



**Innovation and Technology Commission**

**Environmental Report 2021**



## **1. Introduction**

This is the twenty-second Environmental Report published by the Innovation and Technology Commission, covering the Commission's environmental policy, targets and achievements in 2021.

The mission of the Innovation and Technology Commission is to spearhead Hong Kong's drive to become a world-class, knowledge-based economy. We strive to enhance Hong Kong's competitiveness and develop our city into an innovation and technology hub. We have been working on the following initiatives:

- Promoting and supporting applied research and development (R&D) and technology transfer and application which can contribute to innovation and technology upgrading in industry;
- Promoting technological entrepreneurship in Hong Kong and providing essential support to technology-based entrepreneurial activities;
- Supporting the formulation and coordination of innovation and technology policies, and fostering an innovation and technology culture in the community;
- Facilitating the development of world-class support infrastructure and innovation and technology talent to facilitate technological upgrading and development of the industry, and to promote innovation and technology;
- Promoting internationally accepted standards and conformity assessment services to underpin technological development and international trade; and
- Promoting the development of the testing and certification industry in Hong Kong.

## **2. Environmental Policy**

Innovation and technological development cuts across different fields, of which environmental management is one. We aim at providing support to Hong Kong industries to develop and implement advanced technologies for environmental management.

This Commission is also committed to providing a green office environment at the workplace and to ensuring that our operation is conducted in an environmentally conscious and responsible manner. We also educate our colleagues to ensure that they are aware of our departmental environmental policy and initiatives as well as their responsibilities such that they can participate actively in protecting the environment.

## **3. Support Measures to the Industry on Environmental Matters**

Local industries and the society at large are more conscious about the environment than before. Industries recognise the need to adopt cleaner and more environmentally friendly technologies. The Commission continues to provide funding support to the development and adoption of clean environmental technologies and processes in Hong Kong. Funding is available for environmental technology-related projects under the Innovation and Technology Fund (the Fund). The assessment panels for the respective programmes under the Fund would vet environment-related applications. The panels also monitor the implementation of these funded R&D projects.

In 2021, the Fund provided funding support to the following eighteen environment-related R&D projects with a total commitment of about \$64.8 million:

- Development of environmental-friendly air-source high-temperature heat pump unit for domestic hot water supply;
- Enhancement of Nano Confined Catalytic Oxidation Technologies and Development of High Efficiency VOC Treatment Equipment for Healthcare Industry;
- Volatile Organic Compounds Gold Standard Laboratory;
- Pilot Study of the Innovative CeFSCM-CfSBBR System for Advanced Wastewater Treatment;
- Intelligent Sensing System for Boiler Energy Saving and Pollutant Emission Monitoring;
- Highly-efficient Recycling of End-of-life Electric Vehicle Batteries for Energy Storage Material Regeneration;

- Development of Renewable Energy Supported Highly Efficient Wastewater Treatment System;
- Precision Manufacturing and Bioactivation of Artificial Reefs to Facilitate Coral Restoration;
- Artificial Intelligence (AI) based Hydro-ecological and Environmental Monitoring System for Water Security Warning;
- Development of nano-photocatalytic marine antifouling/anticorrosion coatings;
- Ultraparpermeable Nanofiltration Membranes and Modules;
- Modeling and Analysis of Water Pipe Failure: Investigate Causes, Find Solutions, and Develop Potential Strategies, Policies, and Regulations;
- Anti-corrosion, Anti-biofilm and Anti-biofouling Coating Materials for Fresh and Salt Water Pipes;
- Microscopic Hyperspectral Imaging;
- Development of Hybrid Electric Drum Driveline System for Concrete Mixer Trucks;
- Removal of Indigo Blue Color in Denim Plant Wastewater by Macroalgae – A Preliminary Study;
- NAMI Nanocomposite Hydrophobic Oleophobic Biodegradable Packaging; and
- NAMI Seaweed-based Biodegradable Foam.

#### **4. Green Housekeeping Measures**

In support of the Government's efforts to protect the environment, this Commission is committed to ensuring that our internal operations are conforming to environmental protection principles and practices. In 2021, we continued to adopt the following green practices:

##### ***Paper Consumption***

- We continued the use of the electronic modes for internal and external

communications, official correspondences and circulation of information.

- We provided all colleagues with an individual e-mail account and access to computer terminals connected to the departmental network.
- We continued to use the electronic Admin Bulletin board to disseminate information including telephone directories, training activities, newsletters, circulars, etc.
- We sent festive greetings electronically.
- We put circulars, statistics, directories etc. which are commonly used on the shared drive.
- We issued press releases and distributed application forms for funding support to members of the public through our website.
- We continued to review the subscription of newspapers and periodicals and, where possible, replace them by e-version of magazines and periodicals.
- We provided divisional Green Executives with regular reports on paper consumption to facilitate monitoring at divisional level.
- We used recycled paper in place of white paper.
- We did not use fax cover sheets.
- We avoided delivering unclassified documents in envelopes.
- We used photocopiers and network printers capable of producing double-sided printouts.
- We regularly reminded colleagues to keep the number of paper printouts to the minimum and to use both sides of paper.
- We placed boxes holding single-side used paper beside photocopiers and printers to encourage the use of the blank side of used paper.

### ***Energy Consumption***

- We used energy saving fluorescent lamps in our offices. Task lighting approach was adopted for our office at Central Government Offices (Tamar) and there was a lower ambient lighting level (300 lux) in general. The task areas which required a higher luminance level for reading purposes were supplemented with localised

lighting by means of desk lamps.

- Automatic sensors were installed and widely used in our office areas including open plan office, cellular offices, meeting rooms and store rooms. Lights would automatically be switched off when nobody was in the area.
- We kept reminding colleagues to switch off electrical appliances while not in use and a staff member was designated to turn off all unnecessary electrical appliances after normal office hours.
- We enabled the energy saving feature of computers and office equipment.
- Room temperature was set at 25.5°C to reduce energy consumption.
- Computer servers were consolidated via the latest virtualisation technology for better server utilisation rate and reduction of energy consumption.

### ***Water Conservation***

- Automatic sensor water taps were installed in washrooms at Tamar to reduce water consumption.

### ***Waste Minimisation and Recycling***

- We continued to provide green bags in the office for the collection of waste paper for recycling.
- We collected unwanted Compact Discs (CDs) for recycling.
- We collected used printer toner cartridges for recycling.
- We reused envelopes, loose minute file jackets and tags as far as practicable.
- We placed boxes holding used envelopes in common areas to facilitate re-use.
- We reused decorative and festive materials during celebration occasions.
- We used porcelain utensils / glasses instead of disposable ones during meetings.
- We did not serve bottled water or use paper coasters / cup covers during meetings.
- We adhered to the government guidelines on reducing food waste and ordered no

more than six main dishes to avoid excessive food and unnecessary wastage when hosting Chinese cuisine in restaurants.

- In support of green living, we did not consume shark fin, bluefin tuna and black moss in official entertainment functions.
- In line with the Government's green policy, we refrained from bestowing gifts / souvenirs to others during the conduct of official activities as far as possible.

### ***Compliance with Clean Air Charter***

- We adhered to the commitments stated in the Clean Air Charter to help improve Hong Kong's air quality.
- Our departmental cars run on petrol instead of diesel fuel.
- We were conscious of the need to reduce energy consumption and implemented energy-efficient measures in our offices.

### ***Indoor Air Quality***

- We participated in the Indoor Air Quality (IAQ) Certification Scheme launched by the former Environment Bureau and the Environmental Protection Department. Our offices at Immigration Tower, Revenue Tower, The Hub and Queensway Government Offices were certified complying with the "Good Class" of the IAQ Objectives while our office at Tamar was certified complying with the "Excellent Class".



- We installed air purifiers in the office to degrade pollutants and kill bacteria in the air.

### ***Green Procurement***

- We took into account environmental considerations when procuring goods and services.
- We purchased office equipment with Grade 1 energy label as far as possible.
- We procured environmentally friendly products such as recycled paper and clutch pencils.

### ***Environmental Education***

- We issued e-mails to colleagues regularly to appeal for their support of our green initiatives and provide tips on environmental protection and energy saving to arouse colleagues' consciousness in environmental protection.
- We reminded colleagues of our green measures regularly through an internal circular.

## **5. The Way Forward**

In 2022, the Commission will continue to promote and implement green measures and housekeeping practices. To ensure that the green efforts will be maintained and further improved, we are committed to:

- providing funding support to environment-related R&D projects;
- promoting and encouraging the adoption of effective green measures to provide a green working environment;
- encouraging and promoting colleagues' participation through various channels, such as dissemination of green messages and organisation of environmental seminars;
- implementing various energy-efficient measures;
- adhering to the commitments stated in the Clean Air Charter;
- encouraging wider use of information technology to minimise paper and energy consumption;
- adopting a green IT approach in planning future computer projects; and
- equipping our colleagues with adequate computer facility to facilitate the efficient

transaction of departmental business by electronic means.

## **6. Feedback**

We welcome your valuable feedback on this Environmental Report. Please contact the Green Manager of the Commission by:

E-mail: enquiry@itc.gov.hk  
Fax: 2730 4633  
Post: Innovation and Technology Commission  
33/F, Shui On Centre,  
6-8 Harbour Road,  
Wan Chai, Hong Kong

This report is also available on the homepage of the Commission at <http://www.itc.gov.hk>.

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