



同心耕耘廿五載
共創綠色新世代
25 Years of Sustained Effort for a Greener Future



環境局
Environment
Bureau



環境保護署
Environmental
Protection Department

2011

環保工作報告
Environmental
Performance Report





Contents

[Foreword](#)

[Executive Summary](#)

[1 Scope](#)

[2 Our Profile](#)

[A. Organisation and Governance](#)

[B. Vision and Strategy](#)

[3 Environmental Impacts of Our Operations ▼](#)

- [1. Our green management system](#)
- [2. Minimising energy and resources consumption](#)
- [3. Our waste management facilities](#)
- [4. Promoting green procurement](#)

[4 Improving Hong Kong's Environment ▼](#)

- [1. Better Air Quality](#)
- [2. Better Water Quality](#)
- [3. Environmentally Sound Waste Management](#)
- [4. Greener Energy Management](#)
- [5. Nature Conservation](#)
- [6. Quieter Environment](#)
- [7. Cross-boundary and International Co-operation](#)
- [8. Prevention and Mitigation Through Environmental Assessment](#)
- [9. Sustainable Development](#)
- [10. Building Partnerships and Encouraging Compliance](#)

[5 Social Engagement](#)

[A. Working with Stakeholders](#)

[B. Our Staff](#)

[C. Promoting Community Involvement](#)

[6 Our Economic Impacts ▼](#)

- [1. Investment in Sustainability](#)
- [2. Economic Impacts of Our Policies and Programmes](#)

[7 Targets - Our Progress and 2011 Aims ▼](#)

- [1. Better Air Quality](#)
- [2. Better Water Quality](#)
- [3. Environmentally Sound Waste Management](#)
- [4. Greener Energy Management](#)
- [5. Nature Conservation](#)
- [6. Quieter Environment](#)
- [7. Cross-boundary and International Co-operation](#)
- [8. Prevention and Mitigation Through Environmental Assessment](#)
- [9. Sustainable Development](#)
- [10. Building Partnerships and Encouraging Compliance](#)
- [11. Internal Operations](#)
- [12. Our Staff](#)
- [13. Promoting Community Involvement](#)

[Appendix](#)

[I - Environmental and Energy Policy](#)

[II - ENB/EPD Offices and Facilities](#)

[III - Environmental Performance Reports of Government Bureaux/Departments and Agencies](#)

[Verification Statement](#)

[Feedback](#)



Foreword



Hong Kong is one of the best cities in the world and should have a world-class environment. But this is easier said than done, as our growing urbanisation and rising population places significant stress on our environment that is not always easy to tackle. Our air quality has been the subject of much discussion in recent years and our growing waste problems have placed pressure on our waste management facilities. Our high population also requires modern and efficient sewage treatment systems. To this end, we have put in place policies and legislation that are formulated to address these issues.

We have reviewed our Air Quality Objectives (AQOs) with reference to the latest World Health Organisation's air quality guidelines. We have identified 19 measures for improving Hong Kong's air quality and are taking forward the recommended measures which have reached public consensus. Furthermore, improving roadside air quality is one of our priorities and we have set up a \$300 million Pilot Green Transport Fund aimed at public transport operators in addition to setting aside \$540 million for a three-year incentive programme to help vehicle operators switch from Euro II diesel commercial vehicles to new ones which comply with the prevailing emission standard. Hong Kong is an active partner of Guangdong in combating regional pollution. This partnership has been further strengthened by the Framework Agreement on Hong Kong/Guangdong Co-operation signed in April 2010 which sets out the key areas of co-operation between the two sides in, inter alia, environmental protection and ecological conservation. Under the Framework Agreement, Hong Kong and Guangdong are committed to reducing the emissions of air pollutants in the Pearl River Delta region, and are undertaking a joint study to look into the emission reduction arrangements for 2010 onwards.

We keep on expanding our sewerage for achieving a cleaner harbour. Water quality of Victoria Harbour has improved significantly since we implemented the Harbour Area Treatment Scheme (HATS) Stage 1 in 2001. In April 2010, we secured funding for the HATS Stage 2A works to cope with the increasing sewage loads. In parallel, we have also advanced the construction of some disinfection facilities under HATS Stage 2A for full commissioning in March 2010, which has led to better water quality at the western part of the harbour and the beaches in Tsuen Wan.

Municipal solid waste is still a serious challenge as the space we have set aside for waste disposal is running out. In answer to this, we awarded the Design and Construction consultancy to extend the NENT landfill and completed feasibility studies on extending WENT and SENT landfills in 2010. However, relying on landfills is not a sustainable or long-term answer. Following engineering feasibility and environmental impact assessment studies, we will commence tender preparation work for developing the Integrated Waste Management Facilities which would substantially reduce the volume of municipal solid waste requiring landfill disposal and recover energy from the waste for Hong Kong's beneficial uses. We are also putting measures in place to increase recycling rates and explore modern technologies, such as food waste processing.

Whilst providing infrastructure for the cleanup of our activities and management of our waste and wastewater are important, educating our citizens and raising awareness on environmental protection are, in our views, the key for our future sustainable development. Hence, we are not just limiting ourselves on improving the quality of the air we breathe and addressing our diminishing landfill space problems but we are preparing to tackle the growing threat of climate change and the potential impacts this will have on our society.

To chart the way forward for Hong Kong as a low carbon city, we carried out a public consultation on Hong Kong's climate change strategy and action agenda for the coming decade from 10 September 2010 to 31 December 2010. The consultation document proposed for Hong Kong a target to reduce carbon intensity by 50-60 per cent by 2020 when compared with 2005. It outlined an action agenda to further reduce local greenhouse gas (GHG) emissions through various means, including community-wide participation in enhancing energy efficiency, greening road transportation and use of clean, low carbon fuels for electricity generation. A broad direction for adaptation measures was also set for major sectors in Hong Kong that are identified as more vulnerable to climate change. Maximising energy efficiency plays a crucial role towards achieving the target of GHG emissions reduction. In order to improve energy efficiency in buildings, we enacted the Buildings Energy Efficiency Ordinance in November last year. The new legislation specifies the energy efficiency design standards for four key types of building service installations, and requires certain buildings to conduct energy audits. We will commence the full operation of the legislation in September 2012.

We recognise the importance of the involvement of the public and the various stakeholder parties with an interest in sustaining Hong Kong for our work. On this front, we will continue to encourage public participation such that people's concerns are taken into account early on in the planning process of new projects and no unacceptable environmental impacts will be created by developments. In addition, through the Council for Sustainable Development's public engagement process, we are able to gather public views on key sustainability issues for reference in shaping policies and measures. In 2010, the Council completed the public engagement on "Building Design to Foster a Quality and Sustainable Built Environment", which received about 1 400 submissions. Based on the findings, the Council made over 50 recommendations for consideration, most of which have been taken forward by the Government.

The Secretary for the Environment joined the China delegation to the UN Conference on Climate Change in Mexico in December 2010. We also became a member of the C40 Steering Committee on Electric Vehicles (EVs). The compact size of our city makes it an ideal place to test and promote EV technologies and we started to do so in 2009. In addition, Hong Kong hosted the C40 Workshop on 5 and 6 November 2010. Mayors and representatives from over 30 C40 member and affiliate cities, overseas experts, representatives from the trades, government officials and non-governmental organisations (NGOs) took part in the Workshop to share their strategies and experience in combating climate change, focusing on green transport and low carbon built environment.

We welcome your feedback on our efforts. Together we can improve Hong Kong's environment and move towards a sustainable city.



Ms Anissa Wong, JP
Permanent Secretary for the Environment /
Director of Environmental Protection



Executive Summary

1. The Environment Bureau (ENB) and Environmental Protection Department (EPD) are committed to improving Hong Kong's environment and promoting sustainable development. We oversee eight programme areas that address matters related to environmental protection, nature conservation, sustainable development and energy generation and use.
2. We believe that successful policies and programmes can only be developed by taking into account the opinions of our stakeholders and the community and that is why we undertake consultation exercises as often as possible. We also have a close working relationship with authorities in Guangdong Province and Macao to address cross-boundary pollution, and we are committed to upholding our international responsibilities regarding climate change and other issues.
3. Internally, we continually seek opportunities to reduce our impacts on the environment and to offer the best training and development opportunities to our staff. We also implement the Government's commitment to the Clean Air Charter.
4. Our key achievements in 2010 are described below according to the triple bottom line of sustainable development, which considers environmental, social, and economic aspects.

Environmental	Social	Economic
<ul style="list-style-type: none"> • We reduced our electricity consumption by 1.4 per cent, exceeding the consumption reduction target of 1 per cent. We also reduced photocopying paper consumption by 1.9 per cent through our on-going paper-saving initiatives. • The Buildings Energy Efficiency Ordinance was enacted in November 2010. • We completed the study on climate change in Hong Kong and reported major findings in the public consultation document on Hong Kong's Climate Change Strategy and Action Agenda. The consultation was completed in end 2010. • The Air Pollution Control (Motor Vehicle Fuel) Regulation 2010 came into operation on 1 July 2010 tightening the specifications of motor vehicle diesel and unleaded petrol to Euro V standards. • The Legislative Council approved funding for the HATS Stage 2A works in April 2010 and a review study commenced in June 2010. 	<ul style="list-style-type: none"> • 13 roving exhibitions / video broadcasting sessions were organised at shopping malls and estates, to promote "Source Separation of Waste", attracting in total 7 000 participants. • Established communication channel with renovators' trade association for distributing green advisory package for conducting renovation works via the trade association to their members. • Over 100 organisations in the EIAO Users Liaison Groups were consulted and revised guidance notes for the Environmental Impact Assessment Ordinance were issued in December 2010. • A public consultation on a proposed mandatory PRS for waste electrical and electronic equipment (WEEE) was completed in early 2010. • Completed a stakeholder consultation on a proposed plan to control emissions from non-road mobile sources. 	<ul style="list-style-type: none"> • A \$540 million incentive programme, to help vehicle operators switch from Euro II vehicles to new ones complying with the prevailing emission standard was launched on 1 July 2010. The programme will end on 30 June 2013. • A \$300 million Pilot Green Transport Fund has been developed for implementation next year to support the public transport sector and goods vehicle operators to test out green and low-carbon transport technologies.

- The NENT Landfill Extension – Design and Construction consultancy was awarded in December 2010.
- The Programme on Source Separation of Waste reached 80 per cent of the population by the end of 2010, in 1 637 housing estates/buildings and about 700 rural villages, achieving the target set by the Policy Framework for the Management of Municipal Solid Waste (2005-2014).
- The Legislative Council passed the Genetically Modified Organisms (Documentation for Import and Export) Regulation in late 2010, the Genetically Modified Organisms (Control of Release) Ordinance and the Regulation were scheduled to come into effect on 1 March 2011.



1 Scope

1. This Report combines input from the Environment Bureau (ENB) and Environmental Protection Department (EPD). It describes our efforts in 2010 to improve Hong Kong's environment and reduce the impacts of our own operations, and to contribute to sustainable development in Hong Kong.
2. The ENB is the chief administrative entity in the Hong Kong SAR Government responsible for environmental and sustainability matters, and the EPD is one of its main branches. Given that the environment is the primary focus of our work, this report places particular emphasis on environmental issues. However, we also give consideration to other sustainability issues as far as possible with reference to the Global Reporting Initiative.
3. Our target readership includes members of the Executive and Legislative Councils, academics, green groups, local and overseas organisations and businesses, members of the general public with an interest in environmental protection and other government bodies.
4. The reporting period covers 1 January 2010 - 31 December 2010, unless otherwise stated. This report is published in English and Chinese on our website and in CD-ROM format to reduce paper consumption. All monetary figures are in Hong Kong dollars.

Feedback on our Environmental Performance Report 2010

5. Readers are invited to share their views and suggestions on our Environmental Performance Reports through the on-line feedback form. In 2010 we received 20 replies. The majority felt the report's readability was 'good' with only two respondents stating that they thought it was 'poor'. Similar responses were received with regards to understanding our environmental performance; with the remaining respondents rating these areas 'average'. The provision of charts and tables was mostly graded 'average', followed by 'good'. Respondents also asked for more illustrations and hyperlinks to other information. In response to this feedback, we have endeavoured to enhance the report with more illustrations of photos, tables, charts etc., as well as with links to all accessible sources of relevant information.
6. In terms of the content, respondents were most interested in further information about our policies and programmes for the environmental improvements for Hong Kong, and also showed a high interest in finding out more on our promoting community involvement. The current report, while aiming to provide a complete and concise account of our activities as in past reports, has given more coverage on community activities.
7. In terms of environmental issues, the areas of greatest interest, in descending order, were air quality, waste reduction in our internal operations, energy management, waste management policies and programmes, water quality policies and programmes, nature conservation and sustainable development.



2 Our Profile

A. Organisation and Governance

1. The Environment Bureau (ENB) is responsible for Government policy-making and programmes to protect Hong Kong's environment. The Secretary for the Environment reports directly to the Chief Executive and the Executive Council on three main programme areas:

- **Energy.** Policy is set by the ENB, while energy conservation policy is implemented by the Electrical and Mechanical Services Department.
- **Sustainable development.**
- **Environmental protection** encompassing air, environmental assessment and planning, nature conservation, noise, waste and water. The Environmental Protection Department (EPD), which comes under the ENB, develops and implements policies and programmes in all areas except nature conservation, where it sets policies that are implemented by the Agriculture, Fisheries and Conservation Department.

2. Internally, ENB and EPD's sustainability impacts are managed by the Departmental Environment, Safety and Health Committee, a consultative body with representatives from management and staff. An Energy and Emissions Management Team has also been set up to identify ways to reduce energy consumption and meet targets under the Clean Air Charter.

Our Numbers in 2010

Establishment*	ENB, 39 staff; EPD 1 660 staff. See Our Staff for details.
Expenditure	ENB \$61 million; EPD \$2.304 billion. See Our Economic Impacts for details.
Facilities	ENB, one office; EPD, eight offices, three strategic landfills and more than 20 other facilities (see Appendix II).
Headquarters⁺	33/F, 34/F, 40/F and 45-48/F Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong.
Founding	ENB founded in July 2007. EPD founded in 1986.

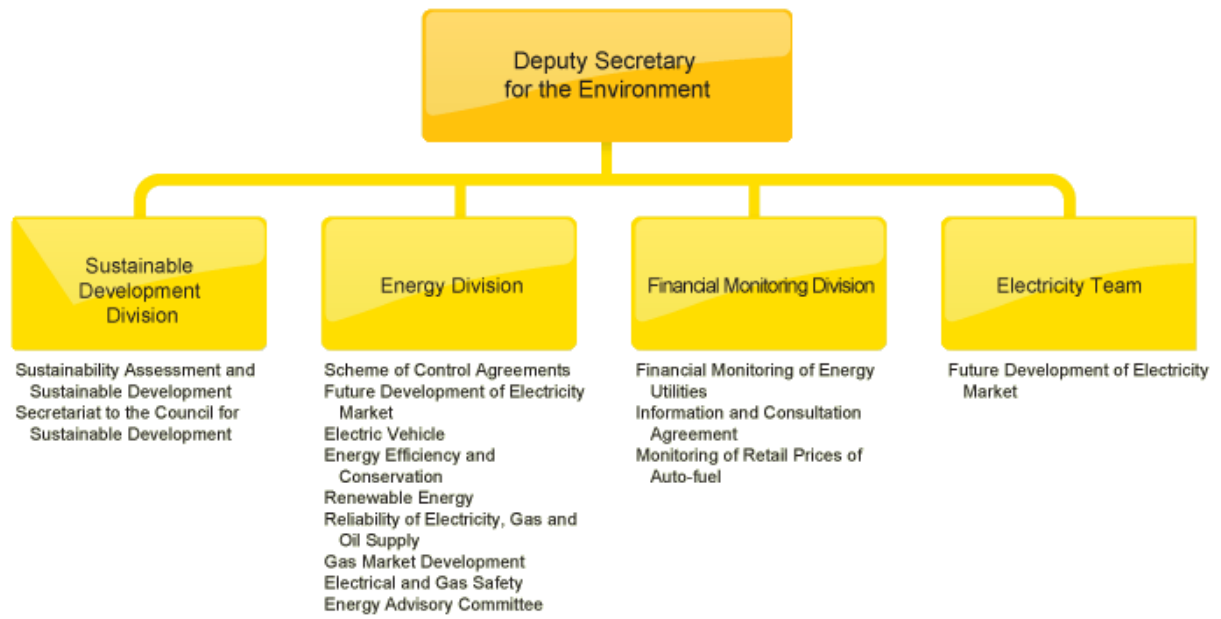
* As at 31 December 2010.

+As of 31 October 2011 the Headquarters is relocated to 15/F & 16/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong.

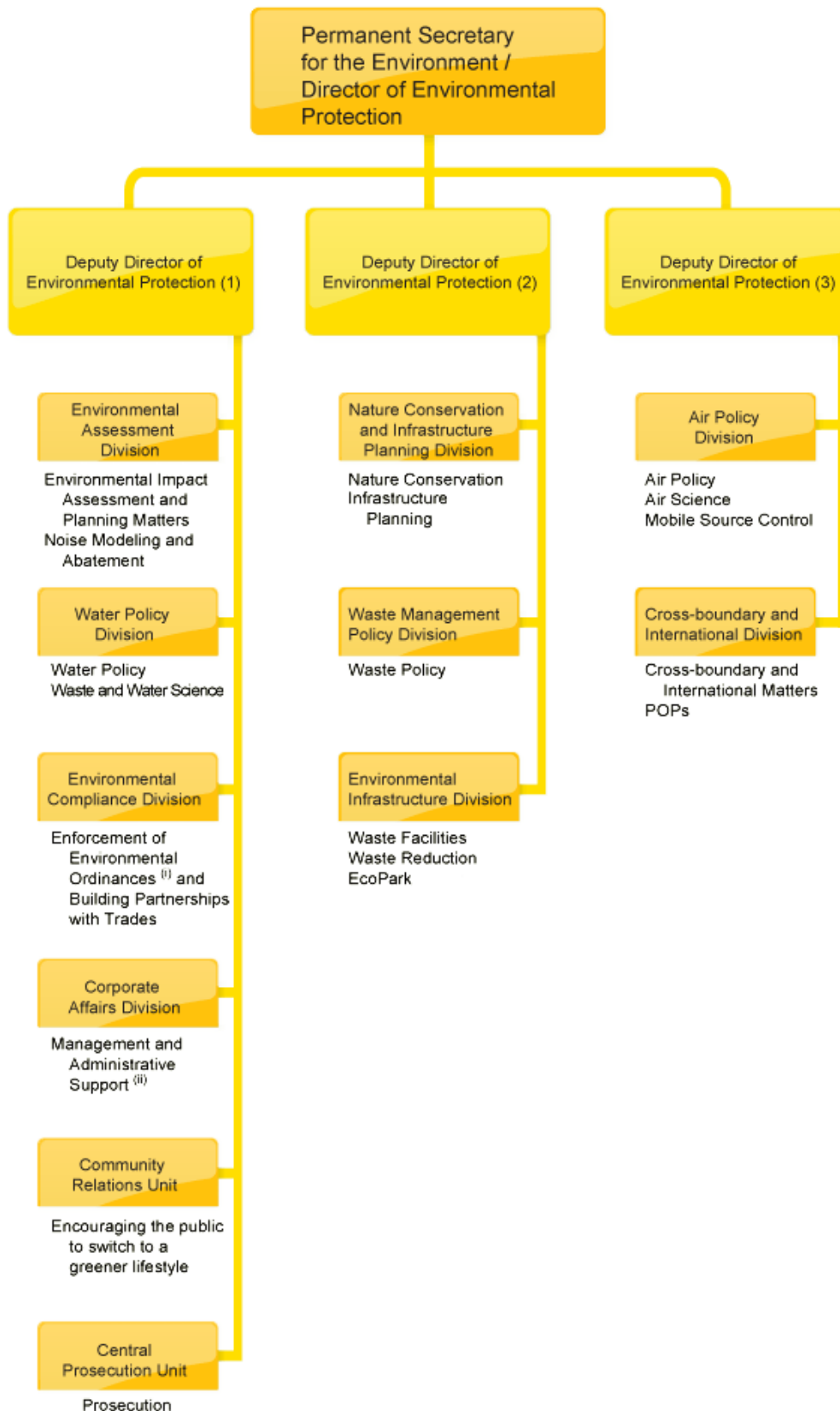
Organisational Structure



Environment Bureau
Energy and Sustainable Development Branch



Environmental Protection Department



Remarks:

- (i) Major enforcement duties under Air, Environmental Impact Assessment and Planning, Noise, Waste and Water Programmes are carried out by the Environmental Compliance Division
- (ii) Covers corporate environmental management, knowledge management, staff safety and health, human resources management, and information technology.

B. Vision and Strategy

Vision and Mission

1. Our vision and mission are to achieve a healthy and pleasant environment, to achieve the sustainable development of our city, and to secure a reliable, safe, efficient and reasonably-priced supply of energy.

Environmental and Energy Policy

2. To realise our vision and mission, we have adopted an Environmental and Energy Policy that applies to our services, programmes and internal operations (see full text at Appendix I). The policy has adopted the following guiding principles:

- Compliance with the letter and spirit of environmental laws;
- Pre-emption of environmental problems through planning and prevention;
- Preparedness for dealing with emergency environmental incidents;
- Minimisation of consumption;
- Communication of our goals to our staff and the public; and
- Training and professional development of our staff.

Strategy

3. Eight environmental strategies have been set out to ensure we achieve improvements to Hong Kong's environment and prevent future problems:

Strategy	Goal
Contribute to the formulation of major policies and plans within the Government, including town planning.	Minimise environmental impact of policies, strategies and planning proposals. Incorporate sustainability in decision-making process.
Develop and implement environmental improvement programmes, monitor environmental quality and handle pollution complaints and incidents.	Achieve direct improvements in: <ul style="list-style-type: none">• Air quality• Noise mitigation• Water quality• Waste management• Nature conservation
Plan and provide waste management facilities.	Ensure waste is handled and disposed of in a sustainable and environmentally responsible manner.
Establish a regulatory control framework and enforce environmental ordinances.	Reduce air, water, waste and noise impacts from polluting activities.
Formulate policies on energy supply and develop programmes to promote energy efficiency.	Minimise environmental impacts from the production and use of energy.
Build partnerships and engage stakeholders.	Secure better cooperation and build capacity among all sectors in improving the environment and promoting sustainable development.
Deliver environmental education programmes to promote environmental awareness and public participation.	Increase community awareness and support for programmes to enhance our environment.
Support research and professionalism in the environmental disciplines.	Contribute to the development of the environmental management profession in Hong Kong.



3 Environmental Impacts of Our Operations

We are committed to reducing the environmental impacts of our own operations through:

- implementing an effective green management system to monitor our internal operations;
- minimising energy and resources consumption;
- ensuring our waste management facilities are managed in the most environmentally acceptable manner; and
- promoting green procurement.

1. Our green management system

1.1 We are pleased to report that we are continuing to monitor the potentially significant environmental aspects of our internal activities and to manage our energy / emission performance through our Energy and Emissions Management Team (EEMT) set up in 2007. Our efforts in minimising the environmental impact of our operations have earned a "Class of Good" Energywise Label and a "Class of Excellence" Wastewise Label in the Hong Kong Awards for Environmental Excellence.

1.2 We have maintained good indoor air quality in our offices. 16 offices are certified under the Indoor Air Quality Certification Scheme.

2. Minimising energy and resources consumption

Our achievements are reported in three areas:

- Reducing our electricity consumption;
- Reducing our transport impacts; and
- Reducing waste.

Reducing our electricity consumption

2.1 Efficient use of energy is a priority and we have implemented a series of energy-saving measures that have resulted in steady progress in reducing our electricity consumption. In 2010 we set a target of 1 per cent reduction in electricity consumption and we managed to reduce consumption by 1.4 per cent (see Table 1).

2.2 Our energy-saving measures include:

Table 1 - Electricity Consumption and Emissions in 2009 - 2010*

	2009	2010
Electricity Consumed (GWh)	2.867	2.827
CO ₂ (tonnes)	2 007	1 979
SO ₂ (kg)	6 022	5 937
NO _x (kg)	3 728	3 676
RSP (kg)	287	283

*For most of our offices, we share office buildings with other users and there is no separate meter for measuring energy consumed by the air-conditioning system, so air-conditioning is excluded from the calculation of energy consumption for all of our offices.

Overall energy management

- Through the EEMT to identify opportunities for further savings;
- Conduct annual self-inspection in all offices and laboratories to identify areas of improvement;
- Appoint Energy Wardens in all offices to coordinate implementation of energy saving measures and monitor conservation efforts; and
- Adhere to the reporting requirements on energy consumption under the Clean Air Charter that the Government signed in 2006.

Good practice measures in offices

- Maintaining room temperatures at 25.5 degrees Celsius in summer months, and encouraging staff to dress down in summer.
- Using installations such as sectional control switches and occupation sensors.
- Replacing ageing lighting equipment with energy-saving ones, and using occupational sensors, as appropriate.
- Reducing lighting as appropriate, and switching lights off when not in use. Reinforcing this practice with routine checks and reminders.
- Using power-saving features and programmable timers for computers and other equipment, and purchasing equipment with energy efficiency labels.
- Switching off equipment when not in use and posting reminder stickers near light switches and office equipment.

Reducing our transport impacts

2.3 In 2010, the mileage of our vehicle fleet increased but we have managed to reduce fuel consumption by vehicles (see Table 2). We will continue to work towards reducing fuel consumption as far as practicable through a number of good practice measures.

Table 2 - Annual fuel consumption and pollutant emissions

Fuel Consumption 2009 - 2010							
Year	Vehicle Fleet	Petrol (litres)	Diesel (litres)	LPG (litres)	Electricity (kWh)	Mileage (km)	ULSD ^[1] (litres)
2009	52 vehicles ^[2]	100 713	60	2 693	-	673 000	92 000
2010	53 vehicles ^[3]	100 631	60	697	979	685 400	91 900

Pollutant Emissions 2009 - 2010 (kg)						
	SO ₂		NO _x		RSP	
	2009	2010	2009	2010	2009	2010
Vehicle Fleet	-	2	1 022	1 021	178	175
Marine Vessel	8	8	4 639	4 634	183	182

Notes:

^[1]ULSD is ultra low sulphur diesel and is used by our marine monitoring vessel, the 'Dr Catherine Lam'.

^[2]48 petrol vehicles, one LPG, two hybrid and one Euro II diesel.

^[3]47 petrol vehicles, one electric vehicle, two LPG, two hybrid and one Euro II diesel.

2.4 We have instituted below good practice measures:

- Procuring new electric vehicles to promote the use of electric vehicles.
- Requiring hybrid vehicles under new waste facilities contracts.
- Encouraging our staff to walk or use public transport where possible, and to car pool when using government vehicles.
- Promoting green driving practices such as switching off idling engines, making only necessary trips, driving at a steady speed and planning routes to minimise journey time.



Electric vehicle benefits the environment with its zero emissions.

2.5 In 2010, we have actively procured environment-friendly vehicles as new or replacement vehicles, including the purchase of an electric vehicle.

Reducing Waste

2.6 Waste paper, metal and plastics are collected separately in our offices for recycling. In 2010 we recycled around 42 700 kg of waste paper and 430 kg of plastic waste.

2.7 Photocopying paper consumption fell by 1.9 per cent through our on-going paper-saving initiatives. We will continue to apply paper-saving measures, such as using e-applications and processing for internal procurement and leave application and promoting electronic sharing of reports and presentation materials, and investigate other areas of potential saving.

2.8 We continued to collect used printer cartridges and used photocopier toner cartridges for recycling. Consumables and Inventory Recycling Scheme is being implemented to re-use and recycle consumables and inventory items. A new software programme has also been identified that can help to reduce the consumption of toner during printing and this software is being installed in all of our computers. In addition, we have launched a programme to recycle our old computers; these computers have been donated to the needy after refurbishment.

3. Our waste management facilities

3.1 Our waste management facilities meet international air emission standards, such as the latest European Union emission standards and this is also the case when putting in place new contracts for new facilities, such as the new Sludge Treatment Facilities to be built at Tsang Tsui, Tuen Mun. For SENT landfill, we are also exploring the viability of a landfill gas utilisation scheme.

3.2 We will continue to ensure that operators of waste management facilities follow stringent contractual requirements to control and monitor emissions and encourage new waste management contractors to join the Clean Air Charter to commit to reducing their emissions.



South East New Territories (SENT) Landfill.

4. Promoting green procurement

4.1 The aim of green procurement is to ensure that the products acquired are as environmentally friendly as possible, subject to sufficient market supply and that is economically rational, to help improve the Government's environmental performance and help promote a market for green products. The EPD works closely with the Government Logistics Department to develop green specifications for such products. To date, green specifications have been developed for over 100 products frequently procured by the Government and this year, the Administration has issued internal circulars on encouraging the use of green materials in public works projects and pursuing green procurement (including green services) in the Government.

4.2 The EPD is also involved in the Government's e-Procurement pilot programme, which simplifies procedures and reduces paper use. The programme was launched in September 2009 and allows for electronic transactions for goods and services up to a value of HK\$1.43 million.

See also: Targets - Our Progress and 2011 Aims.

ENB / EPD Premises Certified Under the Indoor Air Quality Certification Scheme

ENB / EPD Premises	IAQ Class Awarded
1. IAQ Information Centre	Excellent
2. Offices in Southorn Centre	Good
3. Offices in Revenue Tower	Good
4. Wan Chai Environmental Resource Centre	Good
5. Offices in Tsuen Wan Government Offices	Good
6. IWTS Administration Building	Good
7. Offices in Shatin Government Offices	Good
8. Chemical Waste Treatment Centre office	Good
9. Fanling Environmental Resource Centre	Good
10. Offices in Chinachem Exchange Square	Good
11. Offices in Cheung Sha Wan Government Offices	Good
12. Offices in Chinachem Tsuen Wan Plaza	Good
13. Offices in Nan Fung Commercial Centre	Good
14. Office in Murray Building	Good
15. Kennedy Town Environmental Exhibition Centre	Good
16. Office in Hoepwell Center	Good



4 Improving Hong Kong's Environment

Hong Kong's economic development comes with a price in our environment. At Environment Bureau (ENB) and Environmental Protection Department (EPD), we are working closely with our colleagues in other government bodies to protect and improve the environment in order to help Hong Kong's development become more sustainable. Air, energy, waste and water issues are our primary concerns so that we can provide a better living environment for Hong Kong's citizens. As some of these issues are cross-boundary, we collaborate with our colleagues in Guangdong Province to come up with joint solutions to benefit both of our regions. It is a continuous effort on our part as we seek new ideas and refinement of our policies on nature conservation, noise mitigation, environmental assessment, sustainable development and compliance.

The following sections highlight our programmes achievements in 2010:

1. Better Air Quality
2. Better Water Quality
3. Environmentally Sound Waste Management
4. Greener Energy Management
5. Nature Conservation
6. Quieter Environment
7. Cross-boundary and International Cooperation
8. Prevention and Mitigation Through Environmental Assessment
9. Sustainable Development
10. Building Partnerships and Encouraging Compliance

1. Better Air Quality

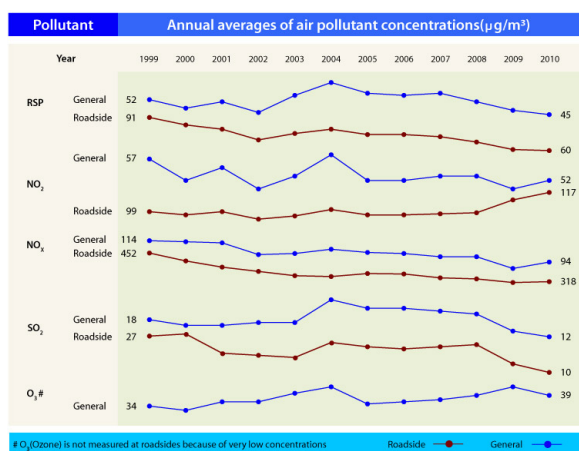
Mission:

To protect the health and well being of the community by achieving and maintaining satisfactory air quality through intervention in the planning process and by enforcing the controls in the Air Pollution Control Ordinance and the Ozone Layer Protection Ordinance.

The air that we breathe

1.1 In 2010, we are pleased to report that, in general, the air that we are breathing has improved in quality as we continue to make good progress to meet the emission reduction targets jointly agreed with Guangdong Province in 2002. Levels of air pollutants including respirable suspended particulates (RSP), sulphur dioxide (SO₂) and nitrogen dioxide (NO₂) measured at the 11 general monitoring stations in Hong Kong all complied with our annual Air Quality Objectives (AQOs) continuing the long-term trend towards improved air quality (see Figure 1).

Figure 1 - Air quality trends in Hong Kong 1999-2010



SEE DATA ENLARGE

Table 3 - Compliance status of long-term (annual) Air Quality Objectives in 2010

Station	NO ₂ 1-year	TSP 1-year	RSP 1-year	SO ₂ 1-yea	Lead 3-months
General Station					
Central/Western	✓	✓	✓	✓	✓
Eastern	✓	--	✓	✓	--
Kwai Chung	✓	✓	✓	✓	✓
Kwun Tong	✓	✓	✓	✓	✓
Sham Shui Po	✓	✓	✓	✓	--
Tsuen Wan	✓	✓	✓	✓	✓
Sha Tin	✓	✓	✓	✓	--
Tai Po	✓	✓	✓	✓	--
Tung Chung	✓	✓	✓	✓	✓
Yuen Long	✓	✓	✓	✓	✓
Tap Mun	✓	--	✓	✓	--
Roadside Station					
Causeway Bay	X	--	X	✓	--
Central	X	--	X	✓	--
Mong Kok	X	X	✓	✓	✓

Notes : "✓" Complied with AQO, "X" Violated the AQO, "--" Not Measured

ENLARGE

1.2 On the other hand, the results of our measurements at roadside level have been mixed. Concentrations of RSP and SO₂ have decreased, but NO₂ levels have increased. The increase in NO₂ levels is shown by the higher incidence of high pollution days at roadsides (a reading of 100 or above on the Air Pollution Index). However, since 1999, as a consequence of our comprehensive vehicle emission programme, we are pleased to report that the roadside levels of RSP, nitrogen oxides (NO_x) and SO₂ levels have fallen significantly by between 30 per cent and 63 per cent, which is positive and encouraging.

Review of Air Quality Objectives

1.3 The Air Quality Objectives (AQOs) are used as the means of assessing how the air quality compares with desired standards. Since we introduced the AQOs, there have been several new scientific findings about air pollution and health and we have carried out a review study followed by a four-month public consultation to identify and recommend new AQOs with reference to the World Health Organisation's latest air quality guidelines together with 19 measures for achieving them.

1.4 So far, we are still incorporating the different views collected to address the relevant policy issues so as to align the implementation of the recommended measures with public interests in our submission to the Legislative Council for approval. In parallel, we have already started to put in place particular measures that have already been unanimously supported or are likely to have wide support from the community to meet the proposed new AQOs.

Cleaning up the region's air

1.5 It is well acknowledged that air pollution does not respect boundaries. In Hong Kong, we share a common air shed with the Pearl River Delta region so trans-boundary issues affect us particularly. In 2002, the Hong Kong SAR Government jointly agreed regional air emission reduction targets to be achieved by 2010 with the Guangdong Provincial Government. We have made significant progress in achieving these targets especially as last year was the imposed deadline. Latest Hong Kong figures, covering 2009, show that emissions of NO_x, RSP and volatile organic compounds (VOC) have been reduced beyond the agreed targets (see Table 4) with SO₂ reduction gradually getting closer to the target, particularly as a result of setting stringent caps on emissions from power plants under the First Technical Memorandum (December 2008) and the power companies retrofitting their coal fired generation units with air pollution reduction equipment.

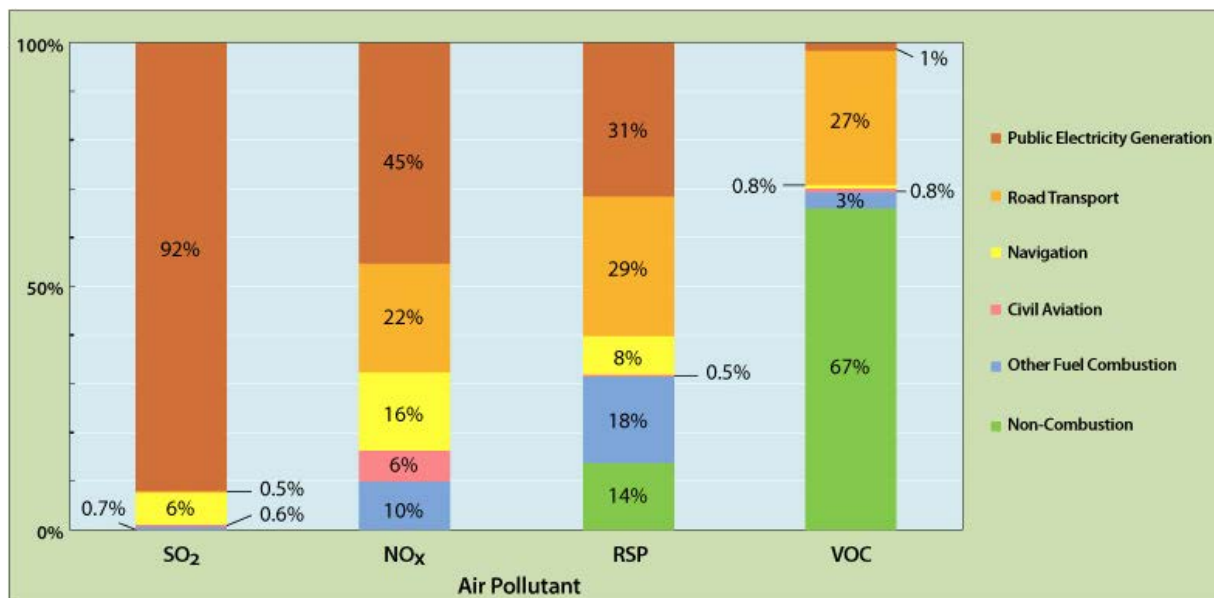
Table 4 - Progress in achieving the 2010 emissions reduction targets

Pollutant	Emission Level 1997 (tonnes)	Emission Level 2009 (tonnes) (preliminary figures)	Change in Emission Level 1997-2009 (preliminary figures)	Emission Reduction Target for 2010
SO ₂	66 200	50 500	-24%	-40%
NO _x	124 000	84 100	-32%	-20%
RSP	11 500	4 890	-57%	-55%
VOC	68 800	29 000	-58%	-55%

Dealing with the power and transport sectors

1.6 As well as power plants, motor vehicles are another major source of air pollution. Both the power and transport sectors figure prominently in our endeavours to tackle air pollution in Hong Kong (see Figure 2).

Figure 2 - Breakdown of sources of air pollution in Hong Kong in 2009



1.7 Power sector accounts for 92 per cent of Hong Kong's SO₂ emissions, 45 per cent of NO_x and 31 per cent of RSP, so we have focused on these pollutants for implementing emission reduction measures. The most recent figures from 2009 show that SO₂ and NO_x emissions from the power sector have fallen as a result of urging the power utilities to switch to cleaner fuels and take other emission reduction measures; however there has been a slight increase in RSP emission (see Figure 3). But we are confident that under the latest stricter mandatory emission caps that came into effect this year, emissions from the power sector will fall further. These emission caps were included in the renewed specified process licences of Lamma Power Station, Castle Peak Power Station, Black Point Power Station and Penny's Bay Gas Turbine Power Station.

Figure 3 - Emissions from Power Sector in 2005 - 2009

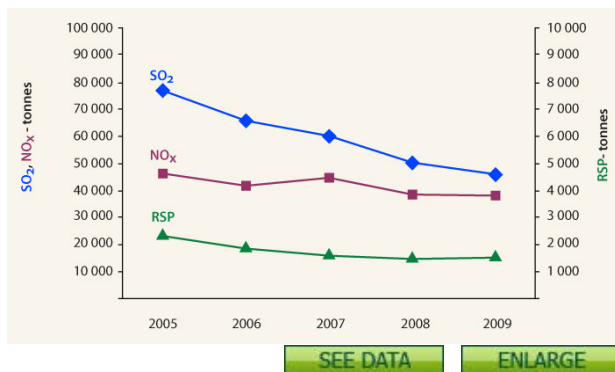
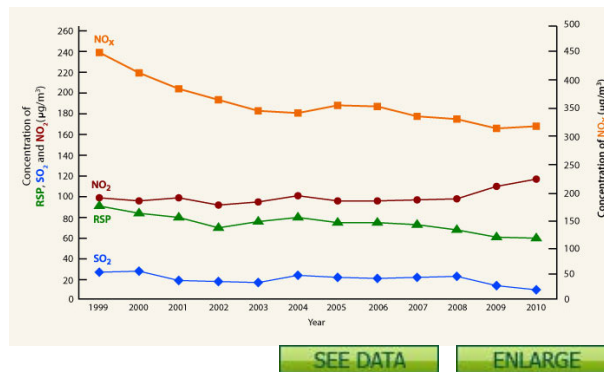


Figure 4 - Roadside air quality trends in Hong Kong 1999 - 2010



1.8 As for the transport sector, we have implemented a comprehensive programme to remove the most polluting vehicles from roads and introduce cleaner fuels since 1999, and there have been significant reductions in roadside pollution (see Figure 4).

1.9 We are continuing nonetheless our efforts to reduce vehicle emissions further through:

- Tightening the specifications of motor vehicle diesel and unleaded petrol to Euro V standards through the Air Pollution Control (Motor Vehicle Fuel) Amendment Regulation 2010;
- Bringing the Motor Vehicle Idling (Fixed Penalty) Bill to the Legislative Council to introduce a statutory ban on idling vehicles with running engines;
- Planning to designate pilot low emission zones (LEZ) for buses in busy districts such as Causeway Bay, Central and Mong Kok, to increase as far as practicable the ratio of low-emission buses (i.e. those meeting the emission level of a Euro IV or above bus) running in these zones from 2011, with the target of having only low-emission buses in these zones by 2015; and
- Promoting and testing electric vehicles as the 2009-10 and 2010-11 budgets also identified it as a key measure in promoting a green economy for Hong Kong.

Non-road mobile sources – another important issue

1.10 Non-road mobile sources in Hong Kong include non-road vehicles and mobile machinery used within the airport, container terminals and construction sites. In 2010, we put forth for stakeholder consultation a proposal to control emissions from these sources. In general, the stakeholders supported the introduction of emissions control on non-road mobile sources but some were concerned about the operational aspects of the proposal. We have revised the proposal and will further consult stakeholders before proceeding with the drafting of legislation.

1.11 Another non-road mobile source is marine vessels, particularly our local ferries. A ferry can reduce its SO₂ emission by more than 90 per cent and particulates by about 30 per cent if it switches from marine light diesel to ultra low sulphur diesel (ULSD). A trial of ULSD used in ferries was launched in 2009 with the co-operation of four ferry operators to assess the technical feasibility and implications in terms of costs and operations. The trial was completed in 2010 and the results will be used to map out the way forward.

The ozone layer

1.12 Protecting the ozone layer in the atmosphere, which helps to shield us from harmful ultra-violet rays, is also part of our responsibility. In 2009, regulations to control products containing ozone depleting substances were extended from chlorofluorocarbons (CFCs) and halons to other ozone depleting substances, such as hydrochlorofluorocarbons (HCFCs), commonly used in air-conditioning units. We have also banned the import of metered-dose inhalers containing CFCs and fire extinguishers containing HCFCs and bromochloromethane since 1 January 2010.

Blue skies once again

1.13 Smog, which hinders visibility and is potentially a hazard for our ships and aircraft, is formed as a result of a photochemical reaction of sunlight, NO_x and VOC. The latter is emitted from solvents and petrochemical products. To reduce smog, we have imposed controls on VOC content in architectural paints/coatings, printing inks, selected consumer products, vessel paints, adhesives, and sealants and this will be further extended to pleasure craft paints and vehicle finishing paints in 2011. With successful implementation of these measures, we hope that Hong Kong will enjoy blue skies yet again in the near future.

Case Study 1 – Further Tightening of the Emission Caps from Power Plants

The Air Pollution Control Ordinance sets emission caps for the power sector through a technical memorandum (TM) promulgated in December 2008 to ensure that the power sector can achieve their targeted emission reductions. In 2010, the implementation of the TM was reviewed and it was considered that there was room for further tightening of the emission caps on the power stations through maximising the use of existing gas-fired generation units and prioritising the use of coal-fired generation units that have been equipped with emission reduction devices for meeting the 2010 emission caps. The new set of emission caps for power sector starting 2015 are 12 482 tonnes for SO₂, 27 552 tonnes for NO_x and 831 tonnes for RSP, reduced by 50 per cent, 35 per cent and 34 per cent respectively compared to the targets set by the first TM in 2008. The overall share of natural gas in the combined fuel mix of the two power companies for local electricity generation will be raised from the anticipated 39 per cent in 2010 to about 52 per cent in 2015, which incidentally would be broadly the same as the proposal in the Air Quality Objectives Review to raise the power sector's fuel mix ratio in local electricity generation to 50 per cent for natural gas.



The coal-fired generation units of Castle Peak Power Station B has retrofitted with emission reduction facilities (The four flue gas desulphurisation plants are in blue at the front.) – Courtesy of CLP Power Hong Kong Limited.

See also: Targets - Our Progress and 2011 Aims.

2. Better Water Quality

Mission:

To achieve marine and fresh water quality objectives that will safeguard the health and welfare of the community and meet various conservation goals, by planning for the provision of sewage facilities, intervening in the planning process and enforcing the controls in the Water Pollution Control Ordinance and the Dumping At Sea Ordinance.

Improving our water quality

2.1 In Hong Kong, we have set our water quality targets for our marine waters, rivers and streams and beaches according to the Water Quality Objectives (WQOs). We are pleased to report that the compliance rates with marine and rivers WQOs in 2010 were 80 per cent and 89 per cent respectively; whereas our compliance with the WQO for bathing waters in Hong Kong was 100 per cent.

Figure 5 - WQOs compliance in marine waters of Hong Kong 1986-2010



SEE DATA

ENLARGE

Figure 6 - WQOs compliance in inland waters of Hong Kong 1986-2010



SEE DATA

ENLARGE

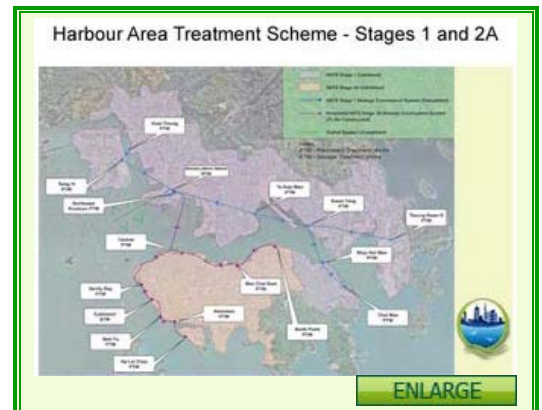
Figure 7 - WQOs compliance in beach water in Hong Kong 1986-2010



SEE DATA

ENLARGE

2.2 As the majority of Hong Kong's population is concentrated along Victoria Harbour, we have embarked on the Harbour Area Treatment Scheme (HATS) to ensure that all sewage around the harbour is properly treated and disposed of (see map of Harbour Area Treatment Scheme-Stages 1 and 2A). HATS Stage 1, completed in 2001, treats 75 per cent of the sewage from areas around the harbour and HATS Stage 2A, will provide disinfection and collect the remaining 25 per cent sewage. The Advance Disinfection Facilities (ADF), commissioned in March 2010, together with the rest of Stage 2A, due to be completed by 2014, are part of our future plans for further improvement of Hong Kong's water quality. Planning is also underway for HATS Stage 2B, which will achieve an even higher level of treatment through underground biological facilities.



ENLARGE

The completion of HATS will mean development on both sides of Victoria Harbour receives proper sewage treatment and harbour water quality is adequately protected.

2.3 Since we implemented HATS Stage 1 for sewage treatment in 2001, the quality of Victoria Harbour's water has improved, as shown in increased dissolved oxygen levels and decreasing nutrients and *E. coli* bacteria levels. With the commissioning of the ADF as part of HATS in March 2010, we are pleased to report that the bacteria levels in western Victoria Harbour as well as Tsuen Wan beaches have further been reduced.



The water quality of Tsuen Wan beaches has been improved.

2.4 In the hinterland, river and stream pollution is being tackled through the village sewerage programme, which aims to provide a public sewer system to village houses and to prevent untreated sewage from discharging into rivers and streams and ultimately into the sea. By the end of 2010, about 6 100 village houses in 144 villages had been connected to the public sewer system.

Review of Water Quality Objectives

2.5 Whilst our WQOs have served as an assessment of how well we are doing, we have felt it necessary to review the objectives in the light of new scientific and technological advances in understanding and monitoring water quality. In 2009, a public engagement exercise involving key stakeholders such as District Councils, the fisheries and marine industries, marine conservation groups, recreational groups, and professionals and academics was held on the WQOs. The views and feedback will be used to propose new WQOs on which the public will be consulted again.

Regional water quality

2.6 Similar to air, we share common water resources with the Pearl River Delta region. Hong Kong and Guangdong are working together to improve water pollution control in shared water areas through monitoring and the implementation of joint strategies for Deep Bay, Mirs Bay and the Pearl River Estuary. Further details are provided in Cross-boundary and International Co-operation.

Case Study 2 – Re-opening the closed Tsuen Wan beaches

The Government has been implementing various improvement works in recent years to help improve water quality of the Tsuen Wan beaches. Measures include the completion of the Sham Tseng sewage treatment works, local sewerage network along Castle Peak Road to receive wastewater from the developments in the beach hinterlands and the ADF under HATS Stage 2A. The ADF came into operation in March 2010. As the water quality of the seven closed Tsuen Wan beaches has significantly improved and water in the area met the WQOs for bathing beaches in the 2010 bathing season, EPD advised the Leisure and Cultural Services Department on 1 November 2010 that all seven beaches would be suitable for bathing. Four of the Tsuen Wan beaches were re-opened in June 2011.



Some of the beaches in Tsuen Wan: Lido Beach (left) and Approach Beach (right).

See also: Targets - Our Progress and 2011 Aims.

3. Environmentally Sound Waste Management

Mission:

To safeguard the health and welfare of the community from adverse environmental effects associated with the handling and disposal of wastes by developing a sustainable waste management strategy, providing waste management facilities and enforcing the controls in the Waste Disposal Ordinance.

Our waste problem

3.1 Waste is one of Hong Kong's most serious environmental challenges. Hong Kong primarily relies on landfill to dispose of our waste produced every day. However, our landfills are rapidly running out of space. While we have had some recent success in reducing waste loads, the situation is still not sustainable and we need to find long-term solutions to waste management.

3.2 In 2010, over 5 million tonnes of solid waste entered our landfills; however this is about 35 per cent lower than 2002 levels. We are pleased to report that this has been the result of initiatives, such as landfill disposal charges for construction waste together with programmes to reduce and recycle domestic and commercial and industrial waste. Our domestic waste levels have fallen by about 13 per cent since 2004 although commercial and industrial waste has remained at about the same level in the recent few years (see Figure 8).

Figure 8 - Solid waste landfilled in Hong Kong 2001-2010

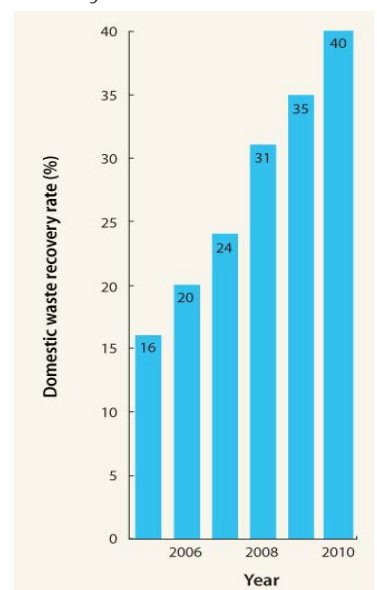


Reducing waste

3.3 We have been exploring municipal solid waste charging as a direct economic disincentive to promote waste reduction and recovery. In 2007, we completed a three-month trial scheme on domestic waste. Following the completion of the trial scheme, a baseline study on commercial and industrial waste generation patterns and waste management practices was completed in 2010. Based on these studies, in 2011, we will engage the public in continued discussions on possible options to introduce municipal solid waste charging in Hong Kong.

3.4 As part of the Policy Framework for the Management of Municipal Solid Waste (2005-2014) developed in 2005, we set a target to have 80 per cent of Hong Kong's population covered by the Programme on Source Separation of Waste (SSW) by 2010. We are pleased to report that we have reached 80 per cent of the population in over 1 600 housing estates/ buildings and 700 rural villages. The Programme's effect on waste recovery is evident from the corresponding increase in domestic waste recovery from 16 per cent to 40 per cent between 2005 and 2010 (see Figure 9). The Programme was extended to the commercial and industrial sector in October 2007 and by the end of 2010, almost 700 buildings are now participating.

Figure 9 – Domestic waste recovery rate



3.5 In 2007, we set up the Hong Kong Second-hand Exchange website for re-usable items and materials. By the end of 2010, the site had received 754 000 visits and information on more than 27 000 items has been uploaded resulting in over 5 100 items being successfully exchanged.

Producer responsibility

3.6 Producer responsibility requires that different stakeholders including producers and consumers take greater share of responsibility for the recovery and recycling of waste products. The Product Eco-Responsibility Ordinance was enacted in July 2008 to provide a legal framework for mandatory Producer Responsibility Schemes (PRS). The first mandatory PRS takes the form of a 50-cent environmental levy on plastic shopping bags. Introduced in July 2009, it has effectively reduced the distribution of plastic shopping bags from registered retailers by about 90 per cent. We will consult the public in 2011 with a view to extending it to cover all retailers in Hong Kong.

3.7 In 2008, we set up voluntary PRSs for rechargeable batteries, computers, fluorescent lamps and glass bottles. In 2010, the public was consulted on the proposal of a second mandatory PRS for waste electrical and electronic equipment (WEEE) and work is being undertaken to engage with the relevant trade on details of the scheme.

Table 5 - Voluntary producer responsibility programmes – quantities recovered

Programme	2008	2009	2010
Rechargeable Battery Recycling Programme	26.6 tonnes (160 480 pieces)	32.5 tonnes (154 750 pieces)	57.1 tonnes (981 380 pieces)
Computer Recycling Programme	19 170 major items (including desktop and notebook computers, CRT and LCD monitors, scanners and printers)	14 134 major items	21 171 major items
Fluorescent Lamp Recycling Programme	163 570 pieces*	312 310 pieces	349 850 pieces
Glass Bottles from Hotel Sector	62 tonnes#	428 tonnes	482 tonnes

* Programme was launched in March 2008. The figure is for April-December 2008.

Programme was launched on 11 November 2008. Figure is for 11 November-31 December 2008.

Case Study 3 – WEEE GO GREEN



Each year, Hong Kong households and corporations throw away more than 70 000 tonnes of waste electrical and electronic equipment (WEEE) and computer products. Some of these items are still in good working condition and could be put to second-hand use. Moreover, all of them contain components and materials that could be recovered for reuse and recycling, such as metals and plastics. The WEEE Recycling Programme aims to channel WEEE for reuse and recycling instead of disposal. Since October 2010, St James' Settlement has been implementing the WEEE GO GREEN programme in the recycling centre at EcoPark in Tuen Mun. The Programme is funded by the Environment and Conservation Fund (ECF) on a 3-year basis. Under the programme, used home appliances will either be refurbished for delivery to needy families or dismantled to recover reusable and recyclable materials.



The Secretary for the Environment, Mr Edward Yau, tours "WEEE Go Green" Recycling Centre at EcoPark in Tuen Mun to learn about its operation.



The Secretary for the Environment, Mr Edward Yau (left), the Permanent Secretary for the Environment, Ms Anissa Wong (right), and other guests officiate at the opening ceremony of the Recycling Centre.

Waste facilities

Landfills

3.8 We have three strategic landfills to accept Hong Kong's solid waste. However, these will be exhausted as early as 2014 and latest by 2018, if we continue to dispose of our waste, according to our estimated waste arising rates. We have therefore been making preparations for extensions to these landfills. In 2010, we achieved the following:

- Completed the feasibility study for the West New Territories Landfill Extension and commenced planning for land resumption;
- Awarded the Design and Construction consultancy for the North East New Territories Landfill Extension; and
- Completed the feasibility study for the South East New Territories Landfill Extension with land re-zoning in progress.

Case Study 4 – Restoring Closed Landfills

Hong Kong's old landfills have been transformed into our assets. There are thirteen old landfills in Hong Kong which were closed between 1975 and 1996. A restoration programme has been implemented by EPD to minimise their potential adverse impacts on the environment and to render them safe for beneficial use. The restored landfills are bustling with life, offering residents of our crowded city attractive new venues where they can relax or enjoy recreational activities. For example, in Kwun Tong, the former Jordan Valley Landfill has been developed into a community park which was opened to the public in August 2010. The Jordan Valley Park features a radio-controlled model car racing circuit, horticultural education centre, community garden, children's play areas, elderly exercise corner, jogging track, etc.



Jordan Valley Park (previously Jordan Valley Landfill).

Waste treatment

3.9 Landfilling is an essential and inevitable part of the waste management strategy but by itself it is not a sustainable solution without waste treatment and reduction. As part of Hong Kong's waste management strategy, we must look at reducing the bulk of Hong Kong's waste through pre-disposal treatment.

3.10 In September 2010, a contract for the Design, Build and Operate of the Sludge Treatment Facilities (STF) was awarded. The design and construction of the STF commenced in October 2010 with a target commissioning date by end of 2013.

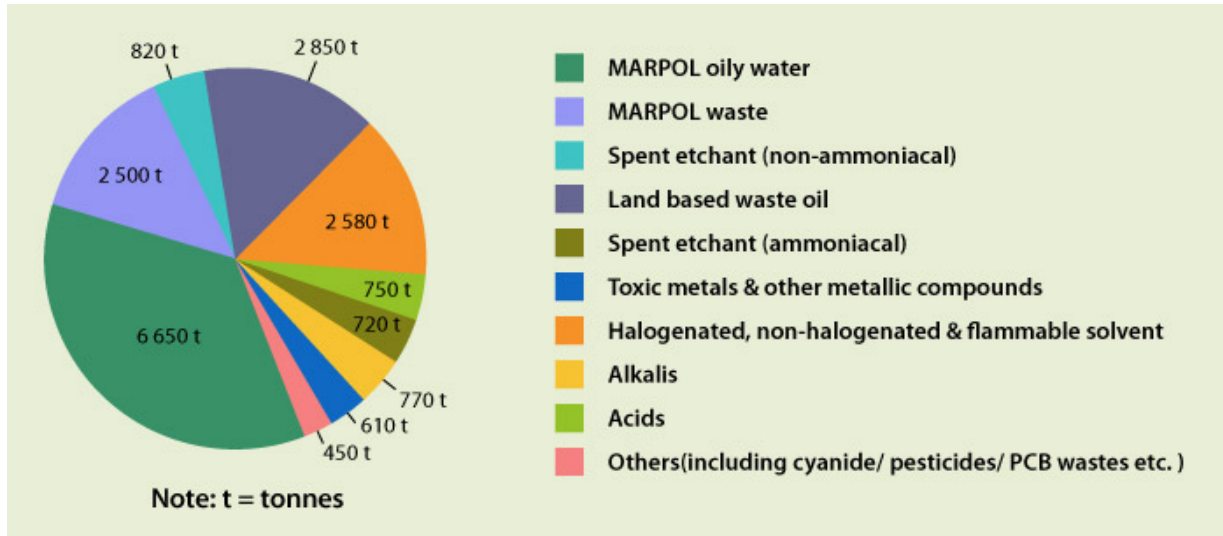
3.11 In 2010, the environmental impact assessment (EIA) for the Organic Waste Treatment Facilities, Phase 1 was completed and the preparation of tender documents, together with tender prequalification and assessment, will be carried out in 2011.

3.12 In November 2008, the government commenced a detailed Engineering Investigation and Environmental Impact Assessment Studies for two sites to ascertain their suitability for the Integrated Waste Management Facilities (IWMMF) that would adopt advanced incineration for municipal solid waste treatment. The EIA Study was substantially completed in the end of 2010 for formal submission in early 2011. The preferred site for developing Hong Kong's first modern IWMMF will be determined taking into account the EIA results and other factors related to Hong Kong's overall waste management strategy.

3.13 We will pay close attention to each step of the preparation work and expedite all the necessary actions so that the IWMMF can be commissioned as early as possible. Meanwhile, we will continue to actively promote reduction, reuse and recycling of waste and eco-responsibility in order to reduce the amount of waste generated.

3.14 The Chemical Waste Treatment Centre (CWTC) handles most of the chemical waste in Hong Kong. In 2010, upgrading of the CWTC air pollution control system to meet the stringent European Union emission standards and construction of facilities for reception and treatment of clinical waste were in progress. We plan to receive and treat clinical waste at the CWTC in the second half of 2011.

Figure 10 – Chemical waste handled by the Chemical Waste Treatment Centre in 2010



See also: Targets - Our Progress and 2011 Aims.

4. Greener Energy Management

Mission:

To ensure reliable supplies of energy at reasonable prices, promote its efficient and safe use, and at the same time minimise the environmental impacts in the production and use of energy.

The future of energy for Hong Kong

4.1 The Government's commitment for Hong Kong's energy future is to reduce energy intensity by at least 25 per cent by 2030 (using 2005 as a base year), based on a target proposed and endorsed by APEC leaders and now publicly declared in the 2009-10 Policy Address. To achieve our mission as well as commitment to reduce energy intensity, it is important to consider our energy usage and most significantly the types of fuel we are using for power generation and their environmental impacts.

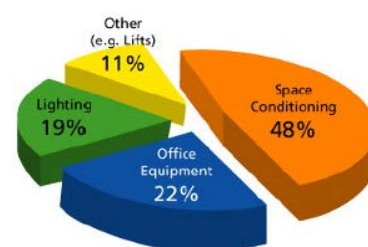
Cleaner electricity generation

4.2 In 2008, the Hong Kong Government signed a Memorandum of Understanding with the National Energy Administration, under which we are guaranteed the continuous supply of nuclear power and enhanced supply of natural gas to Hong Kong which could greatly help reduce air pollution and greenhouse gas emissions from power generation.

4.3 In 2010, we completed the public consultation on "Hong Kong's Climate Change Strategy and Action Agenda", which included the proposal to revamp the fuel mix for local power generation by 2020 (see also Cross-boundary and International Co-operation). We are now consolidating views received during the public consultation to chart the way forward.

Reducing energy consumption

4.4 Buildings account for almost 90 per cent of total electricity consumption in Hong Kong. The Buildings Energy Efficiency Ordinance, which mandates compliance with the Building Energy Code (BEC) on minimum energy performance standards for lighting, electrical, air-conditioning, and lift and escalator installations in new buildings and in major retrofitting works in existing buildings, was enacted in December 2010.



Different proportions of energy consumption of a building.

ENLARGE

4.5 To encourage the public to take concrete actions to enhance buildings energy efficiency, the Environment and Conservation Fund (ECF) had allocated \$450 million to subsidise owners of residential, industrial and commercial buildings to carry out energy-cum-carbon audits as well as energy efficiency projects.

Table 6 - Status of the funding schemes (up to end of December 2010)

Schemes Launch Date	8 April 2009
Application Received	Over 1 280 cases
Application Approved	605 cases
Amount Grant	\$203 million
Benefit Building	Over 4 100 buildings
Annual Electricity Saving	106 million kWh
Reduction of Carbon Dioxide Emission	74 650 tonnes

4.6 The same goal of improving building energy consumption underpins the setting up of district cooling system in the Kai Tak Development, which will provide much more energy-efficient centralised air-conditioning services in the area. With construction work underway, the system is expected to commence operation in 2012.

4.7 We also promote energy efficiency and green buildings through leading by example. In April 2009, we adopted a comprehensive target-based performance framework for our buildings setting out targets for energy efficiency, renewable energy, greenhouse gas emissions and waste management etc. Our new buildings with construction floor area of more than 10 000 square metres are assessed by international or locally-recognised

environmental assessment systems and must attain grades not lower than the second highest level in these systems. We have completed more than 420 energy efficiency improvement projects in our facilities since 2005.

4.8 Carbon audit provides invaluable information to building users and managers on their performance on greenhouse gas emission, a substantial part of it relates to their use of energy. In 2008, the EPD and Electrical and Mechanical Services Department jointly published guidelines for carrying out carbon audits through calculating and reporting greenhouse gas emissions from building operations and identifying areas for improvement. About 200 organisations since, have signed the Carbon Reduction Charter under the "Green Hong Kong • Carbon Audit" campaign and committed to reducing their greenhouse gas emissions.

4.9 Energy efficiency labels for certain products became mandatory in November 2009. The initial phase covers room air-conditioners, refrigerating appliances and compact fluorescent lamps. The second phase commenced in March 2010 with an 18-month grace period, and covers washing machines and dehumidifiers.

4.10 A Voluntary Energy Efficiency Labelling Scheme (VEELS) for 19 household appliances and office equipment has been established. To enable consumer to acquire more energy performance information, the "Grading Type" energy labels under the VEELS for televisions and LED lamps were scheduled to roll out respectively in March & June 2011.



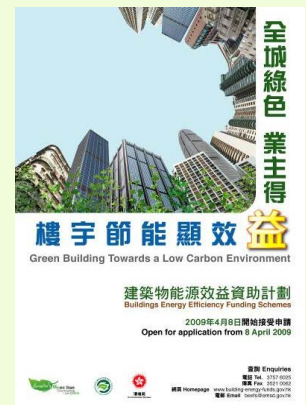
The energy label classifies the energy performance of a product type into five grades. A product with Grade 1 energy label is among the most energy efficient in the market while a product with Grade 5 is the least efficient.

Case Study 5 – Buildings Energy Efficiency Schemes

To address the challenges of climate change, the Environment and Conservation Fund allocated \$450 million to set up the Buildings Energy Efficiency Funding Schemes (BEEFS). Since its launch in 2009, the scheme has been delivering good results. There are two types of projects under the scheme; Energy-cum-Carbon Audit Projects (ECA) and Energy Efficiency Projects (EEP).

Energy consumption is closely related to greenhouse gas (GHG) emissions. In Hong Kong, buildings account for nearly 90 per cent of the total electricity consumption. Therefore, reducing electricity consumption of buildings, e.g. by improving their energy efficiency, is instrumental in bringing down our GHG emissions and improving our air quality. It can also foster a green economy and power a sustainable future.

To further promote the schemes, the Government has solicited support from various sectors such as real estate, property management and architectural services. Up to December 2010, it has also conducted about 70 talks with training organisations, district councils, and community organisations. There are over 290 qualified professionals that provide energy-cum-carbon audits under the scheme.



See also: Targets - Our Progress and 2011 Aims.

5. Nature Conservation

Mission:

To conserve natural resources and the bio-diversity of Hong Kong in a sustainable manner, taking into account social and economic considerations, for the benefit of the present and future generations of the community.

Protecting natural sites

5.1 Hong Kong possesses many natural sites of interest that we are committed to protecting. As such, we have extended legal protection to a number of natural areas and restricted activities that could harm or alter their environment. In 2009, we opened the Hong Kong National Geopark, turning over a new leaf for geo-conservation in Hong Kong.

5.2 We have further implemented two schemes, namely the Management Agreement (MA) and Public-Private Partnership (PPP) Schemes, to enhance the conservation of ecologically important sites under private ownership, as promulgated under our New Nature Conservation Policy.

5.3 Landowners can obtain financial incentives from the Environment and Conservation Fund (ECF) via NGOs to protect sites that would otherwise be developed. Two projects that began in 2005 have achieved significant increases in the diversity and bird and butterfly populations have expanded as a result, and other improvements have been made to their habitats. A further \$9.6 million was awarded in 2009 for this purpose. The Management Agreement projects continued to run with ECF's funding approval made in late 2009, and will end by 2012 and 2013 separately.

5.4 Through the PPP Pilot Scheme, participants can develop less sensitive areas of a natural site while committing to long-term conservation of the remainder. One such project was suggested for a site in Sha Lo Tung in 2008 which the Government supported in principle. The project proponent is now conducting assessment under the Environmental Impact Assessment Ordinance (EIAO).

Protecting native species

5.5 The Legislative Council passed the Genetically Modified Organisms (Documentation for Import and Export) Regulation in late 2010, the Genetically Modified Organisms (Control of Release) Ordinance and the Regulation came into effect on 1 March 2011. We made preparations in 2010 to amend the Schedule of Protection of Endangered Species of Animals and Plants Ordinance, including informing stakeholders on the proposed amendments. We informed the Legislative Council Panel on Environmental Affairs on the proposed amendments in January 2011. We tabled the subsidiary legislation for the Legislative Council's negative vetting in end February 2011. The amendments took effect on 20 May 2011.

Case Study 6 - Our Asset: The Hong Kong Global Geopark of China and its Festival

The Geopark Festival, which was held from late October 2010 to February 2011, aimed at promoting the Hong Kong Global Geopark of China. Not only did it seek to enhance the public's understanding of distinctive landforms and rock formations in the Hong Kong National Geopark, it also stressed the importance of geo-conservation. The Festival included a series of activities such as booth games, exhibitions, photo contest and a "Magnificent Rocks and Magic Scenery" poll, drawing about 90 000 participants. For the photo contest, the best entries were picked from more than 1 100 entries and free-of-charge photography workshops were offered to the participants to visit High Island, Double Haven, Port Island, Bluff Head and Tung Ping Chau areas of our Geopark. In addition, the High Island Geo Trail was voted to be the best geo-tour route among eight routes in the poll. The Geopark has now become a Global Geopark and we will continue to promote this invaluable heritage of Hong Kong to the public.



See also: Targets - Our Progress and 2011 Aims.

6. Quieter Environment

Mission:

To prevent, minimise and resolve environmental noise problems through formulation of noise policy, intervention in the planning process, implementation of noise abatement measures and enforcement of the Noise Control Ordinance.

Reducing traffic noise

6.1 More than a million people in Hong Kong are exposed to excessive traffic noise (defined as greater than 70 dB (A)). Engineering solutions in the form of low-noise road surfaces (LNRSs) and barriers help to reduce exposure. We are pleased to report that by the end of 2010, 49 road sections have been re-surfaced with LNRSs benefiting about 90 000 people, and eight road sections have been retrofitted with barriers, benefiting 33 000 people.



Noise Barriers erected at busy roads to protect nearby dwellings from traffic noise.

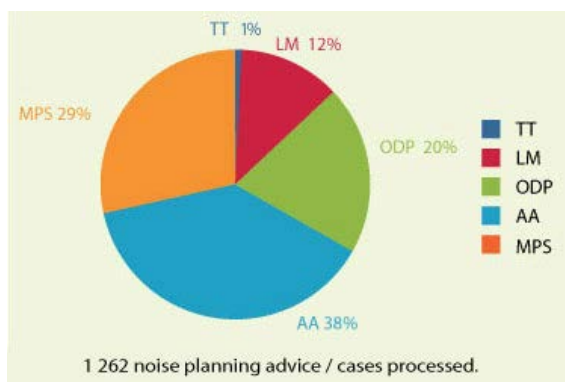
6.2 We will continue to explore alternative LNRS designs, including thicker surface, mixing with smaller aggregate size and others, with a view to reducing noise further and enhanced durability. We are also looking into using less-noisy road joints at flyovers and reviewing the scope of the noise barrier programme.

6.3 Input at the planning stage can help to reduce traffic noise problems (see Figure 11). We now deploy LNRS as a standard feature in new high-speed roads and barriers are installed on new roads where possible. Noise barriers installed since 1990 have been fitted 320 000 people at a cost of \$2.8 billion (see Figure 12). By spending a further \$430 million in insulating 7 900 flats, further noise protection measures have been applied since 1995.

Reducing construction noise

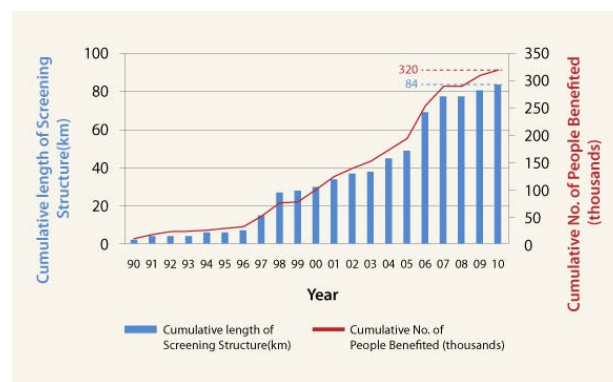
6.4 Construction noise is controlled through the Noise Control Ordinance during night time, Sundays and public holidays. Designated Areas, such as residential areas, are subject to tight controls, which have been extended since 2009 to ensure that newly-developed areas and areas under active development are afforded the same protection against construction noise as existing Designated Areas.

Figure 11 - Noise planning advice / cases in 2010



[SEE DATA](#) [ENLARGE](#)

Figure 12 - Screening structures to reduce traffic noise 1990-2010



[SEE DATA](#) [ENLARGE](#)

See also: Targets - Our Progress and 2011 Aims.

7. Cross-boundary and International Co-operation

Mission:

To protect the environment by tackling cross-boundary pollution problems and by promoting collaborative efforts through regional and international co-operation.

Working together with Guangdong Province

7.1 Our government and the government of Guangdong have worked together for many years to address environmental problems of mutual concern. In 2010, we agreed on a strategic initiative, the Framework Agreement on Hong Kong/Guangdong Co-operation (the Framework Agreement), to work towards transforming the Pearl River Delta (PRD) region into a green quality living area. Both sides agree to take concerted and joint actions to tackle air pollution, enhance cleaner production in the region, promote wider use of electric vehicles, co-operate in protecting marine water quality, promote the development of a circular economy and co-operate in ecology and marine resources conservation.

7.2 These initiatives are being spearheaded through the Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection, which held its 11th annual meeting on 20 December 2010. The Joint Working Group noted the following achievements for the year:

- Air quality in the region has continued to improve with the implementation of emission reduction measures under the PRD Regional Air Quality Management Plan. In 2010, the average annual concentration of SO₂, NO₂ and RSP in the PRD region decreased by 47 per cent, 7 per cent and 14 per cent respectively as compared to 2006 levels, amidst continuing growth of the economy in the region. These reductions are attributable to the implementation of enhanced emission reduction measures by both sides. We are currently undertaking a joint study with our Guangdong counterparts on the post-2010 arrangements for emission reduction in the PRD region.
- A \$93 million five-year Cleaner Production Partnership Programme was launched in 2008 to promote cleaner production technologies and practices to Hong Kong-owned factories in the PRD region for reducing air pollutant emissions and enhancing energy efficiency. In 2010, the coverage of the programme was widened to also provide professional advice and technical support in the treatment and reduction of effluent discharges. By the end of 2010, the programme approved over 1 000 funding applications. In conjunction with the Economic and Information Commission of Guangdong Province, we launched the Hong Kong-Guangdong Cleaner Production Partners Recognition Scheme in 2009 to give recognition to those active and successful participants of the programme. In November 2010, the scheme presented commendations to over 90 manufacturers, four sourcing enterprises and 20 environmental technology service providers for their continuing efforts in cleaner production.
- In 2010, a joint study on the water quality and environmental capacity of the Pearl River Estuary was launched to establish a scientific basis for future regional water quality management plans. Water quality improvement measures are now being implemented in Deep Bay and Mirs Bay (see also Better Water Quality).
- In 2010, seminars, workshops and visits were arranged between Hong Kong authorities and Mainland counterparts to share expertise and experience covering cleaner production, environmental impact assessment, waste water treatment, air quality monitoring, and controls on power plant emissions and vehicle emissions.



The Secretary for the Environment, Mr Edward Yau (left), and the Director of the Environmental Protection Department of Guangdong Province, Mr. Li Qing (right), meet at the 11th Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection in Hong Kong in December 2010.

Case Study 7 - Cleaner Production Partnership Programme

There are more than 56 000 Hong Kong-owned factories operating in the Pearl River Delta (PRD) region. They can take a leading role in enhancing the environmental performance of the industries in the PRD region through adoption of cleaner production. The Environmental Protection Department, in collaboration with the Guangdong authorities and the major industry associations in Hong Kong, launched a Cleaner Production Partnership Programme in April 2008. The Government has committed more than \$93 million to take forward this five-year programme, which provides technical support to Hong Kong-owned factories in the PRD region to facilitate and encourage adoption of cleaner production technologies and practices, thereby making a contribution to improving the regional environment. The successful experiences of the participating factories indicate that cleaner production technologies are not only effective in reducing pollutant emission but, in many cases, also bring about economic benefits. Examples include a plastic product manufacturing factory that has employed an ion exchange system to recycle rinsing water in its electroplating process for reuse so as to achieve a saving of RMB180,000 per annum through reduction of water consumption and effluent discharge; and a textile factory that renovated its boiler flue gas treatment system with cyclonic spray scrubber technology to enhance its effectiveness in desulfurization and particulate removal, and to use alkali wastewater recovered from the production process as absorbent in the scrubber to achieve a saving of RMB1,830,000 per annum in treatment costs for flue gas.



Renovated boiler flue gas in textile factory with enhanced effectiveness.



Ion exchange system employed in a plastic product manufacturing factory to recycle rinsing water.

Ties with Shenzhen

7.3 In addition to the Guangdong Provincial Government, we have also established close collaborative ties with other cities in the Pearl River Delta area. For instance, we have signed a Co-operation Agreement on Cleaner Production with the Habitation and Environment Commission of Shenzhen Municipal People's Government. By the end of 2010, in Shenzhen alone, 276 funding applications were approved under the Cleaner Production Partnership Programme.

7.4 We are also strengthening co-operation and exchanges with our Shenzhen counterparts on the control of motor vehicle emissions, vapour recovery at petrol filling stations and the management of VOC, and will enhance co-operation on clean energy and green transportation in future.

Our relationship with Macao

7.5 Another partner is the Macao SAR Government's Environmental Protection Bureau, with which we have shared experiences in environmental impact assessment, environmental law enforcement and promotion of green management among schools and the business sector. At the 5th Eco-Expo Asia co-organised by the Hong Kong Trade Development Council and ENB in November 2010, green technologies, services and products were showcased and senior government officials in the Pan Pearl River Delta region exchanged their views on the development of the environmental industry.



Senior officials from Pan PRD Environmental Protection Departments in the Hong Kong-Macao-Mainland Authorities Roundtable Meeting with Corporations hold discussions at the EcoExpo 2010.

International activities

7.6 As citizens of the world, we in Hong Kong should contribute globally and locally to combat climate change. In November 2010, we hosted the C40 Workshop where mayors and representatives from over 30 member and affiliate cities, overseas experts, trade representatives, government officials and NGOs took part to share their strategies and experience in combating climate change, focusing on green transport and low carbon built environment.

7.7 Hong Kong has also joined the C40 Steering Committee on Electric Vehicles, which aims to help accelerate the deployment of EV technology and infrastructure.

7.8 In December 2010, our Secretary for the Environment participated as a member of the Chinese delegation in the United Nations Climate Change Conference and related meetings in Cancun, Mexico.



The Chief Executive, Mr Donald Tsang, speaks at the C40 Workshop held in Hong Kong in November 2010.



The Secretary for the Environment, Mr Edward Yau, attends the United Nations Climate Change Conference in Cancun, Mexico in December 2010.

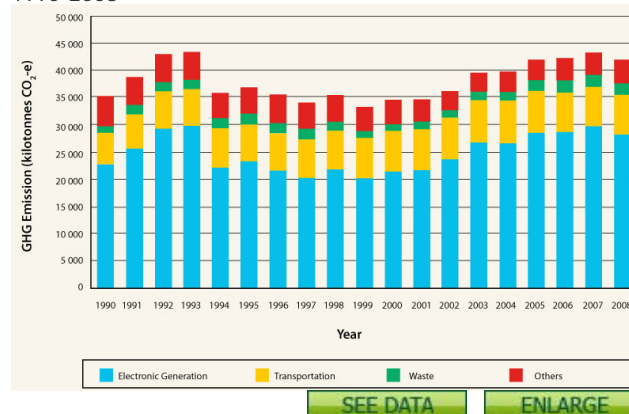
Hong Kong's climate change strategy

7.9 In 2010, a comprehensive study on how climate change might affect Hong Kong was finalised. The study reviewed and updated the inventories of our greenhouse gas emissions and projected trends under different scenarios. Measures to reduce our emissions and enable us to adapt to climate change were identified. A public consultation document based on the study findings was released in September 2010 entitled "Hong Kong's Climate Change Strategy and Action Agenda" seeking public views until the end of 2010 (see also Greener Energy).



The Secretary for the Environment, Mr Edward Yau, briefs members of the Committees & Business Chambers in a Climate Change consultation in September 2010.

Figure 13 – Greenhouse gas emission trends of Hong Kong 1990-2008



See also: [Targets - Our Progress and 2011 Aims.](#)

8. Prevention and Mitigation Through Environmental Assessment

Mission:

To pre-empt environmental problems associated with development projects, plans and strategies, by assessing their environmental implications and ensuring that measures are implemented to avoid any potential problems that are identified.

Planning for the future

8.1 Environmental assessment and planning are incorporated into decision-making at the project and strategic levels. Legal and administrative tools ensure that they are applied to both government and private sector projects, and that they incorporate early public input and involvement.

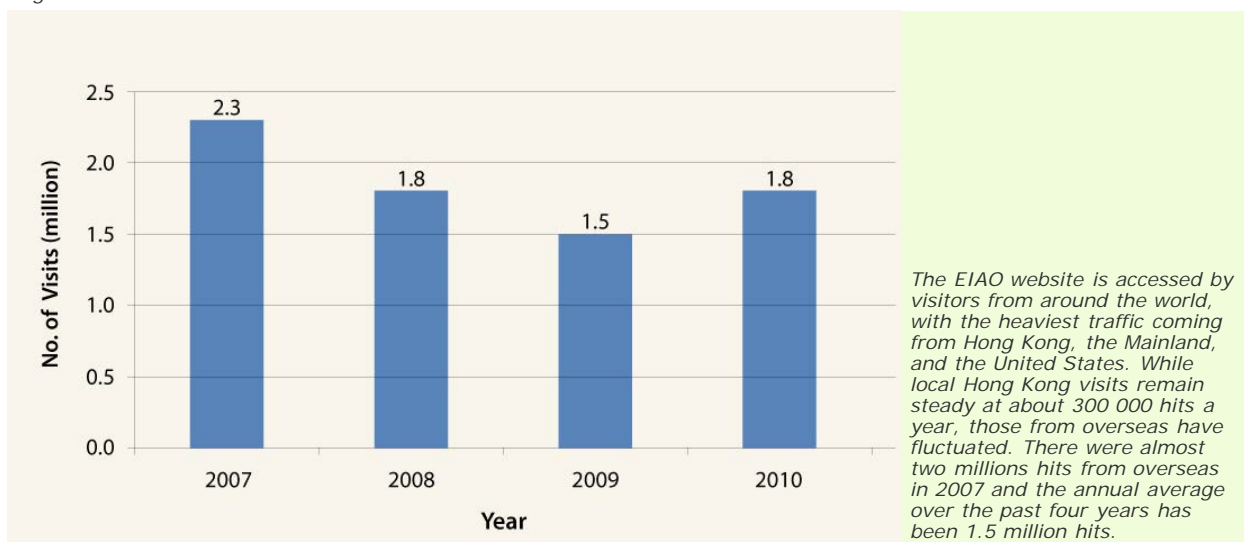
Environmental Impact Assessment Ordinance

8.2 The Environmental Impact Assessment Ordinance (EIAO) is the main legal framework for ensuring designated projects undergo environmental impact assessments (EIA). Since the ordinance was implemented in 1998, almost 160 EIAs have been approved. In addition, 41 major infrastructure projects have been required to include a 3-D tool in their assessments to help the public understand the impacts of projects and visualise the mitigation measures proposed. A library containing 3-D EIA visualisations was also established to illustrate the major findings of EIA reports.

8.3 In 2009, we carried out a review of the EIAO guidance notes for practitioners, originally issued between 2002 and 2005, to take into account new practices and technologies such as the use of infrared cameras in ecological baseline studies. After consulting more than 100 organisations, the revised guidance notes were issued in December 2010.

8.4 We are pleased to note that our EIAO website is being accessed by visitors from around the world, with the heaviest usage coming from Hong Kong, the Mainland, and the United States, an indication of the interest in our legislation. While local Hong Kong visits remain steady at about 300 000 hits a year, those from overseas have fluctuated with an annual average over the past four years of 1.5 million hits, peaking to 2 million in 2007.

Figure 14 - Visits to EIAO website



Strategic Environmental Assessments

8.5 Strategic Environmental Assessments (SEAs) are carried out on major planning and development proposals early in the decision-making process to identify major environmental issues and recommend prevention or mitigation measures. There are several on-going major SEA studies, including the SEA on the Review and Update of the Second Railway Development Study. The on-line SEA Knowledge Centre set up in 2005, where completed SEAs and detailed information about SEAs can be found, provides the public with easy access to SEA resources. 99 new hyperlinks of the latest international SEA resources were added to the web-based SEA Knowledge Centre in 2010.

Government Policies and Programmes

8.6 All bureaux and departments must report the environmental implications of their policies and programme proposals when making submissions to official bodies, such as the Policy Committee, Executive Council, Legislative Council's Public Works Sub-committee and Environmental Affairs Panel. In 2010, nearly 270 funding and policy proposals were vetted. Bureaux and departments must also produce sustainability assessments (see also [Sustainable Development](#)).

See also: Targets - Our Progress and 2011 Aims.

9. Sustainable Development

Mission:

To promote sustainable development in Hong Kong.

Promoting sustainable development

9.1 It is our role to identify priority sustainability issues to promote sustainable development in the community. Through the Sustainable Development Division (SDD), we work closely with the [Council for Sustainable Development](#), which was established in 2003 and is comprised of members from the environment, social and business sectors and the Government.

9.2 The Council uses an inclusive, stakeholder-led engagement model for initiating dialogue and canvassing public views in its public engagement exercises. In 2010, it completed the public engagement process on "Building Design to Foster a Quality and Sustainable Built Environment" and submitted a [report](#) with recommendations to which the Government positively responded (see also [Working with Stakeholders](#)). The Council also promotes sustainable development through awards of grants from the [Sustainable Development Fund \(SDF\)](#).



Public engagement exercise on "Building Design to Foster a Quality and Sustainable Built Environment".



The SDF project "Preparing Students to Embrace Corporate Sustainability, Bridging the Gap between High Schools and the Business Sector" aims to raise awareness of high school students in how sustainability is practised in businesses through seminars and visits to different renowned organisations which have successfully implemented corporate sustainability in their respective business operations.

Sustainability assessments

9.3 As part of our sustainability policy, all major Government policy and programme initiatives are required to be assessed using an internal [Sustainability Assessment System](#) and the findings must be included in submissions to the Policy Committee and/or the Executive Council, and in public consultation documents, if applicable. In 2010, 126 sustainability assessments were processed.

See also: Targets - Our Progress and 2011 Aims.

10. Building Partnerships and Encouraging Compliance

Mission:

To serve the community through enforcing pollution control laws to safeguard people's health and welfare, to work with others and continue to build partnerships, and to promote corporate environmental management in both public and private sectors, in pursuance of sustainable development objectives.

Partnerships

10.1 We promote compliance and good practices through formal partnerships with four key industries – the construction industry, property management companies, the restaurant trade and vehicle repair workshop trade – as well as through services targeted at all industries. For 2010, we are pleased to report on the following partnership-based outreach activities:

- 34 seminars and speeches organised for over 3 300 participants.
- 45 meetings held on a variety of environmental initiatives that affect industry, such as the implementation of Quality Powered Mechanical Equipment, the proposed control of emissions from non-road mobile machinery, the environmental requirements on renovation and building maintenance works and a review of the Integrated Pay for Safety, Environment and Hygiene scheme.
- A commemoration ceremony for the 10th Anniversary of Vehicle Repair Workshop Trade Partnership Programme followed by an environmental seminar was co-organised with two vehicle repair trade associations and the Hong Kong Productivity Council (HKPC).
- A seminar on "Green Restaurants and Retailers" to promote environmental management co-organised with the Quality Tourism Services Association (QTSA), the Association for Hong Kong Catering Services Management (HKCSM) and the HKPC.



The toasting ceremony of the 10th Anniversary of the "Vehicle Repair Workshop Trade Partnership Programme".



The 2010 Environmental Seminar under the Vehicle Repair Workshop Trade Partnership Programme.



The Green Restaurants & Retailers Seminar in June 2010.

10.2 To assist the local restaurant trade to go beyond compliance, we have provided advice to the Environment and Conservation Fund Project entitled "Quality Restaurant Environmental Management Scheme" run by the Hong Kong Federation of Restaurants and Related Trades and the HKPC. The Scheme promotes environmental measures and recognition of good performance through training and accreditation.

10.3 We carried out over 100 environmental site audits at construction sites and existing buildings in regard to the Development Bureau's Considerate Contractor Site Award Scheme and the District Councils' Quality Building Management Competitions.

10.4 We are working closely with the construction and property management industry to help improve the environmental performance of buildings. In 2010 two additional courses of Environmental Officer for the construction sector were launched and a set of contents on environmental protection aspect were completed, jointly with the Hong Kong Construction Association for incorporation by training institutions. In addition we established communication channels with renovators' trade association for distributing green advisory packages for conducting renovation works via the trade association to their members and collaborated with HKU SPACE to incorporate environmental protection content into Professional Diploma in Housing Management. Finally we published poster and delivered talks to promote good environmental practices in managing refuse rooms.

Compliance assistance

10.5 The Compliance Assistance Centre (CAC) is a one-stop shop where individual operators can get information, advice and face-to-face help in applying for EPD-related licences, thus making it easier for them to comply with environmental requirements. In 2010 we handled about 525 cases each month.

10.6 Information about environmental licences for about 600 trades is also available on the Government's Business Licence Information Service (BLIS), which provides information on setting up new businesses in Hong Kong. In 2010 it was further updated and the BLIS was linked to our CAC web site to facilitate the setting up of new businesses in Hong Kong.

Corporate Environmental Management

10.7 We encourage organisations in both the public and private sector to conduct environmental audits, set up environmental management systems and report regularly on their environmental performance. Within Government, all bureaux and departments have appointed Green Managers and published annual reports of their environmental performance (see Appendix III). We have also established a website where listed companies in Hong Kong are urged to share their environmental reports and thus inspire others to follow suit.

Case Study 8 - Quality Restaurant Environmental Management Scheme (QREMS)

The "Quality Restaurant Environmental Management Scheme" was kicked off in 2010 to uplift environmental performance and competitiveness of the local restaurant trade. The project was proposed by the Hong Kong Federation of Restaurants and Related Trades (HKFORT) and the Hong Kong Productivity Council (HKPC) and is funded by the Environment and Conservation Fund. It aims to establish an accreditation scheme and a training programme for local restaurants to implement environmental management and resources conservation. It is the first accreditation scheme of its kind in Hong Kong, and a good example of the local trade being able to demonstrate corporate social responsibility to exceed beyond legislative compliance.



"Quality Restaurant Environmental Management Scheme" kick-off ceremony.

See also: Targets - Our Progress and 2011 Aims.

5 Social Engagement

A. Working with Stakeholders

Consulting others

1. Stakeholders are anyone with an interest in our work. Stakeholders are encouraged to offer their views on our policies and programmes and new proposals through a variety of channels.
2. We meet regularly with the Legislative Council and Advisory Council on the Environment in formal discussions on project-related or policy-related matters.
3. Through the EIA process, we encourage public participation early on in the planning process for new projects to ensure people's concerns are taken into account before irreversible decisions are made. There are four EIAO Users Liaison Groups that we regularly consult i.e. works-related Government departments, corporations, consultants and contractors. In 2010, we consulted over 100 organisations in these liaison groups on EIAO guidance notes before we issued the updated guidance notes in December 2010.
4. Consultation on specific issues may be carried out with the public and/or key stakeholders, such as affected residents and industries. In 2010, we continued to engage and liaise with the local communities in relation to landfill extension projects through meetings with the district councils concerned and rural committee members and representatives of potential sensitive receivers.
5. In 2010, we consulted the public on a new producer responsibility scheme for waste electrical and electronic equipment. We also completed a public consultation on the Hong Kong's climate change strategy and action agenda for the coming decade.
6. Through the Council for Sustainable Development's public engagement process, we are able to gather public views on key sustainability issues so that we can shape policies and measures. In 2010, the Council completed the public engagement on "Building Design to Foster a Quality and Sustainable Built Environment", which received about 1 400 submissions. Based on the findings, the Council made over 50 recommendations on the way forward for consideration and actions by the Government.



Public consultation documents for some of ENB and EPD programmes.

Engaging operators

7. We enjoy formal partnerships with the construction industry, property management companies, the restaurant trade and vehicle repair workshop trade, through which we work towards promoting environmental awareness and compliance. In 2010 for example, we organised a seminar on recent legislative controls and technological solutions to enhance the environmental competency of practitioners in the vehicle repair workshop trade. The seminar was attended by 250 trade practitioners and other related stakeholders.
8. In 2010, we continued to provide trade operators with advice and assistance through the Compliance Assistance Centre and other channels, including seminars, presentations, technical visits and environmental guidelines.

9. To promote the sharing of good practices, we have set up an on-line ISO 14001 EMS Directory, where ISO 14001-certified companies explain why they sought certification and post their feedback and advice. Over 160 organisations have responded positively to this initiative by the end of 2010.

10. For long-term contracts of new waste management facilities, we require that contractors bidding must implement environmental management systems that comply with ISO 14001 standards and obtain certification. We also encourage new contractors to sign the Clean Air Charter.

11. A promotional seminar for the Environmental Workshop for Generic Trades has been organised under the Environmental Compliance Promotion Programme in 2010.

B. Our Staff

Staff are our valuable resources

1. Our staff are our most valuable resource. Their efforts are central to the success of our work. We devote significant effort to train and develop staff, maintain and enhance safety and health, and raise staff awareness, as described below.

2. Good communication with staff is essential to achieve better understanding and cooperation on work-related matters, such as conditions of service and training and productivity. The main channel for this is the Departmental Consultative Committee, which comprises staff and management representatives and meets every three months. Committee members are on the Departmental Environment, Safety and Health Committee (DESHC) as well.

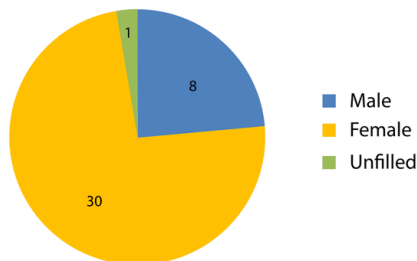
3. We are also aware of the importance of diversity amongst our staff and we strive to achieve a balance breakdown. The latest analysis of staff composition data is shown below in Figures 15.

Figures 15 – Breakdown of staff by gender and grade

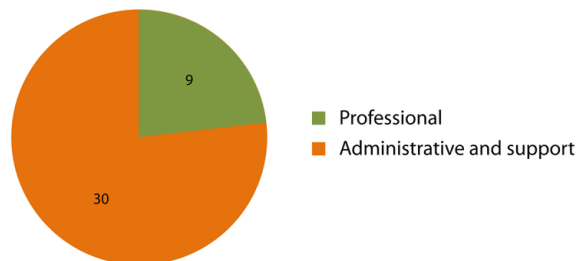
Environment Bureau

Establishment*: 39

Breakdown by gender



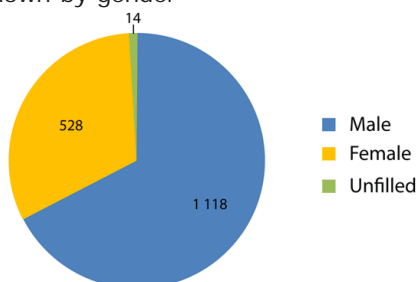
Breakdown by grade



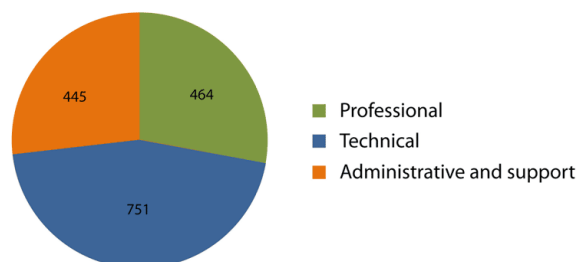
Environmental Protection Department

Establishment*: 1 660

Breakdown by gender



Breakdown by grade



*As at 31 December 2010

Safety and health

4. The Environmental Protection Department (EPD) was the first Government department certified under the Occupational Safety and Health Council's Continual Improvement Safety Programme Recognition System in 2001, and we have been implementing a full safety management system ever since. Safety representatives have been designated in each of our administrative groups and internal safety and health inspections are carried out annually.

5. We also provide training in safety and health, and in 2010 there were 72 classes held with over 300 attendants. Safety reminders and tips are sent out daily to all staff through our intranet system.

6. In 2010 we had 1.8 occupational injuries per 1 000 employees, which were mainly the result of slipping, tripping and falling, lifting or carrying objects and striking against objects.

Training and development

7. Training is provided to staff to equip them to support our operations and services, and to help develop their career. Training programmes are tailored for new recruits, staff in the middle of their career, and staff with exceptional potential for higher responsibilities.

8. In 2010 staff received an average 3.2 days of training (see Table 7). These included related training courses offered by outside parties and 7 in-house workshops for some 550 staff on topics related to our policies, programmes and daily operations, such as ecology, complaint handling, use of GPS, enforcement and prosecution techniques. We also sent more than 25 young professional and inspectorate staff on a study course at Jinan University in Guangzhou to familiarise them with the Mainland's administration, legal and civil service system, national planning, and environmental management. Another 68 staff attended the Investigation Skills Training organised by the Civil Service Bureau to strengthen their skills and techniques in evidence collection and prosecution.

9. The EPD also contributes to the development of the engineering profession through the Environmental Graduate Training Scheme, through which 49 environmental engineering graduates have received on-the-job training with the EPD.

Staff awareness

10. We organise activities for staff and their families to improve their environmental knowledge and enable them to reach out to the community. These range from day-trips to Hong Kong Geopark to participating in the activities of charitable organisations. We also organise social events, such as dinners, sporting activities and tours to the Mainland China to encourage team spirit and networking among staff.

11. Each year, we hold a ceremony to recognise staff with long service of 20 years and to celebrate staff achievements in sports and other activities.

12. Some of the activities that our staff participated in during 2010 include:

- Hong Kong Reef Check at Wong Chuk Kok Tsui near Double Haven in August 2010.
- Green Power Hike held on 6 February 2010.
- Sowers Action Challenging 12 Hours Charity Marathon held on 7 November 2010.
- Activities organized by The Community Chest, including "Skip Lunch Day", "Green Day", "Dress Special Day" and "Love Teeth Day".
- Fund raising activities for Haiti earthquake disaster donated to Hong Kong Red Cross.

Table 7 – Staff Training in 2010

Grade of staff	Average number of training days
Senior Management	3.4
Professionals	4.7
Inspectorates	4.0
Other staff	0.5
Average per staff member	3.2

Note: Calculation based on civil servant staff and non-civil servant staff.



EPD colleagues and their family members pose at a scenic spot in a tour to the Mainland China.



Ms Anissa Wong, the Permanent Secretary for the Environment (middle row, 6th from left), attends the basketball tournament and presents prizes to the winners.



Mr Benny Wong, Deputy Director of Environmental Protection (centre left), shows support to the EPD colleagues participating in the Green Power Hike in February 2010.

See also: **Targets - Our Progress and 2011 Aims.**

C. Promoting Community Involvement

1. Community support and participation are essential in our efforts to improve Hong Kong's environment. We promote public involvement through a number of channels.

Funding community activities

2. The Environment and Conservation Fund (ECF) was established in 1994 to help fund green projects by community groups, such as energy conservation and waste recovery projects. \$450 million has been allocated to establish the Buildings Energy Efficiency Funding Schemes (BEEFS), which offers subsidies to building owners to carry out energy-cum-carbon audits and energy efficiency projects. An amount of \$100 million has been earmarked in addition to the original amount of \$50 million to help schools reduce lunch-related waste through on-site meal portioning.

3. Following the injection of \$1 billion into the ECF in 2008, ECF has approved to finance over 1 600 projects and plans. Subsequent to the funding support to the Tung Wah Group of Hospitals and the Po Leung Kuk, a grant of \$17.99 million was provided in 2010 to the Yan Chai Hospital for turning itself into a green non-government organisation.

Table 8 - Major projects approved by the ECF in 2010

Project area	Number of projects	Funding (\$million)
Energy conservation*	475	188.98
Environmental education and community action – general projects	19	6.32
Minor works at schools and NGOs	235	87.05
On-site meal portioning at schools	47	60.86
Research, technology demonstrations and conferences	20	21.40
Community waste recovery	5	4.90
Source separation of waste	7	0.31
Public education programme under " <u>Policy Framework</u> " on waste management	1	0.78

*Including Buildings Energy Efficiency Funding Schemes and funding for energy conservation projects for NGOs.

4. The Sustainable Development Fund (SDF), established in 2003 to promote sustainable development concepts and practices in the community, has provided \$35.1 million to 38 projects to date. A report describing funded projects is produced annually.



The SDF project "Public Participation in the Sustainable City Development: Starting from the Community" aims at promoting public participatory approach in the practice of sustainable community planning and city development. Through a series of structured community design training activities and workshops, the participants from different sectors of the community proposed and organised "Public Participation" programmes to address local community issues.

Raising awareness

5. The Government organises several awareness-raising activities each year to promote new environmental initiatives and green behaviour. For example in 2010, 13 roving exhibitions / video broadcasting sessions were organised at shopping malls and estates, to promote "Source Separation of Waste", attracting 7 000 participants. In addition, to spread the message of combating climate change and adopting low carbon lifestyle, four public seminars were organised and a series of four books on low carbon living were published. 60 talks and 17 roving exhibitions were also organised at schools.

6. Numerous on-going programmes such as competitions, award schemes and guided tours were continued in 2010 with the participation of tens of thousands of people and hundreds of organisations.

Table 9 - Community training and awareness outreach in 2010

Environmental awareness talks for the community	16 sessions for 650 participants.
Environmental training programme for civil servants	45 talks for 1 435 civil servants.
Sustainability workshops for civil servants	283 staff participated.
Environmental certificates and badges for the training programme of the Scout Environmental Protection Ambassador Scheme	31 certificates and badges awarded.

Access to information

7. The EPD has facilities that provide the public with access to environmental information and activities (see Figure 16). The public and operators can also use the interactive Environmental Protection Information Centre to request specific environmental data and apply, pay for and receive licences and permits electronically.

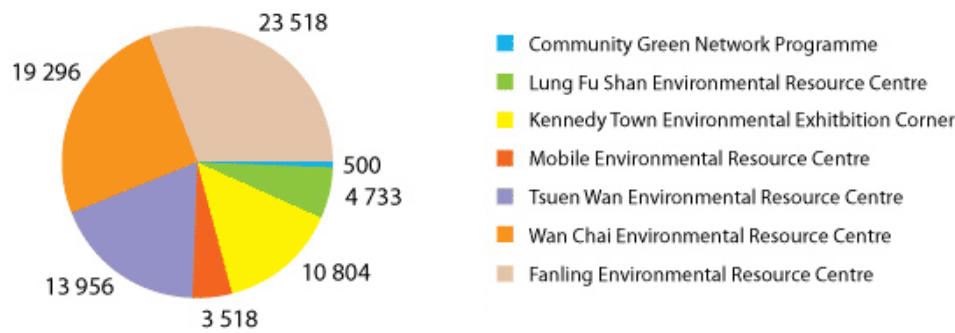
8. We regularly publish environmental data for public viewing. People can get the latest readings and statistics about Hong Kong's environment in the following areas:

- Beach water quality
- Air quality
- Pearl River Delta regional air quality
- Prosecutions
- Environmental impact assessments
- Solid waste arisings
- River, stream and marine water quality

Figure 16 –Distribution of use of our community-based facilities in 2010

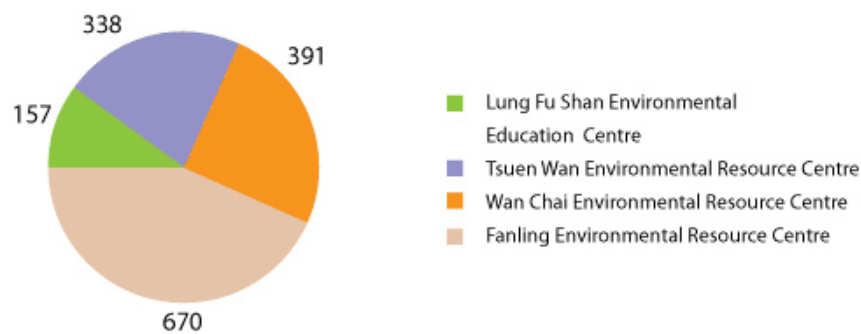
(i) Distribution of visitors

No. of visitors



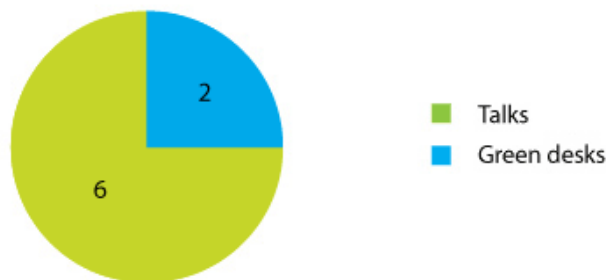
(ii) Distribution of guided visits / workshops

No. of guided visits / workshops



(iii) Green desks available and talks delivered

No. of guided green desks/ talks



Working with our youngsters

9. We have established programmes to educate our youngsters targeted at school students to equip them with greater environmental knowledge and skills. The Student Environmental Protection Ambassador Scheme promotes green leadership among primary and secondary school students. In 2010, more than 14 000 students participated in this scheme.

10. The Hong Kong Green School Award encourages pre-schools as well as primary and secondary schools to implement environmental management plans and we had 213 participants in 2010. In addition, an environmental education kit for pre-schools was produced under the Little Green Ambassador Scheme, funded by The Dairy Farm Group.

11. Low carbon living is promoted through the School Outreach Programme, which enrolled about 60 schools in 2010, and the Sustainable Development School Award Programme. Both programmes are organised by the Council for Sustainable Development.



A school project under Sustainable Development School Award Programme on display in a shopping mall.



Case Study 9 - Climate FootPRINT Book Series

To raise public awareness on climate change and low carbon living, the Environmental Campaign Committee (ECC) has collaborated with The Climate Group (Hong Kong) Limited and RoadShow Media Limited to launch and publicise the Climate FootPRINT Book Series (The Climate FootPRINT). This series consists of four publications with themes of New Green Generation, Low Carbon Economy, Environmentally Friendly Households and Green City Life. The Climate FootPRINT is targeted specifically at youngsters, business sector, homemakers and working class to help mitigate climate change through collective effort of society and to encourage the public to actively practise low carbon living.

See also: Targets - Our Progress and 2011 Aims.



6 Our Economic Impacts

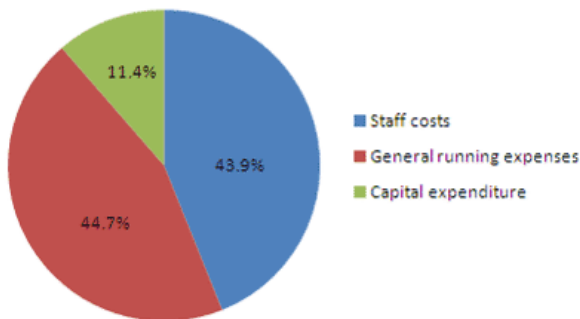
1. Investment in Sustainability

1.1 We invest billions of dollars in public funds each year to make Hong Kong greener and more sustainable. In 2010 the Environment Bureau (ENB) and Environmental Protection Department (EPD) had a total departmental expenditure of more than \$2.3 billion. Figure 17 shows details of both ENB and EPD expenditures.

Figure 17 – Details of ENB and EPD expenditures in 2010

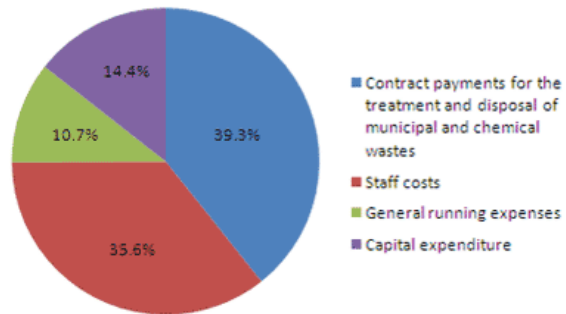
ENB

Total expenditure: \$61 million



EPD

Total expenditure: \$2.30 billion
(excluding major infrastructure work)



2. Economic Impacts of Our Policies and Programmes

Polluter pays initiatives

2.1 Sewage charge is applied to various households and businesses in Hong Kong. The rate is gradually being increased over 10 years, starting from 2008, to partially recover the operating cost of the service.

2.2 The first mandatory producer responsibility scheme (PRS) takes the form of a 50-cent environmental levy on plastic shopping bags. Introduced in July 2009, it has effectively reduced the distribution of plastic shopping bags from registered retailers by about 90 per cent. In 2010, the public was consulted on the proposal of a second mandatory PRS for waste electrical and electronic equipment and work is being undertaken to engage with the relevant trade on details of the scheme.

2.3 We have been exploring municipal solid waste charging as a direct economic incentive to promote waste reduction and recovery. In 2007, we completed a three-month trial scheme on domestic waste and in 2010 we completed a baseline study on commercial and industrial waste generation patterns and waste management practices.

Financial Incentives

2.4 In addition direct incentives have been offered to reduce pollution. A \$3.2 billion programme to help vehicle operators switch from pre-Euro and Euro I vehicles to new ones complying with the prevailing emission standard, was completed in March 2010. A special arrangement was made to allow eligible vehicle owners who had ordered new commercial vehicles but the replacement vehicles had not arrived in time for completing the application for the grant before the deadline of the scheme to retain their eligibility to apply for the grant until end-March 2011.



2.5 A similar \$540 million incentive programme, to help vehicle operators switch from Euro II diesel commercial vehicles to new ones complying with the prevailing emission standard was launched on 1 July 2010. The programme will end on 30 June 2013. The first registration tax for environment-friendly petrol private cars and environment-friendly commercial vehicles has been reduced and businesses which have purchased eligible environment-friendly vehicles may deduct the capital expenditure incurred under the profits tax. In 2009 a waiver on the first registration tax for electric vehicles was extended for five years.



2.6 More incentives have been developed during 2010 for implementation in the next couple of years, including a \$300 million Pilot Green Transport Fund to support the public transport sector and goods vehicle operators to test out green and low-carbon transport technologies. For franchised buses, the Government will fund the full cost of procuring six hybrid buses for trial by the franchised bus companies. If the bus companies wish to test other greener buses such as electric buses, the Government will be ready to provide them with the same financial support.

2.7 The coverage of the \$93 million five-year Cleaner Production Partnership Programme, promoting cleaner production technologies and practices for reducing air pollutant emissions and enhancing energy efficiency, was widened in 2010 to allow professional advice and technical support in the treatment and reduction of effluent discharges. By the end of 2010, the programme approved over 1 000 funding applications.

2.8 Financial support is offered to the wider community to support programmes that promote environmental and sustainable development awareness and initiatives, through the Environment and Conservation Fund and the Sustainable Development Fund.



Under the Cleaner Production Partnership Programme, a Hong Kong-owned factory in the Pearl River Delta region has reduced annual consumption of thinner by 80 000 litres, cut down VOC emissions by 63 tonnes and saved \$350,000 by switching from the conventional solvent-based glue to a water-based adhesive for the laminating process.



7 Targets - Our Progress and 2011 Aims

We have long-term objectives for each of our programme areas, internal operations and social engagement, and within these we set shorter-term targets. Some of these targets are specific for the year, others are on-going to ensure we meet our ultimate goals.

Our programme areas, internal operations and social engagements:

1. Better Air Quality
2. Better Water Quality
3. Environmentally Sound Waste Management
4. Greener Energy Management
5. Nature Conservation
6. Quieter Environment
7. Cross-boundary and International Co-operation
8. Prevention and Mitigation through Environmental Impact Assessment
9. Sustainable Development
10. Building Partnerships and Encouraging Compliance
11. Internal Operations
12. Our Staff
13. Promoting Community Involvement

1. Better Air Quality

Long term objective (1): Reduce local air pollution.		
2010 Targets	Progress in 2010	2011 Targets
i. Review post-2010 emission caps for the power sector.	Achieved. The Second Technical Memorandum (TM) was promulgated in December 2010 to further reduce the emission caps of the power sector starting 2015 from the First TM levels by 34 per cent - 50 per cent.	i. Map out the way forward for reducing the emissions from ferries. ii. Map out the scheme for controlling emissions from non-road mobile sources.
ii. Complete the trial of domestic ferries using ultra low sulphur diesel in mid-2010 and map out a way forward.	Working toward target. The trial was completed in 2010. The Government needs more time to map out the way forward in light of the trial findings.	
iii. Tighten the specifications of motor vehicle diesel and unleaded petrol to Euro V standards.	Achieved. The Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2010 came into operation on 1 July 2010.	
iv. Consult stakeholders on the proposed plan to control emissions from non-road mobile sources.	Achieved. A stakeholder consultation on a proposed plan on controlling these emissions was completed in 2010.	

Long term objective (2): Review Hong Kong's Air Quality Objectives and develop a long-term air quality management strategy.		
2010 Targets	Progress in 2010	2011 Targets
i. Finalise the proposed new Air Quality Objectives and the long-term air quality management strategy.	Working toward target The Government needs more time to analyze in detail the different views collected during the public consultation on the proposed new AQOs and the package of new air quality improvement measures for achieving the new Objectives, and assess their impacts on the relevant policy issues in order to fully consider and coordinate the implementation of the proposed measures.	i. Finalise the proposed new Air Quality Objectives and the long-term air quality management strategy.
ii. Submit the final set of recommendations for consideration to the Legislative Council.		ii. Submit the final set of recommendations for consideration to the Legislative Council.

2. Better Water Quality

Long term objective : Implement HATS Stage 2 to improve the harbour's water quality and sustain the improvement in the long term.		
2010 Targets	Progress in 2010	2011 Targets
i. Obtain funding to implement the remaining works under HATS Stage 2A.	Achieved. The Legislative Council approved funding for these works in April 2010.	i. Complete the technical evaluation of biological treatment methods suitable for HATS Stage 2B.
ii. Commence a review study on HATS Stage 2B.	Achieved. The study commenced in June 2010.	ii. Complete the statutory procedures to rezone a piece of land in Stonecutters Island for the biological treatment plant under HATS Stage 2B.

3. Environmentally Sound Waste Management

Long term objective : Promote waste reduction and recycling, and develop integrated waste management facilities to reduce the environmental burden and landfill space requirement arising from waste disposal.		
2010 Targets	Progress in 2010	2011 Targets
i. Commence construction of the Sludge Treatment Facilities.	Achieved. The design and construction of the Sludge Treatment Facilities commenced in October 2010.	i. Consult the public and the ACE on the EIA result for Integrated Waste Management Facilities Phase I.
ii. Commission a consultancy study for procurement of the NENT Landfill Extension contract.	Achieved. The NENT Landfill Extension – Design and Construction consultancy was awarded in December 2010.	ii. Invite tenders for the follow-on operation contracts for the Island West and West Kowloon Transfer Stations.
iii. Consult the public on a proposed mandatory producer responsibility scheme (PRS) for waste electrical and electronic equipment (WEEE).	Achieved. The public consultation on a proposed mandatory PRS for WEEE was completed in end April 2010.	iii. Commission the consultancy study for procurement of SENT Landfill Extension contract.
iv. Continue to implement and monitor the Environmental Levy Scheme on Plastic Shopping Bags.	Achieved. The review of the Environmental Levy Scheme on Plastic Shopping Bags showed that the Levy Scheme is effective in addressing the indiscriminate use of plastic shopping bags.	iv. Expand the programme on Source Separation of Waste and operate waste recycling activities at suitable public locations to facilitate collection of recyclables from the community with a view to instilling behavioural change.
v. Continue to extend the Programme on Source Separation of Domestic Waste to 1 360 housing estates / buildings.	Achieved. The Programme on Source Separation of Waste (SSW), reached 80 per cent of the population by the end of 2010, in 1 637 housing estates/buildings and about 700 rural villages. We have met the target stated in the Policy Framework for the Management of Municipal Solid Waste (2005-2014) – to have 80per cent of Hong Kong population taking part in the SSW Programme by 2010.	v. Engage with the relevant trade on details of a mandatory PRS for WEEE.
vi. Submit the EIA report for Integrated Waste Management Facilities Phase I to EIAO Authority.	Working toward target. There was only a very slight slippage. The EIA report was substantially completed at the end of 2010 and was ready for submission to EIAO Authority in January 2011.	vi. Consult the public on the extension of the Environmental Levy Scheme on Plastic Shopping Bags.
		vii. Engage the public in continued discussions on possible options to introduce municipal solid waste charging in Hong Kong.

4. Greener Energy Management

Long term objective: Formulate policies and implement measures to promote energy efficiency and conservation, and the development of renewable energy in Hong Kong.		
2010 Targets	Progress in 2010	2011 Targets
i. Take forward the legislative process for mandatory implementation of the Building Energy Codes.	Achieved. The Buildings Energy Efficiency Ordinance was enacted in November 2010.	i. Fully implement the second phase of the mandatory energy efficiency labelling scheme in September 2011.
ii. Prepare for full implementation of the second phase of the mandatory energy efficiency labelling scheme in September 2011.	Achieved. The second phase of the mandatory energy efficiency labelling scheme will be fully implemented in September 2011, after the 18-month grace period for the trade to make necessary preparation.	
iii. Launch a public consultation on restricting the sale of energy-inefficient incandescent light bulbs and formulate the way forward.	Working toward target. The public consultation on restricting the sale of energy-inefficient incandescent light bulbs is under preparation.	
iv. Commence construction works for the District Cooling System in the latter half of the year.	Achieved. The construction works for the District Cooling System has commenced.	

5. Nature Conservation

Long term objective: Formulate policies and implement measures to regulate, protect and manage natural resources that are important for the conservation of the biological diversity of Hong Kong.		
2010 Targets	Progress in 2010	2011 Targets
i. Continue implementing the New Nature Conservation Policy, in particular the Management Agreement and Public-Private Partnership - Pilot Scheme.	<p>Achieved. The Management Agreement projects continued to run with ECF's funding approval made in end 2009, and which will end by 2012 and 2013.</p> <p>The Sha Lo Tung project has been undergoing the Environmental Impact Assessment process in 2010.</p>	i. Continue implementing the New Nature Conservation Policy, in particular the Management Agreement and Public-Private Partnership - Pilot Scheme.
ii. Oversee implementation of the Genetically Modified Organisms (Control of Release) Bill.	<p>Achieved. The Legislative Council passed the Genetically Modified Organisms (Documentation for Import and Export) Regulation in late 2010, the Genetically Modified Organisms (Control of Release) Ordinance and the Regulation would come into effect on 1 March 2011.</p>	ii. Oversee the implementation of the measures to better protect country park enclaves.
iii. Amend the Schedule of Protection of Endangered Species of Animals and Plants Ordinance so as to meet international obligations under the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora.	<p>Achieved. We made preparations in 2010 to amend the Schedule of Protection of Endangered Species of Animals and Plants Ordinance, including informing stakeholders on the proposed amendments. We informed the Legislative Council Panel on Environmental Affairs on the proposed amendments in January 2011. We tabled the subsidiary legislation for the Legislative Council's negative vetting in end February 2011.</p>	

6. Quieter Environment

Long term objective: Reduce and minimise road traffic noise through implementation of noise abatement measures.		
2010 Targets	Progress in 2010	2011 Targets
i. Further develop and continue implementation of the proposed noise mitigation measures (measured in terms of progress made, including studies that have commenced).	Achieved. We continued to explore new low-noise road surface materials and continued a study to improve flyover joints.	i. Continue implementation of noise barrier retrofitting work under the Public Works Programme and a trial of low noise resurfacing work on local road sections.
ii. Continue developing and implementing noise mitigation measures, including noise barrier retrofitting work under the Public Works Programme and trials of low noise road surfaces.	Achieved. Work to install noise barriers completed on three road sections, continued on seven sections and began on another section. Six more road sections were re-surfaced.	

7. Cross-boundary and International Co-operation

Long term objective: Contribute to regional and global efforts to improve the quality of the living environment.		
2010 Targets	Progress in 2010	2011 Targets
i. Complete the consultancy study on climate change in Hong Kong.	Achieved. The study was completed in December 2010. Major findings of the study have been reflected in the public consultation document on Hong Kong's Climate Change Strategy and Action Agenda, and the consultation was completed in end 2010.	i. Formulate measures for combating climate change in the light of the outcome of the public consultation on Hong Kong's Climate Change Strategy and Action Agenda. ii. Continue implementing the Cleaner Production Partnership Programme (measured by number of participants at awareness promotion activities and number of funding applications approved). iii. Continue the joint study with Guangdong on the post-2010 arrangement for air pollutant emission reduction in the Pearl River Delta region and an assessment on the delivery of the 2010 emission reduction targets (measured in term of progress).
ii. Continue implementing the Cleaner Production Partnership Programme (measured by number of participants at awareness promotion activities and number of funding applications approved).	Achieved. More than 190 awareness promotion activities were organised for over 20 000 participants since the programme began in April 2008. Over the same period, 1 027 funding applications have been approved for Hong Kong-owned factories to conduct on-site assessments and demonstration and verification projects.	
iii. Continue the joint study with Guangdong on the post-2010 arrangement for air pollutant emission reduction in the Pearl River Delta region (measured in term of progress).	Achieved. The study is being undertaken by both sides.	

8. Prevention and Mitigation through Environmental Impact Assessment

Long term objective (1): Promote Strategic Environmental Assessment (SEA) to the public locally and internationally by providing easy access to the SEA Manual and related information.		
2010 Targets	Progress in 2010	2011 Targets
i. Add the latest SEA resources from around the world to our site, mainly by hyperlinks, including SEA regulations, SEA guidance documents, SEA reports, SEA reference materials, etc.	Achieved. 99 new hyperlinks of the latest international SEA resources were added to the web-based SEA Knowledge Centre.	i. Disseminate information and knowledge on SEA through the web-based SEA Knowledge Centre (measured by the number of visits to the site).
Long term objective (2): Help the public to understand Environmental Impact Assessment (EIA) findings.		
2010 Targets	Progress in 2010	2011 Targets
i. Continue gathering and disseminating knowledge on the application of the 3-D EIA public engagement tool for easy reference by EIA practitioners and the public (measured by resources added to the 3-D EIA library).	Achieved. The 3-D EIA public engagement tool has been required in the EIA study briefs of 41 major development projects. Three EIA studies using the 3-D tool were made available for public inspection in 2010. A library was also established of 3-D EIA visualisations of the major findings of EIA reports.	i. Maintain efficient operation of the EIAO Website for the public to access project profiles and EIA reports under public inspection; EIAO applications and their decision; EIA guidance materials, and other EIA information.
ii. Consult stakeholders on the revision of the EIAO guidance notes for the Environmental Impact Assessment Ordinance.	Achieved. Over 100 organisations in the EIAO Users Liaison Groups were consulted. Revised guidance notes were issued in December 2010.	

9. Sustainable Development

Long term objective : Promote sustainable development (SD) in Hong Kong.		
2010 Targets	Progress in 2010	2011 Targets
i. The Council for Sustainable Development to submit a report on the public engagement on "Building Design to Foster a Quality and Sustainable Built Environment" to the Government.	Achieved. The report was submitted in June 2010.	i. The Council for Sustainable Development to conduct a new public engagement process on climate change-related issues.

10. Building Partnerships and Encouraging Compliance

Long term objective (1): Enhance environmental awareness among the regulated trades and industries, and reinforce our partnership programmes for the restaurant trade and the vehicle repair workshops trade.		
2010 Targets	Progress in 2010	2011 Targets
i. Develop a technical guidebook for specific trade sectors to provide technological solutions, good practices, and facilitate environmental compliance.	Working toward target. The guidebook is near completion.	i. Revamp the electronic version of Environmental Guide for Smart Business.
ii. Organise a seminar on recent legislative controls and technological solutions to enhance the environmental competency of practitioners in the vehicle repair workshop trade.	Achieved. The seminar was attended by 250 trade practitioners and other related stakeholders.	ii. Appoint Environmental Ambassadors under the Vehicle Repair Workshops Trade Partnership Programme.
Long term objective (2): Enhance the environmental competency of the construction industry and the property management sector.		
2010 Targets	Progress in 2010	2011 Targets
i. Collaborate with training institutions to offer more courses for environmental officers to meet demand from the construction industry.	Achieved. Two additional courses of Environmental Officer for the construction sector were launched in 2010.	i. Organise promotional events such as seminar and award scheme to enhance the environmental competency of practitioners in the construction trade.
ii. Incorporate environmental protection content into existing training courses for construction personnel.	Achieved. EPD completed a set of contents on environmental protection aspect jointly with HK Construction Association for incorporation by training institutions.	ii. Publish promotional materials and organise promotional events, such as seminar and audit, to enhance the environmental compliance of practitioners in the property management trade.
iii. Collaborate with renovators' associations to prevent fly-tipping and promote good environmental practices when conducting renovation works.	Achieved. EPD established communication channel with renovators' trade association for distributing green advisory package for conducting renovation works via the trade association to their members.	
iv. Collaborate with training institutions to incorporate environmental protection content into existing courses for property management personnel.	Achieved. EPD collaborated with HKU SPACE to incorporate environmental protection content into Professional Diploma in Housing Management.	
v. Develop and promulgate training material to promote and educate frontline property managers on good environmental practices in managing refuse rooms.	Achieved. EPD published poster and delivered talks to promote good environmental practices in managing refuse rooms.	

11. Internal Operations

Long term objective (1): Pursue continual improvement in the environmental performance of our internal operations by implementing an effective management system.		
2010 Targets	Progress in 2010	2011 Targets
i. Continue to monitor the potentially significant environmental aspects of our internal activities.	Achieved.	i. Continue to monitor the potentially significant environmental aspects of our internal activities.
ii. Continue to identify and implement energy / emissions reduction measures through the Energy and Emissions Management Team (EEMT).	Achieved. The EEMT, formed in 2007, has identified and implemented energy / emissions reduction measures, and monitored implementation of these measures.	ii. Continue to identify and implement energy / emissions reduction measures through the EEMT.
Long term objective (2): Demonstrate efficiency and commitment to environmental conservation by reducing expenditure and resources consumption.		
2010 Targets	Progress in 2010	2011 Targets
i. Continue paper saving initiatives to keep paper consumption at a minimum.	Achieved. Photocopying paper consumption fell by 1.9 per cent over 2009.	i. Continue paper saving initiatives to keep paper consumption to a minimum.
ii. Continue energy saving measures in conjunction with the energy audit.	Target exceeded. Electricity consumption was reduced by 1.4 per cent over 2009, exceeding the consumption reduction target of 1 per cent for 2010.	ii. Continue energy saving measures and monitor electricity consumption.
iii. Monitor consumption and encourage recycling.	Achieved. More used ink/toner cartridges of printers were recycled.	iii. Monitor consumption and encourage recycling.
iv. Continue Indoor Air Quality certification work and arrange renewal as necessary.	Achieved.	iv. Continue Indoor Air Quality certification work and arrange renewal as necessary.
Long term objective (3): Ensure treatment and disposal of wastes at our facilities are managed in the most environmentally acceptable manner.		
2010 Targets	Progress in 2010	2011 Targets
i. Continue close supervision of our waste facilities contractors, aiming at full compliance with both legal and contractual environmental requirements.	Achieved. No legal non-compliance on environmental requirements at EPD waste facilities in 2010. Of 123 351 environmental monitoring measurements carried out at our waste facilities comprising strategic landfills, restored landfills, chemical waste treatment centre and refuse transfer stations, 123 344 complied with contractual requirements.	i. Continue close supervision of our waste facilities contractors, aiming at full compliance with both legal and contractual environmental requirements.

12. Our Staff

Long term objective : Promote staff environmental awareness and encourage participation.		
2010 Targets	Progress in 2010	2011 Targets
i. Continue encouraging staff to attend training sessions / seminars and awareness campaigns.	Achieved. 156 staff attended 11 training sessions on various green management topics.	i. Continue encouraging staff to attend training sessions / seminars and awareness campaigns.

13. Promoting Community Involvement

Long term objective : Encourage the public to switch to a greener lifestyle.		
2010 Targets	Progress in 2010	2011 Targets
i. Promote Government initiatives on environmental protection.	Achieved. 13 roving exhibitions / video broadcasting sessions were organised at shopping malls and estates, to promote "Source Separation of Waste", attracting 7 000 participants. To spread the message of combating climate change and adopting low carbon lifestyle, four public seminars were organised and a series of four books on low carbon living were published. 60 talks and 17 roving exhibitions were also organised at schools.	i. Continue to promote Government initiatives on environmental protection.
ii. Enhance public involvement and participation in environmental protection.	Achieved. Numerous on-going programmes such as competitions, award schemes and guided tours were continued in 2010 with the participation of tens of thousands of people and hundreds of organisations.	ii. Continue to enhance public involvement and participation in environmental protection.



Appendix I - Environmental and Energy Policy

Vision

Our vision is of a Hong Kong

- which enjoys an environment that is both healthy and pleasant;
- in which the community places a premium on sustaining such an environment for both themselves and future generations, and pursues sustainable development; and
- in which the community enjoys a reliable and safe energy supply at reasonable prices, while improving energy efficiency, promoting energy conservation and minimising the environmental impacts from the production and use of energy.

To realise our vision, we will continue to strengthen our ability to meet environmental sustainability goals. We will formulate policies and implement programmes to improve and safeguard the environment while contributing proactively to strategic decision-making in the Government that will have an impact on the environment. We are committed to ensuring that all policies, services and programmes offered by the Environment Bureau (ENB) and the Environmental Protection Department (EPD), as well as our own internal operations, are developed and conducted in an environmentally responsible manner.

To realise our vision on the energy side, we will continue to monitor the operations of the two power companies and the town gas supply company through the established monitoring arrangements. We will strive to achieve energy efficiency and conservation through public education, promotion, legislation and implementation of various programmes. We will also promote competition and transparency in the local fuel market.

In pursuance of these goals, the ENB and EPD have adopted the following principles:

Compliance

We aim to establish an effective legislative and an efficient control framework to safeguard the health and welfare of the community from any adverse environmental, conservation and energy-related issues. We will facilitate businesses to comply with environmental legislation through educational and promotional programmes, and encourage our business partners to further enhance their performance by adopting green practices with a view to going beyond compliance.

We will seek to provide moral leadership by not only complying with the letter of the law, but the spirit of all applicable legislation, standards and regulations, as well as our internal guidelines and procedures, in all our operations within the ENB and EPD. We will endeavour to surpass them whenever possible.

Pollution Prevention

We aim to pre-empt environmental problems associated with development projects, plans and policies by applying environmental impact assessment in the planning process and seeking opportunities to improve the environmental quality of Hong Kong.

We will implement ISO14001 environmental management systems to improve continually the environmental performance of our major facilities. We will avoid, reduce and control environmental pollution arising from our day-to-day working practices. We will require our contractors to adopt and implement sound environmental management systems and pollution control measures, and actively encourage businesses and other organisations in Hong Kong to adopt similar systems and measures. We will help to reduce air emissions by implementing plans and measures that are relevant to our operations to meet the commitments of the Clean Air Charter.

Adequate Infrastructure for Waste Treatment

We will provide first-class physical infrastructure for the treatment and disposal of waste and wastewater in line with international best practice.

Response to Environmental Incidents

We will implement an emergency response system for handling environmental incidents and we will work closely with other Government departments in responding quickly to minimise the damage to the environment.

Minimisation of Consumption

We aim to plan and provide convenient and cost-effective waste management facilities, as well as promote a sustainable approach to waste management in Hong Kong, in which we consume less, produce less waste, and reuse or recover value from waste.

We will exercise the principles of Reduce, Reuse, Recycle and Responsibility in the consumption of materials and seek continual improvement in the efficient use of natural resources and energy in all our operations.

Energy Supply and Efficiency

We will continue to oversee the reliability of power supply and monitor the performance of the power companies. We will also actively promote energy efficiency and energy saving in the planning, design, production, use and maintenance of products, buildings and services. We aim to integrate energy conservation and efficiency considerations into policies, strategies, plans, programmes, implementation and operations in both the public and private sectors. We will actively promote partnership and community support, facilitate suitable research and development, and raise the awareness of the community on energy efficiency and conservation matters.

Sustainable Development

We will actively promote and contribute to Government-wide policies and programmes that support sound environmental management and sustainable development. We will use and promote evolving scientific and technological systems, work with others and continue to build new partnerships in the pursuance of sustainable development objectives.

Communication and Partnership

We aim to promote community awareness of the environment, energy and sustainable development through campaigns, publicity, education and action programmes. We strive to partner with all relevant stakeholders in promotion and public education activities, with a view to harnessing the community's support for, and contribution to, achieving our desired goals for the environment, energy efficiency and sustainable development.

We will also publicise to the community our policies on the environment, energy and sustainable development and report annually on our performance. We will ensure that all our staff are aware of our policies and that they are able to provide detailed information about our policies and initiatives to stakeholders in their particular areas of concern.

Training

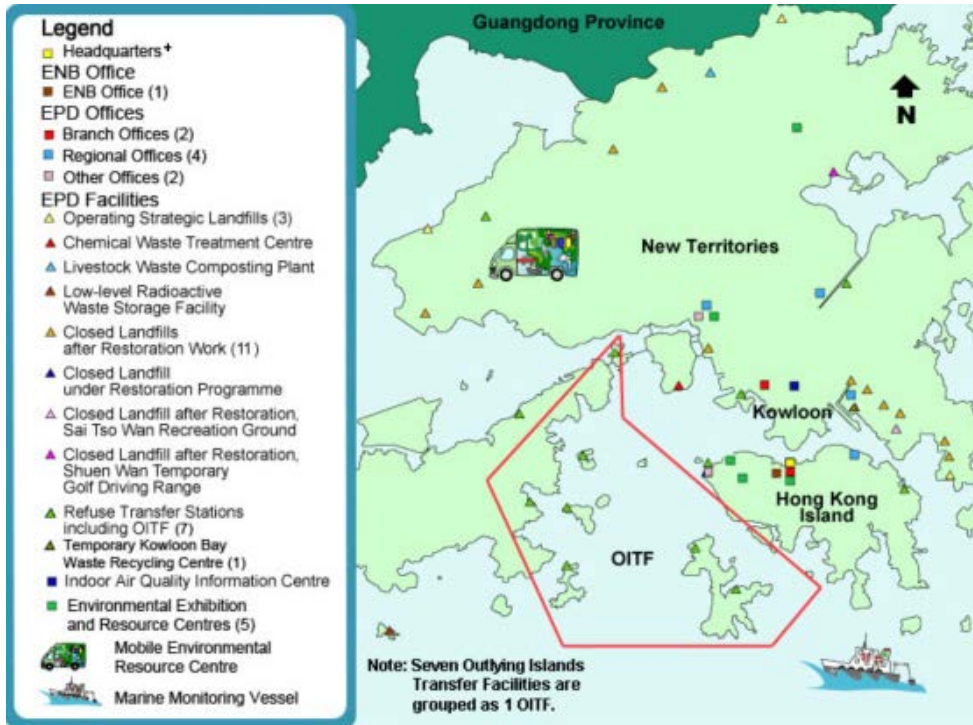
We will ensure through appropriate training and professional development, that every member of our staff has the knowledge and competency to assume his/her responsibilities and to participate constructively in relevant activities.

Management Review

The Management will review this policy as well as our objectives and targets on the environment, energy and sustainable development, with regard to changing internal and external factors, and seek continual improvement in our performance.



Appendix II - ENB / EPD Offices and Facilities



+As of 31 October 2011 the Headquarters is relocated to 15/F & 16/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong.

Photos of some Offices and Facilities:



Revenue Tower Office



ENB Office in Murray Building



Indoor Air Quality Information Centre



Regional Office (North)



Customer Service Centre



Sai Tso Wan Recreation Ground - Visitor Center



Mobile Environmental Resource Centre



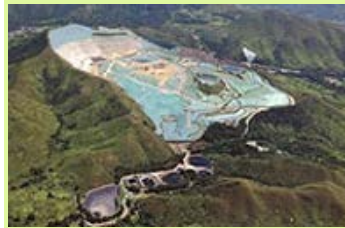
Marine Monitoring Vessel



Roadside Air Monitoring Station at Central



West New Territories Landfill



North East New Territories Landfill



South East New Territories Landfill



Kowloon Bay Recycling Centre



Low-level Radioactive Waste Storage Facility, Siu A Chau



Chemical Waste Treatment Centre, Tsing Yi



Appendix III - Environmental Performance Reports of Government Bureaux/Departments and Agencies

Reference can be made to environmental performance reports of government bureaux/departments and agencies through the hyperlink below:

http://www.epd.gov.hk/epd/english/how_help/tools_epr/collect_1.html



Verification Statement



Hong Kong Productivity Council (HKPC) was commissioned by the Environmental Protection Department (EPD) to verify its Environmental Performance Report 2011 (EPR 2011). The EPR 2011 covers environmental, social and economic performance of the Environment Bureau (ENB) and EPD during the calendar year of 2010.

Objectives

The objective of HKPC's verification work is to provide a third-party assurance on the completeness, accuracy and reliability of information presented in the EPR 2011, and more specifically to:

- assess whether the scope of the EPR 2011 covers all significant aspects in relation to ENB's and EPD's performance;
- evaluate whether the selected statements and data presented in the EPR 2011 are accurate;
- review whether the data collection and information management mechanisms used to prepare the EPR 2011 are reliable; and
- provide recommendations for future reports.

Approach

Our verification procedures comprised a comprehensive review of the EPR 2011, followed by the selection of a representative sample of statements and data for verification. Through a series of interviews with ENB's and EPD's representatives during 11 – 23 November 2011, we reviewed and examined the data collation systems and supporting materials relating to the selected statements and data as well as their relevant management practices and initiatives.

Results

Report Completeness

The EPR 2011 presents a structured and comprehensive overview of the environmental performance with respect to ENB's and EPD's key services, activities and initiatives in terms of their operations as well as the overall situation in Hong Kong. The EPR 2011 also reports a number of social and economic aspects of ENB and EPD. Some of the ENB's and EPD's major initiatives are presented in the form of case studies to provide an in-depth account of achievements.

Report Accuracy and Reliability

The selected sample of statements and data examined during the verification process reflect an accurate and fair account of ENB's and EPD's environmental, social and economic performance. The data collation and information management systems adopted are generally considered to be effective, reliable and organized. ENB and EPD are commended for continuously improving the reliability of their EPR by enhancing the illustrations with photos and graphical presentation of the data.

Recommendations for Future Reports

We encourage ENB and EPD to consider the inclusion of the following aspects in the preparation of their future reports:

- To present data summary for more years regarding ENB's and EPD's internal operations to facilitate comparison with their yearly performance;
- To provide further information on how to address stakeholders' comments on the previous reports; and

- To review the requirements of Global Reporting Initiative G3.1 Guidelines and include appropriate social performance indicators such as human rights, local community impacts and gender to enhance transparency on a wider range of aspects.



Clement Li
Principal Consultant
Hong Kong Productivity Council
2 December 2011

[1]Our verification work did not cover data and information which have already been published in the ENB's and EPD's websites as well as other publicly accessible websites.



Feedback

We value your feedback on our Environmental Performance Report 2011 to help us make improvements in the coming year. You may complete the online **Feedback Form**, and send it to us by pressing its "Submit" button. Comments may also be sent by email to: epr@epd.gov.hk. Thank you in advance for your views.

