



Waste Reduction Committee
減少廢物委員會

31 December 2000

Advisory Council of the Environment
10/F Citibank Tower
3 Garden Road
Centrl
Hong Kong

Dear Chairman and Members,

2000 Review

The 2000 Review of the Waste Reduction Framework Plan is attached for your information.

I believe we have made real progress in 2000 on our waste reduction programme but at the same time, I sense our problems are increasing at a rate greater than this progress.

In 1999 Hong Kong produced 1.09 kg of domestic waste per person per day which required disposal and this is the same as New South Wales, Australia in 1998 and about 21% greater than Singapore (0.9 kg/person/day in 1999).

In view of the foregoing I would like to take this opportunity to share with you my views on some of the critical problems facing Hong Kong's solid waste management programme, and outline some of the very difficult decisions we need to make.

1. In my view the community remains largely ignorant of the problems facing Hong Kong's solid waste management programme. There is no sense of urgency because domestic, industrial, commercial and construction wastes are generally removed quite efficiently from the public's sight. The fact that the landfills are being exhausted is an academic problem to most of our population and it may take a crisis, similar to the situation which developed with our air quality in early 1999, to achieve a consensus on the way forward.

A major task for the Committee and the Administration is to inject a sense of urgency and awareness into the community about our growing waste problem.

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2. The problem of construction and demolition waste is becoming acute and if not dealt with urgently it will severely damage our strategic landfill capacity. The Committee's Waste Reduction Task Force for the Construction Industry has advised me that the trend line for public fill is showing signs of an upswing in material requiring disposal. If this continues we are likely to begin having to send public fill to the landfills in the very near future. The financial implications of this are likely to be severe but not without precedent - in February 1997 the Audit Department commented critically on the additional costs to Government of disposing construction waste to landfill.

Whilst the emphasis must be on reduction and recycling there is an urgent need to develop suitable strategic public filling areas both within and outside of Hong Kong.

3. Hong Kong is increasingly unique in its absence of a charging regime for our landfills. Without this there is no incentive to reduce or recycle - indeed the opposite is true since the disposal facility is free.

The Chief Executive noted in his 1999 Policy Address that charging would be introduced, and whilst I accept any form of charging is a sensitive issue in Hong Kong I urge the Administration to prepare the necessary legislation to ensure the charge is in place by the end of 2001 at the latest. I believe this charge should be applied to all wastes, including domestic.

4. You will note from the 2000 Review, and indeed the Chief Executive's 2000 policy address, that there is an increasingly emphasis on recovery and recycling. I would, however, caution that these do not necessarily mean the same thing, i.e., we may in future find, as other countries have, that material recovered from source separation cannot be recycled in an economic fashion.

Recycling is an integral part of our integrated waste management program but it is **not** a panacea for our problems.

5. It is my personal view that even with an aggressive 3R program, Hong Kong will need some form of bulk waste reduction programme which may involve incineration. Whilst I realise this is an extremely sensitive matter, the long lead time required for some of the technical solutions involved in bulk waste reduction means that difficult decisions will need to be made in the near future.



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Accordingly I believe the Administration should outline to the Community, as soon as practicable, the options which are available for bulk waste reduction.

I would close by thanking my colleagues on the Committee and its Task Forces for their hard work. I would also thank EPD, in particularly Mr. John Rockey and Dr. Ellen Chan for their continued support.

Yours faithfully,

Barrie Cook
Chairman
Waste Reduction Committee
Government of the Hong Kong
Special Administrative Region

BC/qw

2000 Review - Waste Reduction Framework Plan

OVERVIEW

In December 1998, the Advisory Council on the Environment (ACE) members were briefed on the objectives of the Waste Reduction Framework Plan (WRFP) which was launched on 5 November 1998 and the formation of the Waste Reduction Committee (WRC) to spearhead its implementation. Subsequently, the WRC was established in February 1999. It has been agreed that the WRC will provide an annual report to ACE on the implementation progress of the WRFP. In January 2000, the WRC submitted its first Annual Review of the WRFP to ACE. The ACE members were pleased to note the progress of waste reduction initiatives in different sectors, in particular the source separation schemes in the housing sector. Members also expressed the need to implement landfill charging as an incentive for waste reduction and recycling. With another year of efforts, we would like to inform the ACE members the main progress achieved so far.

2. In 2000, a new waste reduction task force for the recycling trade was set up to promote waste reduction initiatives within the recycling industry. Four more sites with a total area of 16,380 m² were successfully allocated to waste recyclers under short term tenancy. The Buildings (Amendment) Ordinance 2000, which requires mandatory provision of space for separation of waste and material recovery in all new building developments, came into effect on 1 November 2000. An Inter-departmental Working Group on Waste Recycling chaired by the Environment and Food Bureau was formed in June 2000 to co-ordinate waste reduction efforts on domestic waste separation and recycling amongst all relevant bureaux and departments.

3. The problem of construction and demolition material is becoming substantially worse. In addition to the shortage of public fill capacity, the trend line in the generation of public fill, which has been linear to date, is showing signs of upswing in materials requiring disposal. There are also upcoming projects that will generate more than 21 million cubic metres of rock and soft materials between mid 2001 and end 2005. We need to develop urgently strategic public filling areas to avoid sending public fill to landfills as soon as mid 2001.

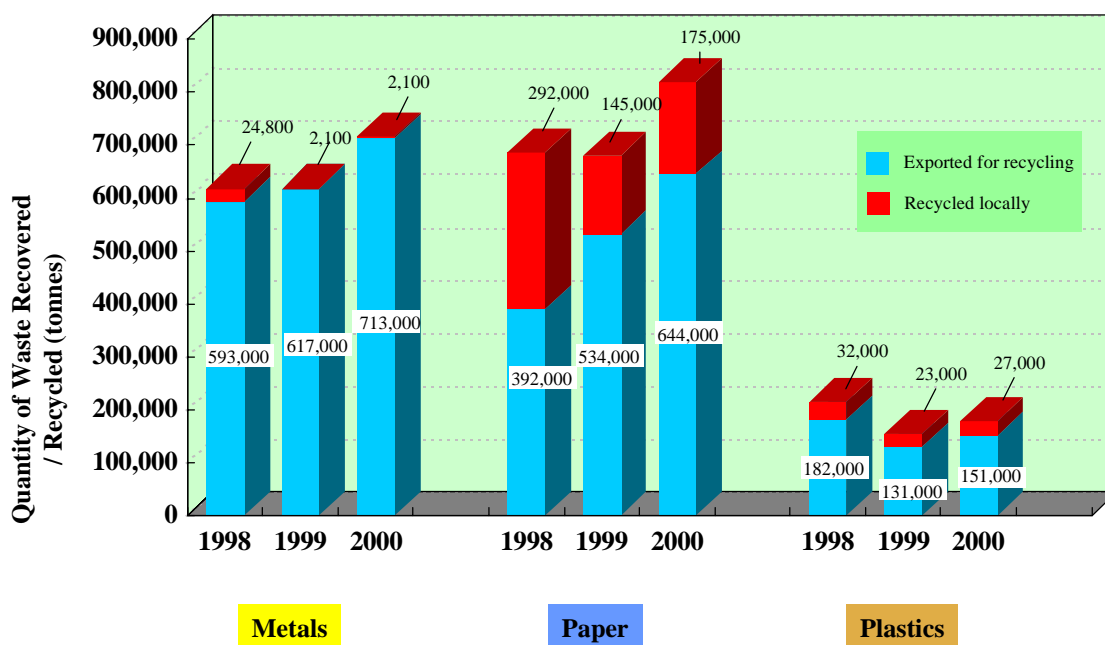
4. The affluence of Hong Kong citizens has exerted a great pressure on solid waste arisings in Hong Kong. With the launching of a series of waste reduction programmes as scheduled in the WRFP, considerable progress has been made to address the pressing needs of waste reduction and to increase community awareness. The following presented the disposal and recovery figures in the form of tables and charts for easy reference.

Table 1 –Quantities of solid waste disposed of at landfills and inert construction & demolition (C&D) material at public filling areas (in tonnes per annum) (1998 - 2000)

Disposal Outlet	Landfills				Public Filling Areas
Waste Type	Municipal Solid Waste	C&D Waste	Special Waste	Total Solid Waste Landfilled	Inert C&D Material Reused in Land Reclamation
1998	3,187,000	2,567,000	290,000	6,044,000	9,374,000
1999	3,383,000	2,882,000	321,000	6,586,000	10,665,000
2000	3,404,000	2,730,000	398,000	6,531,400	11,028,000

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

Figure 1 – A summary of recovery figures of major recyclable materials (1998 - 2000)



Notes:

- Exported figures are provided by Census and Statistics Department.
- Local recycling figures for 2000 are provisional only and are calculated with reference to the proportions between export and local recycling of the 1999 data.

PROGRAMME PROGRESS REVIEW

Prevention of Waste Programme

5. This programme focuses on reducing the amount of waste generated at source and on increasing the amount of waste material that is recovered, recycled or reused. Specific tasks and progress achieved in 2000 are summarised below:

5.1 Waste Separation/Recovery Schemes

In the past year, the Inter-departmental Working Group on Waste Recycling has made good progress towards setting up waste separation bins in public areas. Waste recovery programmes have been extended to about 600 sets in public amenity areas and Government office buildings. A summary of achievements and planned actions by each department is shown in **Table 2** below.

Table 2 – Waste Separation and Collection in Public Areas

Departments	Achievements	Planned Actions
Food & Environmental Hygiene Department (FEHD)	<ul style="list-style-type: none"> Waste separation bins for paper, aluminium cans and plastic bottles have been set up at 147 public places (e.g. refuse collection points, streets, bus terminals) 	<ul style="list-style-type: none"> Consider to further set up 401 new collection points in public places.
Leisure & Cultural Services Department (LCSD)	<ul style="list-style-type: none"> Waste separation bins have been set up at 52 leisure venues 	<ul style="list-style-type: none"> Consider to provide waste recovery facilities at cultural venues (about 12 sites in number e.g. Cultural Centre etc.) by 2000/2001 To extend waste recovery facilities to 500 leisure venues by 2000/2001
Agriculture, Fisheries & Conservation Department (AFCD)	<ul style="list-style-type: none"> Waste separation bins have been set up at over 100 sites in country parks (305 sets of bins for aluminium cans, plastic bottles and BBQ forks) 	<ul style="list-style-type: none"> To further install 200 sets by end of June 2001
Government Property Agency (GPA)	<ul style="list-style-type: none"> Waste recovery programmes set up in 31 government joint-user office buildings for paper, aluminium cans and plastic bottles All 81 government quarters have waste recovery programmes for paper, aluminium cans and plastic bottles 	<ul style="list-style-type: none"> To extend waste recovery programmes to the remaining 11 office buildings in 2001/2002 To examine the feasibility of setting up waste separation bins on each floor office buildings as appropriate

5.2 Landfill Charging Schemes

Following meetings with relevant parties including associations of waste haulers,

cleansing companies, property management companies and contractors, a revised charging framework based mainly on “waste producer pays” approach has been developed and the details of the scheme are being worked out.






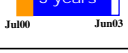

EPD and EFB are consulting the affected trade associations on the details and trying to address their concerns. Subject to the outcome, legislative arrangement for landfill charging will be initiated in 2001.




5.3 Land Allocation

In 2000, four sites under short term tenancy located in Tai Po, Chai Wan, Yau Tong and Sheung Shui (with a total area of 16,380 m²) were allocated to waste paper, metal, plastics and rubber tyre recyclers respectively. The quantities of materials processed each month at these sites were about 1,800 tonnes of paper, 3,850 tonnes of metals, 200 tonnes of scrap tyre crumbs and 200 tonnes of plastics respectively. Tendering of another two sites in Tai Po and one site in Cheung Chau under short term tenancy will be open to the recycling trade in early 2001. A summary of the sites allocated so far is shown in **Table 3**.

Although the short term tenancy arrangement is helping some waste recyclers, there is also a great demand of more long-term land for the expansion of existing waste recyclers as well as setting up of new recycling operations. We have examined all the 13 closed landfill sites in Hong Kong. It has been identified that the Pillar Point Valley Landfill, Ma Yau Tong Central Landfill, Tseung Kwan O Stage II/III Landfill and Siu Lang Shui Landfill with a total platform area of around 8 hectares have the potential to accommodate waste recycling activities. In-principle approval has been obtained from the Committee on Planning and Land Development for the inclusion of materials recycling activities as a possible afteruse of these 4 landfill sites subject to further studies. Apart from old landfill sites, the development of recycling estate/park with the provision of basic infrastructure at other potential sites such as existing or future industrial land is also being considered for further investigation.

Table 3 – Sites allocated to recycling industry since 1998

Site	Area	Annual Rent (HK\$/year)	Tenant	Term	Major Types of Recyclables Collected	Average Monthly Throughput	Lease Period
Sheung Shui Area 30A	16,000 m ²	642,000	Cheung Shing Scrap Metals Recycling Ltd.	3 years certain and thereafter quarterly	Metal	4,500 tonnes	
Kai Tak Main Fire Station	15,100 m ²	10,000	Hong Kong General Association of Recycling Business	3 years certain and thereafter quarterly	Paper, metal	Paper: 5,000 tonnes Metal: 800 tonnes	
Kai Tak Old Fire Station	3,900 m ²	864,000	Wai Hung Metal Ltd.	1 year certain and thereafter quarterly	Metal	300 tonnes	
Tai Po Industrial Estate	4,980 m ²	51,000	Jets Technics Ltd.	3 years certain and thereafter quarterly	Scrap tyre chips, plastic	Tyre chips and old playground mat: 200 tonnes Plastic: 50 tonnes	
Chong Fu Road, Chai Wan	2,530 m ²	600,000	Future's Safe Company Ltd.	1 year certain and thereafter quarterly	Paper	Paper: 1,800 tonnes	
Yan Yue Wai, Yau Tong	2,100 m ²	364,000	Xun Xiang Metalware Co. Ltd.	3 years certain and thereafter quarterly	Metal, paper	Metal: 2,000 tonnes	
Chi Wa Lane, Sheung Shui	6,770 m ²	132,000	Yuen Hing Godown Co. Ltd.	2 years certain and thereafter quarterly	Metal	Metal: 1,850 tonnes Plastic: 150 tonnes	

 Lease period already lapsed
  Remaining lease period
  Lease period renewable on a quarterly basis

5.4 Materials Recovery and Recycling Studies

The consultancy study to formulate a strategic plan for incorporating materials recycling facilities into our waste management system was substantially completed in late 2000. In addition to the tasks completed in 1999, the consultants have examined various support measures, carried out economic and financial analyses and set out various institutional arrangements for the provision of the facilities. The consultants also studied the approach to increasing materials recovery through the spare/expanded capacity of the recycling industry and provision of government's financial support, in particular, on collection and delivery of recovered materials. Based on this approach, a range of pilot schemes which could be put in place reasonably easily and quickly has been recommended in parallel with the implementation of the overall strategic plan. The proposed pilot schemes include trials on collection of source-separated materials, plastic bottles and co-mingled recyclables, small scale automatic composting of organic waste, floor to floor collection of recyclables, use of waste glass in cement production and construction work, and recycling of plastic foams.

5.5 Producer Responsibility Scheme

EPD has been working with relevant sectors to reduce packaging wastes.

- To reduce the use of plastic bags, EPD commissioned the Conservancy Association (CA) in early 2000 to organise a "No plastic bag, please" Campaign. CA had solicited the support of the newspaper vendors and convenience chain stores to encourage the public to reduce the use of newspaper plastic bags. Some newspaper vendors have estimated that they were able to reduce the distribution of plastic bags by around 10-30%. In 2001, the programme would be extended to supermarkets, the retail sector and also wet markets.

- EPD launched the “Testing Guideline on the Degradability and Food Safety of Containers & Bags” and the associated registration scheme in December 2000. The Testing Guideline covers food safety, degradability and physical performance of the concerned products. Relevant criteria have also been developed for degradable products. A registration scheme has been established so that the public could make an informed choice of products that meet the developed criteria. While the launching of this scheme will not reduce waste generation directly, provision of information on alternative containers and bags will help consumers select more environmentally friendly products, with a view to reducing the use of plastic foam or plastic products indirectly. The Guideline was not developed to encourage the use of disposable products.

5.6 Taxation and Fiscal Measures

EPD is studying the possibility to levy environmental tax on products for which environmentally friendly alternatives are available. The purpose of the tax is to bring the cost of pollution and other costs of using the environment into the price of goods in order to help implementing the polluter pays principle, which the government always advocates.

The tax concessions provided to green products or technologies such as ultra-low sulphur diesel, and LPG taxis have provided an incentive for people to use the cleaner products. EPD is examining the possible incentive schemes with respect to materials recovery and recycling.

5.7 Wastewi\$e Scheme

By December 2000, over 110 organisations have joined the Scheme. The participating companies come from a wide range of sectors such as construction industry, property management, utilities, manufacturing industry, restaurants, department stores, hostels/hotels, engineering services, schools, hospitals, and government departments.

Over 25 participants have chosen and set their realistic and achievable waste reduction targets; most of them completed the interim reviews satisfactorily by December 2000. We expect to award the first batch of Wastewi\$e logos to these pioneer Wastewi\$e members in early 2001. Although there are a few participants who have not proceeded to set targets for various reasons, the implementation of the scheme is generally good.

5.8 Demonstration Scheme (DEMOS)

DEMOS as a new type of project eligible for the Environment & Conservation Fund (ECF) and Woo Wheelock Green Fund was launched by the ECF Secretariat on 31 December 2000. To further promulgate the Scheme and encourage applications, publicity leaflet and application form will be distributed to representatives of the recycling trade, local tertiary institutions and Wastewi\$e members.

5.9 Education and Publicity

EPD is working with District Councils to enhance public awareness and participation in waste reduction at the district level. In 2000, EPD attended more than 15 District Council and their sub-committee meetings, building management seminars and carnivals to introduce the Waste Reduction Framework Plan and solicit their support for waste reduction and recovery.

In particular, EPD has been working with the Central & Western District Council (C&W DC) to launch a pilot waste recovery scheme at Mid-levels in early 2001. Mid-levels was selected because of its relatively few waste recovery schemes and comparatively high environmental awareness. It is hoped that the pilot scheme could achieve a cost effective recovery programme to collect small quantities of recyclables from a large number of scattered premises. EPD and C&W DC will jointly organise publicity activities to capture public attention and their participation. Consideration will be given to extend similar scheme to other districts if appropriate.

With the joint efforts of the Registration Electoral Office, Housing Department and EPD, arrangement had been made for waste paper/unwanted promotional materials collection at all polling stations in the District Council Election 1999, Election Committee Elections and LegCo Election 2000. A total of 13,500 kg waste paper were recovered for recycling from the three elections.

The government has produced a set of 3 publicity short films featuring the Garbage Monster and Trashair which was launched in December 1999 on television and a video wall in Causeway Bay. Radio announcement and posters were also made to spread the message. The campaign was successful in capturing our young people's interest in waste separation. The 2000/2001 campaign to be launched in early 2001 will continue to promote source separation of waste. We will also include the message of plastic bags reduction in the television announcements. Similar to the last campaign, radio announcement, and outdoor displays will continue to be used to disseminate the message.

Institutional Programme

6. The Waste Reduction Committee (WRC) and the 7 Waste Reduction Task Forces continued to work towards the common goal of encouraging waste reduction in their respective sectors.

6.1 Task Forces for Public/Private Housing

A major initiative of these two task forces was to set up waste separation bins at public and private housing estates. With the joint efforts of the Housing Department, Hong Kong Housing Society, Environmental Campaign Committee (ECC) and private developers, waste separation bins for paper, aluminium cans and plastic bottles have been set up for Housing Authority's 172 public housing estates, Housing Society's 37 estates and over 500 private housing estates by end 2000. The waste recovery programme has covered over 60% of the population in Hong Kong.

Hence, about 700 public/private housing estates are participating in the ECC Waste Recycling Campaign (Phase IV), which was launched in June 2000. All the participating estates have been requested to record both disposal and recovery quantities to gauge the effectiveness of waste reduction measures.

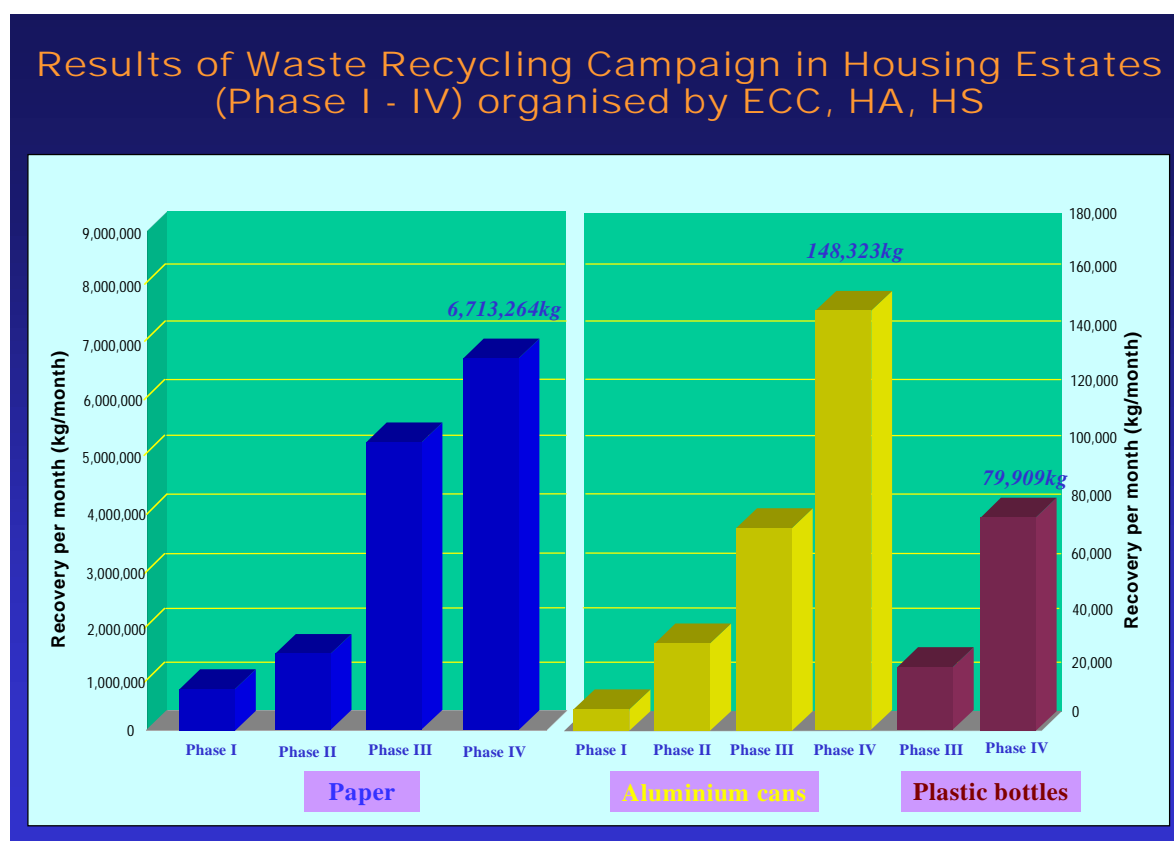
A Private Housing Environmental Ambassador Scheme has been organised to heighten the environmental awareness of residents in private housing estates. The objective of the Scheme is to spread the message of environmental protection particularly on waste reduction to the local community through the ambassadors. At present, about 120 ambassadors have completed their training. With the assistance of the ambassadors, about 25 environmental campaigns have been organised.

The results of the recovery and recycling programmes organised for public/private housing estates are summarised in **Table 4** and **Figure 2** below:

Table 4 – Recovery results of Waste Recycling Campaign at housing estates organised by ECC, HD and HS

		Phase I	Phase II	Phase III	Phase IV
No. of estates		41	132	298	695
No. of households		164,100	458,500	907,366	1,199,228
Competition Duration		29/3/98 – 29/5/98 (2 months)	1/10/98 – 31/3/98 (6 months)	1/7/99 – 31/3/00 (9 months)	1/6/00 – 31/11/00* (6 months)
Recovery	Paper	1,706,890	9,365,346	47,228,529	40,279,581
Quantities (kg)	Al cans	14,096	232,146	685,053	889,938
	Plastic bottles	N/A	N/A	230,460	479,455
Recovery	Paper	853,445	1,560,891	5,247,614	6,713,264
Per month (kg)	Al cans	7,048	38,691	76,117	148,323
	Plastic bottles	N/A	N/A	25,607	79,909
Recovery	Paper	5.20	3.40	5.78	5.60
Per month	Al cans	0.04	0.08	0.08	0.12
	Plastic bottles	N/A	N/A	0.03	0.07
Note : * Phase IV still on-going until 31/3/2001 The figures for Phase IV are provisional only and subject to change.					

Figure 2 – Waste Recovery at Housing Estates



6.2 Task Force for the Hotel Sector

The task force carried out the following initiatives in 2000:

- It commissioned the Hong Kong Polytechnic University to conduct a study entitled "Keeping Hong Kong's Hotel Industry Competitive into the 21st Century: Environmental Management System for Hotels". A CD-ROM and a set of practical guides were produced and distributed to hotels, hostels and guesthouses.
- It organised a Glass Bottle Recycling Programme which provided waste glass for a trial in cement production.
- It collaborated with the Friends of the Earth in organising a Plastic Bottles Recycling Pilot Programme in June 2000 to collect plastic bottles from 11 participating hotels. The number of hotels joining the scheme has now increased to 23. A total of 18 tonnes of plastic bottles have been collected since the launching of the Programme.

6.3 Task Force for the Construction Industry

The Task Force targets to reduce the quantity of construction and demolition (C&D) waste disposed of at landfill by 25% in 5 years, i.e. from about 8,000 tpd in 1999 to 6,000 tpd in 2004. It also aims at maintaining a 3-year public filling capacity.

New items, such as maintaining sufficient public filling outlets and proposal of the establishment of a sustainable development fund to pursue C&D waste reduction initiatives, have been added to its action plans.

The progress made by the construction industry in 2000 on the following major items would set a good foundation for waste minimisation in the coming years:

- Starting from August 2000, requirements on C&D material management have been incorporated in the specification of Housing Authority's contracts. In November 2000, Works Bureau issued Technical Circular No. 29/2000 requiring the submission of Waste Management Plans for all Public Works Programme contracts tendered on or after 1 January 2001.
- The Buildings Department issued Practice Note for Authorised Persons and Registered Structural Engineers (PNAP) No. 243 in June 2000 highlighting the importance of careful consideration of waste generation and management at the planning stage of a building development. PNAP 245 was also issued in July 2000 to address concerns on waste generated by discarding sanitary fittings and other fixtures from new buildings.
- The works departments of the Government had reviewed and revised their specifications to allow the use of recycled aggregates in road sub-base and low grade concrete. About 1,000 tonnes of recycled aggregates had been processed in November 2000 for tests and trials.
- In June 2000, the Highways Department commissioned a fifteen-month study on Asphalt Pavement Recycling for Hong Kong.

- In August 2000, the Civil Engineering Department (CED) set up a temporary sorting facility at Tseung Kwan O to recover public fill from mixed C&D materials. The study commissioned by the CED for constructing a permanent barging point with sorting facility at Chai Wan had been completed and another study for a similar facility at Kwai Chung was being undertaken and would be completed in early 2001.
- The Government has advanced the programme of the reclamation work at Tuen Mun Area 38 Stage 2 to provide an additional public filling capacity of 3.7 M cu.m in 2001 to 2003.
- The Construction Industry Training Authority (CITA) has included training materials on waste minimisation in their courses. Since October 2000, a 10 minute session on minimising C&D materials at construction sites has been incorporated in CITA's one day Green Card courses for all construction site workers.
- The Environmental Protection Department has launched a test web-site since October 2000 to promote construction and demolition material minimisation.

6.4 Task Force for the Government

The Task Force has focused on initiatives such as environmentally responsible purchasing, consumption, packaging and recycling. Progress was made in 2000 in the following areas:

- In 2000, the Government Supplies Department (GSD) introduced more paper products with recycled content e.g. recycled toilet paper and jumbo rolls. The proportion of recycled photocopying paper consumed has increased to about 35% since the introduction of recycled photocopying paper in late 1999.
- Procurement specifications for 31 categories of government bulk purchase items (e.g. paper products, batteries, paints, ink cartridges) were reviewed. GSD will take into consideration the recommended green specifications when tenders are initiated for stock replenishment.
- The Finance Bureau set out new guidelines on green purchasing for implementation across all government departments and bureaux in November 2000.
- A web-page "Green Tips" was developed under GSD's Homepage to disseminate information on environmentally responsible purchasing. The web-page lists out all green products currently maintained in Government's unallocated stores as well as various GSD contracts for collection and removal of recyclable materials.
- A trial using retreaded tyres was undertaken for medium and large vehicles in the government fleet.
- Waste separation bins for paper, aluminium cans and plastic bottles have been set up in all 81 government quarters and extended to 31 government joint-user office buildings.

6.5 Task Force for the Airport Community

The Task Force, aiming to promote waste reduction initiatives within the Airport Community, has launched the following programmes in 2000:

- Recycling programme of the Airport Authority has been extended to cover also toner cartridges, aluminium cans and spent lubricating oil.
- The monthly average quantity of materials recovered from the premises of the Airport Authority and the government departments at the airport have been increased from 45 tonnes in 1999 (Sept to Dec) to 56 tonnes in 2000 (up to Oct).
- Since April 2000, the staff of the Airport Authority (AA) and EPD have started visiting private tenants of the airport community and found that their major concern was the lack of collection service for the small quantity of recyclables they generated. In this regard, the AA would explore the feasibility of providing some extra space in their waste compactor station to collect the recyclables from the airport tenants.
- In the coming year, membership of the Task Force will be expanded to include representatives from the major airport private tenants, such as the air cargo terminals and caterers, in order to facilitate the organisation of community-wide waste reduction programmes.

6.6 Task Force for the Recycling Trade

Since its set up in March 2000, the Task Force has been working in the following areas:

- The methods to calculate the quantities of recovered materials for waste paper, plastics and metals.
- Recovery of plastic bags from commercial retail outlets: a pilot recovery programme of plastic bags from a street in Mongkok and a shopping centre in Kowloon was being considered.
- A special working group was set up to look into the renewal of contracts for the operation at the Public Cargo Working Areas (PCWAs) for exporters of recovered materials. In this connection, the WRC Chairman wrote to the Secretary for Economic Services on 13 June 2000. Subsequently, the captioned tenders were awarded on 15.1.2001 and all existing recovered materials exporters could retain their working berths in the PCWAs with a new 3-year contract.

6.7 Working Group for the Tertiary Institutions

The working group consisted of representatives from the eight universities and HKIEd. It provided a forum for academic and estate management staff of the institutes to share their experience on waste reduction and recovery. A sub-working group was also formed in August 2000 with representatives from 18 tertiary institutes including HK Academy for Performing Arts, Shue Yan College, Chu Hai College and 15 member institutes of the Vocational Training Council.

In January and February 2000, a series of training workshops entitled "Waste Reduction and Recycling Scheme at Tertiary Institutions (Phase I)" was jointly organised by EPD and ECC for some 180 university students and staff.

Another round of training programme "Phase II Scheme" has been launched with a series of training workshops organised for 27 tertiary institutes between October 2000 and February 2001.

6.8 Working Group for the Public Transport Sector

The working group was formed in April 2000 to promote waste reduction and recovery in offices and terminals of the public transport sector. Members consist of representatives from eight public transport companies including MTRC, KCRC-East Rail, KCRC-LRT, HK Tramways, Peak Tramways, Star Ferry, New World 1st Ferry and Shun Tak Holdings Limited. EPD has also maintained close liaison with the three major bus companies in pursuing waste reduction and recovery initiatives.

Waste paper separation bins were available in all KCR stations, Star Ferry piers, some MTR stations and bus terminals for passengers' use.

6.9 Waste Reduction at Club Houses

To help major clubs in Hong Kong to organise waste recovery programmes and environmental campaigns, EPD conducted a workshop in October 2000 and attended the Club Managers' Association (CMA) Meeting in November 2000. Through these two events and subsequent liaisons, over 30 clubhouses were briefed of the Government's waste reduction initiatives and technical supports available.

Bulk Waste Reduction Programme

7. Even with effective waste prevention and recycling measures, considerable amounts of residual waste (e.g. non-recyclables) will remain and require treatment and disposal.

7.1 Bulk Waste Treatment Facilities

Due to the complexity of the Environmental Impact Assessment issues, the feasibility study for energy recovery facilities is still on-going and is expected to be completed in 2001.

7.2 Composting

EPD has proposed to develop a site at Ngau Tam Mei into a small-scale organic waste composting plant. Expressions of Interest for this development were invited in November 2000. The response was encouraging and the submissions received are being assessed. Subject to the outcome of assessment, immediate follow-up work and tendering for developing the composting plant at Ngau Tam Mei will commence.

NON-GOVERNMENT ORGANISATIONS' PARTICIPATION

8. The non-government organisations have also played an important role in the past 12 months in organising education and publicity activities on waste reduction. The following summarises some of their major initiatives in 2000:

- *"No Plastic Bag, Please!" Campaign*

9. In early 2000, EPD commissioned the Conservancy Association (CA) to organise a Green Challenge Campaign for the reduction of plastic bags for newspaper. The campaign included various publicity and educational programmes such as a kick-off ceremony, a bus parade, signature campaigns, surveys and hotline service.

10. CA has solicited the support and commitment of the Newspaper Hawker Association, convenience stores, newspaper distributors and other relevant parties in reducing the use of plastic bags for newspapers. The campaign has enhanced the environmental awareness of the public in plastic bag reduction. Over 500,000 signatures supporting the campaign were collected from various sectors of the community. CA has also successfully sought the support from various Legislative Council and District Council members, schools, Light Transit Railway, government departments, to participate in the campaign.

- *Pilot Scheme on Waste Recycling from Each Floor in Housing Blocks*

11. ECC commissioned Green Power and Friends of the Earth and to conduct pilot schemes of collecting separated waste on each floor of public housing estates from 31 August to 22 November 2000 with a view to increasing the waste recovery rate. Two blocks from two housing estates of HD (Choi Wan Estate at Wong Tai Sin and Kwong Tin Estate at Lam Tin) were selected for the trials. Waste separation bins were set up on each floor, in addition, an "Exchange Square" was set up and durable recycling bags were provided to residents for recovery of waste paper, aluminium cans and plastic bottles. Initial results showed that the recovery rate of recyclables was greatly enhanced. The latest records for placing waste separation bins on each floor indicate that the recovery rates for waste paper, aluminium cans and plastic bottles have been increased by up to 155%, 119% and 195% respectively.

- *Plastic Bottles Recycling Programme for Hotels*








12. The Plastic Bottles Recycling Pilot Programme was organised by the hotel sector in collaboration with the Friends of the Earth. The programme was funded by the Shell Better Environment Awards Scheme with contribution from participating hotels. The scheme will last for one year starting from June 2000. It was planned to expand the programme to cover other hotels in the territory.

13. Initially, a total of 11 hotels in Tsimshatsui and Yaumatei joined the programme. The number of participating hotels has been increased to 23 as at 31 December 2000. 2,700 kg plastic bottles have been collected per month. The collected plastic bottles were shredded into flakes that can be recycled into fibres (materials for making waterproof ski jacket) at a sheltered workshop initially. However, from 6 December 2000 onwards, free collection service has been arranged by a private waste collector.

ACTION PLANS

14. A review of the progress of the 2000 Action Plan indicates that whilst most of the actions proposed on waste reduction and recycling have been taken, the results of these actions may take some time beyond 2000 to be visible. The progress achieved so far can be briefly summarised in the table below:

Table 5 - Progress Review of 2000 Action Plan on Waste Reduction and Recycling

Initiatives	Objectives	Achievements	Remarks
Landfill Charging	To require waste producers to pay directly for the full costs of waste management, thus providing a financial incentive for waste reduction.		The affected trade associations are being consulted, legislative arrangement for landfill charging is to be initiated in 2001.
Land Allocation	To facilitate the development of recycling industry by securing more long term land for the industry.	*STT  *LTS 	More support from the Lands Department and other concerned departments in offering short term and long term sites is crucial to assisting the local recycling industry.
Setting up of Waste Reduction Task Force for the Recycling Trade	To provide a forum for discussion between the Government and the recycling trade on sector-specific issues related to waste reduction.		The Task Force was set up in March 2000 and has implemented a number of waste recovery initiatives.
Producer Responsibility Scheme - reduction of packaging waste	To target on beverage containers subsequent to the issue of the Testing Guideline for "degradable" food containers and the plastic bags reduction programme. To pave the way for new legislation on waste reduction and recycling if necessary.		Waste reduction initiatives on beverage containers have been delayed. The Testing Guideline for "degradable" containers was launched in December 2000. The plastic bag reduction programme will be extended to cover supermarkets, wet markets and retail trade.
Education and Publicity	To organise comprehensive and sustained publicity and education campaigns to promote public awareness in waste reduction and recycling.		Training workshops have been organised for various sectors of the community, including public/private housing, construction industry, transport companies, recycling trade, tertiary institutions, hotels, airport community and club houses.
Demonstration Scheme (DEMOS)	DEMOS is an initiative in the WRFP to promote waste minimisation and recycling technologies and to encourage the adoption of these technologies by different sectors in Hong Kong through financial assistance.		DEMOS has been established under Environment and Conservation Fund and launched in December 2000. Private sector can also apply for funding under the Scheme.

* **STT** - short term tenancy
LTS - long term site

15. To continue our efforts in 2000, we will carry forward the existing planned actions into the next year and launch new initiatives to help promote waste reduction and recycling in the community. Some key initiatives for the next 12 months are highlighted below:

- To initiate legislative arrangement for landfill charging.
- To provide sufficient public filling areas to meet at least 3 years' demand.
- To examine alternative uses of recovered construction waste such as aggregates and asphalt.
- To carry out a pilot trial on the use of recycled aggregates e.g. in road base and paving, and to conduct a pilot trial based on the outcome of the study on recycled asphalt pavement.
- To develop the site at Ngau Tam Mei into organic composting plant facilities.

Annex 1 contains a comprehensive description of our action programme for the next 12 months.

Advice Sought

16. Members are invited to note the contents of this paper. We appreciate any comments from Members.

Waste Reduction Committee
March 2001

Annex 1 - Action Plan on Waste Reduction and Recycling for 2001

Key Areas	Objectives	Proposed Actions
Prevention of Waste Programme		
Waste separation/recovery schemes	An Inter-departmental Working Group on Waste Recycling chaired by the Environment and Food Bureau was formed in July 2000. The working group would review the current waste separation and recycling efforts and identify measures to enhance domestic waste recovery.	<p><u>Proposed increase if funding allows</u></p> <ul style="list-style-type: none"> • FEHD to set up 401 more sets of waste separation bins in public places. • LCSD to increase the no. of bins in leisure and cultural venues to over 3,000 sets. • AFCD to increase the no. of bins in recreation sites in country parks to 800 sets • GPA will expand waste recovery programmes to all 42 government joint-user office buildings and 81 government quarters. <p><u>New waste separation bins</u></p> <ul style="list-style-type: none"> • Functional and appealing design to be available for new waste separation bins in 2001
Land allocation	To facilitate the development of recycling industry by securing more long term land for the industry.	<p><u>Closed old landfill sites</u></p> <ul style="list-style-type: none"> • To explore the feasibility of developing recycling estates/parks at closed landfills. <p><u>Industrial Estates and other Industrial Sites</u></p> <ul style="list-style-type: none"> • To explore the potential of using the vacant land within the Yuen Long Industrial Estate, the Special Industrial Area in Tun Mun 38 and other suitable industrial sites for setting up materials recycling operations.

Key Areas	Objectives	Proposed Actions
Producer responsibility scheme - reduction of packaging waste	To require manufacturers or suppliers of goods to take responsibility for the collection and disposal of waste generated by their products, and to meet certain recycling targets.	<p><u>Plastic Bags Reduction Programme</u></p> <ul style="list-style-type: none"> To organise plastic bags reduction programmes for wet-markets, supermarkets and the whole retail sector. <p><u>Testing guideline on the degradability and food safety of degradable containers and bags</u></p> <ul style="list-style-type: none"> To register the first batch of products passing the test in end 2001. <p><u>Used beverage bottles</u></p> <ul style="list-style-type: none"> To discuss with the concerned industry the initiatives on reduction of packaging waste. In the coming months, EPD will target the reduction of beverage containers. One initiative under consideration is the introduction of a deposit and refund system for certain types of beverage containers with a view to enhancing their recovery rates. <p><u>End-of-life batteries</u></p> <ul style="list-style-type: none"> To liaise with the mobile phone manufacturers, network service providers, etc. and organise a recovery and recycling programme for end-of-life mobile phone batteries in Hong Kong. To organise a recovery and recycling programme for primary batteries.
Wastewi\$e Scheme	To promote and commend waste reduction efforts of the participating organisations.	<ul style="list-style-type: none"> To award the Wastewi\$e logos to the first batch of Wastewi\$e members.
Education and publicity	To organise comprehensive and sustained publicity campaigns to promote public awareness in waste reduction and recycling.	<ul style="list-style-type: none"> To launch a pilot waste recovery scheme at Mid-levels where there are only a small number of domestic premises having waste recovery schemes at present. Publicity activities will be organised jointly by EPD and Central and Western District Council to arouse public awareness and participation in waste recycling. To enlist support from District Councils and promote waste reduction to local community in various districts. To launch a large scale and vigorous publicity campaign involving different media to arouse public awareness on waste reduction.
<ul style="list-style-type: none"> Institutional Programme 		
Public and private housing sector	To promote waste reduction and enhance the waste recovery rate.	<ul style="list-style-type: none"> To achieve a 30% waste recovery rate in participating private housing estates by 31 December 2001. To explore the feasibility of adding provisions in land lease or Deeds of Mutual Covenant requiring residents to practise waste separation. To collect and process plastic bottles from over 250 public and private housing estates participating in the Environmental Campaign Committee Waste Recycling Campaign.
Hotel sector	To facilitate the recycling of used plastic bottles in the hotel sector through central collection.	<ul style="list-style-type: none"> To explore the feasibility of extending the Plastic Bottles Recycling Programme from 23 hotels to cover other hotels in the territory.

Key Areas	Objectives	Proposed Actions
Construction industry	<p>(1) To maximise the beneficial reuse of public fill in reclamation works and earth filling projects.</p> <p>(2) To improve construction standards, specifications and techniques to reduce C&D waste.</p> <p>(3) To enhance the training and education on C&D waste reduction.</p>	<ul style="list-style-type: none"> • To liaise with government bureaux and works departments to maintain sufficient public filling areas for at least a 3-year public fill capacity. • To carry out a pilot trial on the use of recycled aggregates e.g. in road base and paving. • To complete the study on recycled asphalt pavement and conduct a pilot trial based on the study outcome. • To prepare a package of training materials to promulgate construction and demolition waste reduction measures.
Government	<p>(1) To measure progress and achievements of various Bureaux and Departments.</p> <p>(2) To pursue environmentally responsible purchasing in the Government as an example to private sector.</p>	<ul style="list-style-type: none"> • To formulate a set of measurement indicators and targets on waste reduction/recycling for Government bureaux and departments. • To adopt green specifications as recommended in the study " Environmentally responsible product specifications for government procurement items" for paper products, batteries, paints, etc. in new tender preparation when current contracts expire.
Airport community	To facilitate the recovery programme of franchisees and tenants of the Airport Authority.	<ul style="list-style-type: none"> • To explore the feasibility of central collection of small quantities of recyclables from the Franchisees at the airport's Landside Waste Compactor Station. • To promote purchasing of environmentally friendly products in the Airport Authority.
Recycling trade	To explore the feasibility of recovering used plastic bags from the general public.	<ul style="list-style-type: none"> • To organise a trial recovery of plastic bags in a major shopping centre and also a shopping street in Mongkok.
<p>• Bulk Waste Reduction Programme</p>		
Bulk Waste Treatment Facilities	To develop bulk waste reduction facilities	<ul style="list-style-type: none"> • To complete the existing feasibility study on energy recovery project. • To consider an Expression of Interest for the development of facilities for bulk waste reduction.
Composting	To develop facilities to produce compost by bio-degradation of organic waste such as food waste, dewatered digested sewage sludge and livestock waste.	<ul style="list-style-type: none"> • To review and formulate a proposal based on the Expressions of Interests received for the development of composting plant at Ngau Tam Mei. • To commence preparation of the tender document for letting out the site at Ngau Tam Mei.