

# 2009

## 環保工作報告 ENVIRONMENTAL PERFORMANCE REPORT



環境局  
Environment  
Bureau



環境保護署  
Environmental  
Protection Department



綠色香港 我鍾意  
I Love Hong Kong  
I Love GREEN

# Contents

## FOREWORD

## EXECUTIVE SUMMARY

## 1 SCOPE OF THIS REPORT

## 2 OUR PROFILE

- A. About Environment Bureau and Environmental Protection Department*
- B. Vision and Strategy*

## 3 IMPROVING THE ENVIRONMENT

- A. Impacts of Our Internal Operations*
- B. Impacts of Our Policies and Programmes*

## 4 ADDRESSING SOCIAL NEEDS

- A. Working with Stakeholders*
- B. Our Staff*
- C. Promoting Community Involvement*

## 5 OUR ECONOMIC IMPACTS

- A. Investment in Sustainability*
- B. Economic Impacts of Our Policies and Programmes*

## 6 TARGETS - Our Progress and 2009 Aims

## 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



Our chief work is protecting the environment which is key to promote sustainable development. We have to ensure our policies, programmes and operations not only advance our environmental goals, but also take into account economic and social considerations and have positive impacts there.

How do we do this? Stakeholder engagement is absolutely essential. We also believe in the value of an informed public in building support for our programmes and making them succeed. In this report you will read about our efforts in 2008 to achieve a better environment for Hong Kong and to engage key stakeholders and the public in the process.

Among the many highlights during the year, there is particular emphasis on energy. The use of energy is both an economic and environmental issue. We seek to provide reliable, safe and efficient supplies at reasonable prices and at the same time to minimise environmental impacts in the production and use of energy.

We made progress on these aims during the year. The conclusion of the post-2008 Scheme of Control Agreements with the two power companies enables more stringent control of their emissions and a reduction in basic tariffs, while the Memorandum of Understanding on Energy Co-operation, which we signed with the Mainland's National Energy Administration, guarantees the continuous supply of clean energy to Hong Kong for another twenty years.

Energy also received high level attention from the Chief Executive who pledged in his 2008-09 Policy Address to enhance energy efficiency and promote a low-carbon economy in line with global efforts to combat climate change. We introduced a new ordinance on energy efficiency labelling and consulted the public on mandatory implementation of the Building Energy Codes to promote energy efficiency.

Another prominent environmental issue is waste management, which is especially urgent because we are running out of landfill space. We now have a new legal framework for mandatory product responsibility schemes, which promote recycling of certain products and help to reduce their environmental impacts. The first product covered by a mandatory scheme is plastic shopping bags.

Better air quality is one of the top environmental issues in the community. We have conducted a review on the Air Quality Objectives, and are launching a public consultation on proposed new objectives and emission control measures.

In terms of the internal environmental performance of the Environment Bureau and the Environmental Protection Department, we continued to lead by example in reducing our electricity consumption, which fell by 1.8 per cent in 2008. We also reduced paper consumption by 4.3 per cent.

These highlights and achievements in all of our programme areas are described in this report. In the year ahead, we shall continue to inculcate green values in the community and build stronger partnership with all stakeholders for promoting better environment and sustainable development in Hong Kong.

We look forward to hearing what you think about our programmes and performance. A [feedback](#) form can be found at the end of this report, please do share your views with us.



Anissa WONG  
Permanent Secretary for the Environment /  
Director of Environmental Protection

## EXECUTIVE SUMMARY

The Environment Bureau and Environmental Protection Department are committed to minimising our environmental impacts and improving Hong Kong's environment. We also seek to promote sustainable development in Hong Kong.

We oversee eight programme areas, including environmental protection, sustainable development and energy. We develop policies and programmes in consultation with stakeholders and the community, and we also have a strong working relationship with authorities in Guangdong to address cross-boundary pollution. In addition, we recognise our international responsibilities in respect of climate change and other issues, and we adhere to a number of international conventions.

Internally, we are implementing the Government's commitments on the Clean Air Charter and we are continuing to investigate and implement opportunities to reduce our impacts on the environment.

Our key achievements in 2008 are described below and divided according to the triple bottom line for sustainable development: environmental, social and economic.

### Key Achievements in 2008

Environmental	Social	Economic
<p>Began construction of the advance disinfection facilities for treated effluent.</p> <p>Enacted the Energy Efficiency (Labelling of Products) Ordinance to require mandatory labelling of certain products.</p> <p>Proposed to establish a Geopark to protect geological resources.</p> <p>Agreed with Guangdong to further deepen environmental co-operation and jointly draw up strategies to transform the Pearl River Delta region into a green and quality living area.</p> <p>Launched the 5-year Cleaner Production Partnership Programme to encourage and facilitate Hong Kong-owned factories in the Pearl River Delta region to adopt cleaner production technologies and practices.</p> <p>Launched the first guidelines for conducting carbon audits at buildings in Hong Kong.</p> <p>Saw our electricity consumption fall by 1.8 per cent and paper consumption fall by 4.3 per cent.</p>	<p>Consulted the public on the mandatory implementation of Building Energy Codes.</p> <p>Saw the Council for Sustainable Development issue a report on the findings of a public engagement exercise on Better Air Quality, which attracted more than 80 000 responses, and make recommendations to the Government.</p> <p>Launched the Hong Kong Awards for Environmental Excellence to encourage green management and benchmarking by companies and organisations. This is a consolidation of three other awards schemes.</p> <p>Opened the Lung Fu Shan Environmental Education Centre in partnership with the University of Hong Kong.</p>	<p>Finalised new Scheme of Control Agreements with the power companies, which include financial penalties and incentives to improve their environmental performance.</p> <p>Adjusted the Trade Effluent Surcharge imposed on businesses with more polluting wastewater in recognition of some operators efforts to control their pollution.</p> <p>Enacted the Product Eco-Responsibility Ordinance which provides a legal framework for mandatory product responsibility schemes. A 50-cent levy was proposed for plastic shopping bags.</p> <p>Began a Baseline Study on commercial and industrial establishments to collect information for developing municipal solid waste charging options.</p>

## 1 SCOPE OF THIS REPORT

1. This Report describes our responsibilities and efforts in 2008 to improve Hong Kong's environment through our policies, programmes and operations and contribute to sustainable development in Hong Kong.
2. It combines input from the Environment Bureau (ENB) and Environmental Protection Department (EPD), whose activities are closely intertwined. The ENB was formed in 2007 and is the single administrative entity in the Hong Kong SAR Government responsible for environmental and sustainability matters, including the EPD. No significant changes occurred to our size or structure in 2008.
3. This is the ninth annual environmental performance report produced by the EPD since 2000. The emphasis on the environment is deliberate given this is the primary focus of ENB's and EPD's work. However, we also give consideration to other sustainability issues as far as possible with reference to the [Global Reporting Initiative](#).
4. 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.
5. The reporting period covers 1 January 2008 - 31 December 2008, unless otherwise stated. This Report is published in English and Chinese on our website ([www.epd.gov.hk](http://www.epd.gov.hk)) and in CD-ROM format to reduce paper consumption. All monetary figures are in Hong Kong dollars.
6. In parallel with this Report, we also publish [Environment Hong Kong 2009](#), an annual report written for the general public. It provides background information and descriptions of interesting developments in environmental protection during 2008.

### Feedback on the Environmental Performance Report 2008

7. The EPD invites readers to share their views and suggestions on this Report through the [feedback form](#). In 2008 we received 19 replies. The response was quite good. In terms of readability, the provision of charts and tables, and the report's performance on 'understanding our environmental performance', the large majority of respondents graded the report 'good' or 'average'. We have taken on board suggestions for improving readability by shortening the text in the current report as much as possible and providing a variety of charts and tables. We have also tried to improve links between the main text and the section on our Targets. In addition to commenting on presentation, respondents also indicated which areas they were most interested in, and energy, sustainable development, air quality, waste and environmental compliance were the most frequently cited.

## 2 OUR PROFILE

### A. About Environment Bureau and Environmental Protection Department

#### Organisation and Governance

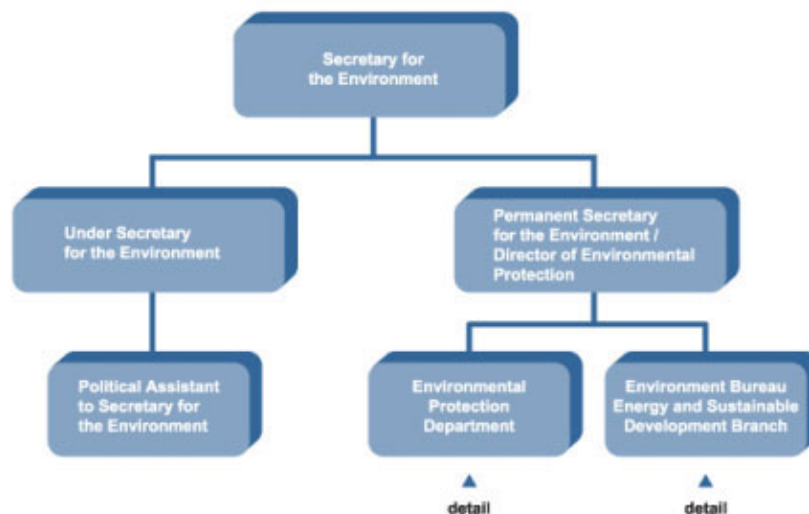
1. The **Environment Bureau** (ENB) is the highest government unit with overarching responsibility for protecting Hong Kong's environment and related policy objectives. The Secretary for the Environment reports directly to the Chief Executive and the Executive Council on the following programme areas:

- Energy policy making. Policy is set by the ENB; energy conservation policy is implemented by the **Electrical and Mechanical Services Department**.
- Sustainable development.
- Environmental protection (six areas): air, environmental assessment and planning, nature conservation, noise, waste and water. The **Environmental Protection Department** (EPD) is responsible for policies and programmes in all areas except nature conservation, where it sets policies that are implemented by the **Agriculture, Fisheries and Conservation Department**.

#### Our numbers:

<b>Staffing establishment</b>	ENB, 37 staff; EPD, 1 629 staff (as at 31 December 2008).
<b>Expenditure</b>	ENB, \$44.062 million; EPD, \$2.557 billion.
<b>Facilities</b>	ENB, one office; EPD, eight offices, three strategic landfills and more than 20 other facilities (see <a href="#">Appendix II</a> ).
<b>Headquarters</b>	33/F - 34/F & 46/F - 48/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong.
<b>History</b>	ENB founded in July 2007, EPD founded in 1986.

#### Organisation structure:



2. Internal sustainability management comes under the **Departmental Environment, Safety and Health Committee**, a consultative body with representatives from management, functional divisions, staff unions, various grades of staff and the Departmental Consultative Committee. We have also set up an Energy and Emissions Management Team (EEMT) to identify ways of reducing our energy consumption and help us meet our targets under the **Clean Air Charter**.

## 2 OUR PROFILE

### *B. Vision and Strategy*

#### **Vision and Mission**

1. Our **vision and mission** are threefold: to achieve a healthy and pleasant environment, to achieve the sustainable development of our community, and to secure a reliable, safe, efficient and reasonably-priced supply of energy.
2. To fulfil those goals, we have adopted an Environmental and Energy Policy that applies to our services, programmes and internal operations (the full text is at [Appendix I](#)). The guiding principles of this policy are as follows:
  - 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. To address sustainability issues arising from our policies and programmes, we have established eight environmental strategies to ensure we achieve improvements and prevent future problems (see table below).

### Environmental Strategies

Strategy	Result
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"> <li>• Air quality</li> <li>• Noise mitigation</li> <li>• Water quality</li> <li>• Waste management</li> <li>• Nature conservation</li> </ul>
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 co-operation 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 IMPROVING THE ENVIRONMENT

#### A. Impacts of Our Internal Operations

##### 1. Minimising Energy Consumption

1.1 More efficient use of energy is one of the main priorities for our internal operations, as it is for Hong Kong as a whole (see [Improving the Environment - Impacts of Our Policies and Programmes](#) for details).

1.2 All of our offices and laboratories undertake annual self-inspections to identify areas of improvement. Energy wardens are in all of our offices to monitor conservation efforts, and the Energy and Emissions Management Team manages overall performance and identifies further opportunities for savings.

1.3 To recognise our effort and achievements in reducing energy consumption in 2008, we have been awarded the 'Class of Good' Energywise Label under the [Hong Kong Awards for Environmental Excellence](#).

1.4 The Environmental Protection Department (EPD) and Environment Bureau (ENB) are also subject to the [Clean Air Charter](#), a voluntary, business-led initiative to encourage companies and organisations to reduce air pollution which was signed by the Government in 2006. The data and information provided below are relevant to the requirements of the Charter. We also produced a Guide to Clean Air Charter Report Writing in early 2008 to provide guidelines to government bureaux and departments on how to report about their achievements.

##### **Progress on aims for 2008**

1.5 We have achieved or exceeded all our aims for 2008:

- Reduced office electricity consumption by 1.8 per cent (exceeding the target of 1.5 per cent by 0.3 per cent ) to 2.5 gigawatt hours(GWh) (not including air-conditioning, as we share office space in buildings that do not meter electricity consumption of air-conditioning separately). The resulting pollutions amounted to 1 800 tonnes of CO<sub>2</sub>, 5 300 kg of SO<sub>2</sub>, 3 300 kg NO<sub>x</sub> and 250 kg RSP.
- Maintained good indoor air quality in our offices ([15 offices certified under the Indoor Air Quality Certification Scheme](#)).
- Procured environment-friendly vehicles as new or replacement vehicles.
- Continued to encourage new waste management contractors to join the Clean Air Charter.
- Ensured waste management facilities met international emission standards when preparing new contracts.
- Continued to explore a landfill gas utilisation scheme for SENT landfill.

## Fuel consumption at EPD in 2007 and 2008

1.6 Our fuel consumption is related to two areas:

Transport fleet in 2008	Fuel consumption in 2007	Fuel consumption in 2008	Pollution emissions in 2008
Road transport (52 vehicles including 47 petrol, two LPG, two hybrid and one Euro II diesel) Total mileage: 623 000 kilometres	95 000 litres petrol 2900 litres diesel 60 litres LPG	88 000 litres petrol 2600 litres diesel 60 litres LPG	560 kg NOx 0.1 kg RSP
Marine monitoring vessel, the 'Dr Catherine Lam'	92 000 litres ultra-low sulphur diesel	84 000 litres ultra-low sulphur diesel	7 SO <sub>2</sub> kg 4 200 kg NOx 170 kg RSP

## Aims for 2009

1.7 Our aims for 2009 are to:

- Reduce office electricity consumption by 1 per cent.
- Certify that all our offices meet indoor air quality requirements.
- Continue exploring the option of procuring more environment-friendly vehicles.
- Continue encouraging new waste management contractors to join the Clean Air Charter.
- Include a requirement that the [Chemical Waste Treatment Centre](#) meets the latest EU emission standards when preparing the Centre's follow-on contract.
- Continue the work on a landfill gas utilisation scheme for SENT landfill to further reduce emissions.

## On-going initiatives

1.8 In addition to the above initiatives, we have on-going measures to reduce energy consumption. These include:

<p><b>OFFICES</b></p> <ul style="list-style-type: none"> <li>- Cooling and heating</li> <li>- Lighting</li> <li>- Office equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain room temperatures at 25.5 degrees Celsius in summer months.</li> <li>• Use sectional control switches for the air-conditioning and lighting systems.</li> <li>• Encourage staff to dress down during summer months when appropriate.</li> <li>• Install occupation sensors in rooms.</li> <li>• Replace T8 fluorescent lamps with T5 lamps and use electronic ballasts in lamps.</li> <li>• Use occupation sensors.</li> <li>• Reduce lighting to the minimum necessary.</li> <li>• Switch off lights when not in use. Conduct routine checks and remind colleagues not to leave lights on.</li> <li>• Replace ageing lighting equipment with energy-saving devices.</li> <li>• Use programmable timers for shared equipment.</li> <li>• Switch off computers and office equipment when not in use.</li> <li>• Use the power saving features on computers and office equipment.</li> <li>• Purchase computers and office equipment with energy efficiency labels.</li> <li>• Post energy-saving stickers on light switches and office equipment.</li> </ul>
<p><b>TRANSPORT</b></p>	<ul style="list-style-type: none"> <li>• Promote green driving practices including:               <ul style="list-style-type: none"> <li>- switching off idling engines;</li> <li>- making trips only when necessary;</li> <li>- driving at a steady speed;</li> <li>- avoiding sudden braking;</li> <li>- planning routes to minimise journey time and avoid congested areas.</li> </ul> </li> <li>• Require hybrid vehicles under new waste facilities contracts.</li> <li>• Encourage staff to use public transport where possible, walk for short</li> <li>• journeys and use the pooling system for government vehicles to maximise vehicle use.</li> </ul>
<p><b>CONTRACTORS</b></p>	<ul style="list-style-type: none"> <li>• Encourage new contractors to sign the Clean Air Charter and commit to reducing their emissions.</li> <li>• Require operators of waste management facilities to follow stringent contractual requirements to control and monitor emissions.</li> <li>• Require continuous monitoring of emissions from the Chemical Waste Treatment Centre and monthly reports released to the public.</li> </ul>

## 2. Waste Reduction

2.1 We have well-established programmes to reduce paper consumption and recycle paper and plastic waste. In 2008 paper consumption fell by 4.3 per cent through our on-going paper-saving initiatives. These included such things as using both sides of paper, promoting electronic versions of annual reports, extending use of e-mail systems to all staff, disseminating administrative information through a daily electronic bulletin, using e-applications and processing for internal procurement and leave application, distributing seasonal greeting cards electronically, and promoting electronic sharing of reports and presentation materials.

2.2 To recognise our effort and achievements in reducing waste in 2008, we have been awarded the 'Class of Excellence' Wastewi\$e Label under the [Hong Kong Awards for Environmental Excellence](#).

2.3 We also consolidated our recycling efforts under the new Consumables and Inventory Recycling Scheme to re-use and recycle surplus items as far as practicable. The collection of recyclables was streamlined in our offices and we started to recycle used toner cartridges from photocopiers. Environmental contractors collected 46 500 kg of waste paper in 2008 and 490 kg of plastic waste.

## 3. Other Issues

### Green Procurement

3.1 The Government uses its purchasing power to negotiate for affordable green products, and hopefully promote a market for these goods. Internal [green procurement guidelines](#) exist for over 30 products. The Government now wants to expand this list and commissioned a consultancy study in July 2008 to update existing specifications and develop green specifications for additional, commonly-used products.

3.2 We also promote green procurement in the community through the [Hong Kong Green Purchasing Charter](#) which is funded by the [Environment and Conservation Fund](#) and was launched in October 2007. Three experience-sharing seminars were held under the Charter in 2007 and 2008. Subsequently, two green purchasing workshops were arranged for April and May 2009.

### *e-procurement*

3.3 The EPD is one of three government departments participating in a [pilot e-Procurement programme](#) that enables electronic transactions with suppliers of goods and services, of up to \$1.43 million. The programme simplifies procedures and reduces paper consumption. The other pilot departments are the Immigration Department and the Office of the Government Chief Information Officer. The next step will be to allow notification of invitations to submit quotations and the submission of quotations.

**See also: [Targets - Our Progress and 2009 Aims](#).**

## 3 IMPROVING THE ENVIRONMENT

### B. Impacts of Our Policies and Programmes

Our main work is to improve and protect Hong Kong's environment. We do this by addressing specific problems, such as air pollution; by preventing harmful impacts through planning and assessment; and by working with polluters and our regional and international counterparts to ensure our efforts are sustainable and take account of economic and social factors, as well as the environment.

#### Main areas of work:

Better Air Quality  
 Better Water Quality  
 Environmentally Sound Waste Management  
 Greener Energy Management  
 Nature Conservation  
 Quieter Environment  
 Cross-boundary and International Co-operation  
 Prevention and Mitigation Through Environmental Assessment  
 Sustainable Development  
 Building Partnerships and Encouraging Compliance

## 1. Better Air Quality

#### Mission:

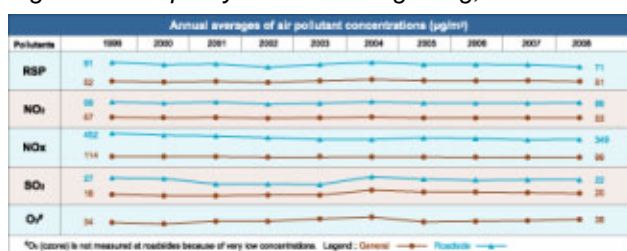
*To protect the health and well being of the community by achieving and maintaining satisfactory air quality through intervention in the planning process and by enforcing the controls in the Air Pollution Control Ordinance and the Ozone Layer Protection Ordinance.*

### Air Quality in 2008

1.1 The Environmental Protection Department (EPD) monitors air quality at 11 general stations and three roadside stations and uses this information to inform its policy-making and programmes. General air quality has improved in the past five years due to the joint efforts of the [Hong Kong and Guangdong governments](#) in reducing emissions. There was also an increase in the number of general stations complying with the long-term (annual) [Air Quality Objectives](#), from six in 2007 to nine in 2008.

1.2 Air quality has also improved at roadsides since we implemented a comprehensive vehicle emission control programme in 1999. By 2008, the annual concentrations of nitrogen oxides (NO<sub>x</sub>), respirable suspended particulates (RSP) and sulphur dioxide (SO<sub>2</sub>) had dropped by between 19 per cent and 23 per cent as compared with 1999. However, we experienced more high pollution days at roadsides (above 100 on the [Air Pollution Index](#)) in 2008 compared with 2007 due to unfavourable weather conditions that induced photochemical smog and trapped pollutants. The results can be seen [here](#).

Figure 1 - Air quality trends in Hong Kong, 1999 - 2008



SEE DATA

ENLARGE

## Review of Air Quality Objectives

1.3 We have launched a [review of Hong Kong's Air Quality Objectives](#) to revise them with reference to the [World Health Organisation's latest air quality guidelines and standards applied in the European Union and the United States](#). The review includes a study, which began in June 2007 and will be completed in 2009 after allowing extra time for modelling and analysis of the results, and public consultations both during and after the study. The outcome of the review will be used to draft future air quality management programmes.



*Ms Anissa WONG, the Permanent Secretary for the Environment (third from right), and members of the Advisory Panel on Review of Air Quality Objectives and Development of a Long-Term Air Quality Strategy for Hong Kong, at a public consultation forum.*

## Regional air quality

1.4 Hong Kong and Guangdong jointly monitor [regional air quality](#) and have established targets to reduce air pollution to well below 1997 levels by 2010, under the [Pearl River Delta Air Quality Management Plan](#). Hong Kong is making steady progress in controlling emissions, particularly from power plants, and expects to achieve its goals (see [Cross-boundary and International Co-operation](#) for details).

## Reducing Emissions

1.5 To achieve our goal of cleaner air, emissions are being reduced from the following sources:

### Power plants

In 2007, power plant emissions account for 89 per cent of Hong Kong's SO<sub>2</sub>, 46 per cent of NO<sub>x</sub> and 28 per cent of RSP. The [New Scheme of Control Agreements](#) signed with the power companies in January 2008 include penalties for failing to meet emission caps and incentives for over-achieving them. A related legislative amendment was made in July that provides for the stipulation of emission caps for SO<sub>2</sub>, NO<sub>x</sub> and RSP from 2010 by [technical memorandum](#) and the use of emissions trading. Lamma Power Station was the first to have its specified process licence renewed under the new provisions.

### Motor vehicle emissions

Motor vehicles are the chief source of roadside air pollution and also contribute to regional air pollution. Intensive efforts have been made to reduce this problem, resulting in a drop of roadside levels of NO<sub>x</sub> by 23 per cent, RSP by 22 per cent and SO<sub>2</sub> by 19 per cent since 1999. New initiatives to control vehicle emissions in 2008 included:

- an extension of a one-off grant scheme to encourage owners of pre-Euro and Euro I diesel commercial vehicles to replace them with cleaner vehicles;
- a waiving of the duty on Euro V diesel; and
- concessions on first registration tax for buyers of newly registered environment-friendly commercial vehicles.

#### Case Study 1 : Financial Incentives to Reduce Motor Vehicle Pollution

*For more than a decade, the Government has used taxes, grants and duties to provide incentives for drivers to use cleaner vehicles and cleaner fuels. The result has been cleaner roadside air as most of the most-polluting vehicles have disappeared from Hong Kong's roads. The [programme](#) began in 1999 with \$1.4 billion earmarked to replace diesel taxis and light buses with ones running on liquefied petroleum gas. There were also [incentives](#) for owners of older diesels to replace them with new vehicles that meet stricter emission standards. In addition, concessionary duties have been offered on cleaner fuels, and [taxes](#) have been reduced for buyers of environment-friendly vehicles*

## Other emissions

A study was commissioned by the EPD in 2007 to examine the spatial distribution of volatile organic compounds (VOCs) across the region. Preparations were also underway to extend the existing controls on the VOC content in products, to vehicle refinishing and vessel paints, adhesives and sealants.

**See also: Targets - Our Progress and 2009 Aims.**

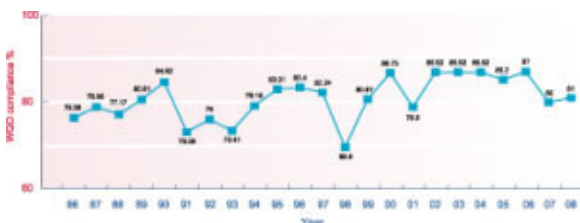
## 2. Better Water Quality

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.

### Water Quality in 2008

2.1 Water quality is monitored at beaches, marine waters, and rivers and streams to provide a scientific basis for water policies and programmes. In 2008 we achieved 80 per cent compliance or better with our Water Quality Objectives (WQOs) across all water bodies (see Figure 2 and Figure 3 below). However, as these WQOs have been in use for more than two decades, we recognise the need to review and update them in line with the latest scientific knowledge and international practices. This process began in October 2008 and will involve consultations with the public and stakeholders.

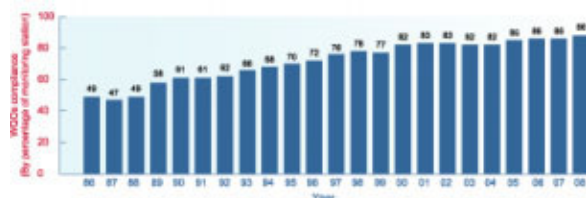
Figure 2 - Overall compliance with marine Water Quality Objectives in Hong Kong, 1986 -2008



SEE DATA

ENLARGE

Figure 3 - Overall compliance with river Water Quality Objectives in Hong Kong, 1986 - 2008



SEE DATA

ENLARGE

### Regional water quality

2.2 Hong Kong shares its waters with Guangdong and efforts have been increased in recent years to co-ordinate water pollution control. The EPD and Guangdong Environmental Protection Bureau developed an advanced numerical water quality model for the Pearl River Estuary in 2008, which will be used to formulate regional water quality management plans. Hong Kong and Shenzhen also have joint strategies for managing Deep Bay and Mirs Bay, and in 2008 they compiled their first review of the Deep Bay programme and launched a separate review of the Mirs Bay programme (see also Cross-boundary and International Co-operation for details).

### Reducing Water Pollution

2.3 Up to 20 per cent of marine and river waters still do not meet our WQOs. Two major programmes, among others, aim to help rectify that: the Harbour Area Treatment Scheme (HATS) and village sewerage.

## HATS

2.4 HATS is an extensive project to collect and treat all sewage from around Victoria Harbour. Stage 1 was completed in 2001 and treats 75 per cent of the harbour's sewage. Despite overall improvements, water quality has worsened in the western waters where the treated effluent is discharged. The **two-pronged** Stage 2 will address this problem. Stage 2A, costing \$11 billion, will collect the remainder of untreated sewage and provide disinfection. Construction work on Advance Disinfection Facilities began in 2008 for completion in October 2009, and the remainder of Stage 2A will be completed by 2014. Stage 2B will provide a higher level of treatment and is still undergoing investigation - in 2008 a study on the co-use of land with port facilities commenced. To help pay for the operation of these facilities, **sewage charges** are being increased.

## Village sewerage

2.5 A number of rivers and streams have been contaminated by sewage from village houses so a programme is underway to connect 330 000 village residents to sewers. By the end of 2008, a total of 5 972 village houses in around 120 villages had been connected to the public sewers.

**See also: Targets - Our Progress and 2009 Aims.**

# 3. Environmentally Sound Waste Management

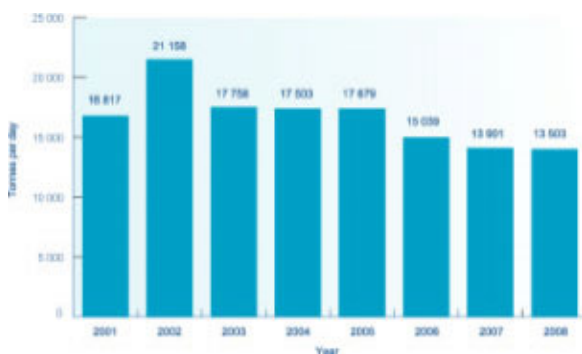
## Mission:

*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.*

## Waste Arisings in 2008

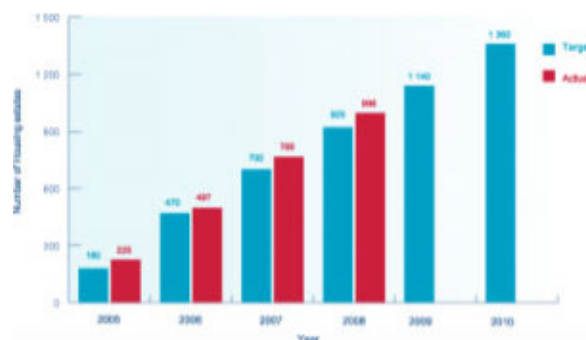
3.1 The rapid increase in waste over the past two decades and a shortage of land have put enormous pressures on waste management in Hong Kong. Landfills are running out of space and this has spurred efforts to reduce waste, with some notable successes. Total quantities of solid waste at landfills have fallen steadily since 2002 (see Figure 4), and in 2008 dropped 3 per cent to 13 500 tonnes per day, helped especially by a decline in construction waste at landfills due to construction waste disposal charges, reduced activity and other factors. Domestic waste loads at landfills have also fallen by more than 10 per cent since 2005 and by more than 4 per cent in 2008 alone. Commercial and industrial waste climbed by 10 per cent in 2008, but this is being addressed (see below).

Figure 4 - Solid waste disposal at landfills in Hong Kong, 2001 - 2008



ENLARGE

Figure 5 -Progress of recruitment of housing estates for Programme on Source Separation of Domestic Waste



ENLARGE



## Reducing Waste

### Source separation of waste

3.2 One of the first steps in reducing waste is to encourage people to separate their waste for re-use and recycling. The EPD has a [Programme on Source Separation of Domestic Waste](#) that aims to bring source separation of domestic waste to 80 per cent of the population, i.e. 1 360 housing estates, by 2010. By the end of 2008, 996 housing estates had signed up against a target of 920. These efforts are being supported by legislation requiring space to accommodate refuse storage and material recovery facilities on building floors in new domestic premises, which was passed in 2008. The programme has been extended to cover the commercial and industrial sectors. Separately, we set up a [second-hand exchange website](#) in October 2007 to encourage people to re-use products and by the end of 2008 it had received 216 000 visits.



*A housing estate provides separate bins for collecting paper, plastics, metals, clothes, toner cartridges and rechargeable batteries at its podium floor (left), and walled mounted plastic baskets in the refuse rooms on building floors for collecting recyclables (right).*

### Producer responsibility

3.3 The producers and users (i.e. the community) of products are being asked to support recovery and recycling through [producer responsibility schemes](#) (PRs). The [Product Eco-Responsibility Ordinance](#) was enacted in July 2008 to provide a legal framework for mandatory PRs and the first scheme, an environmental levy on plastic shopping bags, is expected to be introduced in 2009. In the meantime, voluntary recycling programmes funded and administered by the trades have been introduced for rechargeable batteries, computers, fluorescent lamps, and glass bottles generated by hotels business (see Case Study 2).

#### Case Study 2 : Voluntary Recycling Programmes

*With the support of EPD, the relevant trade and industry fund and administer various voluntary recycling programmes to collect and recycle their used products. The first voluntary recycling programme started in 2005 for [rechargeable batteries](#) and so far 164 tonnes have been collected and 135 tonnes have been sent to an overseas centre for recycling. In 2008, programmes were launched for [computers, fluorescent lamps and glass bottle from hotels](#).*

### Municipal solid waste (MSW) charging

3.4 MSW charging is considered an effective measure to promote waste reduction and recovery. A Baseline Study was launched in November 2008 to gather information on waste generation and management practices of commercial and industrial establishments.

## Waste Facilities

### Landfills

3.5 The three [strategic landfills](#) are running out of space so the EPD has proposed to extend them. Progress in 2008 included an Environmental Permit granted for the [South East New Territories Landfill Extension](#); the commencement of land rezoning and resumption processes for the [North East New Territories Landfill Extension](#); and conducting an EIA for the [West New Territories Landfill Extension](#).

## Waste treatment

3.6 The EPD plans to develop modern **integrated waste management facilities** to reduce the bulk of waste and recover energy using incineration as the core technology. Two potential sites were identified in 2008, Shek Kwu Chau and Tsang Tsui ash lagoons, and they are undergoing engineering and EIA studies. Other facilities are also being developed to treat specific types of waste: an **animal waste composting plant** started operation in April 2008 and provided treatment of horse stable wastes from the **2008 Olympic and Paralympic Equestrian Events** and, afterwards, from the Hong Kong Jockey Club; an **EIA report for sludge treatment facilities** to handle sewage sludge was available for public inspection in December 2008; and work has begun on an EIA for organic waste treatment facilities.



Location Map of Shek Kwu Chau and Tsang Tsui ash lagoons, the two proposed sites for integrated waste management facilities.



The animal waste composting plant at Ngau Tam Mei.



Location map for the proposed sludge treatment facilities.

## Chemical waste treatment

3.7 The **Chemical Waste Treatment Centre (CWTC)** treats a variety of chemical wastes. In 2009 a new follow-on contract for the CWTC will be awarded and it will include measures to enhance the CWTC's environmental performance, such as upgrading emission controls and further reducing permitted sulphur and nitrogen oxide emissions in line with the latest European Union standards. There will also be provisions for the CWTC to handle clinical waste from 2010-11.

Figure 6 - Chemical waste collected at CWTC in 2008



ENLARGE

## EcoPark

3.8 The **EcoPark** provides land and support facilities for the recycling and environmental industries. By the end of 2008, five out of six Phase I lots had been awarded for recycling waste wood, used computers, waste cooking oil, waste plastics and waste metals.

**See also: Targets - Our Progress and 2009 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.

4.1 The Government is committed to reducing its energy intensity by at least 25 per cent by 2030 (using 2005 as a base year), a target supported by [APEC Economic Leaders](#). This commitment was reinforced by the Chief Executive in his [2008-09 Policy Address](#) when he pledged to enhance energy efficiency, use clean fuels, reduce reliance on fossil fuels and promote a low carbon economy based on low energy consumption and low pollution.

4.2 Two areas were targeted for specific measures in 2008: electricity generation and reducing energy consumption.

### Electricity generation

4.3 Using clean sources of energy is our chief goal in electricity generation. A [Memorandum of Understanding](#) (MoU) to provide a continuous supply of nuclear electricity and natural gas to Hong Kong for 20 years, was signed between the HKSAR Government and the National Energy Administration in August. The MoU ensures a long-term and stable supply of clean energy, bringing both environmental and economic benefits. It also means there is no need at this stage to build a new liquefied natural gas terminal here.

4.4 To reduce emissions from the two Hong Kong power companies, we finalised [New Scheme of Control Agreements](#) (SCAs) with the companies in January 2008. The SCAs include goals to improve the companies' environmental performance, penalties if they fail to achieve emission caps, and incentives if they over-achieve the caps and adopt renewable energy.

### Reducing energy consumption

4.5 Initiatives have been implemented to promote the use of energy efficient equipment and reduce energy use at source:

**Energy efficiency labelling**. The [Energy Efficiency \(Labelling of Products\) Ordinance](#) (Cap. 598) was enacted in May to require [mandatory labelling](#) for certain products. The first phase covers room air-conditioners, refrigerating appliances and compact fluorescent lamps. Preparations are underway to cover more products in the legislation in view of public support for the scheme.



Energy labels for room air-conditioners (left), refrigerating appliances (middle) and compact fluorescent lamps (right).

**Building Energy Codes (BECs)**. Buildings account for almost 90 per cent of the total electricity consumption in Hong Kong. A [public consultation](#) was carried out in early 2008 on the proposed mandatory implementation of BECs, which impose minimum energy performance standards on building services installations (lighting, electrical system, air-conditioning, and lifts and escalators) in new buildings and in major retrofitting works in existing buildings, and require energy audits in commercial buildings. The majority of the views received support the Government's proposal. Relevant legislation will be introduced to the Legislative Council in 2009.

**Carbon audit.** Carbon audit guidelines for building users and managers were jointly promulgated by the EPD and the [Electrical and Mechanical Services Department](#). The [guidelines](#) provide a systematic and scientific approach for calculating and reporting greenhouse gas emissions arising from building operations in Hong Kong, and identifying areas for improvement. Organisations are invited to become a 'Carbon Audit • Green Partner' by signing the [Carbon Reduction Charter](#) and undertaking activities to reduce greenhouse gas emissions.

**Government performance.** The Government will continue to lead by example in promoting green buildings. A comprehensive target-based environmental performance framework will be adopted for Government buildings. Targets will be set in various environmental aspects, including energy efficiency, renewable energy, water management, waste management, indoor air quality and greenhouse gas emissions.

**See also:** [Targets - Our Progress and 2009 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.*

5.1 The Government has adopted a two-pronged approach to nature conservation. Some activities it undertakes itself in consultation with the community; others involve partnerships and input from non-government organisations. The aim is to fortify the community's stake in protecting Hong Kong's natural resources.

### **Protecting natural sites**

5.2 *Parks:* 24 country [parks](#), four marine parks and one marine reserve have been established to protect large areas of land and sea from development, ban harmful activities and encourage appreciation of nature. In 2008 the Chief Executive proposed in his [Policy Address](#) to set up a Geopark centred on Hong Kong's unique geological resources. [The Lantau North \(Extension\) Country Park](#) was also officially opened.

5.3 *Sensitive sites:* The [New Nature Conservation Policy](#) of 2004 enables non-government organisations to participate in conserving sensitive sites. Under the [Pilot Scheme for Management Agreements](#), non-government organisations can apply for funding to give landowners financial incentives to protect sites; two such projects received grants from the [Environment and Conservation Fund](#) in 2006 and again in 2008 for their continuation. Under the [Pilot Scheme for Public-Private Partnerships](#), applicants can develop less sensitive areas of a site while committing to long-term conservation of the remainder. The proposals are complex and take time to assess, and in 2008 the Government supported one proposal to be taken forward at Sha Lo Tung.

### **Global conservation obligations**

5.4 Hong Kong is committed to meeting its obligations under the [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#). Parties have recently updated the Convention and in 2008 we started procedures to bring the Schedule to the [Protection of Endangered Species of Animals and Plants Ordinance](#) in line with this development. The public was also consulted on extending the [Convention on Biological Diversity and Cartagena Protocol on Biosafety](#) to Hong Kong.

**See also:** [Targets - Our Progress and 2009 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.

### Traffic noise

#### Existing roads

6.1 More than one million people in Hong Kong are affected by excessive traffic noise (greater than 70 db (A)). Engineering solutions help to reduce their exposure. More than 90 existing road sections have been identified as suitable for low-noise road surfaces (LNRSSs) and by the end of 2008, 37 had been re-surfaced, benefiting about 70 000 people. Another 36 road sections are suitable for retrofitting noise barriers or enclosures; two have been retrofitted, benefiting about 7 000 people. The EPD is also looking at how to improve noise mitigation measures. Studies are underway to optimise the design of LNRSSs, review the scope of the noise barrier programme, improve barrier design and find ways to improve road joints at flyovers so they are less noisy.

#### New roads

6.2 The goal with new roads is to prevent and mitigate traffic noise problems. Since 1990 more than 500 000 people have benefited from planning measures to reduce noise, such as altering routes, installing road barriers (benefiting 280 000 people at a cost of \$2 billion) and making LNRSSs a standard feature of new roads. In addition, 7 900 flats have been insulated against traffic noise since 1995, costing \$430 million.

Figure 7 - Screening structures to reduce traffic noise, 1990 - 2008



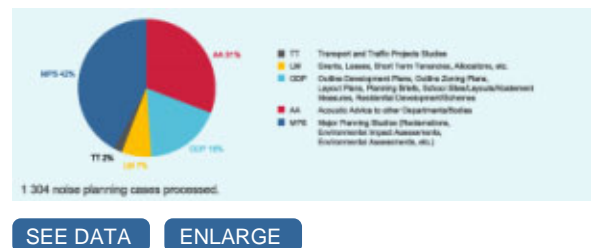
### Construction noise

6.3 Construction noise is controlled at night and on Sundays and public holidays through the [Noise Control Ordinance](#). Designated Areas have been established for tighter controls and, following an earlier review, these were expanded in 2008 for the second time since their introduction in 1996. The intention is to ensure newly-developed areas and areas under active development have the same protection against construction noise as those in existing Designated Areas.

### Public engagement

6.4 Two tools have been developed to help people better understand the impacts of road noise. The [noise map](#) shows impacts across Hong Kong and has been uploaded to the EPD's website for easy access. [3-D noise modelling tools](#) show the impacts on nearby buildings of specific road projects and are used extensively in public consultations.

Figure 8 - Noise planning cases in 2008



See also: [Targets - Our Progress and 2009 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.

### Regional Activities

7.1 Cross-boundary environmental issues are a core subject of collaboration between Hong Kong and Guangdong. That priority was enhanced in 2008 when the Hong Kong - Guangdong Co-operation Joint Conference, co-chaired by the Hong Kong's Chief Executive and the Governor of Guangdong Province, agreed to further deepen environmental co-operation and jointly draw up strategies for transforming the Pearl River Delta region into a green and quality living area.

7.2 The Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection will actively take forward this green initiative. At its [ninth annual meeting](#) in December 2008, it also noted achievements in the following areas, which will continue to be priorities in 2009:

- **Air quality:** A [report](#) on the Mid-Term Review of the Pearl River Delta Air Quality Management Plan, [released](#) in January 2008, concluded that the preventive and control measures being implemented by both sides have helped to substantially reduce air pollutant emissions in the region. Hong Kong should be able to meet its emission reduction targets. Following on from the review's recommendations, Guangdong will implement additional measures and should also achieve the mutually agreed emission reduction targets.
- **Cleaner production:** The five-year [Cleaner Production Partnership Programme](#) was launched in April 2008 with \$93 million from the Hong Kong SAR Government to encourage and facilitate Hong Kong-owned factories in the Pearl River Delta region to adopt cleaner production technologies and practices. The funding helps factories to conduct on-site assessments and demonstration projects and verify their improvement measures. The Programme is supported by extensive awareness-raising activities such as seminars, study missions, exhibitions and a dedicated website.
- **Water quality:** An advanced numerical [water quality model for the Pearl River Estuary region](#) was developed to provide a scientific tool for the formulation of regional water quality management and pollution control plans. New targets for water quality improvement in Deep Bay were agreed with Shenzhen and a review was launched of the Mirs Bay regional water quality control strategy.

7.3 In addition to provincial-level co-operation, a '[Co-operation Agreement on Cleaner Production between Hong Kong and Shenzhen](#)' was signed with the [Shenzhen Environmental Protection Bureau](#). The EPD and [Macao's Environment Council](#) also agreed to further strengthen co-operation on air quality monitoring, waste management and public education.

### International Activities

7.4 Hong Kong is committed to reducing its contributions to climate change (see Figure 9). It joined the [C40 Cities Climate Leadership Group](#) in October 2007 and attended C40 sessions in 2008 to share experiences in combating climate change. The Chief Executive's [2008-09 Policy Address](#) announced initiatives for meeting the challenges of climate change, emphasising enhanced energy efficiency, cleaner fuels, less reliance on fossil fuels and promotion of a low-carbon economy. In addition, a comprehensive study on the likely impacts of climate change in Hong Kong and how to mitigate them was commissioned in March 2008.

Figure 9 - Hong Kong's greenhouse gas emissions 1990 - 2007



SEE DATA

ENLARGE

7.5 International conventions on pollution control also apply to Hong Kong. Legislation came into force to support the local enforcement of conventions on persistent organic pollutants (POPs) and hazardous chemicals. The [Hazardous Chemicals Control Ordinance](#) (Cap. 595) came into operation in April 2008, following implementation of the [Stockholm Convention on POPs](#) in Hong Kong in 2004. The [Rotterdam Convention on the Prior Informed Consent Procedure](#) for certain hazardous chemicals and pesticides became applicable in Hong Kong in August 2008.

### Case Study 3 : Sharing Expertise

*The EPD and Mainland environmental authorities share their expertise and experience to strengthen joint efforts against pollution. In 2008 activities focused on the following:*

- [Cleaner Production Partnership Programme](#): Seminars were organised by the EPD and local authorities in Shenzhen, Jiangmen, Huizhou, Zhongshan, Foshan, and Dongguan. The EPD and the Guangdong Economic and Trade Commission also jointly organised a training seminar in Shenzhen.
- [Persistent organic pollutants \(POPs\)](#): The EPD shared its experience in managing and controlling POPs at a session in Beijing with government officials and experts from the Mainland and overseas. The EPD also organised a two-day exchange on POPs monitoring with the Shenzhen Centre for Disease Control .
- [Waste and wastewater management](#): The EPD organised a two-day exchange programme in Hong Kong for a delegation from the Pan-Pearl River Delta region.
- [Emission control technology](#) : The EPD organised an exchange programme on de-NO<sub>x</sub> technology for the [Shenzhen Environmental Protection Bureau](#).



*Delegates of the EPD and the Shenzhen Environmental Protection Bureau at the Sixth Shenzhen-Hong Kong Environmental Co-operation Forum held in Hong Kong.*

See also: [Targets - Our Progress and 2009 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.*

8.1 Legal and administrative tools ensure that environmental assessment and planning is incorporated into decision-making at the project and strategy levels. These tools apply to both government and private sector projects, and promote early public input and involvement.

### **Environmental Impact Assessment Ordinance**

8.2 [The Environmental Impact Assessment Ordinance \(EIAO\)](#) celebrated its 10th anniversary in 2008, having protected more than 1.5 million people and many ecologically sensitive sites from unacceptable impacts. To date 127 projects have met EIAO requirements and been approved. A [3-D EIA public engagement tool](#) has been developed to facilitate public involvement and understanding of key EIA findings, and by the end of 2008 was required in 35 major infrastructure projects. An [online library of EIA reports](#) with major findings and elements presented through 3-D visualisation was also established.

### **Strategic Environmental Assessments (SEAs)**

8.3 [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. The [SEA for Hong Kong 2030: Planning and Vision Strategy](#) was completed in 2007 and another major SEA study on Land Use Planning for the Closed Area is underway.

### **Government policies and programmes**

8.4 All bureaux and departments are required to report the environmental implications of their policy and programme proposals in submissions to official bodies such as the Policy Committee, Executive Council, Legislative Council's Public Works Sub-committee and Environmental Affairs Panel. In 2008, the EPD vetted nearly 300 funding and policy proposals. Government bodies are also required to produce sustainability assessments (see [Sustainable Development](#) for details).

**See also:** [Targets - Our Progress and 2009 Aims](#).



## 9. Sustainable Development

### *Mission:*

*To promote sustainable development in Hong Kong.*

9.1 Priority sustainability issues are identified with the advice of the [Council for Sustainable Development](#), which was established in 2003 and has members from the environment, community and business sectors and the Government. As the involvement of stakeholders is a key element of sustainability, the Council has designed and implemented an inclusive and stakeholder-led engagement model to harness public opinions on key sustainability issues, most recently on air quality. In 2008 it presented a [report](#) to the Government that contained the findings from the public engagement exercise on air quality and the Council's recommendations on this issue (see also [Working With Stakeholders](#) for details). The Council also organises awareness raising activities and advises on the approval of applications to the [Sustainable Development Fund](#).

9.2 The Council is supported by the Environment Bureau's [Sustainable Development Division](#), which also oversees the Government's internal [Sustainability Assessment System](#). All bureaux and departments are required to conduct sustainability assessments of their major policy and programme initiatives and include the findings in their submissions to the Policy Committee and the Executive Council, and in public consultation documents. In 2008, the Sustainable Development Division processed 139 sustainability assessments.

**See also:** [Targets - Our Progress and 2009 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 (CEM) in both public and private sectors, in the pursuance of sustainable development objectives.*

### Partnerships

10.1 We have formed partnerships with four key polluters to encourage compliance and good environmental practices: the [construction industry](#), [restaurants](#), [vehicle repair workshops](#) and [property management companies](#). This has resulted in a drop in complaints against these industries and in convictions for environmental offences. Examples of partnership activities in 2008 included:

- organising 26 seminars and speeches for nearly 2 500 participants from the four industries;
- holding 44 meetings and 117 environmental site audits to facilitate the smooth implementation of new controls on sulphur and volatile organic compound content in fuel and paints, and to promote good practices against fly-tipping;
- promoting equipment that reduces the environmental impacts of construction activities, such as [Quality Powered Mechanical Equipment](#), mechanical truck covers and non-tungsten lighting;
- supporting a local restaurant association study on controlling cooking fumes;
- organising an environmental forum in collaboration with two vehicle repair trade associations and the [Hong Kong Productivity Council](#).

## Corporate Environmental Management

10.2 We encourage the public and private sectors to adopt [corporate environmental management \(CEM\)](#), especially [environmental performance reporting](#). A dedicated [website](#) has been set up that contains published environmental information from listed companies in Hong Kong. In May 2008 we further promoted environmental reporting at a meeting with the Hong Kong Exchanges & Clearing Limited (HKEx). We also endorse [ACCA Hong Kong's annual Awards for Sustainability Reporting](#).

10.3 To communicate our messages more clearly and concisely, we have consolidated the numerous handbooks and other CEM tools into a more user friendly form. Previously we had published separate tools on everything from ISO 14001 EMS to environmental performance reporting and audits, often in printed form. In November 2008 a CEM Resource DVD-ROM was produced with all published environmental management tools in one disk, thus also saving paper resources.



CEM Resource DVD-ROM.

## Compliance Assistance Centre (CAC)

10.4 One way to encourage operators to perform better is to make it easier for them to comply with environmental requirements. The [Compliance Assistance Centre](#) is a one-stop shop where they can get information and help in applying for licences relating to all areas of the EPD's work. The CAC handles about 440 cases a month and has adopted a 'customer-centric' approach that has been cited by the Government's Efficiency Unit and other organisations. The CAC also took on a new activity in 2008, promoting its services to local and international businesses from a booth at the Macao International Environmental Co-operation Forum and Exhibition.



Mr Edward YAU, the Secretary for the Environment (centre left), and Mr Edmund HO, the Chief Executive of Macao SAR (centre right), visit the CAC booth at the Macao International Environmental Co-operation Forum and Exhibition.

**See also:** [Targets - Our Progress and 2009 Aims](#).

## 4 ADDRESSING SOCIAL NEEDS

### A. Working with Stakeholders

#### Consulting Stakeholders

1. Stakeholder involvement is essential in ensuring our policies and programmes meet the community's aspirations for a quality environment and account for different views. We have a variety of avenues through which we welcome and encourage stakeholders to contribute their views:
  - 1.1 **Formal meetings.** The Environment Bureau (ENB) and Environmental Protection Department (EPD) meet regularly with the [Legislative Council](#) and the [Advisory Council on the Environment](#), keep District Councils up to date on environmental matters affecting their districts, and organise meetings of EIAO User Liaison Groups so works-related government departments, corporations, consultants and contractors can liaise on EIA-related issues.
  - 1.2 **On-going channels.** The [EIA process](#) allows for a high degree of [public involvement](#) early in the planning process to enable the adoption of environmentally friendly designs and ensure wider public support for projects.
  - 1.3 **Stakeholder-based consultations.** The EPD seeks out key target groups, such as local residents, experts or community groups, for their input on specific policies. In 2008 we consulted key stakeholders on [integrated waste management facilities](#), [sludge treatment facilities](#), the [review of Air Quality Objectives](#), the proposed Geopark, the [Cartagena Protocol on Biosafety](#) and controls on products containing [volatile organic compounds](#) and [ozone-depleting HCFCs](#).
  - 1.4 **Public consultations.** Formal consultations, typically lasting three to five months, allow the general public to submit views on proposed initiatives by the Government. These are publicised in the media and meetings and seminars are organised to gauge the views of the general public and relevant stakeholders. In 2008 we completed consultations on the [proposed mandatory implementation of the Building Energy Codes](#) and a proposed [ban on idling engines](#).
  - 1.5 **Council for Sustainable Development.** Public views on key sustainability issues are channelled through the [Council for Sustainable Development's](#) public engagement process. The Council conducts [public engagement exercises](#) on priority issues and uses the results to propose recommendations to the Government. A recent exercise on air quality, which received more than 80 000 responses, resulted in a 2008 [report](#) to the Government recommending a holistic and comprehensive approach to combat air pollution. The Government fully agreed with such an approach and is reviewing [Hong Kong's Air Quality Objectives](#) in preparation for developing a long-term air quality management strategy.



Members of the public are invited to share their views at the "Air Summit" organised during the Better Air Quality Engagement Process.

## Engaging Operators

### *External operators*

2. The EPD reaches out to operators to ensure they understand their responsibilities to the environment and to better understand their needs. Formal partnership programmes have been set up with four key polluters: the [construction industry](#), [restaurants](#), [vehicle repair workshops](#) and [property management companies](#). Operators in all industries can also seek advice and information at the [Compliance Assistance Centre](#), which handles about 440 cases per month.

3. In addition, businesses can share good practices through the online [ISO 14001 EMS Directory](#), which lists ISO 14001 certified companies and invites them to explain why they sought certification. More than 140 organisations have responded.

### *Contractors*

4. The contractors of new waste management facilities are required to implement an environmental management system that complies with ISO 14001 standards, and to obtain certification for long-term contracts. In addition, all new contractors to the EPD are encouraged to sign the [Clean Air Charter](#).



*Representatives of the Hong Kong Exchange and Clearing Limited visit the Compliance Assistance Centre.*

## 4 ADDRESSING SOCIAL NEEDS

### B. Our Staff

1. Our staff are our most important resource. They help us fulfil our responsibilities to improve sustainability in Hong Kong. In turn, we provide them with a workplace that is healthy and safe, where employees can freely communicate their needs and concerns and have opportunities to advance their skills and knowledge and contribute to society as a whole.

#### Environment Bureau (ENB) establishment: 37 staff \*

Figure 1 - Breakdown by gender

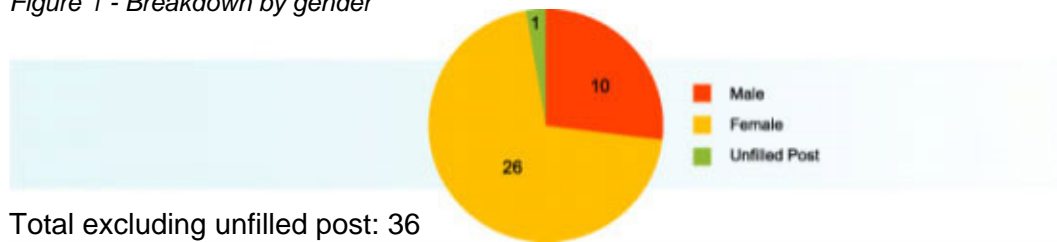
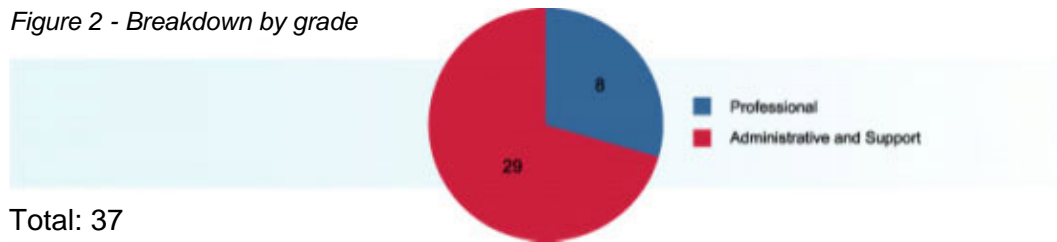


Figure 2 - Breakdown by grade



#### Environmental Protection Department (EPD) establishment: 1 629 staff \*

Figure 3 - Breakdown by gender

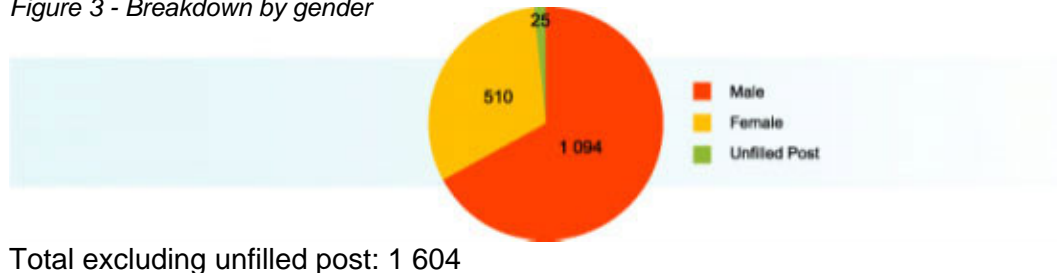
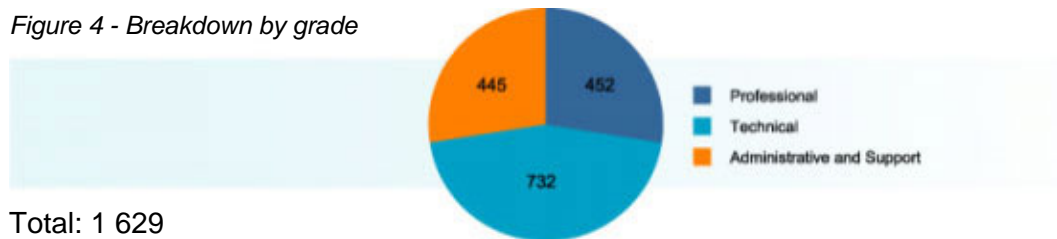


Figure 4 - Breakdown by grade



\* As at 31 December 2008

## Communications

2. The EPD's Departmental Consultative Committee (DCC) is the main formal channel of communication for achieving better understanding and co-operation between management and staff, as well as discussing issues relating to staff well being, such as conditions of service, office accommodation and training and productivity. Its members include representatives from the department's management team and staff representatives who are elected by their colleagues or nominated by staff associations. The DCC meets every three months. The DCC also has representation on the [Departmental Environment, Safety and Health Committee](#).

## Safety and Health

3. The EPD is deeply committed to providing our staff with a safe and healthy workplace. In 2001 we were the first government department certified under the Occupational Safety and Health Council's Continual Improvement Safety Programme Recognition System (CISPROS), and we have since maintained the certification. We also conduct annual internal safety and health inspections and have designated safety representatives in each of our administrative groups.

4. Our efforts have helped to keep occupational injury rates to a minimum. In 2008 we had only 3.1 incidents per 1 000 employees, mainly due to injury while lifting or carrying, slipping, tripping and falling. To improve employee alertness and awareness of safety risks, we organised 76 safety and health training classes in 2008 that were attended by 286 staff. We also send out daily safety reminders and tips through our internal intranet system.

## Training and Development

5. Staff training and development is essential to support our operations and services, as well as for staff career and development. We have a comprehensive programme that encompasses new recruits, staff in the middle of their careers, and staff with exceptional potential for higher responsibilities.

6. Our training activities in 2008 provided staff with an average of three days in training (see table on right). 834 staff attended 100 courses to enhance their professional knowledge and skills, such as green management, corporate social responsibility and energy efficiency and conservation. In addition, 11 staff attended anti-discrimination courses organised by the Civil Service Training and Development Institute of the Civil Service Bureau, to strengthen their understanding of human rights issues in the workplace.

7. We also contribute to the development of the environmental engineering profession through the Environmental Graduate Training Scheme, which has been certified for the Hong Kong Institute of Engineers' "Scheme A Training" since 1997. By the end of 2008, 41 environmental engineering graduates had received on-the-job training with the EPD, and 26 had completed their training.

Staff Training in 2008	
Grade of staff	Number of training days
Senior management	5.3
Professionals	4.4
Inspectorates	3.5
Other staff	0.8
Average per staff member	3

## Staff Awareness

8. Our staff are encouraged to participate in activities that improve the environment and their environmental knowledge, and contribute to the wider community. Family visits were organised in 2008 to Mai Po Nature Reserve and Lamma Wind Turbine to raise environmental awareness. Staff also formed several teams of divers to participate in the Hong Kong Reef Check and go diving in Wong Chuk Kok Tsui near Double Haven, the Hong Kong Reef Check is part of the global programme to promote sustainable management of coral reefs. They also continued to participate in the Green Power Hike.

9. Staff supported several charitable organisations, such as the Community Chest's Corporate and Employee Contribution Programme and a stationery collection programme organised by the Hong Kong Chinese Civil Servants' Association for Wu Xian Primary School in Shaanxi Province after a severe earthquake in the region.

10. EPD staff are recognised annually through a departmental presentation ceremony to honour achievements in internal and external sporting activities, as well as long service for staff who have been working in the civil service for more than 20 years.



*Family members of EPD staff are attracted by the plant model during visit to Lamma Wind Turbine.*



*Ms Anissa WONG, the Permanent Secretary for the Environment (seated row, centre), and other senior members of EPD management, officiate the annual Staff Recreation and Social Committee presentation ceremony.*

**See also:** [Targets - Our Progress and 2009 Aims.](#)

## 4 ADDRESSING SOCIAL NEEDS

### C. Promoting Community Involvement

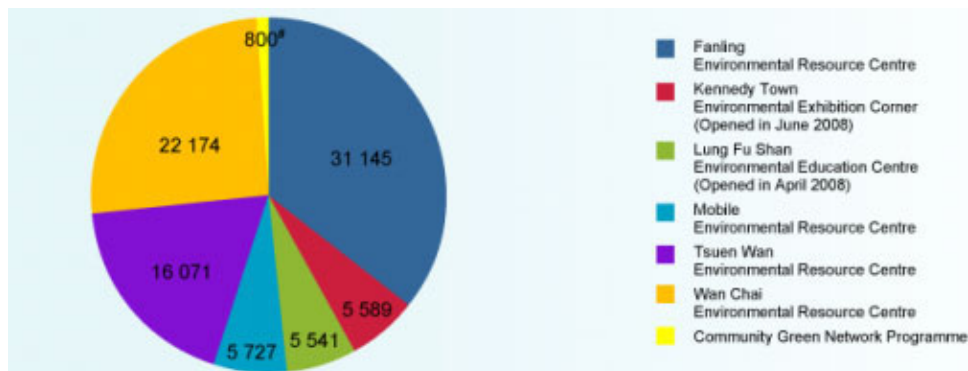
1. Many sustainability initiatives cannot succeed without the community's support and participation. The following programmes aim to promote public involvement.

#### Community Awareness

2. We organise two annual community-wide events to galvanise the general public to take action to protect the environment. [World Environment Day](#) is celebrated on June 5 and the [Environmental Protection Festival](#) is normally held in the winter. The theme for both events in 2008 was Waste Reduction. In addition, the 'I Love Hong Kong! I Love GREEN!' publicity campaign promotes green practices in daily living.

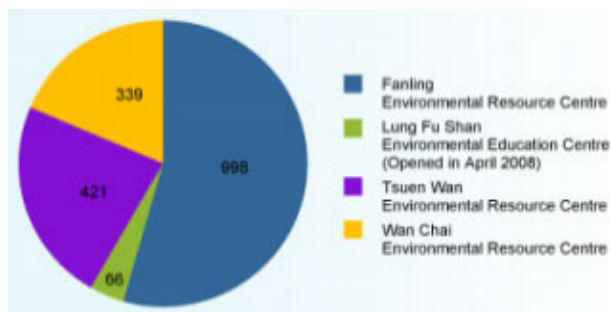
3. We also maintain [Environmental Resource Centres](#) and other facilities in the community to make environmental information accessible to people. More than 85 000 people visited these facilities in 2008 (see Figure 1 below). Two new centres opened in 2008, the [Lung Fu Shan Environmental Education Centre](#), which is operated in partnership with the University of Hong Kong, and the [Kennedy Town Environmental Exhibition Corner](#).

Figure 1 - Use of community-based facilities in 2008  
(i) Distribution of visitors and participants<sup>#</sup>



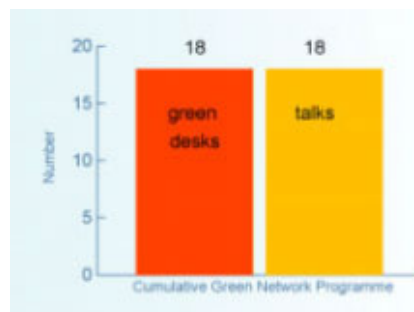
Total visitors and participants<sup>#</sup>: 87 047

(ii) Distribution of guided visits/workshops



Total guided visits/workshops: 1 824

(iii) Green desks available and talks delivered



#### Capacity Building

4. We organise training and awareness programmes to improve the environmental performance of all community sectors, including civil servants, and to recognise good practices (see Table 1 below for details). A major initiative in 2008 was the launch of the [Hong Kong Awards for Environmental Excellence](#), a prestigious awards scheme to encourage green management and benchmarking by companies and organisations (see [Case Study 4](#)).



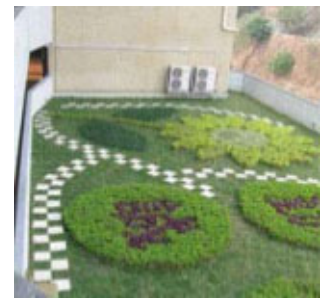
Table 1 - Capacity Building Programmes in 2008

Hong Kong Awards for Environmental Excellence	366 entries competed for the Sectoral Awards; over 2 000 applied for Environmental Labels.
Environmental Awareness Talks for the Community	39 sessions organised for 1 365 participants from schools, NGOs and private companies.
Environmental Training Programme for Civil Servants	49 talks organised for 950 participants.
Sustainability Workshops for Civil Servants	320 staff participated.
One Tonne Challenge	A joint initiative with local green organisations and the Government-appointed Environmental Campaign Committee resulted in pledges by individuals to reduce their CO2 emissions by a total of more than 14 000 tonnes.
Site Visits to Waste Management Facilities	177 visits organised.
Outreach Environmental Programme for the Elderly	12 talks held for 767 participants.
Environmental Certificates and Badges for Boy Scouts and Girl Guides	233 certificates and badges awarded.
Community Outreach Programme for Sustainability	An outreach programme was held in Tai Po.

## Funding

5. Two government-backed funds offer financial support to community and non-government groups in organising green projects. The [Environment and Conservation Fund](#) (ECF), established in 1994, supports projects for environmental education and community action, research, and waste recovery. It received an additional \$1 billion injection from the Government in early 2008 and during the year it granted about \$117.62 million to 147 projects (including those under a new area, minor works, to help schools and charitable organisations install environmental features). Some \$150 million was also earmarked for energy-cum-carbon audit projects and \$300 million for energy efficiency projects, to promote a low-carbon economy and support international efforts to combat climate change. Applications for these will be vetted by the new Energy Conservation Projects Vetting Sub-committee.

6. The [Sustainable Development Fund](#) supports community initiatives to enhance public understanding of sustainable development and encourage people to put it into practice in their daily lives. Since 2003 it has granted a total of \$21.8 million to support 26 sustainability projects. In May 2008 a booklet describing [funded projects](#) was published to further promote such initiatives.



*This green roof, installed over a school hall, is an example of the projects funded by the ECF.*

## Schools

7. Schools-based activities cultivate green practices from an early age. The [Student Environmental Protection Ambassador Scheme](#) encourages green leadership and in 2008 attracted 18 121 participants, while more than 35 000 preschoolers enrolled in the [Little Green Ambassadors Scheme 2008](#), organised by the [Environmental Campaign Committee](#) and Dairy Farm International Group. Schools themselves are encouraged to adopt green management through the [Hong Kong Green School Award](#), in which 189 schools participated in 2008.

8. The concept and practice of sustainable development are promoted through the [School Outreach Programme](#), which enrolled 61 new schools in 2008-09, and the new [Sustainable Development School Award Programme](#), which bestowed Gold, Silver and Bronze Awards to 33 schools in 2007-08. About 32 000 students, teachers, parents and members of the community were involved in the Award Programme. Both activities are organised by the [Council for Sustainable Development](#).

## Supporting EPD Programmes

9. Community awareness activities are essential to the [Programme on Source Separation of Domestic Waste](#), which relies on people's commitment to reduce waste. In 2008, waste reduction was adopted as a theme of various on-going community-based activities and 20 roving exhibitions on waste separation were organised in shopping centres and housing estates. The ECF extended funding for facilities for source separation of waste in housing estates, to include commercial and industrial buildings. The [Environmental Campaign Committee](#) has also set aside funds to provide new recycling bins to housing estates, commercial and industrial buildings, schools and public recyclables collection points, to further promote and improve waste recycling in the community.

10. The Environmental Protection Department (EPD) also keeps the public informed about our work and the state of the environment through regular reports on [beach water quality](#), [air quality](#), the [Pearl River Delta regional air quality](#), [prosecutions](#), [environmental impact assessments](#), [solid waste arisings](#), and [river, stream and marine water quality](#). The public and operators can also use the [Environmental Protection Interactive Centre](#) to set parameters for obtaining environmental information, and apply, pay for and receive permits and licences online.



*Children learn about waste separation through games*

#### Case Study 4 - Hong Kong Awards for Environmental Excellence

*The Hong Kong Awards for Environmental Excellence (HKAEE), launched in 2008, is a merger of three awards schemes and is intended to put a sharper focus on our efforts to encourage green management in companies and organisations. It was formed from the Hong Kong Eco-Business Awards, Wastewi\$e Scheme and Hong Kong Energy Efficiency Awards. Participants can apply for Environmental Labels, under which they have to attain an approved number of specified environmental goals. They can also compete for Sectoral Awards, which honour all-round, outstanding environmental performance in various sectors. In 2008, 366 companies and organisations participated in the Sectoral Awards and more than 2 000 companies and organisations applied for Environmental Labels.*



*The EPD organises information and experience sharing seminars for companies and organisations to enhance understanding of the HKAEE.*

*The HKAEE are sponsored by the ECF and have a high degree of stakeholder involvement, being jointly organised by the Environmental Campaign Committee, EPD, Advisory Council on the Environment, Business Environment Council, Chinese General Chamber of Commerce, Chinese Manufacturers' Association of Hong Kong, Federation of Hong Kong Industries, Hong Kong Chinese Importers' & Exporters' Association, Hong Kong Council of Social Service, Hong Kong General Chamber of Commerce and Hong Kong Productivity Council.*

**See also: [Targets - Our Progress and 2009 Aims.](#)**

## 5 OUR ECONOMIC IMPACTS

### A. Investment in Sustainability

1 We invest billions of dollars in public funds each year to make Hong Kong greener and more sustainable. In 2008 the Environment Bureau (ENB) and Environmental Protection Department (EPD) had a combined recurrent expenditure of more than \$2.6 billion. We have also earmarked more than \$13 billion to extend landfills and develop sludge treatment facilities over the next few years and \$11 billion to build [Stage 2A of the Harbour Area Treatment Scheme](#). A breakdown of our annual expenditure is shown below.

#### ENB Expenditure in 2008



#### EPD Expenditure in 2008 (excluding major infrastructure works)



### B. Economic Impacts of Our Policies and Programmes

1. Apart from our investment in sustainability, we also subscribe to the polluter pays principle, which requires polluters to help pay towards the cost of cleaning up and preventing pollution. We use financial tools as a 'stick' to discourage unsustainable practices, and as a 'carrot' to promote better technologies and practices, as described below.

#### Polluter Pays Initiatives

2. **Sewage charges** are a prime example of the application of the polluter pays principle. Domestic charges are being increased gradually over 10 years with a target of meeting about 80 per cent of the operating costs of sewage services in Hong Kong by 2017-18. A Trade Effluent Surcharge is imposed on businesses with more polluting wastes. This was adjusted in 2008 in recognition of some operators' efforts to control their pollution, resulting in lower charges for more than 90 per cent of accounts and higher charges for the rest.

3. Waste charges are also being developed to help reduce waste loads and recover the cost of treatment and disposal. We already charge for construction and chemical waste, and in late 2008 we began a Baseline Study on commercial and industrial establishments to collect information for developing municipal solid waste charging options. To discourage waste arisings in the first place, we have introduced producer responsibility schemes (see [Environmentally Sound Waste Management](#) for details); in December 2008 a 50-cent levy on plastic shopping bags was proposed and is awaiting Legislative Council approval.

*Increases in domestic household Sewage Charges 2008 -2017*

Year	Sewage Charge Rate (HK\$ / m <sup>3</sup> )
2008-09	1.31
2009-10	1.43
2010-11	1.57
2011-12	1.71
2012-13	1.87
2013-14	2.05
2014-15	2.24
2015-16	2.44
2016-17	2.67
1.4.2017 onward	2.92

## Financial Incentives

4. Financial incentives can encourage operators to adopt greener technologies and practices. Our motor vehicle emissions control programme has a **\$3.2 billion programme** to help vehicle operators switch to less polluting vehicles, and in 2008 we also offered concessions on the first-registration tax for buyers of **environment-friendly commercial vehicles**. Cleaner production by Hong Kong factory operators in the Pearl River Delta region is promoted through a \$93 million fund to raise awareness and offer advice and technical support to encourage and facilitate the adoption of cleaner production technologies and practices. We also offer financial support to the wider community to initiate environmental activities and those which can enhance public understanding of sustainable development and encourage its day to day practice, through the **Environment and Conservation Fund** and the **Sustainable Development Fund**.



*Electric cars are exempted from the first registration tax for vehicles.*

## Energy and the Economy

5. An economy as successful and dynamic as Hong Kong's needs a safe, reliable and efficient energy supply at reasonable prices to sustain itself. The Government's energy policy aims to achieve that goal, while at the same time minimising the environmental impacts from the use and production of energy.

6. In 2008 we finalised **New Scheme of Control Agreements** with the power companies which link their return with emission performance, and we completed a public consultation on the **proposed mandatory implementation of the Building Energy Codes** which would achieve more efficient, and hence cost-effective, use of energy by buildings (see **Greener Energy Management** for details).

## 6 TARGETS - Our Progress and 2009 Aims

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

### 1. Better Air Quality

Long term objective (1): Reduce local air pollution.		
2008 Targets	Progress in 2008	2009 Targets
i. Amend the Air Pollution Control Ordinance and Regulations to: <ul style="list-style-type: none"> <li>- stipulate emission caps for power plants;</li> <li>- tighten motor vehicle fuel specification to Euro V standards;</li> <li>- mandate the use of clean fuel by the industrial and commercial sectors.</li> </ul>	<p><b>Mostly Achieved.</b> The amendments to stipulate emission caps and allow emissions trading for power plants and to mandate the use of clean fuel in industry and commerce have been completed.</p> <p>On Euro V, we are liaising with oil companies on supplies in the region in preparation for amending legislation. All petrol stations offer Euro V diesel exclusively, after a concessionary \$0.56 duty was introduced in December 2007.</p>	i. Make proposals to limit VOC content in vehicle refinishing and vessel paints, adhesives and sealants, and enhance legislative control of ozone depleting substances.  ii. Carry out a trial on using ultra low sulphur diesel in domestic ferries.  iii. Work on specifications for biodiesel use in motor vehicles.
ii. Consult the public on using remote sensing equipment to strengthen the control of emissions from petrol and liquefied petroleum gas (LPG) vehicles.	<p><b>Working towards target.</b> Preparatory work for the consultation is completed. The timing of the launch needs to be determined.</p>	
Long term objective (2): Review Hong Kong's Air Quality Objectives and develop a long-term air quality management strategy.		
2008 Targets	Progress in 2008	2009 Targets
i. Complete the review of Air Quality Objectives by the end of 2008.	<p><b>Working towards target.</b> Extra time was needed to perform computer modelling on future air quality and to conduct a cost-benefit analysis on control measures needed to achieve the new objectives.</p>	i. Complete the study in the first half of the year and conduct a comprehensive public engagement exercise in the second half of the year to solicit views from the public and stake holders, with the aim of finalising the new Air Quality Objectives and the long-term management strategy within 2009.

## 2. Better Water Quality

**Long term objective :**  
Implement HATS Stage 2 to improve the harbour's water quality and sustain the improvements in the long term.

2008 Targets	Progress in 2008	2009 Targets
i. Obtain approval under the Environmental Impact Assessment Ordinance for HATS Stage 2A.	<b>Achieved.</b> The EIA report was approved in October 2008.	i. Commence operation of the advance disinfection facilities for HATS.
ii. Commence a study on co-use of land for HATS Stage 2B.	<b>Achieved.</b> The study began in May 2008.	ii. Seek Legislative Council approval for tunnelling works under HATS Stage 2A.  iii. Obtain funding to build or upgrade the HATS Stage 2A sewage conveyance system, advance preparation works and odour control facilities in 2009.

### 3. Environmentally Sound Waste Management and Facilities

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.		
2008 Targets	Progress in 2008	2009 Targets
i. Develop long-term plans for integrated waste management facilities (IWMF) to achieve bulk reduction of municipal solid waste.	<b>Achieved.</b> The results of a site search for developing IWMF were announced in January 2008, followed by a public engagement exercise and engineering and EIA studies that began in November 2008.	i. Complete the EIA study of the first phase of the Organic Waste Treatment Facilities at Siu Ho Wan.
ii. Develop voluntary producer responsibility schemes (PRSs) for waste electrical and electronic equipment in collaboration with major stakeholders before the end of 2008.	<b>Achieved.</b> The Computer Recycling Programme and Fluorescent Lamp Recycling Programme were launched in early 2008, both funded and administered by the respective trades.	ii. Complete the EIA study for the West New Territories Landfill Extension.
iii. Secure passage of the Product Eco-responsibility Bill by the Legislative Council.	<b>Achieved.</b> The Product Eco-responsibility Ordinance was enacted in July 2008.	iii. Examine the feasibility of introducing a mandatory PRS for used electrical and electronic products and consult the public.
iv. Recruit 920 housing estates / buildings to participate in the Programme on Source Separation of Domestic Waste by the end of 2008.	<b>Target exceeded.</b> By the end of 2008, 996 housing estates / buildings had signed up.	iv. Implement the Environmental Levy Scheme on Plastic Shopping Bags.
		v. Extend the Programme on Source Separation of Domestic Waste to 1 140 housing estates / buildings.



## 4. Greener Energy Management

### Long term objective (1):

Ensure the public will continue to enjoy a safe, reliable and efficient energy supply at reasonable prices, while at the same time minimise the environmental impacts of the production and use of energy.

2008 Targets	Progress in 2008	2009 Targets
i. Finalise the regulatory arrangements of the post-2008 electricity market and monitor the implementation, particularly measures relating to environmental protection.	<b>Achieved.</b> New Scheme of Control Agreements were signed with both power companies in January 2008 and include terms for better emission performance, wider use of renewable energy, and the promotion of energy saving initiatives to customers.	Nil.

### Long term objective (2):

Formulate policies and implement measures to promote energy efficiency and conservation, and the development of renewable energy in Hong Kong.

2008 Targets	Progress in 2008	2009 Targets
i. Roll out the first phase of the mandatory Energy Efficiency Labelling Scheme after completing the legislative process and plan for coverage of its second phase.	<b>Achieved.</b> The Energy Efficiency (Labelling of Products) Ordinance was enacted in May 2008 to implement the Scheme. Amendments to the Ordinance for the implementation of the second phase of the Scheme are being prepared.	i. Table an amendment regulation to the Energy Efficiency (Labelling of Products) Ordinance in the Legislative Council for the second phase of the mandatory Energy Efficiency Labelling Scheme.
ii. Prepare a detailed proposal for the mandatory implementation of the Building Energy Codes, taking into consideration views received during a public consultation.	<b>Mostly Achieved.</b> The legislative proposal is under preparation.	ii. Introduce a bill to the Legislative Council on the mandatory implementation of the Building Energy Codes.
iii. Encourage wider adoption of renewable energy in the finalised post-2008 Scheme of Control Agreements.	<b>Achieved.</b> The Agreements were signed with the two power companies in January 2008 and include provisions to encourage wider adoption of renewable energy.	iii. Roll out the Buildings Energy Efficiency Funding Schemes. iv. Conduct studies on phasing out incandescent light bulbs, and energy wastage from external lighting. v. Make preparations for the implementation of a district cooling system in the Kai Tak Development.

## 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.

2008 Targets	Progress in 2008	2009 Targets
i. Oversee the implementation of the New Nature Conservation Policy, in particular the pilot schemes on management agreements and public-private partnerships.	<b>Achieved.</b> In 2008, the Government supported one application under the Pilot Scheme for Public-Private Partnership, which will be located in Sha Lo Tung. Funds from the Environment and Conservation Fund were also granted for continuation of two Management Agreements at Long Valley and Fung Yuen.	i. Continue implementing the New Nature Conservation Policy, in particular taking forward the Sha Lo Tung project. ii. Set up a Geopark in Hong Kong and aim to apply for its listing as a national geopark by the end of 2009. iii. Introduce a legislative proposal to the Legislative Council to extend the Convention on Biological Diversity and Cartagena Protocol on Biosafety to Hong Kong .
ii. 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.	<b>Achieved.</b> The amendments were completed and ready to be tabled at the Legislative Council for negative vetting in January 2009.	

## 6. Quieter Environment

### Long term objective :

Reduce and minimise road traffic noise through implementation of noise abatement measures.

2008 Targets	Progress in 2008	2009 Targets
i. Further develop and continue implementation of the proposed noise mitigation measures (measured in terms of progress made, including studies that have commenced).	<b>Achieved.</b> Completed investigations of the feasibility of using low noise road surfaces (LNRS) on all selected local road sections; completed a study to optimise the design of noise barriers; and continued studies to improve the design of LNRS materials and improve flyover joints.	i. Continue developing and implementing noise mitigation measures, including noise barrier retrofitting work on 36 road sections and trials of low noise road surfaces.
ii. Continue implementation of noise barrier retrofitting work for 36 identified road sections and a trial of low noise resurfacing work on local road sections.	<b>Achieved.</b> Work to install noise barriers continued on three road sections and began on seven other sections. Three 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.

2008 Targets	Progress in 2008	2009 Targets
i. Commence a consultancy study on climate change in Hong Kong.	<b>Achieved.</b> Commenced in March 2008.	i. Continue the consultancy study on climate change in Hong Kong.  ii. Continue implementing the Cleaner Production Partnership Programme (measured by number of participants at awareness promotion activities and number of funding applications approved).
ii. Launch the Cleaner Production Partnership Programme to encourage and facilitate Hong Kong-owned factories in the Pearl River Delta region to adopt cleaner production technologies and practices, with the aim of helping to improve regional air quality.	<b>Achieved.</b> The programme was launched in April 2008. The Government will provide funding support of over \$93 million.	

## 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.

2008 Targets	Progress in 2008	2009 Targets
i. Upload 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.	<b>Achieved.</b> About 100 documents and hyperlinks were uploaded to the web-based SEA Knowledge Centre in 2008.	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.

2008 Targets	Progress in 2008	2009 Targets
i. Gather and disseminate knowledge in the application of the 3-D EIA public engagement tool for easy reference by EIA practitioners and the public.	<b>Achieved.</b> The 3-D EIA public engagement tool was required in the EIA study briefs of 35 major development projects. Five EIA studies using the 3-D tool were made available for public inspection in 2008. A library was also established of 3-D EIA visualisations of the major findings of EIA reports.	i. Conduct a review of the guidance notes for the Environmental Impact Assessment Ordinance. ii. Continue gathering and disseminating knowledge in 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).

## 9. Sustainable Development

Long term objective : Promote sustainable development (SD) in Hong Kong.		
2008 Targets	Progress in 2008	2009 Targets
i. Provide secretariat support to the Council for Sustainable Development, which was established to advise the Government on the preparation of an SD strategy for Hong Kong and promote public awareness and understanding of the principles of SD.	<b>Achieved.</b> In 2008 the Council submitted a report to the Government with recommendations based on the findings of the Better Air Quality Engagement Process; published a booklet on Sustainable Development Fund projects and reported on their progress; and completed the First Sustainable Development School Award Programme.	i. Conduct a new public engagement process on building design to foster a quality and sustainable built environment.
ii. Promote understanding and application of SD principles, as well as the sustainability assessment system, among government bureaux and departments.	<b>Achieved.</b> In 2008 over 280 government officials participated in training sessions.	

## 10. Building Partnerships and Encouraging Compliance

### Long term objective (1) :

Enhance environmental awareness of the need to control cooking fume emissions for the restaurant trade and reinforce the partnership programme for the vehicle repair workshop trade.

2008 Targets	Progress in 2008	2009 Targets
i. Enhance the features of the Green Restaurant and Green Garage partnership programme websites to make them more user friendly and attractive to the trades.	<b>Achieved.</b> New features have been added to the two websites, making them easier to use.	Nil.
ii. Promote the Vehicle Repair Workshop Programme at a special seminar.	<b>Achieved.</b> EPD collaborated with two trade associations and the Hong Kong Productivity Council to organise a forum in December 2008 to enhance environmental knowledge of practitioners. About 70 stakeholders attended.	

### Long term objective (2):

Provide a common integrated electronic platform for quality management of enforcement information and for facilitating data sharing and modelling use.

2008 Targets	Progress in 2008	2009 Targets
i. Roll out the integrated electronic platform in mid-2008.	<b>Achieved.</b> Implementation of the platform was completed in December 2008.	Nil.

## 11. Internal Operations

### Long term objective (1) :

Pursue continual improvement in the environmental performance of our internal operations by implementing an effective management system.

2008 Targets	Progress in 2008	2009 Targets
i. Continue to monitor the potentially significant environmental aspects of internal activities.	<b>Achieved.</b>	i. Continue to monitor the potentially significant environmental aspects of internal activities.
ii. The Energy and Emissions Management Team (EEMT) to identify and implement energy / emissions reduction measures.	<b>Achieved.</b> The EEMT, formed in 2007, has identified energy / emissions reduction measures and they are being implemented.	ii. The EEMT to identify and implement energy / emissions reduction measures.

**Long term objective (2) :****Demonstrate efficiency and commitment to environmental conservation by reducing expenditure and resources consumption.**

2008 Targets	Progress in 2008	2009 Targets
i. Continue paper saving initiatives to keep paper consumption to a minimum.	<b>Achieved.</b> Paper consumption fell by 4.3 per cent over 2007.	i. Continue paper saving initiatives to keep paper consumption to a minimum. ii. Continue energy saving measures in conjunction with the energy audit. iii. Monitor consumption and encourage recycling. iv. Continue Indoor Air Quality certification work and arrange renewal as necessary.
ii. Continue energy saving measures in conjunction with the energy audit (measured in terms of power consumption in offices).	<b>Target exceeded.</b> Electricity consumption was reduced by 1.8 per cent over 2007, exceeding the consumption reduction target of 1.5 per cent set for 2008.	
iii. Continue energy audits in offices to look for energy saving opportunities (measured in terms of self-audits conducted).	<b>Achieved.</b>	
iv. Monitor consumption and encourage recycling.	<b>Achieved.</b> Used toner cartridges from photocopiers that were disposed of as waste in the past were recycled.	
v. Continue Indoor Air Quality (IAQ) certification work and arrange renewal as necessary.	<b>Achieved.</b> A total of 15 EPD premises have been certified, with one classed as 'excellent' and the others as 'good'.	

**Long term objective (3) :****Ensure treatment and disposal of wastes at our facilities are managed in the most environmentally acceptable manner.**

2008 Targets	Progress in 2008	2009 Targets
i. Continue close supervision of our waste facilities contractors, aiming at full compliance with both legal and contractual environmental requirements.	<b>Achieved.</b> Of 24 858 environmental monitoring measurements carried out at landfills and refuse transfer stations, 24 817 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.**

2008 Targets	Progress in 2008	2009 Targets
i. Arrange training sessions / seminars and awareness campaigns for staff.	<b>Achieved.</b> 76 staff attended nine training sessions on different 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.**

2008 Targets	Progress in 2008	2009 Targets
i. Promote government initiatives on environmental protection.	<b>Achieved.</b> 37 roving exhibitions were organised to promote 'Switching Off Idling Engines' and 'Source Separation of Waste', and 317 activities on green living, energy saving and waste reduction were organised for various sectors of the community.	i. Continue to promote government initiatives on environmental protection. ii. Continue to enhance public involvement and participation in environmental protection
ii. Enhance public involvement and participation in environmental protection.	<b>Achieved.</b> Tens of thousands of people and hundreds of organisations participated in numerous on-going programmes in 2008. See <a href="#">Promoting Community Involvement</a> for details.	



## 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 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 wastewaters 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.

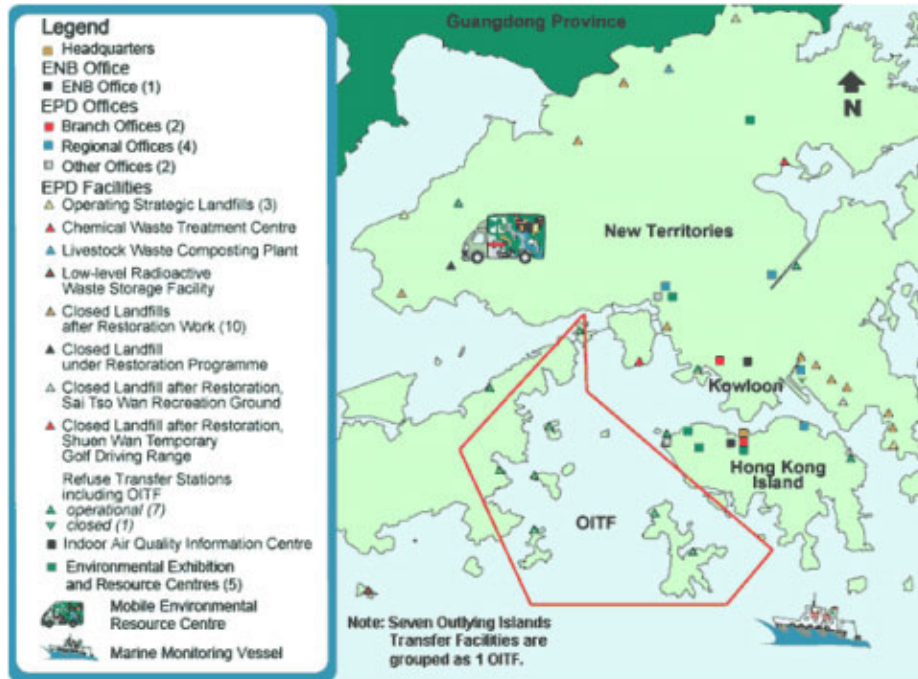
## Training

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



*ENB and EPD Headquarters*



*The ENB Office in Murray Building*



*Indoor Air Quality Information Centre*



*The Compliance Assistance Centre*



*Chemical Waste Treatment Centre, Tsing Yi*



*Low-level Radioactive Waste Storage Facility, Siu A Chau*



*North East New Territories  
Landfill*



*West New Territories  
Landfill*



*South East New Territories  
Landfill*



*Sai Tso Wan Recreation  
Ground (Restored Sai Tso  
Wan Landfill)*



*Island East Refuse  
Transfer Station*



*Roadside Air Monitoring  
Station at Central*



*Wan Chai Environmental  
Resource Centre*



*Lung Fu Shan  
Environmental  
Education Centre*



*Marine Monitoring Vessel*



*Mobile Environmental  
Resource Centre*

2009

環保工作報告  
ENVIRONMENTAL  
PERFORMANCE REPORT



環境局  
Environment  
Bureau



環境保護署  
Environmental  
Protection Department

Contents

## **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](http://www.epd.gov.hk/epd/english/how_help/tools_epr/collect_1.html)

## VERIFICATION STATEMENT



BMT Asia Pacific Limited (BMT) was appointed by the Environmental Protection Department (EPD) to benchmark and verify the contents of the Department's online version Environmental Performance Report 2009 (EPR 2009). The Report describes the environmental, as well as social and economic performance of EPD during the calendar year of 2008.

### Objectives

The verification process intends to provide EPD's stakeholders with an external assurance of the accuracy and completeness of information presented in the Report.

This Statement is issued based on:

- Independent third party opinion – BMT was not involved in any aspects of the preparation of Report; and
- The findings of a verification process that involved validation of a representative selection of data and claims, checking of data collection mechanisms and information management systems, assessment of the report's comprehensiveness, and identification of areas to improve EPD's reporting process.

### Approach

During the verification process, a series of interviews covering data review sessions was held between 28th July and 3rd August of 2009 with EPD's divisional representatives including EPD's senior professional and technical staff. BMT reviewed the selected claims and reported figures, examined and checked supporting data and documented evidence, as well as data collation systems. Where further investigation was necessary to confirm claims, additional information was requested and reviewed.

In parallel with the assurance engagement process, a benchmarking exercise was also conducted to identify possible areas for future improvement in the annual environmental performance reporting. EPR 2009 is compared against local and international reports, reference guidelines and standards, in which evaluation results would be presented in the form of conclusions and recommendations.

## Results and Commentary

### Report Accuracy

- Data collection mechanisms and information management systems are generally considered to be reliable, efficient, organised and effective. In particular, data were systematically collected, recorded, filed, endorsed and analysed following prescribed procedures. Specific data used to support claims and compile reported figures were correctly retrieved and appropriately interpreted.
- The claims made in EPR 2009 examined by BMT represent an accurate account of EPD's actions and performance in 2008. EPD has made amendments, to BMT's satisfaction, to clarify some minor claims and figures that were deemed unclear during the verification.

## Report Coverage and Relevance

- EPR 2009 provides a balanced overview of EPD's performance in 2008 with respect to its roles and responsibilities in Hong Kong, key programme areas, relevant projects, and significant aspects related to daily operations and services.
- EPD's ongoing measures to address impacts from its own operations and services on the Hong Kong community were clearly set out in the Report. Communications with different stakeholders were also discussed. EPD has graphically presented the major year-on-year trends in services and environmental performance, and presented progress of targets for 2008, and sets out targets for year 2009.
- EPR 2009 considerably responded to feedback from EPR 2008 with the shortening of report text and provision of links between main text and targets to improve the readability.

## Recommendations for Future Reports

EPD is encouraged to:

- Enhance the comprehensiveness of the report by further discussing the internal staff management issues.
- Further enhance stakeholder engagement process to proactively engage report stakeholders to collect constructive feedback for report content enhancement.
- Continuously move towards sustainability reporting with reference to the internationally recognised Global Reporting Initiative's G3 Guideline, including application level achieved when reporting.



Winnie Chu  
FEnvSc, LEED AP, CEnv, CAP, CES  
Associate Director  
BMT Asia Pacific Limited

## FEEDBACK

We value your feedback on our Environmental Performance Report 2009 to help us make improvements in the coming year. You may complete this form and send it to us by clicking the "Submit" button below. Comments may also be sent by email to: [epr@epd.gov.hk](mailto:epr@epd.gov.hk). Thank you in advance for your views.



1. How do you rate the report in terms of the following? (Please complete at least 1 item)

Good      Average      Poor      Other comment

a) Readability

\_\_\_\_\_

b) Charts and tables

\_\_\_\_\_

c) Understanding our environmental performance

\_\_\_\_\_

2. Which section(s) of the report would you like to have more information on? (You may leave this section blank or mark more than one box)

**Our Profile**

- About ENB and EPD  
 - Vision and Strategy

**Improving the Environment**

- Impacts of Our Internal Operations  
 - Impacts of Our Policies and Programmes

**Addressing Social Needs**

- Working with Stakeholders  
 - Our Staff  
 - Promoting Community Involvement

**Our Economic Impacts**

- Investment in Sustainability  
 - Economic Impacts of Our Policies and Programmes

**Targets - Our Progress and 2009 Aims**

3. Which of the following are you most interested in? (You may leave this section blank or mark more than one box)

**Internal Operations**

- Minimising Energy Consumption       Waste Reduction       Other issues

**Policies and Programmes**

- Better Air Quality       Better Water Quality       Environmentally Sound Waste Management  
 Greener Energy Management       Nature Conservation       Quieter Environment  
 Cross-boundary and International Co-operation       Prevention and Mitigation Through Environmental Assessment       Sustainable Development  
 Building Partnerships and Encouraging Compliance





4. Which of the following would you like to see more of ?  
(You may leave it blank or mark more than one box)

Statistical information

Illustrations

Hyperlinks to other  
information

Others (please specify): \_\_\_\_\_

5. Other comments and suggestions:

---

---

---

---