiu Hall. Dr. Liao and Prof. Lau presented appointment certificates to 100 energy conservation coordinators from different departments of the University, who were responsible for promoting energy conservation on campus. Events of the special week included an energy-wise workshop, an exhibition, a visit to Wetland Park.



中大提供多樣化的課程，向本科生和研究生灌輸環保知識；又舉辦論壇和研討會，邀請世界各地的專家討論環保議題。

二月至三月間，中大舉行環保周二零零六，以「心繫全球，情牽香港，由我做起」為主題。二月二十八日在祖堯堂舉行揭幕禮，由環境運輸及工務局局長廖秀冬博士和中大校長劉遵義教授主禮。廖博士和劉教授向中大不同部門的一百位能源協調員頒發委任狀，這些協調員負責在校園內推動節約能源。環保周的活動，包括節能工作坊、展覽和參觀濕地公園。



▲ Visit to Wetland Park  
參觀濕地公園



▶ Screening of *An Inconvenient Truth*  
放映「絕望真相」

### ▼ Organic farming activities 有機耕種活動





**Compliance**  
遵守法規



## Compliance 遵守法規

During the year, the University and its contractors were not convicted a single time of environmental non-compliance. A total of seven environment-related complaints were received, most of which were related to the pollution of Chung Chi Stream and tree felling. The University formed a task force to restore the water quality and to formulate a long-term policy for stream protection. The secretary of the newly established Campus Landscaping Enhancement Committee was made responsible for handling complaints related to trees and landscaping.

年內，中大及其承建商從未因不符環保要求而被控，而接獲與環境有關的投訴則有七宗，大部分與「小橋流水」污染和砍伐樹木有關。中大成立了專責小組，研究使水質回復正常的方法，並制訂保護河水免受污染的長遠政策。新設的校園景觀美化委員會的秘書，負責處理有關樹木和環境美化工作的投訴。





**Communication**  
沟通



## Communication 溝通

Throughout 2006, the University continued to engage its stakeholders such as staff, students, environmental groups, professional groups, regulators, contractors and suppliers, through meetings, site visits, workshops, consultation, community education, and conferences and seminars. We also took an active part in community and public services in support of the sustainable development of Hong Kong.

在二零零六年，中大繼續透過會議、實地視察、工作坊、諮詢活動、社區教育和研討會，加強與教職員、學生、環保團體、專業組織、監管機構、承建商和供應商溝通。我們也積極參加社區和公共服務，支持香港的可持續發展。



## Feedback

The *Sustainability Report* represents the Chinese University's commitment to building a green campus and outlines the University's plans to seek continual improvement. We have incorporated the basic elements of the *Global Reporting Initiative (GRI) : G3 Guidelines* into this report. To help us improve our performance, please let us have your comments and suggestions. Contact us via our hotline, email or website.

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## 回應

本《可持續發展報告》，顯示中大致力建設綠色校園的承擔，並概述中大持續改善環境的計劃。在報告中，我們採納了《全球報告倡議組織：G3指南》的基本元素。為使本校的環保工作更臻完善，請不吝惠賜意見和建議。歡迎透過熱線、電郵或網頁聯絡我們。

**University Safety & Environment Office** 大學安全及環境事務處

**Phone** 電話: 2609 7958

**Email** 電郵: [uls@cuhk.edu.hk](mailto:uls@cuhk.edu.hk)

**Environmental Hotline** 環保熱線: 2609 8666

**Website** 網址: [www.cuhk.edu.hk/useo/](http://www.cuhk.edu.hk/useo/)

