



[中文](#)   [English](#)

[直接進入](#)  
[Skip](#)

Foreword

Environmental Policy

Organisation, Programmes and Responsibilities

EPD Offices and Facilities

Our Influence and Impact on the Environment

## **Our Contribution to the Environment**

Our Contribution to Strategic Decision-Making

Planning for a Better Environment

- Prevention and Mitigation through Environmental Impact Assessment

- Better Air Quality

- Quieter Environment

- Better Water Quality

- Environmentally Sound Waste Management and Facilities

Effective Enforcement and Emergency Response

Building Partnerships

Environmental Awareness and Education

Professional Development and Research

## **Our Own Operations**

Corporate Environmental Management

Minimising Impacts of Our Operations

Greener Office

Staff Awareness, Training and Participation

Progress on Year 2000 Targets

Targets for 2001

Verification Statement

Feedback Form



THIS is the second report that the Environmental Protection Department has produced under the Chief Executive's policy initiative requiring all government departments and bureaus to produce annual environmental performance reports. In going through this second reporting exercise, particularly in reporting on the progress in meeting the targets we had set last year, we have learnt much in evaluating the impact our policies and daily activities have had on the environment. This has also allowed us to consider how we could improve on our work, and set more realistic targets for the coming year.

As with our last environmental performance report, we have tried to be concise in reporting on our mainstream environmental protection activities, as many of the details are provided in our annual report, Environment Hong Kong 2001, which has just been published. The present report focuses on our own direct impact on the environment.

Concerning our own environmental management system, I am pleased to report that the Waste Facilities Business Unit obtained formal ISO 14001 certification last year. This is a clear indication that we are committed to ensuring that our waste management system and the operations of our many waste facilities meet with the highest environmental standards. But with ISO 14001 certification comes a commitment to strive for continuous improvement, and we will take this very seriously.

A setback in 2000 was the slight increase in paper consumption recorded. While this is mainly due to an increase in our workload, we shall put in extra effort in the coming year to further identify means of reducing paper consumption. For next year's report, we intend not to produce a hard copy version. The major means of publication would be through our website on the Internet, with hyper-links to more detailed information where necessary, e.g. the Environment Hong Kong report. Hard copies could still be printed from the computer by the readers if required.

To help us improve our reporting further, it is essential that we have your feedback on this report. Your valuable comments are most welcome, and you may send them to us using the feedback form at the back of this report, but preferably by email to <[enquiry@epd.gov.hk](mailto:enquiry@epd.gov.hk)>.

A handwritten signature in blue ink, appearing to be 'R. J. S. Law', written in a cursive style.

R. J. S. LAW, JP  
Director of Environmental Protection



## **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 be prepared to respond 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 our initiatives to our 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 their environmental responsibilities and to participate constructively in environmental activities.

### **Management Review**

The Management will review regularly and seek continual improvement in this Policy in order to ensure it is adjusted to reflect changing internal and external factors.

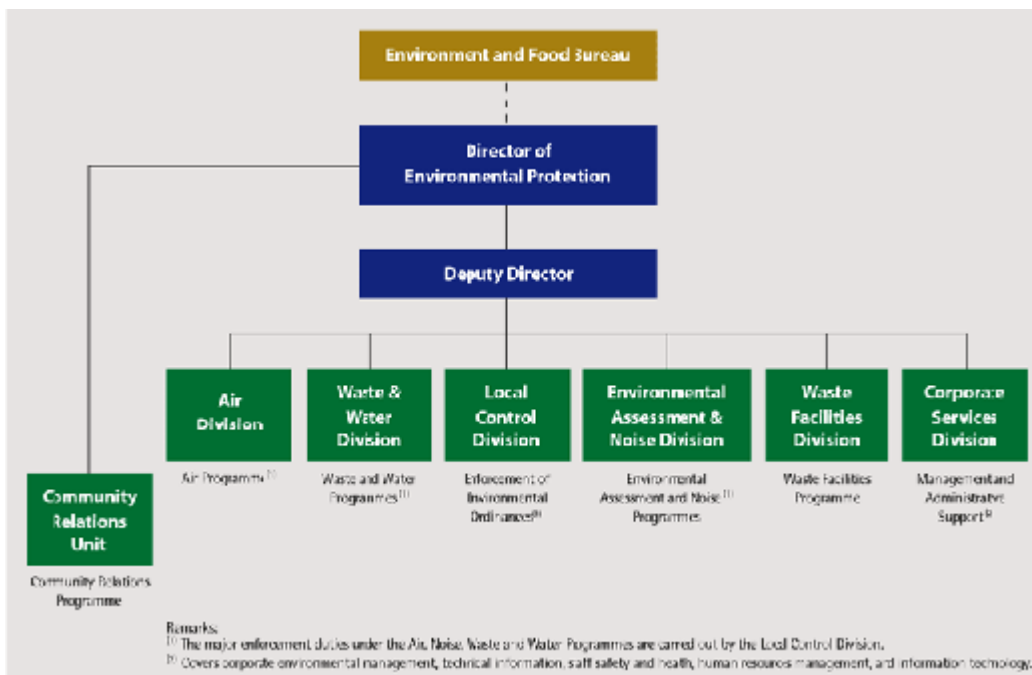
WITHIN GOVERNMENT, the Environment and Food Bureau has overall policy responsibility for the environment, while the Environmental Protection Department (EPD) implements environmental plans and legislation as well as advises on policy and new initiatives. The EPD was established on 1 April 1986, with staff and resources from six government departments and the aim of bringing the majority of pollution prevention and control activities under one organisation.

The department's responsibilities include implementing environmental policy and plans; promoting community environmental awareness; enforcing environmental legislation; monitoring environmental quality; providing collection, transfer, treatment and disposal facilities for many types of waste; advising on the environmental implications of town planning and new policies; and handling pollution complaints and incidents. These responsibilities are organised under seven programme areas (see below).

The department employs about 1,600 staff, about one-quarter of whom are professional staff, half are technical-grade staff and the remainder are administrative and support staff.

In 2000, out of a departmental expenditure of about \$2.8 billion, about 70% was for capital expenditure and contract payments for the treatment and disposal of municipal and chemical wastes, 26% was for staffing, and 4% was for general operating expenses.

**Organisation Chart of Environmental Protection Department**



Apart from the EPD, other government departments are also responsible for environmental initiatives that are related to their areas of responsibility. For example, the Electrical and Mechanical Services Department is responsible for energy efficiency, while the Agriculture, Fisheries and Conservation Department is responsible for nature conservation.

Our aims and objectives under each of our various programmes are as follows:

**Air Programme**

- Achieve and maintain satisfactory air quality through intervention in the planning process.
- Participate in the risk management of potentially hazardous installations and in matters related to energy and global warming.
- Enforce the Air Pollution Control and Ozone Layer Protection Ordinances.

**Community Relations Programme**

- Promote community awareness through environmental campaigns, publicity, education and action programmes.

**Environmental Assessment and Planning Programme**

- Pre-empt environmental problems associated with projects, plans, policies and strategies by assessing their environmental impacts and implementing preventive and mitigatory measures where potential problems are identified.
- Strive for the best possible environmental performance in both the public and private sectors.
- Enforce the Environmental Impact Assessment Ordinance.

**Noise Programme**

- Prevent, minimise and resolve noise problems through intervention in the planning process.
- Enforce the Noise Control Ordinance.

**Waste Programme**

- Establish a framework of legislative and institutional controls to safeguard the health and welfare of the community from the adverse environmental effects associated with the improper handling and disposal of waste.
- Enforce the Waste Disposal and Dumping at Sea Ordinances.

**Waste Facilities Programme**

- Develop plans and programmes for the minimisation of waste.
- Provide facilities for managing any residual waste in a cost-effective and environmentally acceptable manner.
- Coordinate and manage the implementation of plans and programmes relating to waste minimisation and waste facilities.

**Water Programme**

- Develop plans and programmes to ensure the quality of inland and marine waters meets with our conservation goals.
- Formulate and implement sewerage and sewage treatment systems that operate safely and effectively.
- Enforce the Water Pollution Control Ordinance.



**Tsing Yi Chemical Waste Treatment Centre**



**Island West Transfer Station**



**Vehicle Emission Testing Centre**



**Sha Ling Livestock Waste Composting Plant**



**Restored Shuen Wan Landfill**



**14 Air Quality Monitoring Stations**



**Local Control Office (Territory East)**



**South East New Territories Landfill**



**Chemical Laboratory at Revenue Tower**



**Wan Chai Environmental Resource Centre**



**Marine Monitoring Vessel**



## The Department's contribution towards improving the environment

Main Activities	Environmental Results
Contribute to the formulation of major policies and plans within the Government	<ul style="list-style-type: none"> <li>▪ Environmental impact of policies, strategies and planning proposals minimised &gt;&gt;</li> <li>▪ Sustainability incorporated in decision-making process &gt;&gt;</li> </ul>
Develop and implement environmental improvement programmes	Direct improvements in: <ul style="list-style-type: none"> <li>▪ Air quality &gt;&gt;</li> <li>▪ Noise mitigation &gt;&gt;</li> <li>▪ Water quality &gt;&gt;</li> <li>▪ Waste management &gt;&gt;</li> </ul>
Plan and provide waste management facilities	<ul style="list-style-type: none"> <li>▪ Waste handled and disposed of in an environmentally responsible manner &gt;&gt;</li> </ul>
Establish regulatory control framework and enforce environmental ordinances	<ul style="list-style-type: none"> <li>▪ Air, water, waste and noise impacts from polluting activities are reduced &gt;&gt;</li> </ul>
Build partnerships and engage stakeholders	<ul style="list-style-type: none"> <li>▪ Better co-operation gained from all sectors in improving the environment &gt;&gt;</li> </ul>
Promote environmental awareness and public participation	<ul style="list-style-type: none"> <li>▪ Increased awareness and support given to preventing and tackling environmental problems &gt;&gt;</li> </ul>
Support research and professionalism in the environmental disciplines	<ul style="list-style-type: none"> <li>▪ Professional contribution to environmental management in Hong Kong enhanced &gt;&gt;</li> </ul>

## Environmental impact of our own operations

Operations and Services	Effect and Environmental Impact	
Waste Collection, Transfer and Disposal Services	Discharge of wastewater and leachate	<ul style="list-style-type: none"> <li>▪ Pollution of receiving water bodies</li> </ul>
	Emission of landfill gas	<ul style="list-style-type: none"> <li>▪ Potential fire and other hazards to human life</li> </ul>
	Environmental nuisance	<ul style="list-style-type: none"> <li>▪ Noise, odour and visual impact &gt;&gt;</li> </ul>
	Exhaust emission from on-site treatment facilities, vehicles and vessel fleets	<ul style="list-style-type: none"> <li>▪ Air pollution and contribution to greenhouse gas emissions</li> </ul>
Laboratory Services	Consumption of fuel and electricity	<ul style="list-style-type: none"> <li>▪ Air pollution and contribution to greenhouse gas emissions</li> </ul>
	Exhaust emission from fume cupboards and safety cabinets	<ul style="list-style-type: none"> <li>▪ Air pollution impact</li> </ul>
	Wastewater discharge	<ul style="list-style-type: none"> <li>▪ Pollution of receiving water bodies &gt;&gt;</li> </ul>
	Accidental chemical spillage	<ul style="list-style-type: none"> <li>▪ Potential hazards to human life</li> <li>▪</li> </ul>

	Generation of chemical and biological wastes	Residual pollution from waste treatment processes	
Field Work	Fuel consumption and emissions from vehicles/vessels	<ul style="list-style-type: none"> <li>▪ Air pollution and contribution to greenhouse gas emissions</li> </ul>	
	Use of chemicals	<ul style="list-style-type: none"> <li>▪ Contamination of soil and water bodies</li> </ul>	>>
	Disposal of samples	<ul style="list-style-type: none"> <li>▪ Residual pollution from waste treatment processes</li> </ul>	
Office Activities	Consumption of energy and resources (electricity, paper, water, stationery, etc.)	<ul style="list-style-type: none"> <li>▪ Air pollution and contribution to greenhouse gas emissions</li> <li>▪ Depletion of resources</li> </ul>	>>
	Generation of solid waste	<ul style="list-style-type: none"> <li>▪ Increased demand for landfill disposal</li> </ul>	

THE EPD WORKS closely with other government departments and stakeholders to promote sustainable development and build consideration of the environment into the HKSAR's decision-making process.

As reported last year, we participated actively in the government's Study on Sustainable Development for the 21st Century (SUSDEV 21) and we are involved in managing the environmental part of the study. In relation to that, we completed the management of an Environmental Baseline Study in August 2000. This report reviews the condition of Hong Kong's natural capital stock and the pressures it faces. It will provide useful information for evaluating the environmental sustainability of future policies or strategic proposals.

A section on environmental implications is required in all policy submissions to the Executive Council and in all submissions to the Public Works Sub-committee of the Legislative Council for funding approval of public projects. During the year we reviewed 220 such submissions. This facilitates sustainable development by integrating environmental considerations into the decision-making process.



We also managed a strategic environmental assessment (SEA) of the Second Railway Development Study, which was completed in May 2000. The SEA suggested ways to avoid environmentally unacceptable alignments at the early stage and avoid intrusion into environmentally sensitive areas. The SEA also confirmed and highlighted the environmental benefits of the proposed rail strategy, providing environmental reasons for supporting railway development even though it is not always financially attractive. The SEA also identified strategic follow-up actions required and highlighted the key environmental issues for each railway scheme so that they can be incorporated into and addressed during the detailed design stage.

In October 2000 we issued a study brief on the strategic environmental assessment of the upcoming "Hong Kong 2030: Planning, Vision and Strategy", which will update the existing physical planning framework and guide the long term development of Hong Kong.

Pollution cannot be contained by borders or administrative boundaries. The EPD works closely with the international community and with other administrations to preserve our environment. In 2000, we completed a stocktaking of the HKSAR's greenhouse gas emissions such as carbon dioxide, as an initial step towards formulating a greenhouse gas policy. On a regional basis, we participate actively in the Joint Working Group on Sustainable Development and Environmental Protection and its related Special Panels, through which officials from the Hong Kong and Guangdong Governments work together to address regional pollution problems. Both Governments are implementing action plans with regular audits to protect the Deep Bay and Mirs Bay environs.

In 2000 the controlling officers of all government departments and bureaus were required to start reporting on their environmental impacts and performance on an annual basis, fulfilling a pledge made by the Chief Executive in his 1998 Policy Address. The EPD set up a helpdesk that assisted more than 100 users from 38 government departments in compiling the reports. Almost everybody completed their first reports during the year, demonstrating their commitment to being transparent and accountable about environmental issues. These reports are listed on the EPD's website <http://www.info.gov.hk/epd>. In 2001 we will review the results and facilitate the sharing of experiences, with the aim of improving environmental reporting in the public sector. We will also encourage the private sector to produce environmental reports.

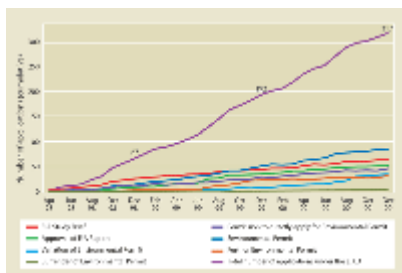


## Prevention and Mitigation through Environmental Impact Assessment

THE EPD AIMS to prevent new environmental problems from being created through the application of the Environmental Impact Assessment (EIA) Ordinance. In 2000 we processed 132 applications involving projects worth a total of over \$38 billion, with 18 EIA reports processed and 39 environmental permits issued. The impact avoidance measures adopted in these applications will eventually benefit over 400,000 people living near railways, roads or on new reclamation sites. We also managed 167 environmental monitoring and audit programmes of approved projects to ensure they comply with EIA recommendations. For example, a 100-year-old park at Signal Hill was saved through an alignment change as a result of the EIA process. The ordinance was reviewed in 1999 and as a result improvements are being made in 2000 and 2001 to improve the flow and public access to information.

As public participation is a major element of sustainable development, we aim to make the EIA system as open as possible. All EIAs and decisions are placed on our website and comments may be submitted electronically, thus reducing paper consumption. From January 2000 we required all environmental monitoring and audit reports to be available on-line. Our website received more than 36,000 hits in 2000. In 2001 we plan to introduce a 24-hour online EIA Ordinance help bench and provide further information to help guide project proponents, consultants and the public through the EIA process. Since mid-2000, we have also initiated four EIAO liaison groups designed to enhance communication with project proponents and promote better understanding of the EIAO requirements. These groups included consultants, contractors, and both private sector and government proponents. In the same year, we organised 14 EIAO seminars with more than 2,100 participants.

The EIA reports of several prominent projects were among those submitted for approval in 2000, such as the Disneyland project on Lantau Island, the Lantau North-South Link, and the Kowloon-Canton Railway Corporation's Lok Ma Chau spurline. The Disney project was approved because its EIA included measures to protect residents and the local ecology from adverse impacts. The alignment for a road to link the north and south of Lantau was changed to preserve the Tai Ho Bay ecosystem. The Lok Ma Chau spurline EIA was rejected because of unacceptable environmental impacts and it is being appealed.



**Figures on the applications trend**

We helped to organise the 20th annual meeting of the International Association for Impact Assessment (IAIA 2000) in June 2000 which was opened by the Chief Executive, the Hon. Tung Chee-hwa. More than 500 delegates came to Hong Kong from 80 countries and it was an important partnership-building event. With the same goal in mind, we helped to organise a local conference on the EIA process later in the year which was attended by ourselves, green groups, contractors, the Hong Kong Institute of EIAs and others.

## Better Air Quality

AIR POLLUTION REMAINS one of our highest pollution control priorities. The problem is compounded by high population density, a high concentration of vehicles, especially diesel ones, and high-rise buildings which hinder the dispersion of air pollutants at street level. In 2000 we implemented a number of programmes to reduce vehicle emissions and introduce cleaner fuels and new technology. Urban air quality has improved as a result, with respirable suspended particulates (RSPs) dropping 8%, and nitrogen dioxide 6%.

But there is still some way to go. Overall, air quality at our 14 fixed monitoring stations showed levels of harmful nitrogen dioxide did not meet our health-based Air Quality Objectives at three stations, and RSPs did not meet the objectives at six stations in 2000.

Our target is to reduce particulate emissions from vehicles by 80% by 2005, and nitrogen oxides from vehicles by 30%. In 2000 more than 4,300 diesel taxis - one-quarter of the force - switched to cleaner liquefied petroleum gas (LPG) with the help of \$720 million in grants from the government. More than 9,600 light diesel vehicles imported before 1995 were retrofitted with particulate traps and catalytic converters. Again, this represented about one-quarter of the fleet. In 2001 we will require all newly registered taxis to run on LPG and we will work on a proposal to phase out diesel light buses in favour of clean alternatives. We will also put forward proposals for retrofitting heavy vehicles (over four tonnes) with devices to remove particulates.



**Joint operation with Police under the smoky vehicle spotting programme**



**Technical and administrative measures have helped to lower emissions, despite an increase in vehicle mileage**

Ultra-low sulphur diesel (ULSD) was introduced which has 0.005% sulphur, to replace diesel with 0.05% sulphur. The supply of ULSD at petrol filling stations was changed over in just over one month, making Hong Kong one of the first places in the world to use this environmentally friendlier fuel on a widespread basis. The European Union does not plan to adopt the fuel as a standard until 2005.

Our smoky vehicle spotter programme was upgraded, with extra EPD staff going out on the street and the Hong Kong Police deploying officers at district level. More than 64,000 smoky vehicle reports were received in 2000. We also have an on-going programme to count smoky vehicles at fixed locations on a regular basis, and the numbers dropped by 19% in 2000.

Work continued on a joint study on regional air pollution with Guangdong, which we expect to complete in 2001 and release for public discussion. We also set up an Indoor Air Quality (IAQ) Information Centre at the Hong Kong Productivity Council and devised an IAQ Certification Scheme, both of which will be launched in early 2001. In 2001 we also plan to introduce a regulation for controlling perchloroethylene emissions from dry cleaning facilities.

## Quieter Environment

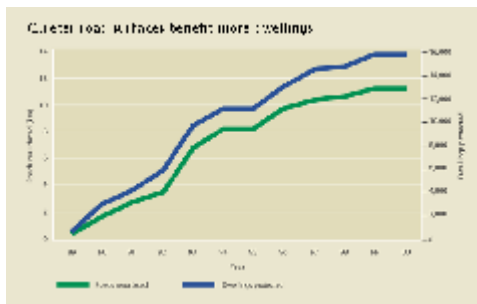
ENVIRONMENTAL NOISE is a pervasive nuisance that affects the quality of life of many people in Hong Kong. Our goal is to protect and maintain an acceptable acoustic environment for the community by:

- Advising on technical solutions to potential noise problems as identified during the land-use planning and potential housing development site review process.
- Managing noise abatement programmes to bring relief to existing residential flats and schools adversely affected by traffic noise.
- Enforcing the Noise Control Ordinance.

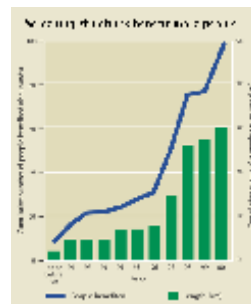
We introduced a new policy to reduce noise from existing roads in 2000. Some 29 roads are suitable for noise barriers or enclosures and 72 roads may be suitable for low-noise surfaces. We are looking for other solutions for about 500 other roads generating noise in excess of the noise limit. Traffic management is one option and we carried out a successful three-month trial to ban heavy vehicles on the West Kowloon Corridor at night. We have provided results of the trial to District Council members to facilitate discussions on whether to implement the ban permanently. In 2001 we will tighten the noise standards of newly registered vehicles.

We already recommend barriers, enclosures and low-noise surfaces for new roads. By the end of 2000, about 30 kilometres of noise barriers and enclosures have been erected and some 18,000 dwellings protected from excessive traffic noise. About 11 kilometres of highway have been paved with a quieter surface providing relief to about 16,000 residential flats. Acoustic insulation and air-conditioners have also been provided to about 6,000 flats exposed to excessive road noise.

Apart from road noise, we are continuing with efforts to further control construction noise. Since 1989 we have limited percussive piling to a few hours a day in populated areas and from 1999 we have further phased out noisy diesel hammers. General construction work may be conducted during restricted hours, but this is tightly controlled. In 2000 we began a review of daytime construction noise and renovation noise, and we will investigate the practicality of further control of these areas in 2001. We have also initiated a study to comprehensively review the acoustical environment of Hong Kong due to infrastructure projects such as roads and rails.



**Quieter road surfaces benefit more dwellings**



**Screening structures benefit more people**



**The proposed noise barrier for Shui Pin Wai Estate, Yuen Long**

## Better Water Quality

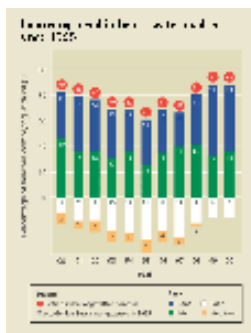
IMPROVING THE water quality of Hong Kong is an on-going task of EPD. Since the late 1980s we have developed sewerage plans for all of Hong Kong, a collection, treatment and disposal scheme for Victoria Harbour, a programme to upgrade sewage treatment plants and specific initiatives for sensitive areas such as beaches, among other things.

Our on-going monitoring indicated improvements in some areas. Of the 41 gazetted beaches, 35 beaches now meet the Water Quality Objectives (which means they are in the Good or Fair categories), only six beaches are in the Poor category and none are in the Very Poor category. The compliance rate for our marine Water Quality Objectives increased from 81% in 1999 to 87% in 2000, with an ultimate target of 100% by 2010. A new marine and river water quality web page was set up in 2000 at the EPD's website. General information, water quality data and the full text of our annual reports on marine and river waters are available at the site.

Our overall sewage scheme for the Victoria Harbour went to an international review panel which reported in November. The panel supported many elements of the plan, but recommended consideration of a higher grade of treatment and disposal in Victoria Harbour. Studies to evaluate the recommended options further will start in 2001.

A review of sewerage master plans to collect all of the sewage in Hong Kong and link it to treatment plants continued. Reviews were on-going in 2000 of central and east Kowloon; Tuen Mun and Tsing Yi; the outlying islands; North District and Tolo Harbour; and Hong Kong Island. The first three are expected to be completed in 2001. Sewage treatment plants are also being upgraded to provide chemical treatment plus disinfection and their outfalls are being monitored. A plan to connect all unsewered areas to public sewers continued. 280 unsewered areas (including villages) have been identified for provision of public sewers, with a target of progressive completion by 2009/10. By the end of 2000, a total of 53 unsewered areas in the territory had been provided with main sewers for connection.

Special efforts were made to tackle specific pollution problems. A \$70 million programme to treat the smelly sediment of the Shing Mun River, developed by a Local Control Office, received funding approval in 2000.



**Improving trend in beach water quality since 1995**

The Technical Memorandum on Effluent Standards of the Water Pollution Control Ordinance was reviewed and proposals were made to simplify the requirements of discharges. Consultation started in late 2000 and we expect to finalise the proposals for legislative amendments in 2001. A study on the cumulative impact of coastal developments reported that developments had relatively little impact on water quality as compared with pollution loads.

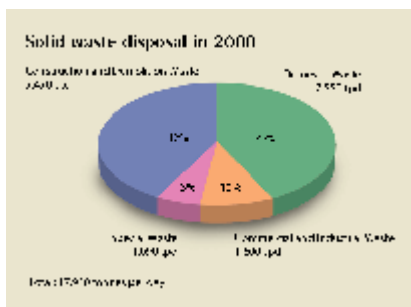
We also worked with our Mainland partners in 2000 to improve the exchange of information. We participated in the Second National Marine Pollution Baseline Survey and prepared to participate in the National Marine Environment Monitoring Network in 2001, both of which are coordinated by the State Oceanic Administration. We began a joint study of mapping out the strategy for management of the water quality of Mirs Bay with Shenzhen in June. And a special panel set

up under the cross-border Joint Working Group began looking at water quality management plans for the Pearl River Delta.

## Environmentally Sound Waste Management and Facilities

WASTE MANAGEMENT continues to be our major challenge. While we aim to provide an environmentally sound and sustainable system for managing waste, we must deal with ever-increasing loads of waste. In 2000 we handled 6.6 million tonnes of waste at landfills including 2.7 million tonnes of construction waste. We also manage livestock and chemical waste, sewage and water treatment sludge and other difficult wastes.

Landfill space will run out within 10 to 15 years and we are trying to reduce waste loads and identify sites for new waste facilities. The Waste Reduction Framework Plan, published in 1998, is our strategy to divert 60% of municipal solid waste away from landfills over the next decade. By the end of 2000 waste separation bins were in place at more than 700 housing estates, and seven short-term tenancies had been arranged for recyclers, including four in 2000. The DEMOS scheme was introduced during the year to provide grants to companies and organisations that try out new waste minimisation and recycling technologies. The Buildings Ordinance was amended in November 2000 requiring all new buildings to provide space for waste separation and recycling. We issued testing guidelines for the degradability and food safety of containers and bags. In 2001 we will be working on development of the Waste Management Plan for 2002-2021.



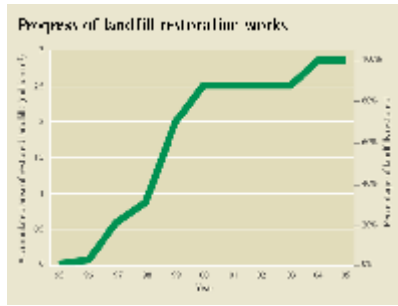
**Solid waste disposal in 2000**



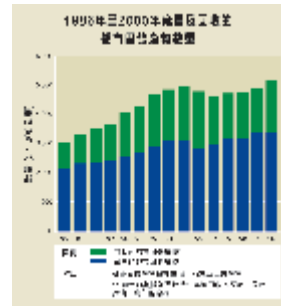
**Waste Facilities in Hong Kong**

We continued to look for solutions to the problem of construction and demolition waste, which comes to landfills if other uses such as public filling areas are not available. In addition to the Construction Waste Recycling Facility at SENT Landfill, a temporary sorting site was set up at Tseung Kwan O by the Civil Engineering Department to recover inert material from mixed construction and demolition waste for beneficial reuse. The Highways Department will conduct a trial using recycled aggregate to pave a section of the Tolo Highway. We promoted waste management planning, on-site sorting of waste and the use of new technologies which create less waste. We are also consulting on landfill charges for non-household waste as a tool to reduce wasteloads.

Waste facilities, especially landfills, are under great pressure and in 2000 we commissioned a study to search for new waste disposal sites and identify ways of extending the existing landfills. We will also complete a study on bulk waste reduction facilities in 2001, which would help to reduce the bulk of wasteloads by up to 90 per cent. Other technical means of reducing wasteloads are being considered and in 2001 we will put to open tender an organic waste composting facility at Ngau Tam Mei.



**Restoration of substandard old landfills will be completed by 2004**



**Quantity of municipal solid waste disposed of and recovered 1986 - 2000**

On the movement of waste, we signed a memorandum of understanding with the State Environmental Protection Administration to control shipments of hazardous waste in accordance with the Basel Convention. Hong Kong has adhered to the convention since 1996 and our efforts were recognised when the Secretariat of the Basel Convention organised its first regional training seminar in the SAR in December 2000.

Dredged sediment is a waste issue and in April 2000 we introduced the requirement for a biological test to determine the toxicity of sediment, in addition to a heavy metal test already being used, to bring Hong Kong in line with international standards. We also banned the dumping of locally-dredged toxic sediment outside of Hong Kong waters, unless the contractor can prove it will be handled in an environmentally-acceptable way.

In 2000 we:

- commissioned two new refuse transfer facilities on Lamma Islands
- awarded a contract for the Northwest New Territories Refuse Transfer Station, which will open in 2001
- awarded the contract for a new door-to-door livestock waste collection service to improve the disposal of this waste
- expanded the grease trap treatment facility at West New Territories Landfill to handle growing grease trap wasteloads
- completed an independent expert assessment of dioxin emissions from the Chemical Waste Treatment Centre on Tsing Yi Island, which found the levels to be within international health standards
- completed restoration work at 12 exhausted landfills
- received the ISO 14001 certification for the environmental management system of the Waste Facilities Business Unit

## Enforcement

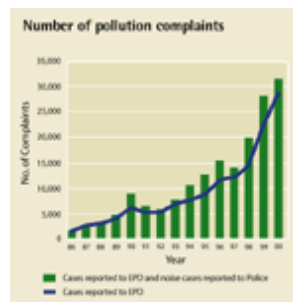
OUR LEGISLATIVE and enforcement work is much more than an effort to use the law to reduce pollution. Although we enforce laws dealing with air, water, waste and noise pollution, we also assess the environmental impacts of development projects, respond to complaints and regulate specific polluting activities through licensing procedures. In 2000 we also greatly enhanced our partnerships with industry to encourage greater compliance.

Formal partnerships were developed with several trade associations, such as those representing vehicle repair shops, restaurants and the construction industry, to provide them with information and training and learn more about their constraints. In turn, they are starting to help us by training their staff, rectifying malpractices and developing ways to reduce their pollution. It is hoped to extend these partnerships to other trades that attract a lot of complaints.

To improve our efficiency in catching offenders, we linked up with the Hong Kong Police who provided a two-week training course on enforcement practices for staff. We also sent officers to Canada for enforcement training and experience sharing under the Memorandum of Understanding with Canada. As a result, our enforcement practices have been streamlined, and a guidebook on enforcement techniques is being prepared. We are trying to improve our efficiency in carrying out our enforcement duties. In 1999 we introduced integrated enforcement teams at all Local Control Offices in which team members are trained to deal with all types of pollution control in a single site visit as far as practicable.



**Strict enforcement has resulted in increasing numbers of prosecutions and fines**



**Rising environmental concerns and community expectations have resulted in increasing numbers of pollution complaints**



**Seminars are organised to promote regulatory compliance**

We received the go-ahead to set up a Central Prosecution Unit in 2001 which will be led by a full-time legal professional, a move made necessary by the growing number of not-guilty pleas. There were 1,824 prosecutions in 2000, up from 1,740 in 1999, and convicted offenders paid \$22.4 million in fines.

Our hotlines received more than 100,000 calls in 2000, of which about 20,000 were complaints about pollution. We also received 7,000 complaints by other means such as by letter, via other government departments or by e-mail. We are increasing the application of information technology to all of our operations. We responded to 99% of calls within three working days during the year. The A C Nielsen company reviewed our

hotline service and reported in January that 89% of users were satisfied with the service, compared with 84% in 1998. We will continue to improve the service, such as exploring the possibility of extending the operating hours and improving the skill of our staff by more intensive training. We also handled about 8,000 applications for licences and permits, such as effluent discharge licences and construction noise permits, during the year.

A crackdown on smoky vehicles, which traditionally attract the most pollution complaints, was carried out with the Police at district level. Pollution from street-side cooked food stalls has been a source of complaint from District Councils and we approached owners of these stalls with advice on reducing their pollution. We continued to carry out the Sewer Connection Programme in Tolo Harbour Catchment and to date we have connected 37 villages and more than 15,000 villagers in the area to public sewers. Sewer connection programmes were also carried out in other sensitive beach areas such as Shek O and Stanley.

## Response to Environmental Incidents

THE EPD WORKS closely with other government departments, such as the Fire Services and Marine Departments and the Government Chemist, to provide a speedy response to environmental incidents. We have comprehensive response plans for dealing with 36 different types of emergency situations on land and at sea, including oil and chemical spills.

Our local control offices provide dedicated support to all emergency responses and our Chemical Waste Treatment Centre contractor provides chemical waste collection and disposal services for incidents involving chemicals. In 2000 we were involved in 32 land-based incidents and 11 marine-based incidents. In each instance where clean-up work was required, it was completed satisfactorily.

In 1999, we set up an Emergency Response Drill Team to enhance staff performance and readiness in emergency situations. In 2000, six drills such as mysterious gassing incidents and accidental wastewater discharge to a bathing beach, were conducted, one at each of the six Local Control Offices. In early 2001 we will organise an international workshop to share our experiences with local and overseas experts. We also continue to look for opportunities to improve our efficiency in handling emergency situations.

Two serious environmental incidents were handled in 2000:

A truck overturned at Yuen Long Industrial Estate during the Chinese New Year on February 5, spilling approximately 12 tonnes of styrene into a nullah near Mai Po marshes, an ecologically sensitive site. Fire Services Department contained the spill and cleaned up the site. EPD staff closely monitored the site afterwards, taking water and soil samples for analysis. No long-term ecological impact was detected, thanks to the clean-up operation and natural decomposition of the chemical.

An oil spill incident occurred at the Tung Chung Road on Lantau on November 9. The oil slick stretched four kilometres along the Tung Chung Road, forcing the only north-south Lantau link road to be closed for almost eight hours. The vehicle suspected of spilling the oil disappeared, but the oil threatened the nearby Shek Pik reservoir and the downstream Cheung Sha gazetted beach. We advised the clean-up crew to avoid flushing the oil into the stream course and to use saw-dust to soak up the oil for off-

site disposal as chemical waste. The road was cleaned up and reopened the next morning, with no contamination of the water in the Shek Pik reservoir or the beach water in Cheung Sha.

RECOGNISING THE NEED to win support from all segments of society for environmental initiatives, the EPD has been building partnerships with relevant stakeholders and professionals at both the local, national and international levels. The experience gained from these outside contacts is invaluable.

## Locally

In 2000, the EPD organised 30 environmental seminars for a total of 3,400 participants from various trades to arouse their environmental awareness and to help them to comply with the environmental law requirements. Apart from organising these seminars, the EPD initiated partnerships with three local trades that attract considerable pollution complaints from the public. The goal is to encourage better compliance. With the construction trade, we are promoting dialogues on pollution control information exchange, helping contractors and consultants to identify ways of reducing environmental impacts, and working with major contractors to set up mitigation measures for compliance. With motor vehicle repair workshops, we are working with the Hong Kong Vehicle Repair Merchants Association to promote environmentally friendly operations. Once we identify any suspected violation, we will inform the association whose representatives will visit these workshops to discuss how to reduce their pollution. We are also contacting various institutions about arranging technical advice on pollution control. With the restaurant trade, we are giving workshops and arranging technical advice on reducing cooking fumes, odour and smoke.

The EPD also has on-going contacts with other sectors of society. We meet regularly with the green groups and community groups to exchange views and work together on projects and campaigns. We collaborate with private sector companies in trial schemes, such as the bus companies with whom we tested Ultra Low Sulphur Diesel fuel. Formal consultation on environmental issues is conducted through the Advisory Council on the Environment and the Environmental Affairs Panel of the Legislative Council. In addition, we participate in District Council, industrial and business association meetings to explain new environmental initiatives and to seek their views. Partnerships with District Councils were strengthened in 2000 to promote waste reduction and recycling.



**A workshop was held with the Hong Kong Vehicle Repair Merchants Association on reducing pollution caused by the trade**



**The 2nd Progress Meeting of the Mirs Bay Water Quality Regional Control Strategy Joint Working Group**

Another local partnership is with the rest of government. Under the Waste Reduction Task Force for Government, we began working with the Government Supplies Department (GSD) in 1999 to establish green product specifications for commonly used items such as paper products. By the end of 2000, 31 product categories were reviewed and the relevant green specifications incorporated as appropriate. The information is

available on the Waste Reduction Committee's web page (<http://www.info.gov.hk/wrc>) so the private sector and outside organisations can refer to it when buying their supplies. The GSD also requires contractors to reduce packaging and, since 1997, it has arranged for a local oil recycler to collect waste oil from all government departments, recovering about 680 tonnes per year. In 2000, the Government's Stores and Procurement Regulations have been amended to require the inclusion of environmental considerations in the drawing up of tender specifications.

On the professional level, we initiated the Professional Persons Environmental Consultative Committee which serves as a forum for local professional institutions to exchange views and develop professional practice notes on good environmental measures.

## Nationally

The EPD maintains regular contacts with the environmental authorities on the Mainland to tackle cross-border environmental issues. In January 2000, we signed a Memorandum of Understanding (MOU) with the State Environmental Protection Administration on the control of cross-border waste shipments. During the year, we participated in the State Oceanic Administration's (SOA) Second National Marine Pollution Baseline Survey and made preparations to participate in the SOA's National Marine Environmental Monitoring Network in 2001, an exercise which has resulted from an MOU signed with the SOA in 1999. We hosted a visit by the Director of the Shanghai Environmental Protection Bureau and met with judges of the Beijing Supreme People's Court to discuss trade and the environment.

Closer to home, we continued to work with our counterparts in Guangdong on shared environmental issues. Under the Joint Working Group on Sustainable Development and Environmental Protection, which was launched in 1999 to replace the Hong Kong-Guangdong Environmental Protection Liaison Group, a study of air pollution in the Pearl River Delta Region was launched in 1999. The Joint Working Group also launched a study to draw up a regional water quality control strategy for Mirs Bay, following a similar one already completed for Deep Bay in 1998.

In collaboration with the State Environmental Protection Administration, we organised a nation-wide environmental proposal competition for youth in 2000. We also worked with the environmental protection bureaus of Guangzhou, Shenzhen, Zhuhai and Macau to promote the theme of "Clean Air" for World Environment Day 2000.

## Internationally

We worked closely with Canada, Vienna and Australia in 2000. Our partnership with Canada dates back to 1992 when we signed an MOU on environmental collaboration. Since then we have organised various workshops and exchanges of information. In 2000 we organised an international workshop on enforcement practices with Canada, with participation also from the United Kingdom and Australia. EPD officers also went to Canada for several weeks to study enforcement practices there. We also organised a joint workshop on environmental impact assessments with Canada. We will carry out programmes on the Work Plan for 2001 with Canada.

An MOU with Vienna was signed in 1999 and in 2000 the EPD and Vienna's environmental officials organised a workshop to exchange information and experiences. The EPD and

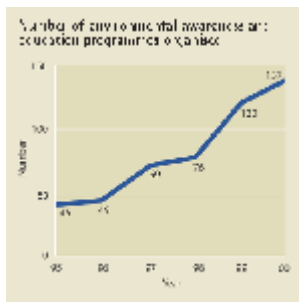


**International Workshop on  
Enforcement of Pollution Control  
under the MOU with Canada**

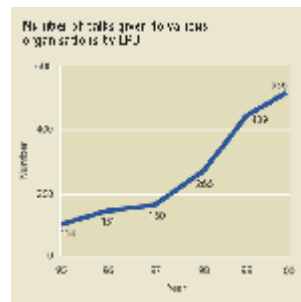
Environment Australia announced in 2000 they would improve cooperation. This resulted in an EPD official being invited to the Sydney 2000 Olympics to observe how the "green games" were being promoted.

## Community Support

GAINING COMMUNITY support has been, and remains, one of the greatest challenges of environmental protection work in the HKSAR. Over the years, we have worked with green groups and other community organisations to raise environmental awareness through a range of activities and programmes. The EPD's contribution includes giving talks and lectures; organising and running environmental education and awareness projects for schools, youths, corporations, government departments, other organisations and members of the public; serving as advisers and adjudicators of community environmental programmes; and advising community groups and environmental committees on corporate environmental strategies and environmental awareness programmes. We are also developing out-reach environmental education programmes at district level.



**Number of environmental awareness and education programmes organised**



**Number of talks given to various organisations by EPD**



**Environmental Protection Festival**

### The 2000 highlights include:

- The annual Hong Kong Environmental Protection Festival, which focused on waste reduction this year, and the annual World Environment Day, which focused on clean air.
- The Waste Recycling Campaign in Housing Estates, which grew from about 300 public and private housing estates in 1999 to 700 estates by the end of 2000. The campaign first started in March 1998 to encourage residents to separate paper, aluminium cans and plastic bottles for recycling.
- The School Waste Paper Separation and Recycling Pilot Scheme, which was launched in 100 schools in 1999 and extended to 411 schools, and another waste recycling scheme which was extended from nine tertiary institutes to 31 tertiary and vocational institutes in 2000.
- The first Green School Awards, which attracted more than 90 participants, and the second Hong Kong Eco-Business Awards, which saw participation double to 74 businesses in 2000. Both awards schemes aim to encourage better environmental management.
- The Schools Environmental Award Scheme and Student Environmental Protection Ambassador Scheme, which reached 520 schools and more than 8,000 students, up from 417 schools and 6,100 students in 1999. The schemes aim to cultivate a sense of

responsibility towards the environment among students. Environmental Protection Ambassador Schemes are also organised for more than 1,000 members of the Scouts, Girl Guides, Junior Police Call and other community-based groups, and in 2000 were extended to the elderly.

- The Environment and Conservation Fund, which handed out \$4.4 million for environmental education and community action projects. The fund is financed by equal contributions from the government and the private sector Woo Wheelock Green Fund.

Looking ahead, it is planned to introduce a Mobile Environmental Resource Centre in 2001, to expand the Waste Recycling Campaign in Housing Estates to 300 more estates and to expand the Student Environmental Protection Ambassador Scheme to 8,800 students, among many other initiatives.

## Public Access to Information

We place much emphasis on making environmental information widely available to the general public. We issue regular press releases, increasingly make use of the Internet and respond to enquiries from the public, media and others. Some examples of the information we release regularly include:

- Weekly reports on water quality at gazetted bathing beaches during the swimming season, which are issued through the Internet, newspapers and a hotline. An annual report on beach water quality is published before the commencement of the bathing season in March.
- An hourly Air Pollution Index which has been issued since July 1999 via the Internet, a telephone hotline and press releases to newspapers, radio and TV. API forecasts are available daily and carried by the media.
- Statistics on environmental prosecutions brought by the EPD, which are released to the news media on a monthly basis. Environmental Impact Assessments that are either in progress or completed are released quarterly.
- Monitoring data for rivers and streams and marine waters, which are published in separate annual reports and are also available on EPD's website.

In addition, we produced 31 publications in 2000 ranging from publicity and training materials to guidelines explaining our new services and initiatives.

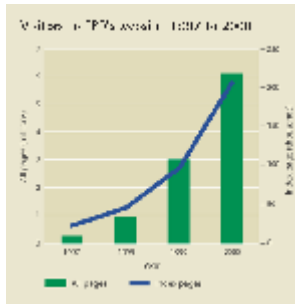


**EPD homepage**

Since 1996, our website <http://www.info.gov.hk/epd> has provided easy and instant access for the public to a wealth of information.

We also operate two Environmental Resource Centres in Wanchai and Tsuen Wan. These multi-media centres are open to the public for easy access to environmental information. A new mobile centre will come into operation in mid-2001.

We recognise the important role the media plays in disseminating environmental



**Visitors to EPD's website: 1997 to 2000**

messages, so in 2000 we organised media visits to our waste facilities and air quality monitoring laboratories to give journalists a first-hand look at the EPD's work. We also handled 6,970 press enquiries, issued 264 press releases, organised nine press conferences and briefings, and arranged 248 press interviews.

THE EPD EMPLOYS 1,100 professional and technical staff, making it the largest employer of environmental experts in the HKSAR. Our staff come from a wide variety of backgrounds, ranging from science, applied science and town planning to engineering, and many are active members of learned societies in their spheres of expertise. We contribute to the development of the environmental management profession in Hong Kong and elsewhere, by organising conferences, seminars and staff exchanges, providing advice, collaborating with researchers, continuously training staff and writing for outside publications.

The highlights of 2000 included:

- Co-organising the annual meeting of the International Association for Impact Assessment, which was attended by more than 500 delegates from 80 countries.
- Co-organising the International Solid Waste Association (ISWA) International Symposium and Exhibition on Waste Management in Asian Cities with the Hong Kong Waste Management Association. More than 400 participants from 30 countries and international organisations attended.
- Hosting the first regional training seminar of the Basel Convention, which aims to control illegal transboundary movements of hazardous waste. About 60 participants from 23 countries attended.
- Co-organising an international workshop on environmental law enforcement practices with Canada.
- Co-organising another 6 events including technical meetings and visits with our overseas counterparts and local and international environmental associations, which attracted some 360 local and overseas professionals.
- Collaborating with the Hong Kong University of Science & Technology and the City University of Hong Kong to evaluate the possible use of local marine organisms to help determine the toxicity of sediment. We also collaborated with the City University of Hong Kong and the University of Hong Kong to develop a rapid testing method for *E. coli* using the Polymerase Chain Reaction (PCR) technique.
- Producing 34 papers, which were published in professional journals or presented at conferences or workshops. The papers were written by EPD staff on various environmental issues.
- Continuing to serve on the fund-vetting committees of the Innovation and Technology Fund and the Environment and Conservation Fund, which help finance education and research projects in the environmental field.
- Providing training to our professional staff for an average 7.2 days each in 2000, which met our stated target. About 60% of the training sessions focused on environmental subjects and the rest covered management, safety, languages and computers. Our technical staff each recorded an average of 6.8 days of training in 2000, with more than 35% concerning environmental subjects.



**IAIA 2000 Conference**

## **Environmental Graduate Training Scheme**

More than 180 professional engineers in various fields now work in the EPD. But we are conscious of the need to train future generations of professional environmental engineers. In August 1997 we initiated a three-year Environmental Graduate Training Scheme. Nine engineering graduates have entered training under the department and three of them graduated in 2000.

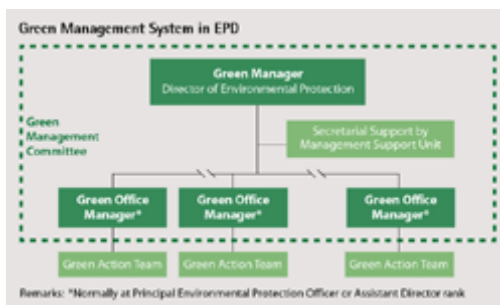
We will continue to invest in staff development in 2001.

## Environmental Management System

THE DIRECTOR OF THE EPD is our Green Manager and chairs the department's Green Management Committee (GMC), attended by office managers from our 13 offices. The GMC sets the policies for our internal environmental management. The GMC is supported by the Management Support Unit (MSU), which is responsible for developing, implementing and reviewing our green management system and practices department-wide. In each of the 13 offices, green practices are carried out by a Green Action Team comprising staff of various ranks. The Green Action Teams report to their respective office managers, who may bring matters up for discussion at the GMC as required.

All of our offices are required to conduct annual audits of their activities and report back to the MSU. The MSU checks these self-audits by doing its own audits of one office each month (including laboratories and field offices). If non-compliances are identified during these external audits, they are reported to the relevant Green Office Manager for follow-up action.

In 2000, 40 self-audits were carried out by the 13 offices, and 10 external audit checks were carried out by MSU. Only minor lapses in green housekeeping practices by individual staff were found.



**Green Management System in EPD**



**The ISO14001  
certificate for  
our WFBU**

## ISO 14001 Certification

We obtained certification of our Waste Facilities Business Unit (WFBU) in 2000 and we see it as an opportunity to not only continue to improve our environmental performance, but to set an example for other government departments and the private sector to do so.

The WFBU also requires contractors of new waste management facilities to obtain ISO 14001 EMS certification as part of the contractual arrangements.

For the rest of EPD, the environmental management system is modelled on that of ISO 14001. A gap analysis will be carried out in 2001 and improvements made as necessary to bring us as close to ISO 14001 standards as possible.

## Waste Facilities

THE EPD OVERSEES 29 waste facilities and we require our contractors to operate them to a high environmental standard, through both contractual requirements and statutory controls. The contractors must comply with all applicable environmental ordinances, regulations and emission conditions. Air, noise and wastewater emissions from these facilities must be monitored and this is supervised closely by EPD staff on site. Since 1989, we have included a provision in waste facilities contracts to deduct payment for non-compliance with environmental controls.

In 1999 tenderers for the new Northwest New Territories Refuse Transfer Station were required to develop and obtain ISO14001 EMS certification within 24 months of the contract being awarded. All new waste facilities contracts must have similar ISO certification.

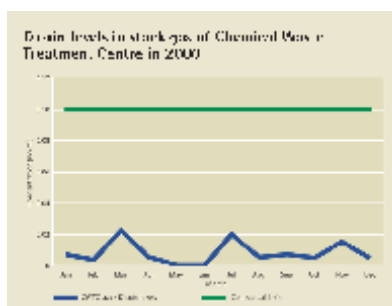
### Compliance Rate

In 2000, no environmental prosecution was taken against any of our waste management contractors. The contractors' overall compliance with the contractual environmental performance requirements remained at 99.9% as for last year. Nevertheless, each non-compliance was thoroughly investigated and remedial action instigated.

For example, the contractual limit for Total Suspended Particulates (TSP) was exceeded three times at the early stages of construction of one of the refuse transfer stations. The contractor was advised to revise its work plan to limit the extent of excavation and to improve site cleanliness. Generation of air-borne dust was reduced and the problem was remediated.

### Complaints

In 2000 there were five complaints received against our waste facilities. Complaints included gas emissions, fly nuisance, river bank erosion and indiscriminate waste disposal. All complaints were dealt with promptly.



**Dioxin levels in stack gas of Chemical Waste Treatment Centre in 2000**



**Landfill gas is used to generate electricity**

## Pollution Control Measures

### Landfills

All new landfills have gas extraction systems installed from the start, and old landfills are

being retrofitted. The boundaries of the landfills are monitored to ensure landfill gas does not escape. In 2000, an average 802,000 m<sup>3</sup> of landfill gas was collected daily, 44% of which is used to meet nearly all on-site energy consumption. To date, electricity generators with a total capacity of 7.4 MW have been installed at six landfills.

A construction and demolition (C&D) waste recycling plant has been operating on the Southeast New Territories (SENT) landfill since 1995, to sort and recycle any C&D waste delivered for beneficial reuse and to reduce the amount of waste taking up landfill space. At present the plant is recycling about 35,000 tonnes of C&D waste monthly, representing 14% of the total waste intake at the landfill.

### **Refuse Transfer Stations**

Refuse Transfer Stations (RTSs) help to reduce the environmental impact of transporting waste to landfills. Small refuse collection vehicles (RCV) deliver waste to the RTSs where it is transferred into bulk waste containers that are taken to landfills either by land or by sea. Each container can accommodate the equivalent of three to five RCV-loads. In 2000 some 1,000 RCV trips to landfills were eliminated each day. Bulk waste transfer, by sea in particular, has significantly reduced the traffic, noise and air emission problems that might otherwise be caused by directly hauling waste to landfills. An eighth RTS will be commissioned in the North West New Territories in late 2001.

The seven RTSs are mostly located in built-up areas. Ventilation systems and odour scrubbers are installed to remove offensive odours and dust from the exhaust air. The Island West RTS is located within a man-made cavern under Mount Davis which not only reduces its visual impact, but also takes up less land space.

### **Chemical Waste Treatment Centre**

Stack gas from the incineration system is scrubbed and a spray dry absorber, activated carbon injection and fabric filter baghouses are used to remove pollutants prior to release into the atmosphere. The gas is monitored continuously to ensure complete combustion and removal of air pollutants. In the event of any problem, waste feed to the incinerator is stopped automatically. The ambient air around the CWTC is monitored twice yearly and measurement of dioxins is carried out monthly. So far, all ambient air measurements are within the normal range. All process residues, including incineration ash, are chemically treated and confirmed to be stable by analysis before being sent to the SENT landfill for final disposal.

Environmentally friendly practices are encouraged by allowing the contractor to keep revenue generated from the sale of materials recovered from waste. The oil recovered from the oil/water waste of ocean-going vessels is sent to a local cement plant for use as a fuel, instead of being incinerated. The copper oxide recovered from waste etchant used by the electronics industry is sent to a smelter in the United States to recover the copper. In 2000, 7,840 tonnes of oil and 374 tonnes of copper oxide were recovered by the Centre.

### **Laboratories**

Our laboratories (air, chemical, water sciences and microbiological) are operated in a manner that minimises the impact on the environment and in compliance with the legal requirements and statutory licence conditions. In 2000, routine monitoring of the effluent discharge from our laboratories indicated 100% compliance. Annual monitoring of the emission of acid fumes from fume cupboards also indicated full compliance with preset limits.

## Field Work

To minimise the environmental impacts during our investigation work, only non-toxic dye is used to trace the source of pollution. Any chemicals used in field measurements and analysis are returned to the laboratories for proper disposal. Safety guidelines are issued to all field staff who are trained in the handling of hazardous materials.



**Emissions from the stack of CWTC are closely monitored**



**Emergency spill kit used in the laboratories**

## Emergency Response at EPD Facilities

The EPD has internal emergency response plans for our own operations, in particular our waste facilities and laboratories. For landfills, the plans cover predictable events such as the unavailability of certain landfills or refuse transfer stations due to power failure, as well as road blockages arising from traffic accidents, congestion, chemical waste spills, etc.

For the CWTC, two emergency drills were carried out in 2000. The first drill assumed a spillage of chemical waste on site, and the second drill assumed a spillage of MARPOL waste during its transfer from an ocean-going vessel to a collection barge. For our laboratories, no incidents were reported in 2000.

### Measures adopted to prevent pollution from the laboratories:

#### Legal measures:

All necessary licences and permits under the law (e.g. Water Pollution Control Ordinance (WPCO), Waste Disposal Ordinance (WDO), etc.) are obtained and the stipulated conditions are strictly adhered to

#### Air pollution:

Emissions from fume cupboards and safety cabinets, including those for asbestos, are scrubbed or filtered as required to remove pollutants before release into the atmosphere

#### Water pollution:

Most laboratory sinks are fitted with buffer tanks to prevent the accidental discharge of unsuitable substances into the sewers. Buffer tanks will be installed in the remaining two sinks by 2001. A sink used for handling asbestos is also fitted with a filter to

remove the asbestos from the waste water

**Monitoring:**

Emissions from fume cupboards and discharges from sinks are monitored regularly to ensure compliance with the required standards

**Hazardous waste:**

Chemical waste is properly disposed of by the CWTC contractor and biological waste is disinfected and disposed of in accordance with World Health Organisation guidelines. A licensed collector is engaged to deliver asbestos samples from the air laboratory to the SENT landfill for disposal

**Emergencies:**

Emergency spill kits are provided in all the laboratories and our staff are trained to deal with accidental spills. The general procedures for handling chemical spillage/leakage are documented in the laboratory environmental and safety manuals

**Audits:**

Environmental audits of the laboratories are carried out regularly by laboratory staff and supplemented with external audits by the EPD's Management Support Unit

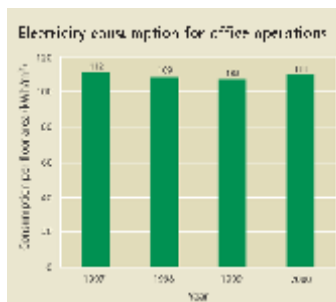
GREEN HOUSEKEEPING has always been a high priority in the EPD for two reasons. First, we want to conserve resources. But equally, we want to set a good example to others, including other government departments, and the community at large. We have adopted a number of environment-friendly measures in our offices and we expect all of our colleagues to practise them, regardless of rank.

Our first departmental green housekeeping guideline was issued in 1987 on the use of electricity. Later, we were the first government department to specify the use of recycled paper for all our publications. From 2000, we began using environmentally friendly printing ink in our publications. Since 1999, we have been using only photocopy paper with recycled content. We were also one of the first departments to utilise information technology to reduce paper consumption, as well as to enhance office efficiency.

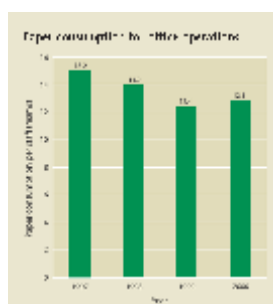
In 2000, we started investigating all major sources of paper and electrical consumption so that realistic reduction targets could be set in 2001. A 3% increase in paper consumption was found in 2000, when compared with 1999. While this slight increase is mainly attributed to an increase in workload, we are investigating further means of saving paper. Further reduction in paper is expected from the implementation of our electronic transaction and service delivery initiatives. We have also required that external parties submit software copies of reports to reduce paper consumption. In 2001 we planned to ask the Electrical and Mechanical Services Department to conduct an energy audit of the EPD floors in Southorn Centre to see what energy-saving measures could be adopted.



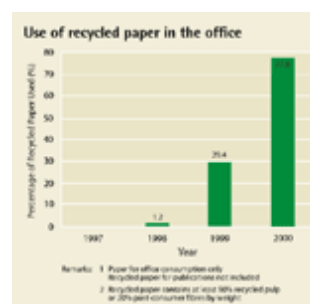
**A recycling corner in our office**



**Electricity consumption for office operations**



**Paper consumption for office operations**



**Use of recycled paper in the office**

## Office Environment

Indoor air quality surveys were conducted at the 10 main EPD offices by the Electrical & Mechanical Services Department between 1998 and 2000. The air quality in our offices generally complied with our indoor air quality guideline levels, but the levels of carbon dioxide and/or total viable count of microbial/biological contaminants exceeded the set

levels in some office areas. Improvements have been undertaken with the aim of gaining full compliance. To provide a better working environment for our staff, a no-smoking policy has been in place in all our offices since 1995. The ban has recently been extended to all departmental vehicles, in line with general government policy.

## **Office Transport**

Motor vehicle transport is by its nature polluting, so we have devised a number of ways to reduce our emissions and fuel consumption. For example, our Local Control Offices combine trips, thereby maximising the use of our departmental vehicles. Since 1999, we have joined the pooling system of government vehicles at Revenue Tower in Wanchai North to maximise the use of vehicles between departments. As a result of these measures, we have not had to purchase any new vehicles since 1996 even though our operations have increased.

None of our vehicles - mainly medium vans, saloons, and motorcycles - run on the more polluting diesel fuel. They use petrol instead. The only non-petrol vehicle is a saloon which runs on liquid petroleum gas (LPG). We have also initiated a non-idling policy for our vehicles in an effort to reduce air pollution.

In 1999 we began discussions with the Government Land Transport Agency (GLTA) to include environmental performance considerations in awarding contracts for hired vehicles, such as whether they emit black smoke, use petrol instead of diesel, or are installed with particulate traps and/or catalytic converters. As a result, a preferential clause was included in tender specifications for new contracts starting in 2000, indicating clearly to vehicle contractors our policy of requiring good environmental performance. Contract drivers are also required to switch off their engines when the vehicles are stationary.

We aim to improve our performance further and in 2001 we will devise plans to promote greater use of efficient and environmentally friendly means of transport in our internal operations.

## **Suppliers and Service Providers**

For out-sourced services, we require our service providers to adopt green measures as much as possible. For example, where hard copies are unavoidable, consultants are required to submit reports that are environmentally friendly, i.e. double-sided printing, simple binding, no excessive use of plastics, etc. The same goes for the production of the education packs used by our Community Relations Unit. Publicity souvenirs such as clips and rulers must be manufactured from recycled plastics.

For the new mobile Environmental Resource Centre, which will be delivered in 2001, the contractor who is fitting it out is required to install environmentally friendly features such as solar fans and energy-saving bulbs. The vehicle is also powered by the less polluting liquid petroleum gas.

To exert further influence on our contractors and suppliers, we began requiring them in 2000 to provide information on their environmental performance, such as whether they have obtained ISO 14001 certification, whether they avoid the use of hazardous materials in the manufacturing process and whether they will take back spent products such as batteries.

THE EPD INTRODUCED formal training in environmental management for our staff in 1997. New staff are briefed on green management, including our Environmental Policy, during their induction course. Full-day courses on environmental management and auditing are organised for new and existing staff, and by the end of 2000, 261 staff had attended at least one of these courses. In addition, environmental management systems training was provided to 212 staff in the Waste Facilities Business Unit for the unit's ISO 14001 certification in 2000. A feedback mechanism was incorporated into the training sessions to ensure their content and coverage met the requirements of our staff.

We continually try to raise staff awareness of environmental protection through departmental circulars, postings on Green Corner notice boards, direct e-mails, a green management corner on the departmental computer network, the staff newsletter EPD Life, our annual report Environment Hong Kong, this Environmental Performance Report and our Internet homepage.



**Visit to Mai Po shrimp farm organised by our staff committee**



**Our staff have easy access to environmental information at the green management corner on the departmental computer network**

A Green Action Team is in place in every office to ensure staff comply with good green office management practises. The team makes surprise inspections and sends friendly reminders to colleagues who forget to follow green office management practices.

Our colleagues are encouraged to contribute green ideas through a staff suggestion scheme. Winning proposals receive cash prizes and/or departmental commendations, resulting in some very innovative ideas being adopted. One winning suggestion in 2000 was to use old 5.25 inch floppy disk jackets to make albums for holding CD-ROM disks.

Our staff committee organises outings for staff and their families to participate in green activities outside the office. They have visited the Mai Po Nature Reserve, joined Dolphin Watch cruises, participated in tree planting programmes, supported No Plastic Bag Please signature campaigns and taken part in Ride Green days. We will continue to promote these kinds of green activities among our staff. In 2001, we intend to arrange visits to our waste facilities, laboratories and other facilities for staff. This will be particularly informative for administrative staff and their families, who are generally less familiar with EPD's work.

**Major Initiatives under EPD's Programmes:**

<b>Reporting areas</b>	<b>Targets for 2000</b>	<b>Progress in 2000</b>
Contribution to Strategic Decision-making	<ul style="list-style-type: none"> <li>To issue study briefs on Strategic Environmental Assessment (SEA) for a major planning proposal, Hong Kong 2030: Planning, Vision and Strategy, before the first quarter of 2001.</li> </ul>	Issued study briefs in October 2000. Instead of adopting a conventional demand-led approach, the SEA will investigate environmental resources and carrying capacities.
	<ul style="list-style-type: none"> <li>To complete the management of the strategic environmental assessment for the Second Railway Development Strategy in 2000 to provide adequate environmental information for public consultation and informed decision-making.</li> </ul>	Completed in May 2000.
Prevention and Mitigation through Environmental Impact Assessment	<ul style="list-style-type: none"> <li>To minimise the impacts on some 200,000 people from railway lines, roads, reclamation sites, etc. through the statutory EIA process, strategic environmental assessment and environmental planning studies in 2000.</li> </ul>	Processed 132 applications under the EIAO involving projects costing a total of over HK\$38 billion. Over 400,000 people will be protected.
Better Air Quality	<ul style="list-style-type: none"> <li>To start the LPG taxi incentive scheme in 2000.</li> </ul>	Started disbursement of one-off grants for replacing diesel taxis with LPG ones in August 2000.
	<ul style="list-style-type: none"> <li>To implement in 2000 a programme to retrofit pre-Euro light diesel vehicles with devices to reduce emission of particulates.</li> </ul>	Started retrofit programme in September 2000.
	<ul style="list-style-type: none"> <li>To conduct a trial of LPG and electric light buses in 2000.</li> </ul>	Launched trial in June 2000.
	<ul style="list-style-type: none"> <li>To retrofit diesel catalyts to heavy duty diesel vehicles in 2000.</li> </ul>	Conducted trial of diesel catalyts in 2000 with the aim of drafting specifications for the catalyts in 2001.
	<ul style="list-style-type: none"> <li>To increase the fixed penalty fines to \$1,000 for vehicles emitting black smoke.</li> </ul>	Increased penalty fine to \$1000 on 1 December 2000.
	<ul style="list-style-type: none"> <li>To expand the joint effort with the Police in 2000 to control smoky vehicles.</li> </ul>	Expanded joint effort with the Police starting October 2000.
	<ul style="list-style-type: none"> <li>To include an emission test in the roadworthiness inspection of petrol and LPG vehicles starting from</li> </ul>	Included emission test from November 2000.

2000.

- To extend the use of dynamometer in testing smoke from heavy duty vehicles in 2000  
Extended smoke test to heavy duty vehicles in December 2000.
- To introduce ultra-low sulphur diesel fuel for vehicles in 2000.  
Set a preferential duty for ultra-low sulphur diesel, which has been the only motor diesel supplied at local petrol filling stations since October 2000.
- To promote the Indoor Air Quality Certificate Scheme to improve indoor air quality in 2000.  
Started implementing the Indoor Air Quality Management Programme in government buildings in June 2000.
- To strengthen liaison with Guangdong authorities in tackling regional air pollution.  
Reached agreement on setting up two special panels to deal with regional air pollution matters during the August 2000 meeting of the Expert Group of the Joint Working Group on Sustainable Development and Environmental Protection.

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Environmentally Sound Waste Management and Facilities

- To facilitate local recycling activities through suitable support measures in 2000, e.g. land allocation under short-term tenancy agreements, the development of waste minimisation or recycling technology under the Demonstration Scheme (DEMOS) funding.  
Allocated four sites in Tai Po, Chai Wan, Yau Tong and Sheung Shui (with a total area of 16,380 m<sup>2</sup>) to waste paper, metal, plastics and rubber tyre recyclers, respectively.  
  
Launched the Demonstration Scheme (DEMOS) in December 2000.
- To develop plans for incorporating materials recovery/recycling facilities into the municipal solid waste management system.  
Produced the Draft Report on the strategic plan in December 2000.
- To commence development of a Waste Management Plan (2002 - 2021) in 2000.  
Completed a waste forecast and a review of technologies. Market driven recycling options were being examined.
- To continue preparations for implementing a charging scheme for the disposal of non-household waste at landfills.  
Revised charging framework based mainly on "waste producer pays" approach. The affected trade associations were consulted on the details of the revised scheme.
- To complete a review of alternative treatment technologies for clinical waste by the end of 2000.  
Completed review.
- To review the framework for  
On-going.

	assessing contaminated land in 2000.	
Better Water Quality	<ul style="list-style-type: none"> <li>▪ To set up an International Review Panel to review the remaining stages of the Strategic Sewage Disposal Scheme (SSDS/HATS) in 2000.</li> <li>▪ To complete the Environmental Impact Assessment for SSDS/HATS Stage II in 2000.</li> <li>▪ To progress with the review of Sewerage Master Plans and begin two new reviews in 2000.</li> <li>▪ To start consultation on the review of the Technical Memorandum to the Water Pollution Control Ordinance in 2000.</li> <li>▪ To complete our contribution to the State Oceanic Administration's 2nd National Marine Pollution Baseline Survey.</li> </ul>	<p>Completed. Report submitted in November 2000.</p> <p>Completed.</p> <p>Completed.</p> <p>Completed consultation.</p> <p>Completed.</p>
Quieter Environment	<ul style="list-style-type: none"> <li>▪ To review 130 planning schemes and strategic proposals to minimise noise problems for around 55,000 people in 2000.</li> <li>▪ To work with relevant departments to commence a trial scheme in urban areas to minimise traffic noise through traffic management in 2000.</li> <li>▪ To work with Territory Development Department and Highways Department on the provision of noise insulation to protect 500 dwellings near five new road projects in 2000.</li> </ul>	<p>Reviewed 230 planning schemes to benefit about 65,000 people.</p> <p>Implemented a trial scheme for banning heavy vehicles on West Kowloon Corridor during night-time.</p> <p>Provided noise insulation to some 470 dwellings in three new road projects.</p>
Waste Facilities and Landfill Restoration	<ul style="list-style-type: none"> <li>▪ To invite private sector participation in 2000 to develop facilities for composting of organic waste.</li> <li>▪ To complete upgrading of the Interim Grease Trap Waste Treatment Facility at the Western New Territories Landfill to handle the increasing intake of grease trap</li> </ul>	<p>Sought views and information from interested parties in December. Began preparatory work for developing a composting plant.</p> <p>Completed upgrading in October.</p>

waste in 2000.

- To complete restoration work at five landfills located at Northwest New Territories, Gin Drinkers Bay and Ngau Chi Wan in 2000. Completed all works.

Building Partnerships	<ul style="list-style-type: none"> <li>▪ To carry out programmes on the Work Plan for 2000 with the Canadian Government.</li> </ul>	Completed.
Environmental Awareness and Education	<ul style="list-style-type: none"> <li>▪ To organise 120 environmental awareness and education programmes with 1,600 green groups, schools and community groups; to deliver 400 environmental talks; and arrange 330 guided visits to the Visitors Centre and Environmental Resource Centres in 2000.</li> <li>▪ To conduct three environmental education training workshops for 150 primary teachers in 2000-2001.</li> <li>▪ To extend Phase IV of the Waste Recycling Campaign in Housing Estates for 2000-2001 to 300 additional housing estates.</li> <li>▪ To invite 500 schools and 8,000 students to join the Student Environmental Protection Ambassador Scheme.</li> <li>▪ To train 1,000 members from the community groups to be environmental ambassadors by the end of 2000-2001.</li> </ul>	<p>Organised 137 environmental awareness and education programmes with 1,923 green groups, schools and community groups; delivered 536 talks; and arranged 378 guided visits.</p> <p>Conducted four workshops for 150 primary teachers in 2000-2001. In addition, conducted a workshop on environmental management in schools for 44 primary teachers.</p> <p>Extended Phase IV of the Campaign for 2000-2001 to more than 400 additional housing estates.</p> <p>In school year 2000-2001, 520 schools with over 8,000 students participated in the Scheme.</p> <p>Trained over 1,000 environmental ambassadors in 2000-2001.</p>
Contribution to Sustainable Development	<ul style="list-style-type: none"> <li>▪ To complete the management of a territory-wide Environmental Baseline Study for SUSDEV21 for public dissemination in early 2001.</li> <li>▪ To improve the help desk service to provide specific advice and assistance to government departments on the preparation of environmental reports in 2000.</li> </ul>	<p>Completed in August 2000.</p> <p>Provided advice and assistance to more than 100 users from 38 government departments and bureaux. By the end of 2000, 74 departments and bureaux had produced their first reports.</p>

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Emergency Response	To run at least one territory-wide emergency drill with other government departments in 2000-2001.	Conducted one oil spill emergency drill with Marine Department and six other emergency drills (one at each LCO).
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### Initiatives to Strengthen the Environmental Performance of Our Internal Operations:

Reporting areas	Targets for 2000	Progress in 2000
Corporate Environmental Management	<ul style="list-style-type: none"> <li>To obtain ISO 14001 certification for the Waste Facilities Business Unit in 2000.</li> </ul>	Obtained ISO 14001 certification in September 2000.
	<ul style="list-style-type: none"> <li>Each Green Action Team at the 13 EPD offices to carry out at least one self-audit on their green management practices in 2000.</li> </ul>	Completed.
	<ul style="list-style-type: none"> <li>To complete departmental green management audits on at least 10 EPD offices.</li> </ul>	Completed.
Reduction of Pollution and Hazards	<ul style="list-style-type: none"> <li>To continue the close supervision of our waste facilities contractors aiming for 100% compliance with both the legal and contractual environmental requirements.</li> </ul>	Achieved a compliance rate of 99.9%.
	<ul style="list-style-type: none"> <li>To achieve 100% compliance with the legal and departmental environmental requirements in our laboratories and field operations.</li> </ul>	Achieved.
Greener Office	<ul style="list-style-type: none"> <li>To keep the consumption of paper and electricity at 1999 levels.</li> </ul>	Found paper consumption in 2000 to be 3% above that of 1999.
	<ul style="list-style-type: none"> <li>To conduct a survey on the major sources of paper and electricity consumption in 2000 and set reduction targets for 2001.</li> </ul>	Completed survey and are now analysing the data.
	<ul style="list-style-type: none"> <li>To introduce Phase I of the electronic workflow project in 2000 to reduce paper-based transactions in our offices.</li> </ul>	Implemented Phase I.
	<ul style="list-style-type: none"> <li>To minimise the number of hard copies of reports submitted to EPD by also requiring the submission of electronic versions in 2000.</li> </ul>	Require electronic versions of reports now.
Greener	<ul style="list-style-type: none"> <li>To devise internal Green Transport</li> </ul>	Started work.

Transport	Plans for our operations to promote greater use of efficient and environmentally friendly means of transport by 2001.	
Greener Contractors and Suppliers	<ul style="list-style-type: none"> <li>▪ To require contractors of the two new waste management facilities to obtain ISO 14001 Environmental Management System certification within two years of contract award.</li> <li>▪ To develop jointly with the Government Supplies Department environmentally responsible product specifications for 31 common items in use government-wide in 2000.</li> <li>▪ To introduce a requirement to supply environmental information on products and services out-sourced from contractors and suppliers in 2000.</li> </ul>	<p>Have incorporated ISO 14001 requirement into contracts.</p> <p>Completed.</p> <p>Introduced requirement for some products where applicable.</p>
Staff Awareness, Training and Participation	<ul style="list-style-type: none"> <li>▪ To provide awareness training on Environmental Management System to WFBU staff in 2000 for preparation of ISO 14001 certification.</li> <li>▪ To convert the Green Management Corner to the new departmental computer platform to facilitate greater access by all staff in 2000.</li> <li>▪ To mobilise each division to organise at least one activity in 2000 to enhance staff awareness about environmental and green management issues.</li> </ul>	<p>Provided awareness training to 212 staff and implementation training to 36 staff in 2000.</p> <p>Completed conversion.</p> <p>Organised several green activities for staff.</p>

## Major initiatives under EPD's Programmes:

### Reporting areas    Targets for 2001

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| Contribution to Strategic Decision-making | <ul style="list-style-type: none"> <li>▪ To manage the SEA for Hong Kong 2030: Planning, Vision and Strategy in order to ensure environmental considerations are fully integrated in the long-term strategic planning of Hong Kong.</li> <li>▪ To continue promoting the application of SEAs to major government policies and proposals which might have major environmental implications.</li> <li>▪ To provide environmental information to the future Sustainable Development Unit to update and manage the environmental database of the Sustainable Development System developed under SUSDEV21.</li> <li>▪ To issue guidance material and conduct seminars for the private sector to encourage them to go further in environmental performance reporting.</li> </ul> |
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| Prevention and Mitigation through Environmental Impact Assessment | <ul style="list-style-type: none"> <li>▪ To allow public access to environmental monitoring and audit information of major development projects through the Internet by 2001.</li> </ul> |
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| Better Air Quality | <ul style="list-style-type: none"> <li>▪ To require all newly registered taxis to use LPG fuel from 2001.</li> <li>▪ To draw up a specification on catalytic converters suitable for pre-Euro standard diesel vehicles over 4 tonnes and to implement a large-scale retrofit programme.</li> <li>▪ To start introducing the Euro III emission standards for newly registered vehicles in 2001.</li> <li>▪ To complete the trial of LPG and electric light buses in early 2001.</li> <li>▪ To work out a proposal to phase out diesel light buses in favour of clean alternatives.</li> <li>▪ To put forward a proposal to make the installation of a particulate removal device a requirement for the licence renewal of pre-Euro standard diesel vehicles up to 4 tonnes.</li> <li>▪ To introduce a regulation for controlling perchloroethylene emissions from dry cleaning facilities.</li> <li>▪ To open the Indoor Air Quality (IAQ) Information Centre in early 2001 and launch the voluntary certification programme for IAQ.</li> <li>▪ To examine possible improvement measures on regional air pollution with the Guangdong authorities.</li> </ul> |
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| Quieter Environment | <ul style="list-style-type: none"> <li>▪ To complete a review on the control on daytime construction noise.</li> <li>▪ To review 200 planning schemes and strategic proposals to minimise noise problems for around 57,000 people in 2001.</li> <li>▪ To expand the Noise Control Designated Areas in the territory which are subject to tighter construction noise control in 2001.</li> <li>▪ To tighten the noise standards for motor vehicles in 2001.</li> <li>▪ To commence a retrofitting programme to address noise impacts of existing roads by implementing engineering solutions with barriers and enclosures, and resurfacing with low noise materials from 2002.</li> </ul> |
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Better Water Quality	<ul style="list-style-type: none"> <li>▪ To commence preparation work for the HKSAR's participation in China's National Marine Environment Monitoring Network.</li> <li>▪ To initiate studies and trials recommended by the International Review Panel on the Harbour Area Treatment Scheme.</li> <li>▪ To finalise the amendment proposals to the Technical Memorandum on Effluent Standards.</li> <li>▪ To finalise the legislative amendment proposals to the Water Pollution Control Ordinance.</li> </ul>
Environmentally-Sound Waste Management and Facilities	<ul style="list-style-type: none"> <li>▪ To review the Waste Disposal Ordinance with special emphasis on tackling illegal disposal and enhancing waste reduction initiatives.</li> <li>▪ To examine the feasibility of developing materials recovery/recycling facilities at the identified potential sites in 2001.</li> <li>▪ To commission the Northwest New Territories Refuse Transfer Station in 2001.</li> <li>▪ To complete strategic environmental assessments on expanding existing landfills and on potential sites for new waste disposal facilities in 2001.</li> <li>▪ To complete a study on the development of bulk waste reduction facilities in 2001.</li> <li>▪ To implement on-going and new initiatives under the Waste Reduction Framework Plan.</li> <li>▪ To firm up the implementation arrangements of the landfill charging scheme and to develop the associated legislative framework.</li> </ul>
Effective Enforcement and Emergency Response	<ul style="list-style-type: none"> <li>▪ To set up a Central Prosecution Section in 2001.</li> <li>▪ To set up an Emergency Response Information Database centrally in Local Control Division in 2001.</li> <li>▪ To conduct a seminar by early 2001 to share our experience with local and overseas experts.</li> </ul>
Building Partnerships	<ul style="list-style-type: none"> <li>▪ To organise an International Workshop on Handling of Emergency Incidents with the Canadian Government in 2001.</li> <li>▪ To promote environmental compliance in the construction industry through enhancing the communication with the management of major projects.</li> </ul>
Environmental Awareness and Education	<ul style="list-style-type: none"> <li>▪ To implement Phase V of the Waste Recycling Campaign in Housing Estates for 2001-2002 to allow 300 additional housing estates to participate.</li> <li>▪ To invite 580 schools and over 8,800 students to join the Student Environmental Protection Ambassador Scheme in 2001-02.</li> <li>▪ To conduct 90 training workshops to train 1,800 stakeholders to be green leaders in 2001-02.</li> <li>▪ To conduct four environmental education training workshops for 150 primary teachers in 2001-2002.</li> <li>▪ To extend the Waste Separation and Recycling Scheme in Schools to allow 400 additional schools to participate.</li> <li>▪ To open a new Mobile Environmental Resource Centre and arrange 50 visits for the community in 2001-02.</li> </ul>

## Initiatives to Strengthen the Environmental Performance of Our Internal Operations:

### Reporting areas Targets for 2000

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| Corporate Environmental Management | <ul style="list-style-type: none"> <li>▪ To ensure each Green Action Team at the 13 EPD offices carries out at least one self-audit on their green management practices in 2001.</li> <li>▪ To complete departmental green management audits on at least ten EPD offices in 2001.</li> <li>▪ To carry out a gap analysis of our environmental management system and ISO 14001 in 2001.</li> </ul> |
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| Minimising Impacts of Our Operations | <ul style="list-style-type: none"> <li>▪ To continue the close supervision of our waste facilities contractors aiming for 100% compliance with both the legal and contractual environmental requirements.</li> <li>▪ To achieve 100% compliance with the legal and departmental environmental requirements in our laboratories and field operations.</li> </ul> |
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| Greener Office | <ul style="list-style-type: none"> <li>▪ To set reduction targets for paper and electricity consumption in 2001.</li> <li>▪ To implement energy saving measures in our offices at Southorn Centre.</li> <li>▪ To continue to devise internal Green Transport Plans for our operations to promote greater use of efficient and environmentally friendly means of transport by 2001.</li> <li>▪ To continue with the requirement to supply environmental information on products and services out-sourced from contractors and suppliers in 2001.</li> <li>▪ To reduce the printing of departmental publications (e.g. EHK and EPR) by making greater use of CD-ROMs and dissemination through the Internet.</li> <li>▪ To reduce the use of paper by carrying out more office transactions through the departmental computer network, e.g. information sharing, archiving of documents, purchase requisition, etc.</li> </ul> |
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| Staff Awareness, Training and Participation | <ul style="list-style-type: none"> <li>▪ To organise more training opportunities for our staff.</li> </ul> |
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## Verification Statement

### Purpose of the verification

Hong Kong Productivity Council (HKPC) was commissioned by the Environmental Protection Department (EPD) in April 2001, to verify EPD's Environmental Performance Report 2001 (EPR). The purpose of the verification is to provide independent and third party assessment as to the completeness and accuracy of the EPR. The collation and presentation of data in the Report is the responsibility of EPD. HKPC was not involved in any aspect of the preparation or drafting of the EPR.

### Scope of the verification

The verification focussed on the following four main areas of the EPR:-

- **EPD's Contribution to the Environment**

- a) Verification of the 7 programme areas: viz waste and waste facilities, air, noise, community relations, water, environmental assessment and planning
- b) Legal Enforcement
- c) Community Awareness & Partnerships
- d) Emergency Response

- **Impact of EPD's Operations**

- a) Legal Compliance & Handling of Complaints
- b) Staff Training/Personal Development
- c) Contract Management of Facilities
- d) Laboratory and Office activities

- **Compliance with the Environmental Policy**

- **Target Setting and Achievements**

As part of the verification we have reviewed organisation structures, systems and mechanisms that would be necessary to facilitate the reporting process. We have also sought assurance and evidence that the data and information presented in the EPR has been recorded and analysed in an appropriate and accurate fashion.

The verification process itself involved review and analysis of relevant documents and data and interviews with the associated EPD staff. Verification was based upon information and data in the report pertaining to the calendar year 2000 only. Therefore any information relating to planned activities for the year 2001 was not verified, even if the

activities were reported as being undertaken in early 2001.

### **Data verification and accuracy of the EPR**

In our opinion the data presented in the EPR provides an accurate account of EPD's approach to environmental management, in terms of the Department's contribution to the environment through its policy, planning and enforcement activities; as well as the control/minimisation of potential impacts arising from the operation of its laboratories, offices and contract management processes. EPD's systems used to collect, maintain and analyse the data were also found to be effective.

Broad statements based on specific data are included in the EPR. While these statements as well as the data were verified to be correct, it is considered that more specific 'qualification' statements could provide further clarification of the reported issues.

### **Verification of the completeness of the EPR**

In our opinion EPD has presented a comprehensive, fair and balanced disclosure of information on the Department's environmental performance in this second EPR. The EPR covered all of EPD's main environmental aspects including all seven programme areas, legal enforcement activities and compliance, awareness programmes, emergency issues, staff training and development, and is considered to be comprehensive.

Targets for the year 2000 have been accurately reported, clearly indicating that EPD has substantially achieved the targets set for itself for the year 2000. In addition realistic targets have been established during this reporting period for the year 2001.

### **Comments and recommendations for future Reports**

During the verification process we have made a number of observations from which we have formulated the following recommendations for EPD's consideration in the preparation of future Environmental Performance Reports.

In future reports it is suggested that EPD could provide further details of some of the issues and initiatives documented in the report. For example, in some cases the reasons for participation in and undertaking of studies and how the results may be used could be expanded upon. This would provide readers with greater appreciation of the implications and the context of the reported information.

In terms of coverage, the comprehensiveness of the Report is commendable. It is suggested that EPD considers including more information on sustainability in future reports, to further explain how the Department's work contributes to sustainable development in Hong Kong.

Compared with the status of Environmental Reporting internationally, EPD is one of the few Government Departments that publishes an annual Environmental Report that goes beyond the state of the environment and focuses specifically on Departmental environmental performance in terms of the stipulated policies and activities. EPR 2001 follows the same format as the first Report - EPR 2000 and has continued logically where the previous EPR ended. These efforts by the Department are commended and EPD is further encouraged to increase stakeholder involvement during preparation of future

reports to:

- ensure that transparency of EPD's policies and activities continues;
- ensure that the reports continue to focus on issues of concern to the local community;  
and
- maintain the readers' interest and enhance readability of the reports.



Date: 28 June 2001

C M Lin  
General Manager  
Environmental Management Division  
Hong Kong Productivity Council

**Environmental Protection Department's  
ENVIRONMENTAL PERFORMANCE REPORT 2001**

**Feedback Form**

We would welcome your valuable feedback on Environmental Protection Department's **Environmental Performance Report 2001** (the Report), which would be most useful for improving our report in the coming year. Please complete this form and post it back to us on the address overleaf or fax to **2834 8845**. You may also send any comments by email to: **enquiry@epd.gov.hk**. Thank you.

1. **How did you find out about the Report?**

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2. **Did you find the Report informative?**

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3. **Did you find the information presented in an easily understandable way?**

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4. **Which information did you find particularly useful?**

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5. **Which aspect(s) of the Report would you like more information on?**

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6. **How can we improve the Report?**

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7. **Other comments and suggestions:**

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8. **Please specify your background** (general public, green group, professional/academic, other government department/organisation, etc.)

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Name: _____ Telephone: _____
Address: _____
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STAMP

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130 Hennessy Road  
Wan Chai  
Hong Kong

