



Environmental Performance



環境保護署
ENVIRONMENTAL
PROTECTION DEPARTMENT

Report 2006

Foreword



2005 was a landmark year for the EPD. We merged with the environment arm of the Environment, Transport and Works Bureau, keeping our name while streamlining our work and expanding our responsibilities. Environmental policy-making and implementation are now under one roof, which should make us more effective in addressing environmental concerns. We have also taken on policy-making responsibility for nature conservation and energy conservation, which are closely related to the environment.

The merger came into effect on 1 April 2005 and, like any major change, provided an opportunity for the department to reflect on its priorities and effectiveness. One important outcome has been a sharper focus on the polluter pays principle. Polluter pays will be essential to the successful management and control of solid and liquid wastes, two areas requiring urgent attention and investment by the community. As you will read in this report, we are striving to educate the public and develop the application of polluter pays in Hong Kong.

Making polluters pay is a complex issue because there are social and economic impacts, as well as environmental ones. The EPD is keenly aware that such sustainability considerations underpin much of our work. We have attempted to reflect that awareness in this report, which has been re-vamped to make it more concise and incorporate some of the guiding principles of sustainability reporting. The coverage of our internal operations, for example, reflects such diverse achievements as our success in reducing paper and electricity consumption in 2005 despite the merger and increased responsibilities, and in maintaining a commendable record on worker safety.

We are continually seeking ways to improve our sustainability performance. I cordially invite readers to share their comments and suggestions on our performance and this report through the on-line [feedback form](#) included in this report or by e-mail at enquiry@epd.gov.hk.

Michael Chiu

Dr Michael T L Chiu, JP
Permanent Secretary for the Environment, Transport and Works (Environment)/
Director of Environmental Protection
(Acting)



Chapter 1

Scope of Report

This Environmental Performance Report covers 1 January 2005 - 31 December 2005 unless otherwise stated. It seeks to provide an overview of our efforts to improve Hong Kong's environment and minimise the environmental impacts of our operations. This year, for the first time, we also report on our efforts in nature and energy conservation, a new area of responsibility for the EPD following our re-organisation on 1 April 2005 (see [Chapter 3](#) for details).

We have incorporated other sustainability considerations where possible, making reference to standard sustainability practices such as the [Global Reporting Initiative](#). This report is only published in CD-ROM format and on our [web site](#) to reduce paper consumption.

Chapter 2

Vision and Strategy

1. Sustainability is at the heart of the Environmental Protection Department's (EPD) work, as reflected in our vision and mission statements. We are the main Government body responsible for protecting the environment and our policies and programmes affect everyone in the community.

VISION

2. 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.

3. Our Mission is to contribute towards realising this vision by applying our professional knowledge and judgement and drawing on our experience in environmental protection and conservation

- to formulate policies and plans on environmental protection and conservation;
- to increase community awareness of environmental protection and conservation issues;
- to implement environmental protection legislation and plans; and
- to participate in the town planning process

with a view to achieving and maintaining a high standard of environmental quality and conservation.

STRATEGY

4. The EPD's responsibilities are spread across six programme areas – air, environmental assessment and planning, conservation, noise, waste and water (see [Chapter 6 - Part A](#) for details). We have adopted the following general strategies for carrying out our work.

STRATEGY	ENVIRONMENTAL RESULT
Contribute to the formulation of major policies and plans within the Government, including town planning.	<ul style="list-style-type: none"> ● Minimise environmental impact of policies, strategies and planning proposals. ● Incorporate sustainability in the decision-making process.
Develop and implement environmental improvement programmes, monitor environmental quality and handle pollution complaints and incidents.	<p>Achieve direct improvements in:</p> <ul style="list-style-type: none"> ● Air quality ● Noise mitigation ● Water quality ● Waste management ● Ecology conservation
Plan and provide waste management facilities.	Ensure waste is handled and disposed of in a sustainable and environmentally responsible manner.

Establish regulatory control framework and enforce environmental ordinances.	Reduce air, water, waste and noise impacts from polluting activities.
Build partnerships and engage stakeholders.	Secure better co-operation and build capacity amongst all sectors in improving the environment.
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 environmental professionalism in Hong Kong.

Environmental Policy

5. The EPD has adopted an Environmental Policy that lays out guiding principles for carrying out our services, programmes and internal operations. These principles cover:

- compliance with the letter and spirit of environmental law;
- 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.

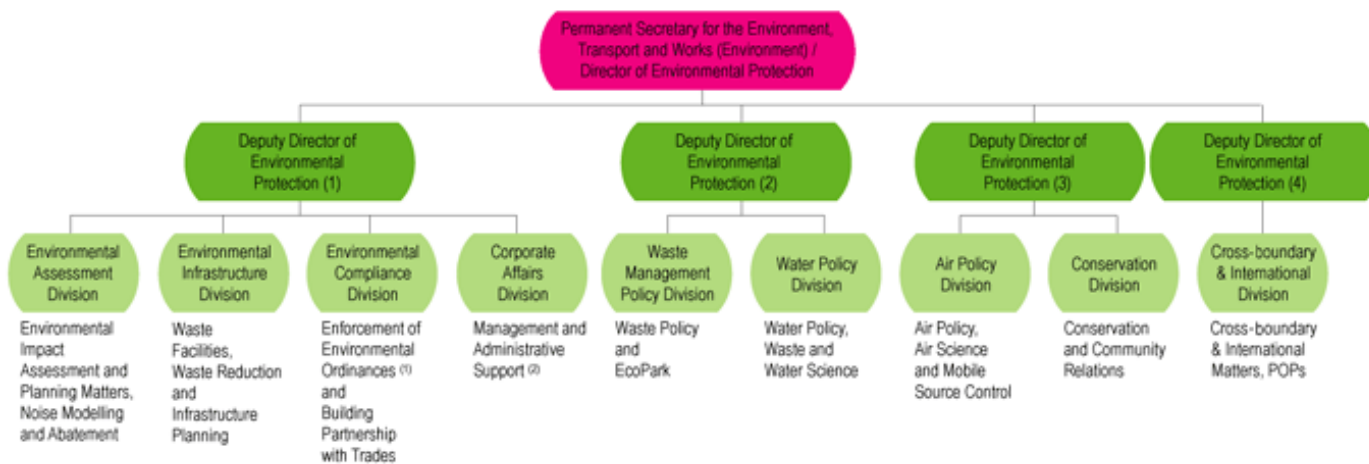
Please see [Appendix I](#) for details.

6. The management of EPD will review this policy and our environmental objectives and targets in light of changing internal and external factors, and seek continual improvement in our environmental performance.

Chapter 3

Organisation and Governance

1. The Environmental Protection Department underwent a major re-organisation on 1 April 2005, which enabled us to streamline our work, improve the flow of communication and raise the profile of environmental issues. The department previously implemented policies, which were set by the environment arm of the Environment, Transport and Works Bureau. Now, policy-formulation and implementation have been unified under the new department. The EPD name, which is well known in the community, has been retained.
2. The EPD is now headed by a Permanent Secretary who reports directly to the Secretary for the Environment, Transport and Works. Our policies and programmes are scrutinised by the Legislative Council. In addition, we seek input on our work from stakeholders in the community (see [Chapter 4](#) for details).
3. Several changes have resulted from the merger. Our programmes have been consolidated into six fields, as opposed to seven in the past – air, environmental assessment and planning, conservation, noise, waste and water. Conservation is a new policy formulation responsibility and the implementation remains with the [Agriculture, Fisheries and Conservation Department](#) (for nature conservation) and the [Electrical and Mechanical Services Department](#) (for energy conservation). We have also established a division focusing on cross-boundary and international co-operation.



Remarks:

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

Staffing

4. The department had an establishment of 34 directorates and 1 593 non-directorate staff as of 31 December 2005,

of whom 27% were professionals, 44.9% were technical-grade staff and 28.1% were administrative and supporting staff. A breakdown of staff by gender was as below:

	Male	Female	Unfilled posts
Directorate	26	5	3
Non-Directorate	1 080	498	15
Sub-total	1 106	503	18
Total	1 627		

Finances

5. The EPD's expenses are paid out of the Government's General Revenue Account. The total expenditure in 2005 was \$2.064 billion. Of that amount, 52.5% was for contract payments for the treatment and disposal of municipal and chemical wastes, 35.3% for staff costs, 6.2% for capital expenditure and 6.0% for general expenses.

Internal Sustainability Management

6. The EPD has developed an integrated environment, safety and health management system, which is monitored and reviewed by the Departmental Environment, Safety and Health Committee (DESHC) to ensure its continual effectiveness, improvement and sustainability. Membership of the DESHC includes the representatives from management, functional divisions, staff unions, various grades of staff and the departmental consultative committee, so as to reflect a wide range of views and sectors through the committee.



Chapter 4

Stakeholder Engagement

1. The EPD aims to take account of community concerns and operators' needs when proposing policies and programmes. We engage stakeholders on many levels, as described below. We also submit our policies to the scrutiny of the Legislative Council and the Advisory Council on the Environment, and have frequent contacts with members of both councils. District Councils are also briefed on matters affecting their districts and have been partners in our awareness-raising campaigns.

Engaging the Public

2. The EPD consults the public on major policies to explain options and invite comments, either through community-wide public consultation or smaller, more focused public engagement workshops. For example:

- i. Public consultation was pursued for the [Harbour Area Treatment Scheme \(HATS\)](#). We consulted the public over five months in 2004 and received encouraging feedback. This was reported to the Executive and Legislative Councils in 2005, who generally supported our plans for collecting and treating Victoria Harbour's sewage.
- ii. Public engagement workshops were used to seek views on the development of integrated waste management facilities in September 2005. Apart from the general public, various sectors of society, such as community groups, academics, District Councils and property management companies, were invited to discuss waste treatment options. Their opinions will help the Government to formulate an appropriate scheme.
- iii. Various channels were employed for collecting public views on the waste strategy proposed under "[A Policy Framework for the Management of Municipal Solid Waste \(2005-2014\)](#)". A dedicated email account was used to receive comments from the public. We also initiated discussions in the Public Affairs Forum administered by the [Home Affairs Bureau](#) to obtain views from the general public. An open forum held by the Advisory Council on the Environment (ACE) provided a platform for direct communication with green groups, recyclers, other interested parties and members of the public.

3. In addition to consulting the public, we run education programmes to raise community awareness about environmental protection. In 2005 these programmes focused on waste reduction and energy conservation (see [Chapter 6 - Part A](#) for details).

Engaging Operators

4. The EPD communicates directly with operators who are the main targets of our policies. We have formal partnership programmes with the [construction industry](#), [restaurants](#), [vehicle repair workshops](#) and [property management companies](#), to provide advice, encourage greener practices and receive feedback on our programmes. In 2005 we reviewed the method for re-assessing the Trade Effluent Surcharge to address the concerns of restaurants and other trades. (see [Chapter 6 - Part A](#) for details).

5. The EPD also works with other operators to develop new policies and programmes. Since 2004 we have worked with suppliers of rechargeable batteries to develop producer responsibility schemes. In 2005 we also worked with two charity groups, [St James' Settlement and Caritas](#), on pilot schemes to recycle computers, and waste electrical and electronic equipment.

6. Furthermore, User Liaison Groups have been established with key sectors with potentially significant impacts on the environment – government works departments, consultants, contractors, private developers and public corporations. We meet periodically to discuss new developments and issues of concern.

Feedback on our Environmental Performance Report

7. The EPD is keen to receive feedback on its Environmental Performance Report. Readers can send us their views electronically through an online [feedback form](#) or by email. We sent about 250 letters seeking feedback on our 2005 report from key stakeholders, such as academics, private companies, green groups and overseas organisations. We received three responses with positive comments and 11 others with no comment. This year we have simplified the form.



Members of the restaurant trade and EPD attend an experience-sharing seminar on green restaurants.

Chapter 5

Sustainability at EPD - Economic Impacts

1. As described in [Chapter 3 Organisation and Governance](#), the EPD is funded from the Government's General Revenue Account. The total expenditure for 2005 was \$2.064 billion.
2. Looking ahead, we have major projects coming up for waste management and sewage treatment that will have financial implications for the community. The Government will pay the capital costs of new facilities out of its coffers. For waste, we need to spend over \$8 billion to extend our landfills, plus an as-yet-unspecified amount on integrated waste management facilities. For water, we will spend \$8.1 billion by 2013-14 to build Stage 2A of the [Harbour Area Treatment Scheme](#) (HATS). However, the public should pay for the operating costs of these facilities, in accordance with the principle of polluter pays.

Polluter Pays

3. To help alleviate the financial burden on taxpayers and encourage less wasteful habits, the Government has increasingly adopted the polluter pays principle in various policy areas. Currently, chemical waste producers pay part of the cost of treating their waste, while homes and businesses pay a portion of sewage treatment costs. In 2005, the EPD proposed adopting the polluter pays principle in waste management policy. We also worked on proposals to seek full recovery of sewage treatment costs.
 - i. The Waste Disposal Ordinance was amended to enable [charges for construction waste disposal](#). The charges, effective from 20 January 2006, will see waste producers pay \$27 per tonne to dispose of inert construction waste at a public fill reception facility and \$100 per tonne at a sorting facility if the waste contains more than 50% (by weight) inert material. They can dispose of construction waste at landfills only if it contains not more than 50% (by weight) inert material, at \$125 per tonne. Moreover, legislation on municipal solid waste charging will be introduced into the Legislative Council in 2007.
 - ii. A proposal to revise the sewage charges is being developed, with the goal of putting it before the Legislative Council in 2006. The Government currently spends \$1 billion on sewage treatment annually, which will increase by more than 50% when Stage 2A of the HATS is commissioned. Households pay only half their share while heavy polluters pay about 80% of the cost of treating the excess pollution they produce. The proposal will aim to gradually increase sewage charges to recover the full cost of sewage treatment.





Chapter 6

Sustainability at EPD - Environmental Impacts

The EPD is conscious of the environmental impacts caused by our policies and programmes, and by our operations. Hence, we aim to minimise our impacts and seek environmental improvements as described in Chapter 6 - Part A and Part B.

Chapter 6 - Part A Environmental Impacts of Policies and Programmes

Chapter 6 - Part B Environmental Impacts of Internal Operations



Chapter 6

Sustainability at EPD - Environmental Impacts

Part A Sustainability at EPD - Environmental Impacts of Policies and Programmes

Chapter 6 - Sustainability at EPD - Environmental Impacts

Chapter 6 - Part A Environmental Impacts of Policies and Programmes

Chapter 6 - Part B Environmental Impacts of Internal Operations

1. Our work is divided into six programme areas: **air**, **environmental assessment and planning**, **conservation**, **noise**, **waste** and **water**. We also carry out activities that straddle two or more programme areas, concerning **compliance**, **community awareness** and **cross-boundary and international co-operation**. Our major achievements in 2005 are described here. Further details of our work can be found in [Environment Hong Kong 2006](#).

AIR

AIM

To achieve and maintain satisfactory air quality through intervention in the planning process and enforcement of the Air Pollution Control Ordinance, Ozone Layer Protection Ordinance and other statutory requirements.

Air Quality

2. The EPD monitors air quality at 11 general stations and three roadside ones (see map in [Figure 1](#)). In 2005 air quality improved as a result of favourable meteorological conditions and continued efforts by Hong Kong and Guangdong to improve air quality. The **Air Pollution Index** exceeded 100 on 49 days, as compared with 87 days in 2004 (readings over 100 indicate non-compliance with short-term Air Quality Objectives). Details of monitoring results by pollutant and location can be seen in [Table 1](#).



Figure 1 - Location of EPD's Air Quality Monitoring Stations (2005)

Table 1 - Compliance Status of Long-term (1-year and 3-month average) Air Quality Objectives (AQO) in 2005

Station		Sulphur Dioxide	Nitrogen Dioxide	Total Suspended Particulates	Respirable Suspended Particulates	Lead
		1-year	1-year	1-year	1-year	3-month
General Station	Central/Western	•	•	x	•	•
	Eastern	•	•	--	•	--
	Kwai Chung	•	•	•	x	•
	Kwun Tong	•	•	x	x	•
	Sham Shui Po	•	•	x	x	--
	Tsuen Wan	•	•	x	x	•
	Sha Tin	•	•	•	•	--
	Tai Po	•	•	•	•	--
	Tung Chung	•	•	•	x	•
	Yuen Long	•	•	x	x	•
	Tap Mun	•	•	--	•	--
Roadside Station	Causeway Bay	•	x	--	x	--
	Central	•	x	--	x	--
	Mong Kok	•	x	x	x	•

Notes:	"•"	Complied with the AQO
	"x"	Violated the AQO
	"--"	Not measured

Regional Co-operation

3. Hong Kong and Guangdong are co-operating to reduce air pollution to well below 1997 levels. In addition to individual efforts, the EPD and Guangdong Environmental Protection Bureau commissioned a **joint regional air quality monitoring network** on 30 November 2005. 13 stations are in Guangdong, and three in Hong Kong.

Power Plants

4. Power plants are Hong Kong's largest contributors to regional air pollution, accounting for 92% of sulphur dioxide, 49% of nitrogen oxides and 51% of respirable suspended particulates emissions in Hong Kong. From August 2005 we imposed a cap on total yearly emissions from power plants when they renewed their specified processes licences; previously a cap was imposed on hourly pollution concentrations and rates. The two power companies also agreed to set up production-scale wind turbines to test their applicability in Hong Kong.

Volatile Organic Compounds

5. VOCs contribute to smog. In 2005 the EPD reached agreement with traders to impose mandatory controls on VOCs in paints, inks and selected consumer products by 2007. An earlier proposal to require labelling and registration in advance of mandatory controls was dropped after taking into account the objections of the trades and careful consideration of the cost-effectiveness of controls. Hong Kong will be one of very few places in the world to impose VOC limits on products, placing it at the vanguard of VOC controls.



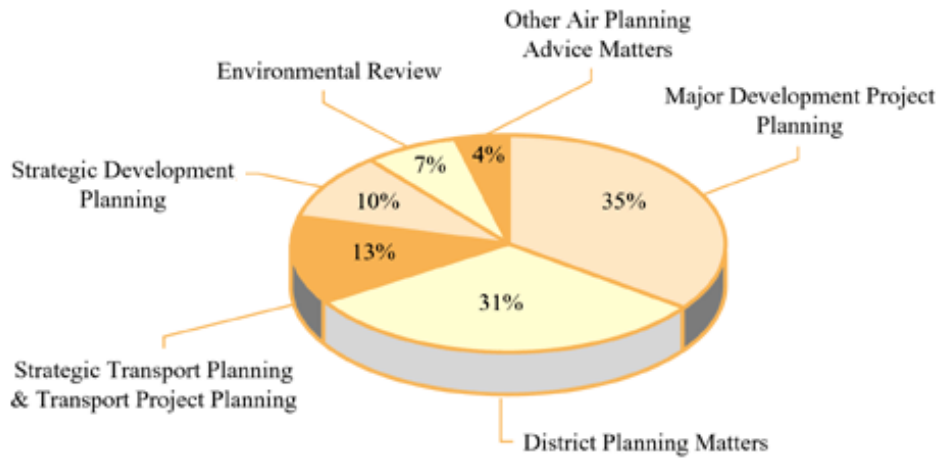
VOC-containing products.

Motor Vehicle Emissions

6. Our programme to control motor vehicle emissions continued in 2005, with **Euro IV petrol** introduced in step with the European Union (Euro IV diesel is already our statutory standard). Since 1999 roadside levels of nitrogen oxides have fallen 17% and respirable suspended particulates 14%.

Planning Advice

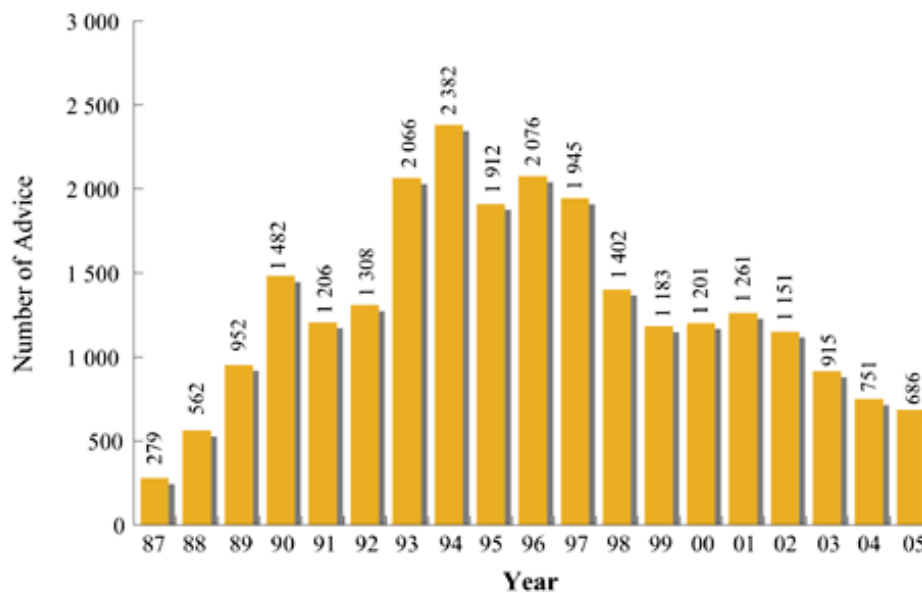
7. The EPD provides professional advice in the planning processes for strategic land use and transport. In 2005 we provided advice in 686 cases (see **Figures 2a** and **2b**).



Total: 686 Air Planning Advice

See Data

Figure 2a - Statistics of Air Planning Advice in 2005



See Data

Figure 2b - Yearly Statistics of Air Planning Advice

ENVIRONMENTAL ASSESSMENT AND PLANNING

AIM

To pre-empt environmental problems associated with projects, plans, policies and strategies by assessing their environmental implications and ensuring that effective preventive and mitigatory measures are implemented where potential problems are identified.

Strategic Environmental Assessments (SEAs)

8. The HKSAR Chief Executive announced in October 2005 that all major Government policies would be subject to environmental protection scrutiny. This was a major breakthrough as it systemised the application of SEAs, which have been carried out in selected cases such as the [Territorial Development Strategy Review](#) and [Hong Kong 2030: Planning](#)

Vision and Strategy. The EPD set up an [SEA web site](#) in December 2005 featuring guidelines, information, best international practices and other material. We also held two workshops for SEA practitioners during the year.

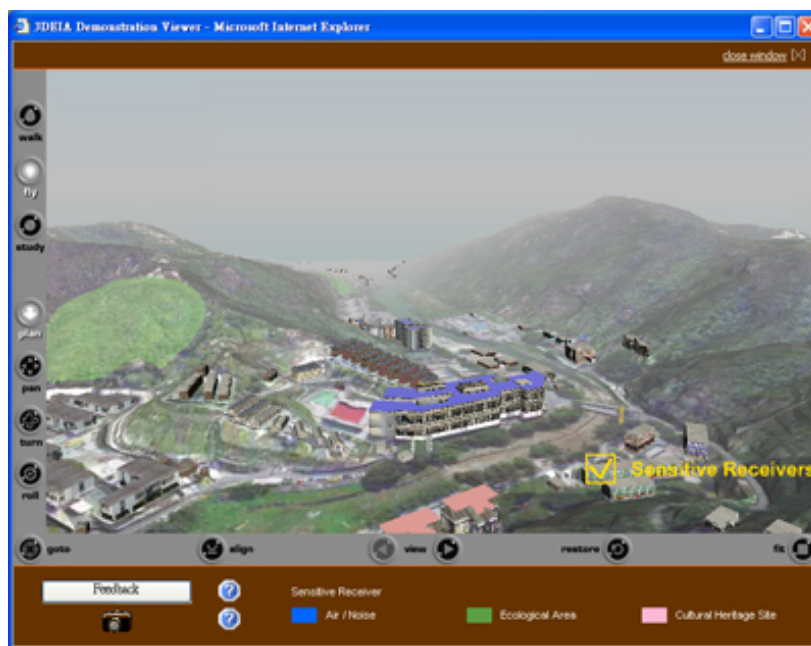
9. In a related area, the EPD reviewed and commented on 172 environmental implications sections in 2005, contained in submissions to the Policy Committee, the Executive Council, the Legislative Council's Public Works Sub-committee and Environmental Affairs Panel, and other official bodies.

Environmental Impact Assessment Ordinance (EIAO)

10. The EIAO has been applied since 1998, protecting approximately 1.5 million people and approximately 14 hectares of fishponds through changes of alignment. By the end of 2005, 93 projects worth about \$340 billion combined had met EIAO requirements and been approved. The EPD also operates an EIAO Support Section to provide assistance to other government departments and the private sector.

Public Engagement

11. The EPD promotes continuous public involvement in the EIA process. To assist this process we developed a 3-D EIA public engagement tool in 2004, which makes it easier for non-professionals to understand the implications of projects. By the end of 2005 eight major works projects announced that they would use the tool, such as landfill extensions, CLP Power Hong Kong Ltd's liquefied natural gas terminal, the Logistics Park, the Harbour Area Treatment Scheme (HATS) and the Sha Tin Central Link.



A virtual reality model shows the predicted impacts of a project.

CONSERVATION

AIM

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

12. Conservation is a new responsibility for EPD, resulting from the department's merger with the environment arm of the Environment, Transport and Works Bureau.

Energy Conservation

13. The EPD's goal of reducing consumption of non-renewable energy was supported in the Government's **"A First**

"Sustainable Development Strategy for Hong Kong", released in May 2005. During the year we secured agreement from Hong Kong's two power companies to set up production-scale wind turbines. We also consulted industry, the public and the Advisory Council on the Environment on a proposed **mandatory energy efficiency labelling scheme**, receiving generally favourable feedback. A legislative proposal on this is now being prepared. In addition, the EPD promoted a Government initiative to set air-conditioning temperatures at 25.5 degrees Celsius in summer months.



Wind Turbine on Lamma Island.

Nature Conservation

14. The Government announced a **New Nature Conservation Policy** in November 2004 to protect important ecological sites. From that emerged two pilot schemes to enhance protection of sites on private land. The **Pilot Scheme for Management Agreements** allows non-government organisations to apply for government funding to provide landowners with financial incentives for protecting sensitive sites. Three projects were approved in 2005, receiving a total \$4.6 million from the Environment and Conservation Fund. The **Pilot Scheme for Public-Private Partnership** allows development in less-sensitive areas of a site, but applicants must commit to long-term conservation of the rest of the site. Six applications are now under consideration.

15. In addition, a legislative amendment was proposed so Hong Kong can fully comply with the **Convention on International Trade in Endangered Species of Wild Fauna and Flora** regarding medicines made from these species. The proposed amendment also streamlines existing licensing mechanisms.

NOISE

AIM

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

16. One million people in Hong Kong are exposed to excessive traffic noise. The EPD has undertaken a number of measures to tackle this problem. In 2005, we compiled our efforts into a package of five strategies to give the public a better understanding of our work. The strategies are described below:

- (i) **New roads:** The EPD uses planning and environmental impact assessment to reduce noise on new roads. Since 1990, 500 000 people have been protected through planning measures including road alignment. Another 190 000 people have been protected by road barriers on new roads, costing \$1.3 billion (see **Figure 3**). Low-noise surface has now become a standard practice for high-speed roads. In addition, 7 700 flats have been protected through insulation since 1995 (see **Figure 4**).
- (ii) **Newly registered vehicles:** Vehicles must meet the latest **European and Japanese noise standards** for first registration. We are also exploring ways to enhance the community's awareness of proper vehicle maintenance to help reduce noise.

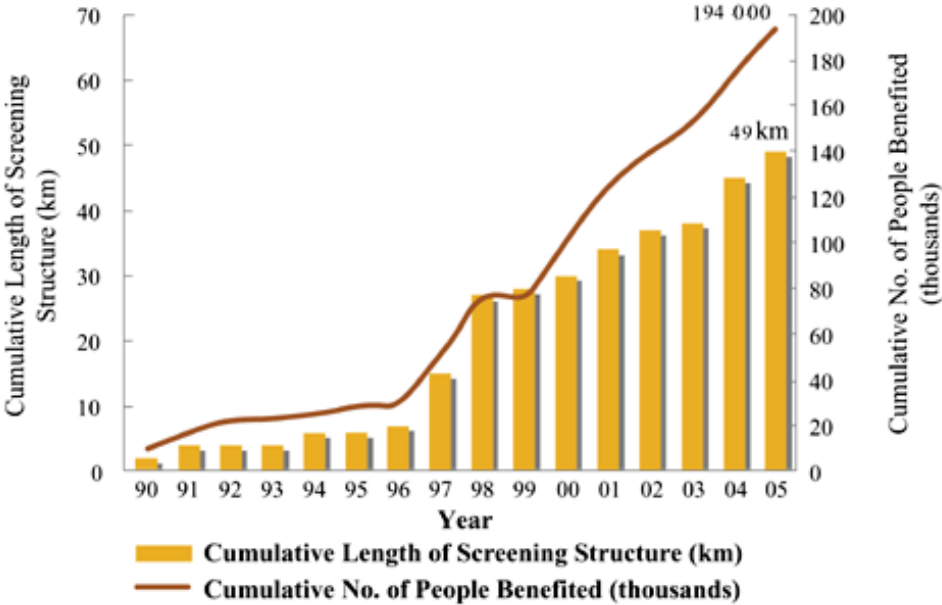
- (iii) Existing roads: This is our biggest problem. A programme to resurface suitable road sections over the territory provided noise relief to some 50 000 people upon its completion in 1999. Under an on-going retrofitting programme, we have identified some 30 roads for retrofitting barriers or enclosures and 72 local roads for low-noise surfacing, protecting 210 000 people upon their completion (see [Table 2](#)). That leaves 550 existing noisy roads. For some road sections, traffic management is a possible option. A pilot scheme in 2003 met with objections from the transport trade. However, in July 2005 we started banning buses from Texaco Road Flyover from midnight-6am. Further such solutions will require co-operation from the community.
- (iv) Public education: In 2005, we used a 3-D tool during public consultation for the first time, to help improve public understanding of noise issues. The tool vividly demonstrated the benefits of retrofitting a noise barrier along Tseung Kwan O Road to Kwun Tong District Councillors. We are also developing Practice Guides encouraging operators to take responsibility for reducing noise, such as using quieter driving practices.
- (v) Research and development: The EPD is working with local universities to develop home grown solutions to technical needs, such as low-noise surfaces.

Planning Input

17. Since 1986 the EPD has protected 150 000 flats through intervention in the planning process. In 2005, we provided advice in 1 370 cases (see [Figure 5](#)).

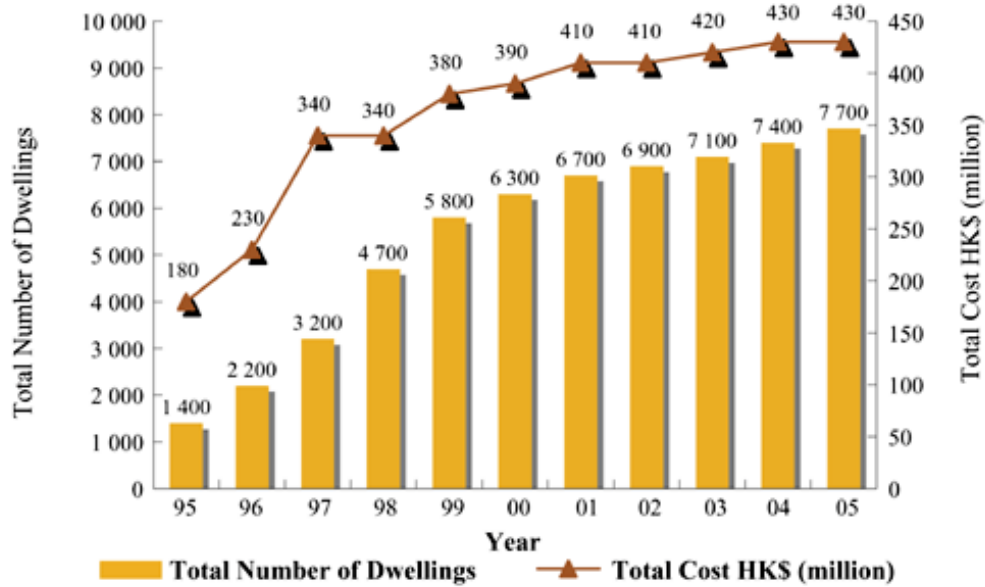


Nearby residents are protected against traffic noise from West Kowloon Expressway through a landscape buffer and noise barriers.



See Data

Figure 3 - Screening Structures to Reduce Traffic Noise



See Data

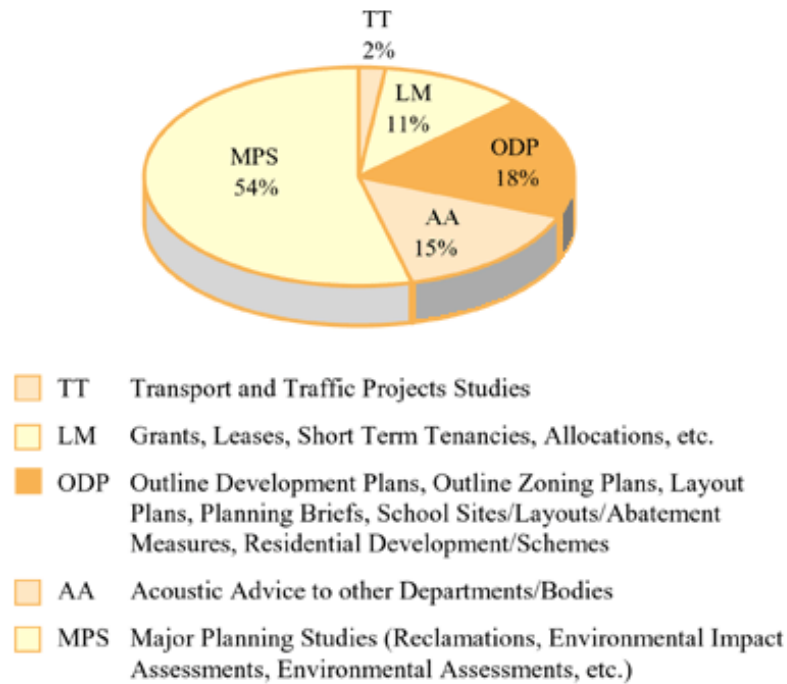
Figure 4 - Accumulated Number of Dwellings Insulated in 2005

Table 2- Retrofitting Noise Barriers - Tentative Implementation Programme

No.	Roads	Year											
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
1	Fanling Highway (near Choi Yuen Estate)												
2	Fanling Highway (near Fanling Centre)												
3	Cheung Pei Shan Road												
4	Ma On Shan Road												
5	Yuen Shin Road												
6	Tseung Kwan O Road (near Hing Tin Estate)												
7	Tseung Kwan O Road (near Tsui Ping (South) Estate)												
8	Tuen Mun Road (Tsuen Wan)												
9	Tuen Mun Road (Sam Shing Hui)												
10	Tuen Mun Road (Tsing Lung Tau)												
11	Tuen Mun Road (Castle Peak Bay)												
12	Tuen Mun Road (Anglers' Beach)												
13	Tuen Mun Road (Sham Tseng)												
14	Tuen Mun Road (Yau Kom Tau)												
15	Tsing Tsuen Bridge (Tsuen Wan and Tsing Yi)												
16	Tai Chung Kiu Road												
17	Che Kung Miu Road												
18	Hung Mai Kuk Road / Che Kung Miu Road												
19	Tin Sam Street												
20	Sha Tin Road												
21	Kwun Tong Bypass												
22	Hoi On Road												
23	Po Lam Road North												
24	Fung Shue Wo Road (Tsing Yi Estate to Tsing King Road Roundabout)												
25	Po Ning Road												
26	Shun Lee Tsuen Road												
27	Yuen Wo Road												
28	West Kowloon Corridor												
29	Heung Yip Road												
30	Ma Wang Road												
31	Sau Mau Ping Road												
32	Tai Po Road (Sham Shui Po)												
33	Chai Wan Road												
34	Castle Peak Road (Ping Shan)												
35	Castle Peak road (Hung Shui Kiu)												
36	Ap Lei Chau Bridge (near Shan Ming Street)												

* Indicative programme subject to review and availability of resources.

Enlarge



See Data

Figure 5 - Breakdown of 1 370 Noise Planning Advice/Cases in 2005

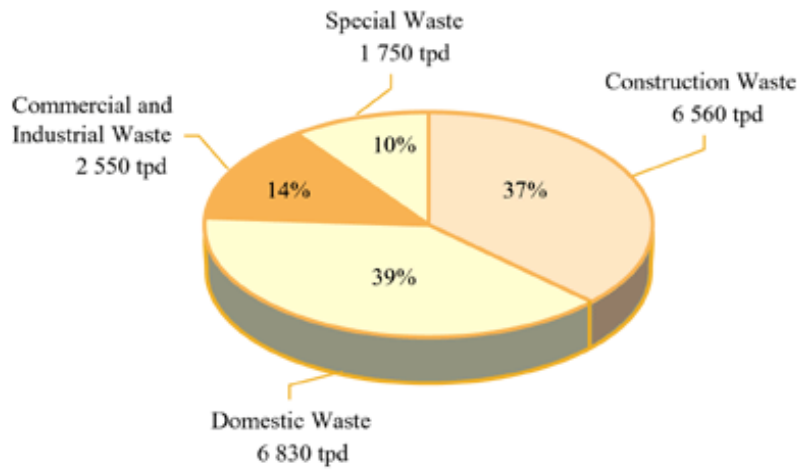
WASTE

AIM

To develop and implement a sustainable waste management strategy for Hong Kong to reduce waste and to safeguard the health and welfare of the community from any adverse environmental effects associated with the improper handling and disposal of waste. This is done through a framework of programmes for the provision of facilities as well as legislative and institutional measures.

Waste Arisings

18. Municipal solid waste has increased by about 3% annually in the past nine years as against a 0.9% growth in population. As a result landfills are running out of capacity earlier than expected. In 2005, it was estimated that all landfills would be full in six to ten years. (A breakdown of municipal, construction and special waste arisings can be seen in [Figure 6](#)). These wastes are disposed of in three strategic landfills (see [Appendix II](#)). In addition a Chemical Waste Treatment Centre (CWTC) on Tsing Yi Island treats chemical waste (see [Figure 7](#) for details on 2005 arisings).

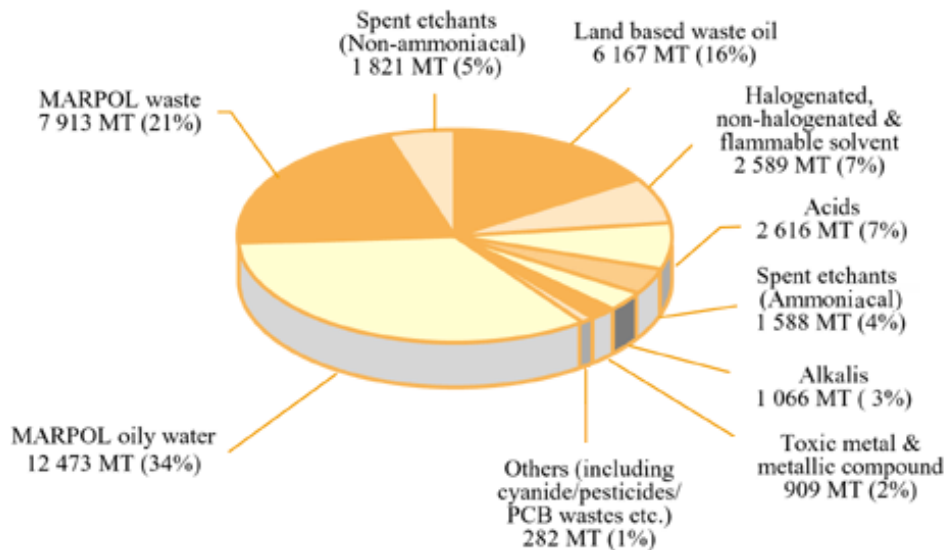


Total: 17 680 tonnes per day (tpd)

Note: Figures may not add up to total due to rounding off.

See Data

Figure 6 - Types of Solid Waste Disposed of at Landfills in 2005



Note: MT=Metric Tonne

See Data

Figure 7 - Chemical Waste Collected at CWTC in 2005

Policy Framework for Waste Management

19. The Government identified waste management as a priority in *A First Sustainable Development Strategy for Hong Kong*, released in May 2005, and in the HKSAR Chief Executive's Policy Address in October 2005. Following that, the EPD issued *A Policy Framework for the Management of Municipal Solid Waste (2005-2014)* in December 2005, laying out our goals and strategies for reducing waste loads and prolonging landfill life span.



A comprehensive package that addresses our waste problem.

20. The framework sets three chief goals for 2014:

- (i) Reduce the total of domestic, commercial and industrial waste that is recycled and landfilled by 1% per year.
- (ii) Increase the recovery of municipal solid waste to 50%, as opposed to 40% at present.
- (iii) Reduce the proportion of municipal solid waste taken to landfills to 25% from 60% today.

21. The framework describes three broad strategies for achieving these goals. First, minimise, recycle and recover waste at source. Floor-based source separation will be in place in about 1 360 housing estates by 2010, covering 80% of the population (223 estates signed up to the source separation programme in 2005), with the aim of increasing the domestic waste recovery rate to 26% by 2012. Recyclers are also being supported with affordable short-term tenancies in advance of the commissioning of the EcoPark in Tuen Mun in 2006.

22. Second, introduce incentives to reduce waste. Charges for disposal are being implemented, starting with construction waste (see [Chapter 5](#)). A bill on producer responsibility schemes is also being developed to provide a legal framework for these schemes.

23. And third, provide treatment and disposal. We will adopt a multi-technology approach to treat and reduce the bulk of waste, and invest over \$8 billion to extend existing landfills.

Other Waste Issues

24. An amendment bill was proposed to the Legislative Council in May 2005 to provide proper controls on clinical waste. The EPD also opened a low-level radioactive waste storage facility on Siu A Chau that provides proper storage of low-level radioactive waste generated in Hong Kong.



A low-level radioactive waste facility opened on Siu A Chau in 2005.

WATER

AIM

To ensure that the quality of our marine and fresh water is such that the various conservation goals for them can be met, and that plans are formulated and implemented to ensure Hong Kong's sewerage systems can operate safely and effectively both now and with further urban development in future.

Water Quality

25. The EPD monitors water quality to check compliance with Water Quality Objectives (WQOs). We have achieved more than 80 per cent compliance across Hong Kong as a whole. Further improvements will require extra investment in the Harbour Area Treatment Scheme (HATS) and village sewerage improvement works. Details of our monitoring results can be seen in [Figure 8 \(Marine Water Quality in Hong Kong\)](#), [Figure 9 \(River Water Quality in Hong Kong\)](#) and at [Beach Water Quality in Hong Kong](#).

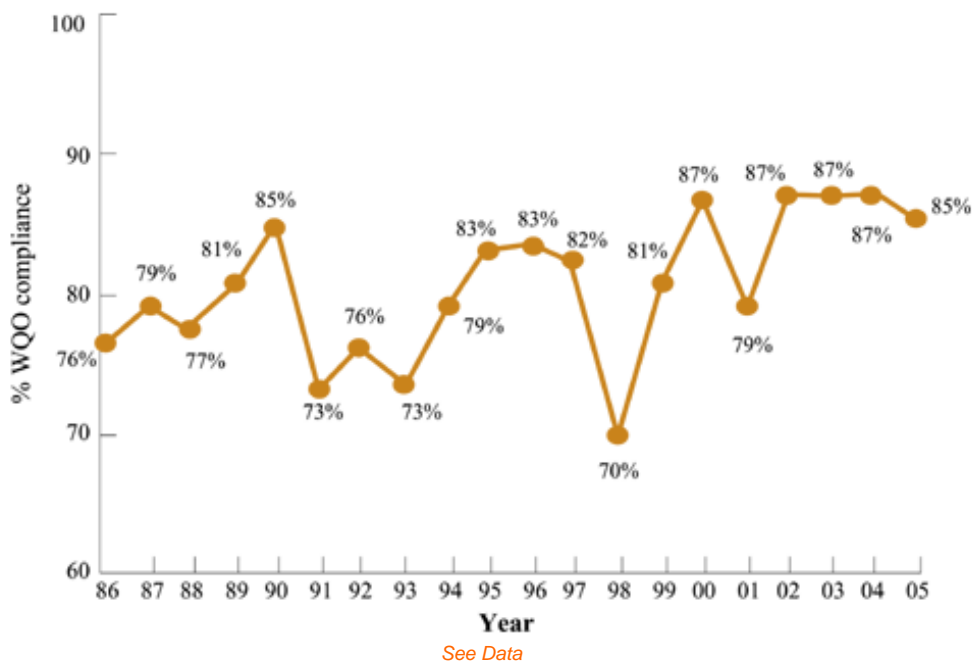
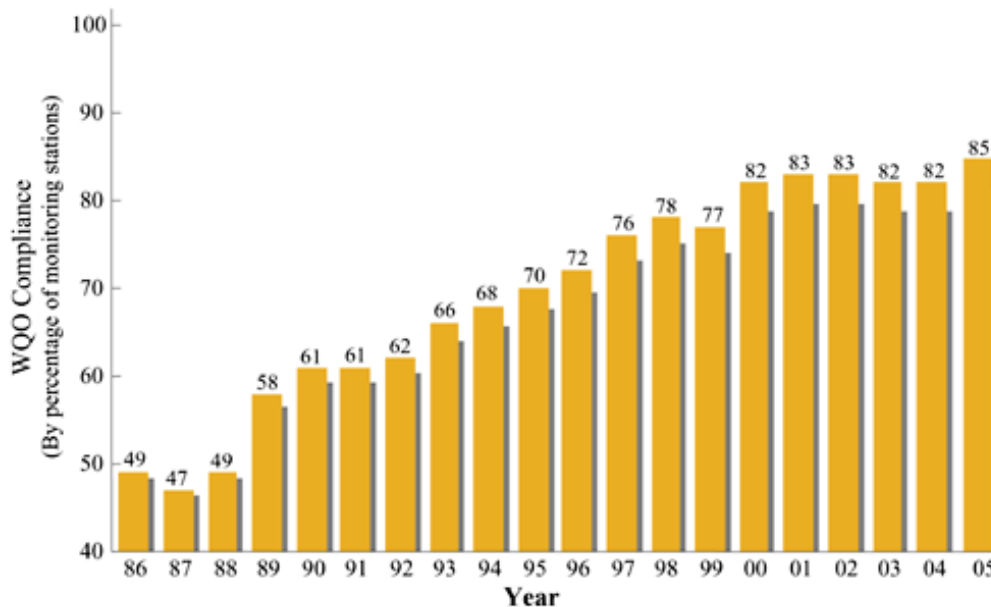


Figure 8 - Overall Compliance with Marine Water Quality Objectives in Hong Kong 1986–2005



See Data

Figure 9 - Compliance of Water Quality Objectives in Inland Waters from 1986–2005

HATS

26. Stage One of the HATS was commissioned in 2001 and treats 75 per cent of the sewage around Victoria Harbour. However, we need to implement Stage Two to fully meet our WQOs. The public was consulted on options in 2004 and we reported the results to the Executive Council (ExCo) and Legislative Council (LegCo) in 2005. The Chief Executive-in-Council directed that we should split Stage Two into two phases and seek full recovery of the operating costs of sewage services (see Chapter 5 for details). Stage 2A, costing \$8.1 billion to build and \$430 million a year to operate, would collect the remaining untreated sewage and provide disinfection. Stage 2B, costing \$10.8 billion to build and \$700 million a year to operate, would provide a higher level of treatment.

27. LegCo was in general agreement, but raised two concerns. One was over disinfection. The EPD is planning to chlorinate then de-chlorinate the treated effluent to remove the residual chlorine. An environmental impact assessment for the proposed disinfection is being carried out to ensure this will be the case. LegCo's second concern was the timing of Stage 2B. The Government agreed to review the timing in 2010 or 2011, taking into account water quality trends, sewage flow and population growth.

Trade Effluent Surcharge

28. Commercial and industrial operators with higher pollution loads pay a Trade Effluent Surcharge. They can seek re-assessment if they reduce the contamination of their effluent, however this can be expensive for smaller operators. The EPD therefore is looking into how this process can be streamlined to reduce the corresponding costs.

Village Sewerage

29. Contamination of rivers and streams by unsewered village houses has been a long-standing problem. In 2005 the Government earmarked \$1.3 billion to connect sewers to the properties of 235 000 people in 236 villages. This was in addition to \$500 million provided in 2004. The investment will also bolster a programme that has already connected or is connecting 94 000 people to sewers.

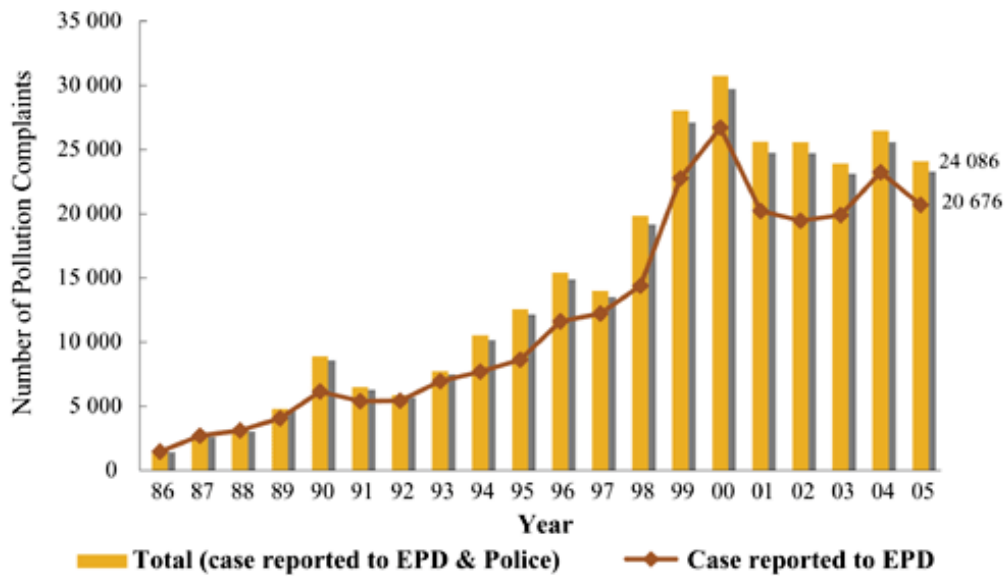
OTHER AREAS OF WORKS

Environmental Compliance

30. Compliance with environmental law is encouraged through partnerships and enforcement. In 2004 the former Local Control Division was re-named the Environmental Compliance Division (ECD) to reflect these dual priorities, as well as our customer service work. Following that, in April 2005 the Central Prosecution Unit was separated from the ECD and now reports directly to a Deputy Director. This provides a clearer division between prosecution and enforcement activities.

- (i) **Partnerships:** The EPD has formal partnerships with four key polluters: the **construction industry**, **restaurants**, **vehicle repair workshops** and **property management companies** . Between 2000 and 2005 convictions for these groups dropped from 1 095 (65% of the total) to 111 (40% of the total). Our 2005 programme included expanding a safety payment scheme for contractors to cover environmental performance; presenting guidelines on cold water thawing at a seminar for the restaurant trade; launching a **Green Garage web site**; and training 576 Property Management Environmental Protection Ambassadors. Apart from our formal partnerships, we produced **ISO14001 Environmental Management System (EMS) support packages for small and medium enterprises (SMEs) in the construction and electronic/electrical sectors**, and updated our support packages in line with the latest ISO 14001 EMS requirements. We also prepared to launch a Compliance Assistance Centre to provide tailor-made information to operators.
- (ii) **Enforcement:** Prosecutions and complaints continued to decline in 2005 due to better behaviour by operators and improved enforcement. There were 300 prosecutions with 272 convictions (see **Table 3**), and 24 086 complaints (see **Table 4**). These include 3 410 noise complaints made to the Police. In addition, our Customer Service Centre handled 37 390 general enquiry calls during the year. We also conducted around 53 000 routine and inspections (see **Table 5**) and issued about 5 700 licences and permits (see **Table 6**).

31. Apart from these routine activities, we held a workshop on managing pig farms and waste water for local farmers and launched a **Livestock Waste Information System** to provide the public with more information on this subject. We also developed a real-time monitoring system for dumping at sea, which will go on trial in 2006.



See Data

Figure 10 – Annual Record of Pollution Complaints

Table 3 - No. of Convictions in 2005 - Breakdown by Ordinance

Ordinance	No. of Convictions
APCO	102
DASO	2
NCO	64
WPCO	41
OLPO	1
WDO	62
EIAO	0
Total	272

Table 4 - Complaints Breakdown by Media

Nature	2005
Air Vehicle Emissions	6 577
Other	5 766
Noise*	5 034
Waste	1 153
Water	1 991
Miscellaneous	155
Total	20 676

* Excluding complaints handled by Police (The police investigated 3 410 cases in 2005).

Table 5 - No. of Inspections in 2005

Ordinance	No. of inspections
APCO	20 300
OLPO	10
DASO	529
NCO	4 965
WDO	8 805
Livestock Waste	2 353
Chemical Waste	3 936
Illegal Dumping	1 880
Import & Export	636
WPCO	17 880
EIAO	643

Table 6 - Licences and Permits Issued in 2005

Ordinance	Activities	No. Issued
APCO	Chimney Approval	301
	Specified Process Licence	6
	Open Burning Permit	1
	Sub Total: 308	
NCO	Construction Noise Permit (Percussive Piling)	159
	Construction Noise Permit (General Construction Work -Total)	2 541
	Sub Total: 2 700	
WDO	Registration of Chemical Waste Producer	612
	Chemical Waste Disposal Licence	9
	Chemical Waste Collection Licence	7
	Waste Import and Export Permit	3
	Sub Total: 631	
WPCO	New Licence	1 331
	Licence Renewal	565
	Sub Total: 1 896	
DASO	Marine Dumping Permit	105
	Sub Total: 105	
Other	Clinical Waste Disposal Permit	101
	Sub Total: 101	
	Total	5 741

Community Awareness

32. The EPD appreciates the importance and necessity of raising community awareness on environmental and sustainability issues. In 2005 our activities focused largely on waste recycling to support the new programme on floor-based source separation of waste (see [Waste section](#) in this chapter).

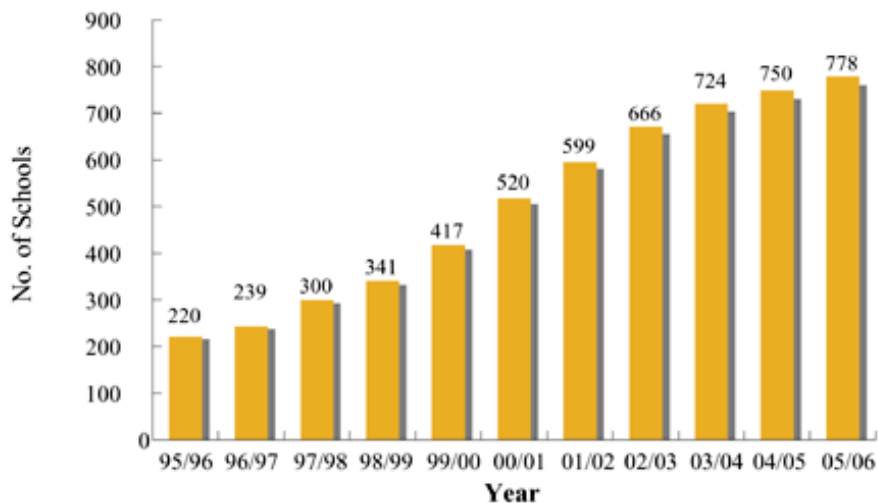
33. During the year we broadcast two television programmes on TVB Jade explaining Hong Kong's waste problem and the Government's waste management policy. We also sent our officers into the community to promote and demonstrate waste recycling. About 500 Environmental Protection Ambassadors for Property Management were enrolled to undergo training on organising waste reduction activities in housing estates. The annual Environmental Protection Festival in December also promoted waste reduction and featured a Waste Electrical and Electronic Equipment Recycling Day. Larger green groups and smaller organisations were also encouraged to pair up to conduct waste reduction projects, with funding from [the Environment and Conservation Fund](#).

34. Another theme in 2005 was energy conservation. World Environment Day 2005 promoted the Government's

initiative to set air-conditioning temperature at 25.5 degrees Celsius. This message was also publicised in a TV Announcement of Public Interest (API). Another TV API will be launched in early 2006 to promote energy conservation in general.

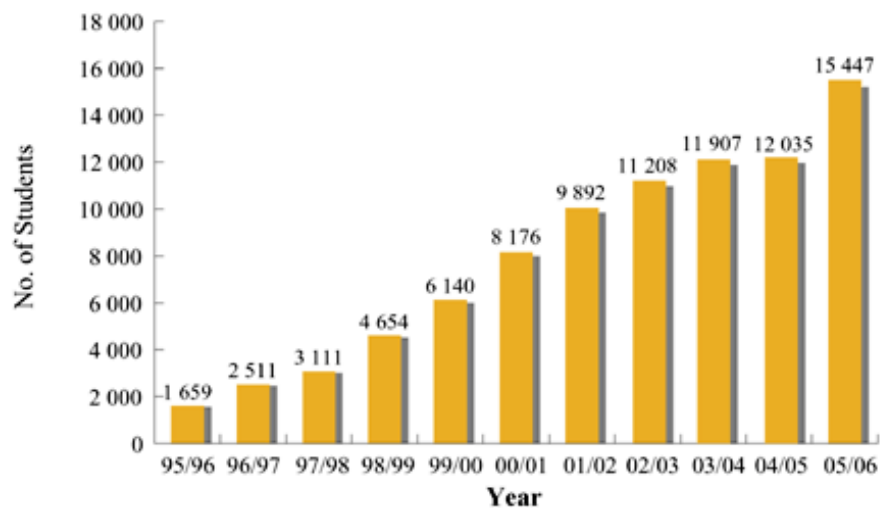
35. Our community awareness work also involved these on-going programmes:

- (i) **Schools Environmental Award Scheme cum Student Environmental Protection Ambassador Scheme.** In 2005/06, 778 schools and 15 447 students participated (see [Figures 11a](#) and [11b](#)).
- (ii) **Hong Kong Green School Awards.** In 2005, 147 primary and secondary schools participated, and 83 primary schools and 64 secondary schools gained the "Green School" status. Another 135 pre-schools participated in the Hong Kong Green Pre-School Award.
- (iii) **2005 Hong Kong Eco-Business Awards.** We received 144 entries in the categories of Green SME Award, Green Property Management Award and Green Construction Contractor Award. The Award Scheme is organised jointly by the Environmental Campaign Committee, EPD, The Chinese General Chamber of Commerce, Hong Kong General Chamber of Commerce and Hong Kong Productivity Council.
- (iv) **Environmental Resource Centres.** Some 100 000 people visited the centres in Fanling, Tsuen Wan and Wan Chai and the Mobile Environmental Resource Centre in 2005.
- (v) **Community Green Network Programme.** "Green Desks" were set up in 118 shopping malls, housing estates and other public places during the year. Officers also gave 42 talks to members of mutual aid committees and owners incorporations.
- (vi) **Environmental Education and Information Counter.** This counter handled over 8 000 enquiries and received some 5 000 visitors.
- (vii) **Others.** The EPD reports regularly on [beach water quality](#), [the Air Pollution Index](#), [the Regional Air Quality Index](#), [prosecutions](#), [environmental impact assessments](#), [monitoring of rivers, streams and marine waters](#) and [monitoring of solid waste](#) in Hong Kong. The [Environmental Protection Interactive Centre](#) enables users to set parameters for the information they are seeking, and apply, pay for and receive permits and licences on-line.



[See Data](#)

Figure 11a - Number of Primary & Secondary Schools Participating in the Student Environmental Protection Ambassador Scheme



See Data

Figure 11b - Number of Students Participating in the Student Environmental Protection Ambassador Scheme



Estates joining the Pilot Programme on Source Separation of Domestic Waste organise publicity and educational programmes to enhance residents' awareness of waste recovery.



The Mobile Environmental Resource Centre draws the interest of students on the Programme on Source Separation of Domestic Waste.

Cross-boundary and International Co-operation

36. **Cross-boundary:** The EPD has an active programme of co-operation with Guangdong to control regional pollution. In December 2005 the sixth Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection was held to review progress on our co-operative initiatives and identify tasks for 2006. Attention focused mainly on air and water pollution.

37. For air pollution, the two administrations continued to work towards reducing pollution to well below 1997 levels, as agreed in 2002. A **joint regional air quality monitoring network** began operating on 30 November 2005. Each administration also carried out individual initiatives (see **Air** section of this chapter for details of Hong Kong's programme).

38. For water pollution, Hong Kong and Guangdong continued to develop a joint water quality model for the Pearl River Delta, due to be completed in 2006. We are also studying further joint actions on Deep Bay. Hong Kong is a member of the Pan Pearl River Delta Co-operation, together with Macao and nine Mainland provinces (including Guangdong), and in 2005 members agreed to co-operate to control pollution along the length of the Pearl River.

39. At a national level, the EPD co-operates with the State Environmental Protection Administration. Regular

exchanges and co-operation started in 2004 on environmental impact assessment matters and were extended to air pollution in 2005.

40. **International:** The EPD made preparations in 2005 to enable Hong Kong to comply with two international conventions, the [Stockholm Convention on Persistent Organic Pollutants](#) and the [Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade](#). The Stockholm Convention has applied to Hong Kong, whereas the Rotterdam Convention is not yet applicable. A draft implementation plan has been compiled for the Stockholm Convention, incorporating suggestions from stakeholders. Legislation to control the import, export, domestic production and use of non-pesticide hazardous chemicals is also being drafted.

Chapter 6

Sustainability at EPD - Environmental Impacts

Part B Sustainability at EPD - Environmental Impacts of Internal Operations

Chapter 6 - Sustainability at EPD - Environmental Impacts

Chapter 6 - Part A Environmental Impacts of Policies and Programmes

Chapter 6 - Part B Environmental Impacts of Internal Operations

1. The EPD manages its environmental impacts through the Departmental Environment, Safety and Health Committee (DESHC) (see [Chapter 3](#) for details). We have two kinds of impacts. One arises from our office work and concerns mainly paper and electricity consumption and the use of recyclables. The other arises from our waste facilities, laboratories and other field work, where the impacts are more complex and require special controls.

2. A map and photos of our offices and facilities can be seen in [Appendix II](#).

Minimising Impacts from Our Offices

Paper Consumption

3. In 2005, we reduced consumption of photocopying paper by about 2.6% over 2004, ahead of the Environment, Transport and Works Bureau's Government-wide target to reduce consumption by an average of 2.5% a year. The progress in 2005 reflected a progressive decline in paper consumption and we have altogether reduced paper consumption by 26% since 1998. This was mainly achieved through various on-going paper-saving initiatives, including the following programmes:

- Extension of the use of email systems to EPD staff;
- Dissemination of various administrative information through an electronic daily bulletin system;
- Use of e-application and processing in the internal procurement system;
- Use of an electronic leave application and processing system; and
- Extension of the internal knowledge management portal to encourage more storage and sharing of reports and presentation materials in electronic form.

Year	1998	1999	2000	2001	2002	2003	2004	2005
Photocopying paper (ream)	17 411	16 211	16 300	15 736	15 548	15 455	13 085	12 747
% reduction vs 1998 figures	-	6.9%	6.4%	9.6%	10.7%	11.2%	24.8%	26.8%
Total paper saved since 1998 (ream)	-	1 200	2 311	3 986	5 849	7 805	12 131	16 795

Electricity Consumption

4. In 2005, we achieved about 1.8% saving in energy consumption in our offices. This was attributable to growing awareness of energy conservation among staff, as well as initiatives such as adjustments to office lighting hours, the

installation of electronic ballasts for fluorescent lamps and modification of office lighting zones. The EPD will continue to pursue other energy saving measures, such as conducting energy audits of some of our offices, with a view to further reduce energy consumption.

5. The Departmental Environment, Safety and Health Committee will continue to provide stewardship on energy conservation and efficiency at senior management level. Energy wardens have been appointed for all EPD offices to actively check and remind colleagues about measures to achieve energy conservation at working level. We are strictly adhering to the Government's directive that the room temperature of government offices is maintained at 25.5 degree Celsius during summer months.



A poster promoting air-conditioning temperatures at 25.5 degrees Celsius provides thermometer readings.

Waste Reduction

6. The EPD seeks to minimise waste by reducing consumption, re-using goods and recycling. We have reduced consumption of disposable batteries, new fluorescent pens and new ink/toner cartridges. In addition, recycling rates for paper and laser cartridges have increased. In 2005 we streamlined the arrangements for collecting recyclables in some offices to improve recycling rates. We also continued to provide convenient collection channels in our branch offices to collect recyclables. We actively liaise with environmental contractors to collect, recycle and reuse our wastes.

Indoor Air

7. The EPD participates in the voluntary **Indoor Air Quality Certification Scheme**. By the end of 2005 one EPD premise was certified "Excellent Class" and nine were "Good Class" as shown below. We will extend the scheme to all our offices in 2006.

	EPD Premises	Certification Date	Class Awarded
1	IAQ Information Centre	November 2005	Excellent
2	Offices in Southorn Centre	December 2005	Good
3	Offices in Revenue Tower	December 2005	Good
4	Wan Chai Environmental Resource Centre	December 2005	Good
5	Offices in Tsuen Wan Government Offices	December 2005	Good
6	IWTS Administration Building	June 2005	Good
7	Offices in Sha Tin Government Offices	June 2005	Good
8	Offices in Chemical Waste Treatment Centre	September 2005	Good
9	Fanling Environmental Resource Centre	January 2005	Good
10	Office in South East New Territories Landfill	February 2005	Good

Audits

8. All offices had undergone a self-audit exercise by the end of 2005 to check and review the current green, safety and health aspects of the working environment, and to identify possible and potential enhancement areas.

Transport

9. The EPD has a fleet of 51 vehicles, which are all powered either by petrol or liquefied petroleum gas. We have a non-idling policy and we combine trips to reduce air emissions and fuel consumption.

Minimising Impacts from Our Facilities

Waste Facilities

10. The EPD operates 26 waste facilities of which the Kowloon Bay Transfer Station (KBTS) has been temporarily closed since April 2005 (see [Appendix II](#)). All waste facilities are subject to a range of legal, contractual and technical controls. In 2005 we received 86 complaint cases against our waste facilities, mainly on mal-odour, dust from traffic, water ponding and fly nuisance. All were thoroughly investigated and remedial action has been instigated. None of our waste management contractors was prosecuted for environmental offences.

Other issues at our facilities include:

- (i) Landfill gas, which we recover. In 2005 an average 576 000 cubic metres of landfill gas was collected daily, 48% of which was used to meet nearly all on-site energy needs. In 2004 the EPD signed an agreement with the North East New Territories Landfill contractor to allow landfill gas to be sold to public utilities operators and the gas export scheme is scheduled for commissioning in mid-2006. In 2005, landfill gas equivalent to a total of 78 700 Mega-joules from the restored Shuen Wan Landfill was used for the production of Towngas.
- (ii) Construction waste is sorted at the South East New Territories (SENT) Landfill. In 2005, about 22 500 tonnes of construction waste was processed there each month (see [Chapter 5](#) for details).
- (iii) Chemical waste is treated at the Chemical Waste Treatment Centre (CWTC) on Tsing Yi Island. The CWTC is equipped with a wide range of pollution controls to ensure emissions from incineration and other processes are safe. The ambient air around the CWTC is monitored twice yearly and dioxins measured monthly. The results are lower than or comparable to levels observed in other large developed cities. All process residues, including incineration ash, are chemically treated and confirmed by analysis to be stable before being taken to the South East New Territories Landfill for final disposal. In addition, 5 009 tonnes of oil and 416 tonnes of copper oxide were recovered by the CWTC in 2005.

Laboratories

11. The EPD operates air, water sciences and microbiology laboratories. In 2005 they fully complied with legal requirements and statutory licence conditions. Special attention is paid to emissions from fume cupboards and safety cabinets and discharges from sinks, which are treated as required.

12. Chemical waste from laboratories are collected and treated by the CWTC contractor. Biological waste is disinfected and disposed of in accordance with World Health Organisation guidelines. A licensed collector delivers asbestos samples from the air laboratory to the Southeast New Territories landfill for disposal.

13. Environmental audits of the EPD's laboratories are carried out regularly by laboratory staff.

Field work

14. Only non-toxic dye is used to trace pollution sources, to minimise the environmental impacts of investigations. Field samples are sent to the Government Laboratory and EPD's laboratories for appropriate action. Safety guidelines are issued to all field staff who are trained in the handling of hazardous materials.

Emergency Response

15. The EPD has internal emergency response plans for its facilities. In 2005, five emergency drills were carried out at the CWTC. The CWTC contractor is also required to conduct at least one drill for marine incidents each year. No incidents were reported in EPD's laboratories or other facilities in 2005.

ISO 14001

16. Our Environmental Infrastructure Division (the former Waste Facilities Business Unit) has obtained ISO 14001 certification since 2000. Conversion to ISO 14001:2004 was completed in November 2005. The division also requires contractors of new waste management facilities to obtain ISO 14001 certification. Existing facilities have also been certified, including five refuse transfer stations, two landfills, 12 restored landfills and the Sha Ling Composting Plant.



Chapter 7

Sustainability at EPD - Social Impacts

1. The EPD's policies and programmes affect people's lives in several ways. As described elsewhere in this report, we help to raise awareness and participation in environmental programmes through partnerships, community programmes, education and stakeholder engagement. We also have direct impacts on public health. Our air quality programme includes the publication of **air pollution indices** with precautionary advice to protect public health. Our monitoring programme on beach water quality also includes a **grading system** for indicating health risks and informing the public. In 2005 we also sought to protect public safety by improving guidelines for manholes related to our work.

2. Our social impacts also extend to our staff. We have programmes to protect their health and safety and encourage their professional development, as described below.

Safety and Health

3. The EPD was the first government department to receive certification under the Occupational Safety and Health Council's Continual Improvement Safety Programme Recognition of System in 2001, and the certificate was renewed in 2004.

4. Our occupational injury rate has been kept to a very low level as compared with the rate for all major economic activities. In 2005 we had an average of about 3.7 incidents per 1 000 workers, whereas that for all major economic activities was about 18 per 1 000 workers as reported by the Labour Department in 2004. The incidents mainly involved road traffic accidents, slipping, tripping or falling, insect bites, or injury while lifting or carrying. These problems were generally caused by low alertness and inexperience so we are providing more training and awareness programmes to staff.

5. We carried out annual safety audits and have designated Group Safety Representatives for each group to look after safety and health matters. In 2005 we provided safety and health training to 422 staff.

Training and Development

6. All new staff are briefed on our green management measures as part of their induction training. Professional development courses are also offered to existing staff. In 2005 we organised over 40 courses on various environmental topics for about 800 colleagues, as well as conferences and workshops to advance professional knowledge. EPD professional staff received an average of 5.6 days of training in 2005, while technical staff received an average of 7.3 days.

7. The EPD contributes to the development of the environmental engineering profession through its Environmental Graduate Training Scheme. We have been certified for the Hong Kong Institution of Engineers' "Scheme A Training" since 1997. So far 27 environmental engineering graduates have received on-the-job training with the EPD, of whom 18 completed their training in 2005.

Staff Awareness

8. Staff are encouraged to participate in various environmental schemes. In the workplace, that includes recycling and energy-saving schemes (see **Chapter 6 - Part B**), as well as contributing green ideas through our Departmental Staff Suggestion Scheme. Outside the workplace, our staff committee organises environmental programmes for staff and their

families, which in 2005 included Eco-tours to Nam Sang Wai Wetland and Hoi Ha Marine Park and a tour to Ocean Park.



Chapter 8

Progress on Year 2005 Targets

Note: Some long term objectives and targets reported here have been re-arranged due to the reorganisation of the EPD and the redistribution of business.

Major Reporting Areas under EPD's Programmes:

Long term objective	Targets for 2005	Measurement Method / indicator	Progress in 2005 (With reason(s) for slippage, if applicable)
I - Contribution to Strategic Decision-making			
1. Ensure small- and medium-sized enterprises (SMEs) fully understand the requirements of an Environmental Management System (EMS) for implementing and adopting the ISO 14001 EMS.	i. To organise a seminar and launch a support package on Environmental Management Information and the ISO 14001 EMS for SMEs in the electrical/electronic sector.	Measured by number of participants and their feedback.	<ul style="list-style-type: none"> The seminar was held in January 2005 and supported by the electrical/electronic sector. Some 150 people participated, with about 42% providing feedback. 85% of respondents said the seminar was "good" to "excellent" and found the support package useful. EMS support packages were updated in November 2005 to meet the latest requirements for the ISO 14001 EMS.
2. Promote Strategic Environmental Assessment (SEA) to the public locally and internationally by providing easy access to the SEA Manual and related information.	i. To enhance the electronic version of the SEA Manual now being posted on the EPD web site, aiming to provide links to various SEAs and environmental information.	Measured by enhancement of SEA information on the EPD web site.	Launched the web-based SEA knowledge centre.
	ii. To revamp the SEA web pages to make them more user-friendly, interactive and appealing.		

	iii. Continue to introduce the SEA Manual and promote SEAs to local and overseas government officials and professionals at forums, workshops and similar occasions.	Measured by number of forums organised.	Organised two seminars for practitioners on SEAs.
--	---	---	---

II - Prevention and Mitigation through Environmental Impact Assessment

1. Help the public to understand EIA findings.	i. To launch an improved version of the demo 3-D EIA project on the web site to illustrate its application and how the public could more easily visualise and understand key EIA findings.	Measured by successful launch of the interactive 3-D continuous public engagement in EIA, and number of projects using it.	The interactive 3-D continuous public engagement in EIA was launched in 2005 and by the end of the year, eight major proposed projects had incorporated a 3-D EIA tool into their plans.
--	--	--	--

III - Better Air Quality

1. Comply with the requirements of the Beijing Amendment to the Montreal Protocol.			In progress.
2. Reduce local air pollution	i. To complete the retrofit programme for long-idling pre-Euro standard diesel vehicles over 4 tonnes.		Completed.
	ii. To introduce to the Legislative Council legislation to tighten emission standards for newly registered vehicles to Euro IV standards, in step with the European Union.		In good progress.
	iii. To introduce to the Legislative Council legislation to require all pre-Euro standard vehicles over 4 tonnes to be installed with emission reduction devices.		Completed.

	iv. To draft a regulation with respect to the contents of volatile organic compounds in paint, printing inks and selected consumer products.		In good progress.
	v. To implement a regulation requiring petrol filling stations to install and operate vapour recovery systems for vehicle refuelling.		Completed.
	vi. To continue the promotion of good indoor air quality (IAQ) and review what improvements should be made, such as developing a quality assurance system for indoor air quality certification works.		In progress.

IV - Quieter Environment

1. Prevent and minimise environmental noise through early intervention in the planning process.	i. To review 140 planning schemes and strategic proposals to minimise noise problems for about 32 000 people.	Measured in terms of number of planning schemes and strategic proposals reviewed, and number of people benefited.	148 planning schemes and strategic proposals were reviewed, benefiting 33 000 people.
2. Resolve road traffic noise issues through implementation of abatement measures.	i. To continue supporting reviews, investigation studies and design work for retrofitting barriers for Public Works Programme (PWP) Category A, B and C projects, as well as technical feasibility studies for other retrofit projects and work to resurface identified road sections.	Measured in terms of number of retrofit projects in progress and number of road sections resurfaced.	<ul style="list-style-type: none"> • Provided support to various studies/design work in connection with the implementation of the abatement measures. • Commenced / proceeded construction of three noise barrier retrofit projects. • Commenced / proceeded investigation / design of 18 PWP Category B noise barrier retrofit projects. • Resurfaced 11 road sections.

V - Better Water Quality

--	--	--	--

1. Restore Deep Bay to a clean and healthy state by year 2015.	i. To complete water pollution surveys for the Yuen Long, Kam Tin, Tin Shui Wai, Ngau Tam Mei and San Tin catchments under the first review of the Deep Bay Water Pollution Control Joint Implementation Programme.	Measured in terms of progress and achievement of target.	The water pollution surveys for the Yuen Long, Kam Tin, Tin Shui Wai, Ngau Tam Mei and San Tin catchments were completed in November 2005.
2. Introduce new effluent standards into the Legislative Council for negative vetting.	i. To re-visit some of the effluent standards established in a review conducted on the Technical Memorandum for Effluent Standards several years ago, upon request of the bureau.	Measured in terms of achievement of target.	The effluent standards established in the review have been re-visited.
3. Make reclaimed water usage one of the key options under the Total Water Management initiative in Hong Kong.	i. To complete the design and tender process for the Demonstration Scheme on Reclaimed Water Uses in the North District in 2005.	Measured in terms of progress and achievement of target.	Design for the Demonstration Scheme was prepared and the tender invitation process completed in 2005.
4. Implement HATS Stage Two to improve the harbour water quality and sustain the improvement in the long term.	i. To identify the way forward for HATS, based on views collected in the consultation in 2004, and the Chief Executive's 2005 Environmental Policy Agenda.	Measured in terms of ExCo's approval and LegCo's support of the proposed way forward.	We reported the results of the public consultation to the Executive Council and the Legislative Council in 2005. The CE - in -Council directed that Stage Two should be implemented in two phases, subject to community acceptance of the need for the full operating costs of providing sewage services to be recovered through sewage charges.

VI - Environmentally Sound Waste Management and Facilities

1. Promote waste reduction and recycling, and develop integrated waste management facilities to reduce the environmental burden and landfill space requirement arising from waste disposal.	i. To consult the public on technology options for the development of integrated waste management facilities in Hong Kong.	Measured in terms of number of public engagement workshops.	A paper was submitted to the LegCo Panel on Environmental Affairs in May 2005 regarding technical aspects of the integrated waste management facilities. A total of three public engagement workshops were organised in September 2005.
	ii. To implement the construction waste charging scheme at landfills in the latter part of 2005.	Measured in terms of time of commissioning.	The scheme was implemented in December 2005.

iii. To replace the pilot scheme on waste tyre recycling with a longer-term programme to be commissioned in the second half of 2005.	Measured in terms of progress on tendering.	The first tender was called in October 2005 and subsequently cancelled resulting in a slippage. The service contract for the 2 nd phase of the pilot scheme, lasting 31 months, was awarded in February 2006.
iv. To continue pilot programmes to recover used computers and electrical and electronic equipment for reuse and recycling, with a target of 42 000 items.	Measured in terms of number of items processed.	New centres were set up at Kowloon Bay Transfer Station in October 2005 for recycling used computers and electrical appliances. Over 50 000 items were processed in 2005.
v. To launch the Rechargeable Battery Recycling Programme in the first half of 2005.	Measured in terms of timing of launch.	The Rechargeable Battery Recycling Programme was launched in April 2005.
vi. To invite tenders for construction of the EcoPark in Tuen Mun Area 38.	Measured in terms of successful launch of tender exercise.	Planning issues for rezoning of the EcoPark site were resolved in 2005. Tenders will be invited in February 2006.
vii. To promote source separation of domestic waste territory-wide in partnership with property management associations and companies, with a target to recruit 180 housing estates/buildings to the programme by the end of 2005.	Measured in terms of number of participating housing estates/buildings.	By the end of 2005, 223 housing estates/buildings had signed up for the programme.
viii. To commission feasibility studies on extension schemes for the three strategic landfills.	Measured in terms of time of commissioning.	<ul style="list-style-type: none"> • Feasibility studies for NENT and SENT Landfill extension schemes were commissioned in 2005. • The programme on the WENT Landfill extension scheme is being reviewed.
ix. To commission a study for the follow-on operation of Island East Transfer Station.	Measured in terms of time of commissioning.	The consultant selection for the Island East Transfer Station project was completed by December 2005 and a consultancy study will be commissioned in early January 2006.

	x. To review the feasibility of the development of a grease trap waste treatment facility in the urban area.	Measured in terms of time of completion of the feasibility review.	Feasibility confirmed and development of the grease trap waste treatment facility at the West Kowloon Transfer Station is in progress.
	xi. To re-introduce the Waste Disposal (Amendment) Bill for the control of clinical waste to the Legislative Council (LegCo).	Measured in terms of successful re-introduction of the Bill to the LegCo.	The Waste Disposal (Amendment) Bill for the control of clinical waste was submitted to the LegCo in May 2005. A Bills Committee was formed by the LegCo to examine the Bill.
2. Achieve full recovery of the variable operating cost of collecting and treating chemical waste and MARPOL waste at the Chemical Waste Treatment Centre (CWTC).	i. To revise charges for the disposal of chemical waste and MARPOL waste at the CWTC.	Measured in terms of timing of the revision of charges.	<ul style="list-style-type: none"> The proposed revision of charges for disposal of chemical waste at CWTC has been deferred to 2006 because of opposition from some chemical waste producers, particularly from the printed circuit board trade. Charges for disposal of MARPOL waste at CWTC was revised in 31 March 2006.

VII - Cross-boundary and International Co-operation

1. Fulfil the HKSAR's obligations under the Stockholm Convention.	i. To compile a Persistent Organic Pollutants (POPs) emission inventory for Hong Kong and draft the Hong Kong Special Administrative Region Implementation Plan as part of China's National Implementation Plan for submission to the Conference of Parties of the Stockholm Convention before November 2006.	Measured in terms of progress and achievement of target.	A POPs emission inventory for Hong Kong was completed. A stakeholder consultation workshop was held in November 2005 to solicit views from the community on proposed action plans to be included in the Hong Kong Special Administrative Region Implementation Plan, a draft of which was completed in December 2005.
2. Work with Guangdong authorities to improve regional air quality in the Pearl River Delta region.	i. To implement jointly with Guangdong authorities the Pearl River Delta Regional Air Quality Management Plan agreed in December 2003, in accordance with its 2005 Work Plan.	To start operating a regional air quality monitoring network.	The joint air quality monitoring network has started operation and a Regional Air Quality Index has been reported to the public on a daily basis since 30 November 2005.
		To conduct technical exchanges with Guangdong authorities	The two governments have conducted technical exchanges on real-time ambient monitoring, continuous source emission monitoring and emissions inventory.

		To prepare an annual report on the implementation progress of the Pearl River Delta Regional Air Quality Management Plan by end 2005	The 2005 Annual Report on the Pearl River Delta Air Quality Management Plan was approved by the Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection in December 2005.
3. Explore with Guangdong authorities the introduction of emissions trading and other measures to improve air quality.	i. To work with the Guangdong authorities on the details of the emissions trading pilot scheme.	Measured in terms of progress and achievement of target.	In progress.

VIII - Effective Enforcement and Emergency Response

1. Monitor dumping operations by remote and instant means to better protect the marine environment from short-dumping of dredged sediments.	i. To set up a real time monitoring control room in the EPD to enhance control of dumping at sea activities by barges, under the Dumping at Sea Ordinance.	Measured in terms of readiness of an EPD Control Centre to function.	Set-up of Control Centre in EPD completed.
2. Apply mobile computing solution in all enforcement activities to improve data manipulation and communication efficiency.	i. To implement in phases a mobile computing solution for field enforcement activities.	Measured in terms of level of implementation	The development phase of the system was completed in 2005. A trial run is in progress.
3. Provide a common integrated electronic platform for quality management of enforcement information and for facilitating data sharing and modelling use.	i. To continue the development of an integrated data / information management solution for streamlining multimedia enforcement workflow and data management.	Measured in terms of percentage completion of the project.	Progress in 2005 was satisfactory. About 60% of the project was completed. The procurement of necessary hardware was nearly completed. The whole project is expected to be completed by early 2007.

IX - Building Partnerships and Customer Service

1. Protect the Pearl River for sustainable development of the region.	i. To participate in the compilation of a water pollution prevention plan for the Pearl River catchment as part of the Pan-PRD Regional Environmental Protection Co-operation.	Measured in terms of EPD's participation and contribution.	EPD has been briefed on the plan which involves pollution prevention planning by Guangdong province in upstream catchments. Given the upstream focus our involvement is necessarily limited, we will replace this target with a long-term target to develop a regional water quality management plan for the Pearl River Estuary.
---	--	--	---

2. Promote environmental compliance by introducing new control technologies and good management practices, and provide a dedicated advisory service to the trades.	i. To identify and promote wider application of environmentally friendly technologies and materials.	Measured in terms of number of activities organised.	38 activities were organised for both trade stakeholders and our staff to build up trade-specific knowledge related to new technologies, compliance issues and good environmental practices.
	ii. To set up a Help Desk telephone hotline service for the trades under the partnership programmes, which will provide a one-stop source of information to the business community, give advice on environmental legislation and standards, and provide practical reference guides on complying with the requirements.	Measured in terms of success in establishing Help Desk.	The Help Desk was set up in February 2005.

X - Environmental Awareness and Education

1. Promote Government initiatives on environmental protection.	i. To encourage public participation in waste reduction and recycling.	Measured in terms of promotion activities.	<ul style="list-style-type: none"> As at the end of 2005, 223 housing estates/ buildings have signed up the Programme on Source Separation of Domestic Waste. TV and radio Announcements of Public Interest (APIs) were launched on source separation of domestic waste. A Waste Electrical and Electronic Equipment Recycling Day and 'Zero Waste' walk were organised for the Environmental Protection Festival (EPF) 2005. Seven Non Government Organisations (NGOs)/ Green Groups/ Community Groups and six District Councils were enlisted to organise public education activities under EPF 2005 to promote waste reduction. 10 one-minute television programmes and a 30-minute programme were broadcast on TVB Jade to promote waste reduction.
--	--	--	--

	ii. To enhance public awareness of energy conservation.	Measured in terms of promotion activities.	<ul style="list-style-type: none"> • The Environmental Campaign Committee launched a territory-wide campaign on World Environment Day (WED) 2005 to urge the public to set air-conditioning temperatures at 25.5 degrees Celsius. • Six NGOs/Green Groups/Community Groups and one District Council were enlisted to organise public education activities under WED 2005 to promote energy conservation. • A TV API on energy conservation was launched.
2. Reach out to the community and bring the latest environmental information to the public.	i. To arrange the Mobile Environmental Resource Centre (ERC) to visit local communities.	Measured in terms of number of visits conducted.	111 visits were conducted by the Mobile ERC.
	ii. To set up Green Desks in local communities to promote environmental messages.	Measured in terms of number of Green Desks set up.	118 Green Desks were set up in housing estates.
	iii. To promote environmental messages through the ERCs.	Measured in terms of number of visitors to the ERCs.	The ERCs at Fanling, Wanchai, Tsuen Wan and Mobile ERC received some 100 000 visitors.
3. Build the capacity of stakeholders for achieving long-term environmental goals.	i. To provide environmental training for target groups.	Measured in terms of number of training sessions organised.	<ul style="list-style-type: none"> • 15 447 students joined the Student Environmental Protection Ambassador Scheme and 46 workshops were organised for them. • 23 environmental workshops were organised for school administrators and teachers. • 18 training programmes were organised for Environmental Protection Ambassadors for Property Management. • 78 workshops were organised for the Civil Service.

	ii. To promote environmental management in schools and the business sector.	Measured in terms of number of participating schools and organisations.	<ul style="list-style-type: none"> 147 primary and secondary schools participated in the Hong Kong Green School Award. Another 135 pre-schools participated in the Hong Kong Green Pre-School Award. 144 organisations competed for the 2005 Eco-Business Awards.
--	---	---	---

XI - Corporate Environmental Management

1. Pursue continual improvement in the environmental performance of our internal operations by implementing an effective management system.	i. To continue to monitor the potentially significant environmental aspects of EPD's internal activities.	Measured in terms of monitoring by the Departmental Environment, Safety and Health Committee (DESHC).	Monitoring kept up. Progress in paper and energy savings reported in the environmental performance report.
	ii. To continue paper saving initiatives to meet the 2.5% reduction target.	Measured in terms of consumption of photocopying paper.	The consumption of photocopy paper in 2005 dropped by 2.6% as compared with 2004.
	iii. To continue energy saving measures in conjunction with the energy audit.	Measured in terms of power consumption in offices.	Power consumption decreased by about 1.8% as compared with 2004.

XII - Minimising the Impacts of Our Operations

1. Ensure treatment and disposal of wastes at our facilities are managed in the most environmentally acceptable manner.	i. To continue close supervision of our waste facilities contractors, aiming at full compliance with both legal and contractual environmental requirements.	Measured in terms of compliance rate.	<u>Landfills and Refuse Transfer Stations</u> (1) Full compliance with legal requirements. (2) 21 550 environmental monitoring measurements were carried out, of which 21 447 measurements complied with contractual requirements.
---	---	---------------------------------------	--

XIII - Greener Office

1. Demonstrate efficiency and commitment to environmental conservation by reducing expenditure and resources consumption.	i. To keep up the paper ordering plan and monitor the use of paper vis-à-vis the reduction targets.	Measured in terms of developing a group paper order plan to set quotas on the consumption of each group.	All groups adhered to the quota, resulting in a 2.6 % reduction.

	ii. To continue audits in offices to look for energy saving opportunities.	Measured in terms of successful completion of energy audits in offices.	<ul style="list-style-type: none"> Appointed Energy Wardens to remind staff of housekeeping measures for saving energy. Energy audits were conducted in EPD offices to identify areas for saving energy.
	iii. To continue Indoor Air Quality (IAQ) Certification work and arrange renewal as necessary.	Measured in terms of number of IAQ certificates obtained or renewed.	The EPD had 10 premises certified as meeting the IAQ requirement.

XIV - Staff Awareness, Training and Participation

1. Promote staff environmental awareness and encourage participation.	i. To arrange training sessions / seminars and awareness campaigns for staff.	Measured in terms of training sessions and activities organised.	<ul style="list-style-type: none"> Provided interesting tips to staff on environment, safety and health issues through the daily internal bulletin system. Organised field trips to enhance staff environmental awareness.
---	---	--	--



Chapter 9

Targets for 2006

Major Reporting Areas under EPD's Programmes:

Long term objective	Targets for 2006	Measurement Method/ indicator
I - Contribution to Strategic Decision-making		
1. Promote SEA to the public locally and internationally by providing easy access to the SEA Manual and related information.	i. To widely distribute the SEA Manual.	Measured in terms of number of visits to the SEA knowledge centre.
II - Prevention and Mitigation through Environmental Impact Assessment		
1. Help the public to understand EIA findings.	i. To continue to promote and facilitate Continuous Public Involvement for various stages of the EIA process and further apply the 3-D EIA public engagement tool to enhance public involvement.	Measured in terms of progress and achievements in developing a common GIS-based platform for all of Hong Kong, which will use 3-D technologies to facilitate public participation in major projects.
III - Better Air Quality		
1. Comply with the requirements of the Beijing Amendment to the Montreal Protocol.	i. To include a new controlled substance under the Montreal Protocol, Bromochloromethane (Halon 1011), as a scheduled substance in the Ozone Layer Protection Ordinance.	Measured in terms of successful passage of the amendment to the Ozone Layer Protection Ordinance.
2. Reduce local air pollution	i. To continue to vigorously control pollution from vehicular traffic, power stations and VOC-containing goods.	Measured in terms of achievement of relevant targets as specific to particular policy measures.
IV - Quieter Environment		
1. Prevent and minimise environmental noise through early intervention in the planning process.	i. To review 140 planning schemes and strategic proposals to minimise noise problems for about 32 000 people.	Measured in terms of number of planning schemes/strategic proposals reviewed, and number of people benefited.

2. Resolve road traffic noise issues through implementation of abatement measures.	i. To continue implementation of noise barrier retrofitting work for 36 identified road sections and low noise resurfacing work for 72 identified road sections.	Measured in terms of progress in the programme, including road sections where works have commenced.
3. Develop a comprehensive plan of action to tackle road traffic noise.	i. To launch the proposed comprehensive plan of action for public consultation and commence studies under the plan.	Measured in terms of progress made in launching the consultation and the studies.
V - Better Water Quality		
1. Restore Deep Bay to a clean and healthy state by 2015.	i. To complete the remaining river pollution surveys in the North District in March 2006 and develop a revised Deep Bay Water Quality Model by December 2006.	Measured in terms of progress and achievement of target.
2. Develop a regional water quality management plan for the Pearl River Estuary.	i. To complete the Pearl River Delta Water Quality Model development work by December 2006.	Measured in terms of progress and achievement of target.
3. Make reclaimed water usage one of the key options under the Total Water Management initiative in Hong Kong.	i. To complete construction work and start generating treated water for selected users under the Demonstration Scheme on Reclaimed Water Uses in the North District in 2006.	Measured in terms of progress and achievement of target.
4. Achieve full recovery of the costs of operating sewage services through the sewage charging schemes.	i. To finalise and implement the results of a review of the Trade Effluent Surcharge Scheme. ii. To secure unequivocal community support for recovery of the full operating costs of sewage services from all users.	Measured in terms of progress and achievement of target.
5. Implement HATS Stage Two to improve the harbour water quality and sustain the improvement in the long term.	i. To obtain funding for HATS Stage 2A construction work (dependent upon LegCo's agreement that the full operating costs should be recovered through sewage charges). ii. To decide on the disinfection process to be adopted for HATS Stage 2A. iii. To decide on the procurement arrangements for upgrading Stonecutters Island Sewage Treatment Works under HATS Stage 2A.	Measured in terms of progress and achievement of target.
6. Deliver the sewerage programme in a more cost-effective way through Public-Private Partnership (PPP) arrangements.	i. To draw up a road map for the implementation of PPP in sewerage projects.	Measured in terms of progress and achievement of target.

7. Review subjects related to the Water Pollution Control Ordinance (WPCO).	<ul style="list-style-type: none"> i. To conduct an internal review of proposals for changes to the WPCO. ii. To conduct an internal review of proposals for changes to the WPCO Technical Memorandum. iii. To initiate a review of the Water Quality Objectives iv. To review the guidance for setting WPCO effluent standards. 	Measured in terms of progress and achievement of target.
---	--	--

VI - Environmentally Sound Waste Management and Facilities

1. Promote waste reduction and recycling, and develop integrated waste management facilities to reduce the environmental burden and landfill space requirement arising from waste disposal.	<ul style="list-style-type: none"> i. To develop long-term plans for integrated waste management facilities to achieve bulk reduction of municipal solid waste. 	Measured in terms of progress in preparing a draft development plan for integrated waste management facilities.
	<ul style="list-style-type: none"> ii. To identify and implement potential waste management/recycling activities in the Island East Transfer Station (IETS) follow-on contract. 	Measured in terms of progress and achievement of target.
	<ul style="list-style-type: none"> iii. To implement the 2nd phase of the pilot scheme on waste tyre recycling. 	Measured in terms of quantity of tyres recycled.
	<ul style="list-style-type: none"> iv. To engage contractors to recycle a combined total of 42 000 used computers, electrical appliances and cathode ray tubes at Kowloon Bay Transfer Station (KBTS). 	Measured in terms of number of items recycled or processed at KBTS centres.
	<ul style="list-style-type: none"> v. To complete a pilot computer recycling project with the computer industry to collect commercial operation data by end 2006. 	Measured in terms of progress of the project.
	<ul style="list-style-type: none"> vi. To enhance the collection of rechargeable batteries under the Rechargeable Battery Recycling Programme to improve the rate to 10% by April 2007. 	Measured in terms of the recovery rate of rechargeable batteries.
	<ul style="list-style-type: none"> vii. To commence construction of EcoPark in mid 2006, and make Phase I of the EcoPark ready for occupation by tenants by the end of 2006. 	Measured in terms of tenancies leased.
	<ul style="list-style-type: none"> viii. To recruit 470 housing estates/buildings to participate in the programme on Source Separation of Domestic Waste by the end of 2006. 	Measured in terms of number of participating housing estates/buildings.
	<ul style="list-style-type: none"> ix. To propose and acquire the most suitable and cost effective operational arrangements for the follow-on operation of Island East Transfer Station after the expiry of its existing contract. 	Measured in terms of the completion of the consultancy study and the procurement of the follow-on contract.

	x. To commission a grease trap waste treatment facility at the West Kowloon Transfer Station in 2007.	Measured in terms of progress towards commissioning the project.
	xi. To complete examination of the Waste Disposal (Amendment) Bill for the control of clinical waste by the Legislative Council.	Measured in terms of completion of the examination of the amendment.
	xii. To submit the draft Waste Disposal (Clinical Waste) (General) Regulation to the Legislative Council after passage of the Bill.	Measured in terms of timing of submission of the Regulation.
	xiii. To develop voluntary schemes on plastic bag reduction with the major supermarkets and retail chains.	Measured in terms of progress and achievement of target.
2. Achieve full recovery of the variable operating cost of collecting and treating chemical waste and MARPOL waste at the Chemical Waste Treatment Centre (CWTC).	i. To continue with the programme to revise the charges for disposal of chemical waste and MARPOL waste at the CWTC.	Measured in terms of implementing the increased charges.
VII - Cross-boundary and International Co-operation		
1. Fulfil the HKSAR's obligations under the Stockholm Convention.	<p>i. To submit the Hong Kong Special Administrative Region Implementation Plan to the Central People's Government for inclusion in China's National Implementation Plan, which will be submitted to the Conference of the Parties of the Stockholm Convention before November 2006.</p> <p>ii. To introduce the Hazardous Chemicals Control Bill into the Legislative Council in 2006.</p>	Measured in terms of progress and achievement of target.
2. Work with Guangdong authorities to improve regional air quality in the Pearl River Delta region.	i. To implement jointly with Guangdong authorities the 2006 Work Plan for the Pearl River Delta Regional Air Quality Management Plan.	Measured in terms of progress of tasks in the Work Plan by end 2006.
3. Explore with Guangdong authorities the introduction of emissions trading and other measures to improve air quality.	i. To work out jointly with Guangdong authorities an emissions trading pilot scheme for thermal power plants in the Pearl River Delta region in 2006.	Measured in terms of progress in developing the proposed pilot scheme.
VIII - Nature and Energy Conservation		
1. Formulate policies and implement measures to regulate, protect and manage natural resources that are important for the conservation of biological diversity of Hong Kong.	i. To oversee the implementation of the new nature conservation policy, in particular the pilot scheme on two new conservation measures, viz. management agreements and public-private partnership.	Measured in terms of progress of the programme.

	ii. To oversee the implementation of the new Protection of Endangered Species of Animals and Plants Ordinance.	Measured in terms of on-going progress review.
	iii. To prepare a legislative proposal to extend the Cartagena Protocol on Biosafety under the Convention on Biological Diversity of Hong Kong.	Measured in terms of progress of the proposal.
	iv. To amend the Marine Parks and Marine Reserve Regulations to strengthen the control of vessels and specimen collection activities in marine parks and marine reserve.	Measured in terms of progress of the proposal.
2. Formulate policies and implement measures to promote energy efficiency and conservation.	i. To oversee the implementation of energy efficiency and conservation programmes.	Measured in terms of progress of the programmes.
	ii. To prepare a legislative proposal on a mandatory energy efficiency labelling scheme.	Measured in terms of progress of the proposal.
3. Formulate policies and implement measures to promote the development of renewable energy in Hong Kong.	i. To gather the public's views on proposed measures to promote renewable energy, as set out in the Stage II Consultation Paper on Future Development of the Electricity Market in Hong Kong.	Measured in terms of progress of the programme.
IX - Effective Enforcement and Emergency Response		
1. Monitor dumping operations by remote and instant means to better protect the marine environment from short-dumping of dredged sediments.	i. To complete all tests and sea trials with a view to applying the Real Time Monitoring System for marine dumping control use in 2006.	Measured in terms of progress and application of the Real Time Monitoring System.
2. Apply mobile computing solution in all enforcement activities to improve data manipulation and communication efficiency.	i. To fully implement the mobile computing system after the launch of an integrated electronic platform.	Measured in terms of progress in implementing the mobile computing system.
3. Provide a common integrated electronic platform for quality management of enforcement information and for facilitating data sharing and modelling use.	i. To develop and fully implement the targeted integrated data / information management solution for streamlining multimedia enforcement workflow and data management.	Measured in terms of percentage completion of the project.
X - Building Partnerships and Customer Service		
1. Promote environmental compliance by introducing new control technologies and good management practices, and provide a dedicated advisory service to the trades.	i. To identify and promote wider application of environmentally friendly technologies and materials.	Measured in terms of number of activities organised.

	ii. To conduct an on site non-enforcement audit and evaluation of the environmental performance of public and private housing estates.	Measured in terms of number of buildings subjected to non-enforcement environmental performance audit.
	iii. To conduct an on site non-enforcement audit and evaluation of the environmental performance of construction site contractors.	Measured in terms of number of construction site visits conducted for non-enforcement environmental performance audit.
	iv. To jointly develop with Environment, Transport and Works Bureau, Hong Kong Construction Association, Construction Industry Training Authority and others all necessary management tools (Environmental Management Plan (EMP) templates), supporting logistics and training programmes to facilitate the smooth implementation of the Pay for Safety and Environment Scheme.	Measured in terms of completion of the benchmark generic EMP template and the rolling-out of the Environmental Protection Officer Training Course.
	v. To replace the Help Desk with the Compliance Assistance Centre in the Business Facilitation Office.	Measured in terms of successful launch of the Compliance Assistance Centre.
2. Enhance environmental awareness of the need to control cooking fume emissions and technical support for the restaurant trade.	i. To support a local restaurant trade association's (HKFORT) project to establish a programme to help small- to medium-sized restaurants and the catering industry control and mitigate cooking fume emissions. The project commences April 2006 under the SME Development Fund.	Measured in terms of project deliverables.
XI - Environmental Awareness and Education		
1. Promote Government initiatives on environmental protection.	i. To encourage public participation in waste reduction and recycling.	Measured in terms of promotion activities.
	ii. To enhance public awareness of energy conservation.	Measured in terms of promotion activities.
2. Reach out to the community and bring the latest environmental information to the public.	i. To arrange the Mobile Environmental Resource Centre (ERC) to visit local communities.	Measured in terms of number of visits conducted.
	ii. To set up Green Desks in local communities to promote environmental messages.	Measured in terms of number of Green Desks set up.
	iii. To promote environmental messages through the ERCs.	Measured in terms of number of visitors to the ERCs.
3. Build the capacity of stakeholders for achieving long-term environmental goals.	i. To provide environmental training for target groups.	Measured in terms of number of training sessions organised.

	ii. To promote environmental management in schools and the business sector.	Measured in terms of number of participating schools and organisations.
XII - Corporate Environmental Management		
1. Pursue continual improvement in the environmental performance of our internal operations by implementing an effective management system.	i. To continue to monitor the potentially significant environmental aspects of EPD's internal activities.	Measured in terms of monitoring by the Departmental Environment, Safety and Health Committee.
	ii. To continue paper saving initiatives to meet the 2.5% reduction target.	Measured in terms of consumption of photocopying paper.
	iii. To continue energy saving measures in conjunction with the energy audit.	Measured in terms of power consumption in offices.
XIII - Minimising the Impacts of Our Operations		
1. Ensure treatment and disposal of wastes at our facilities are managed in the most environmentally acceptable manner.	i. To continue close supervision of our waste facilities contractors, aiming at full compliance with both legal and contractual environmental requirements.	Measured in terms of compliance rate.
XIV - Greener Office		
1. Demonstrate efficiency and commitment to environmental conservation by reducing expenditure and resources consumption.	i. To monitor consumption and encourage recycling.	Measured in terms of consumption and recycling monitoring.
	ii. To continue energy audits in offices to look for energy saving opportunities.	Measured in terms of number of energy audits conducted in our offices.
XV - Staff Awareness, Training and Participation		
1. Promote staff environmental awareness and encourage participation.	i. To arrange training sessions / seminars and awareness campaigns for staff.	Measured in terms of number of training sessions and activities organised.



Appendix I Environmental 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.

To realise this vision, we will continue to strengthen our ability to meet environmental sustainability goals. We will formulate 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 services and programmes offered by the Environmental Protection Department (EPD), as well as our own internal operations, are developed and conducted in an environmentally responsible manner.

In pursuance of these goals, the EPD has 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 effects.

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

Response to Environmental Incidents

We will implement an emergency response system for handling environmental incidents, and 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 and Recycle in the consumption of materials and seek continual

improvement in the efficient use of natural resources and energy in all our operations.

Sustainable Development

We will actively 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

We aim to promote community awareness, through environmental campaigns, publicity, education and action programmes, and public access to environmental information, with a view to harnessing the community's support for, and contribution to, achieving the desired environmental goals.

We will also publicise to the community our Environmental Policy and report annually on our environmental performance. We will ensure that all our staff are aware of our Environmental Policy, that they will be able to provide detailed information about our Policy 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 environmental responsibilities and to participate constructively in environmental activities.

Management Review

The Management will review this policy and the department's environmental objectives and targets vis-a-vis the changing internal and external factors, and seek continual improvement in our environmental performance.



Appendix II EPD Office and Facilities

EPD Offices and Facilities

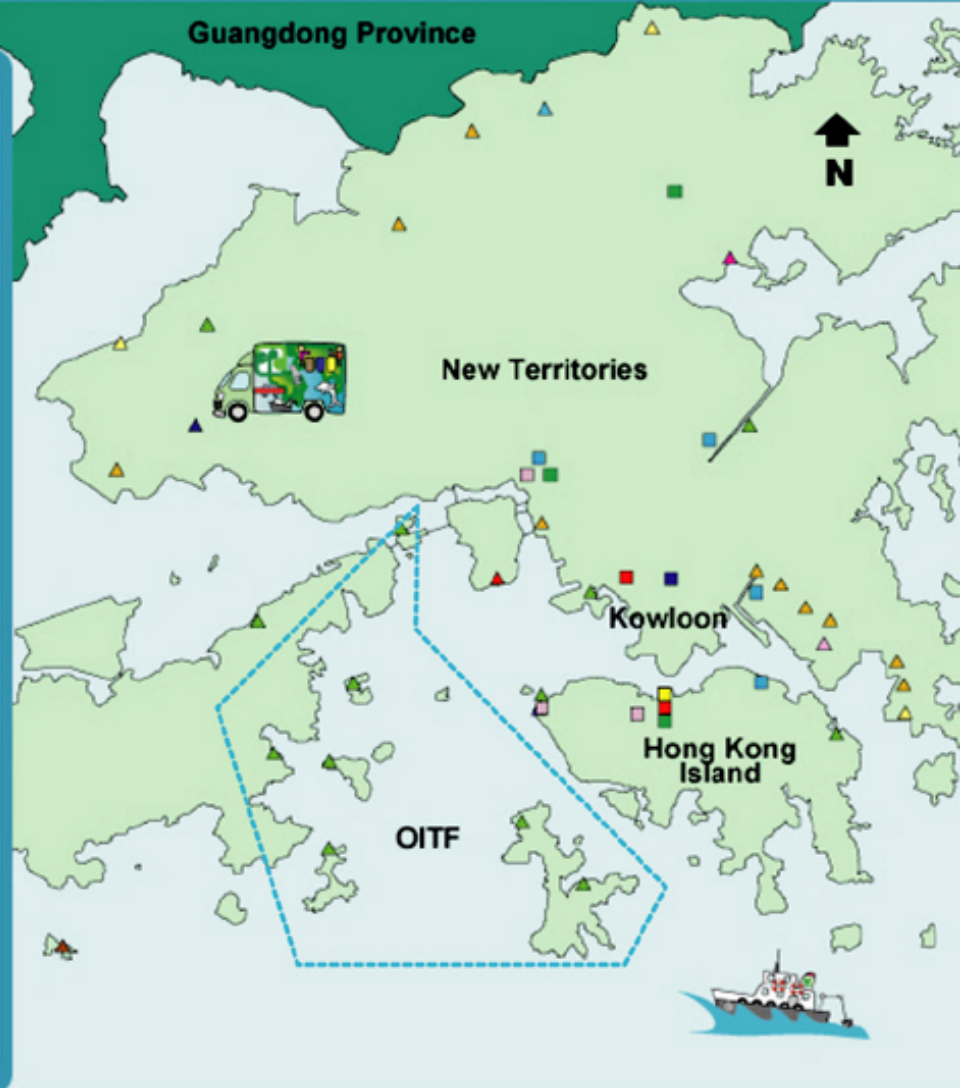
Legend

EPD Offices

- Headquarters
- Branch Offices (2)
- Regional Offices (4)
- Other Offices (3)

EPD Facilities

- ▲ Operating Strategic Landfills (3)
- ▲ Refuse Transfer Stations (7)
- ▲ Chemical Waste Treatment Centre
- ▲ Livestock Waste Composting Plant
- ▲ Low-level Radioactive Waste Storage Facility
- ▲ Closed Landfills after Restoration Work (10)
- ▲ Closed Landfill under Restoration Programme
- ▲ Closed Landfill after Restoration, Sai Tso Wan Recreation Ground
- ▲ Closed Landfill after Restoration, Shuen Wan Temporary Golf Driving Range
- ▲ Refuse Transfer Stations including OITF (8)
- Indoor Air Quality Information Centre
- Environmental Resource Centres (3)
- Mobile Environmental Resource Centre
- Marine Monitoring Vessel





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)**



Regional Office (West).



Regional Office (South).



Headquarter Reception Counter at 46/F Revenue Tower.



EIAO Registration Office at 27/F Southern Centre.



Roadside Air Monitoring Station at Central.



Fanling Environmental Resource Centre .



Marine Monitoring Vessel.



The Mobile Environmental Resource Centre.



Appendix III Environmental performance reports of government bureaux/departments and agencies

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

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



Verification Statement

Objectives

Hong Kong Productivity Council (HKPC) was commissioned by the Environmental Protection Department (EPD) to verify its Environmental Performance Report 2006 (the EPR 2006), which covers EPD's environmental performance in 2005 as well as information on economic and social aspects. The objectives of HKPC's verification work are to:

- Assess whether the scope of the EPR 2006 covers all significant issues in relation to EPD's environmental performance;
- Assess whether the selected statements and data presented in the EPR 2006 are accurate;
- Assess whether the data collection and information management systems used to prepare the EPR 2006 are reliable; and
- Provide recommendations for future reports.

Approach

Our verification procedures comprised a review of the EPR 2006 and selection of a representative sample of statements and data for verification through a series of interviews with EPD's representatives. During the interviews, the documented supporting materials relating to the selected statements and data as well as EPD's environmental management practices and environmental initiatives were explained to and examined by our independent verifiers. It should be noted that we have not carried out any work on information with respect to EPD's future target(s) and those published on EPD's website to which references are made in the EPR 2006.

Results

We have concluded that:

- The EPR 2006 is considered to be comprehensive, providing a good overview of EPD's environmental performance;
- The selected statements and data examined during the verification process, with minor revisions to some specific statements for clarification purpose that were subsequently made to HKPC's satisfaction, all reflect an accurate account of EPD's environmental, social and economic performance;
- The data collection and information management systems used are considered to be generally effective and reliable; and
- EPD has addressed a considerable extent to last year verifier's recommendations to report on the key and significant achievements; invite more readers' comments on the EPR 2005 and most importantly move towards the content enhancement of sustainability reporting by including information on social and economic aspects with reference to the Global Reporting Initiative Sustainability Reporting Guidelines (GRI Guidelines).

Recommendations for Future Reports

EPD is encouraged to:

- provide further information on its performance in relation to regional matters as far as practicable, and where relevant, emerging global environmental issues;
- further enhance the readability through presenting achievement highlights and adopting further appropriate visual aids as far as practicable for presenting quantitative information; and
- continue to move towards sustainability reporting and further enhance the social and economic aspects of future reports with reference to the GRI Guidelines.

A handwritten signature in black ink, appearing to read 'Tsang Kan Lan'.

K L Tsang
Technology Services Manager
Environmental Management Division
Hong Kong Productivity Council
30 June 2006



Feedback Form

We welcome your valuable feedback on our Environmental Performance Report 2006 (the report), which will help us make improvements in the coming year. Please complete this form online and send it to us by clicking the "Submit" button below. You may also send any comments by email to: enquiry@epd.gov.hk. Thank you.

1. What is your opinion on the report?

Meets expectation

Generally informative

Not impressive

2. How did you find the presentation of the report?

Presented professionally and with good readability

Well structured and balanced in text and figures

Too verbal and woolly

3. Which chapter(s) of the report would you like to have more information on? (You may mark more than one box)

Vision and Strategy

Organisation and Governance

Stakeholder Engagement

Sustainability at EPD -
Economic Impacts

Sustainability at EPD -
Environmental Impacts of
Policies and Programmes

Sustainability at EPD -
Environmental Impacts of
Internal Operations

Sustainability at EPD - Social
Impacts

Progress on Year 2005 Targets

Targets for 2006

4. Which topic(s) are you most interested in? (You may select more than one box)

Air

Environmental Assessment &
Planning

Conservation

Noise

Waste

Water

Environmental Compliance

Community Awareness

Cross-boundary and
International Co-operation

5. How can we improve the report, if applicable?

Length about right

More statistical presentations

Focused more on topical issues

6. Other comments and suggestions, if any:

7. If you have come to know about this report through internet or in a library, please specify your background (general public, green group, professional / academic, other government department / organisation, etc.) (optional)

Name:

Email: