

4-Steps to Set Up a Successful Waste Separation and Recovery Programme

Step 1 - Understand the Waste Recovery System in Hong Kong

Nearly 1.54 million tonnes of recyclables were recovered from the municipal waste stream in 1997. Waste recovery has been achieved mainly in the following ways:

- (I) waste generators (mainly industrial) separate recyclables from their waste and sell the recovered materials directly to scrap traders/recyclers;
- (ii) "scavengers" and cleansing staff separate valuable materials from the mixed waste stream and sell the recovered materials to scrap traders for further processing;
- (iii) organisations such as schools, housing estates, government departments, community bodies, etc. organise, for environmental protection purpose, their own waste recovery schemes and sell/give the recovered materials to scavengers or scrap traders.

Step 2 - Identify Your Valuable Waste Components

As waste recovery in Hong Kong is market driven, the availability of market for any waste to be recovered in your programme would be an important factor affecting the successfulness of your programme. It is advisable for you to have a look at the waste stream first and identify the valuable waste components. You can make use of *Appendix I* to prepare a list of potentially marketable recyclables and record the estimated quantities. The common recyclables in our refuse include paper, plastic, ferrous metal, non-ferrous metal and glass bottle.

Step 3 - Acquire an Outlet for Your Recyclables

To confirm if there would be an outlet for the recyclables to be recovered in your programme and to finalise the list of recyclables to be recovered, you can contact the following potential "buyer" of your recyclables :

- (a) Scrap Trade and Recyclers (suitable for large scale programme)
List of scrap traders (recyclable collectors) and recyclers are available from EPD through the telephone hotline of 27552750. Collection service might be provided by these collectors depending on the quantity of recyclables and location. A procedural checklist is attached in *Appendix II* for you to record the requirements of and services provided by different collectors.
- (b) Cleansing Agent (suitable for smaller scale programme)
The profit obtained by selling the recyclables to scrap traders/recyclers sometimes creates an incentive for the cleansing staff to collect even a small quantity of

recyclables. You can thus liaise with your janitor to see if he/she is interested in the recovering the recyclables. For larger scale programmes covering a whole building or estate, it is possible to involve the cleansing contractor of that building or estate.

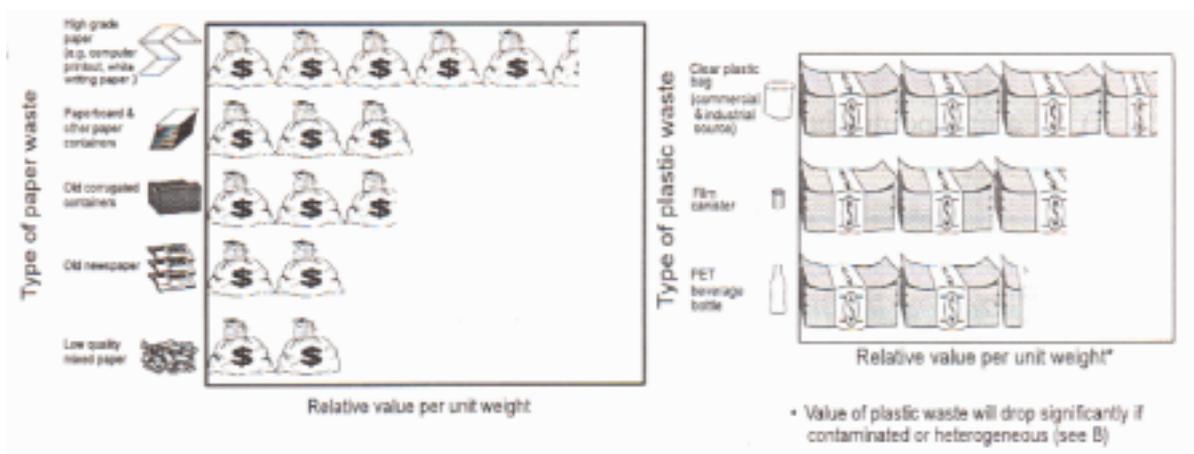
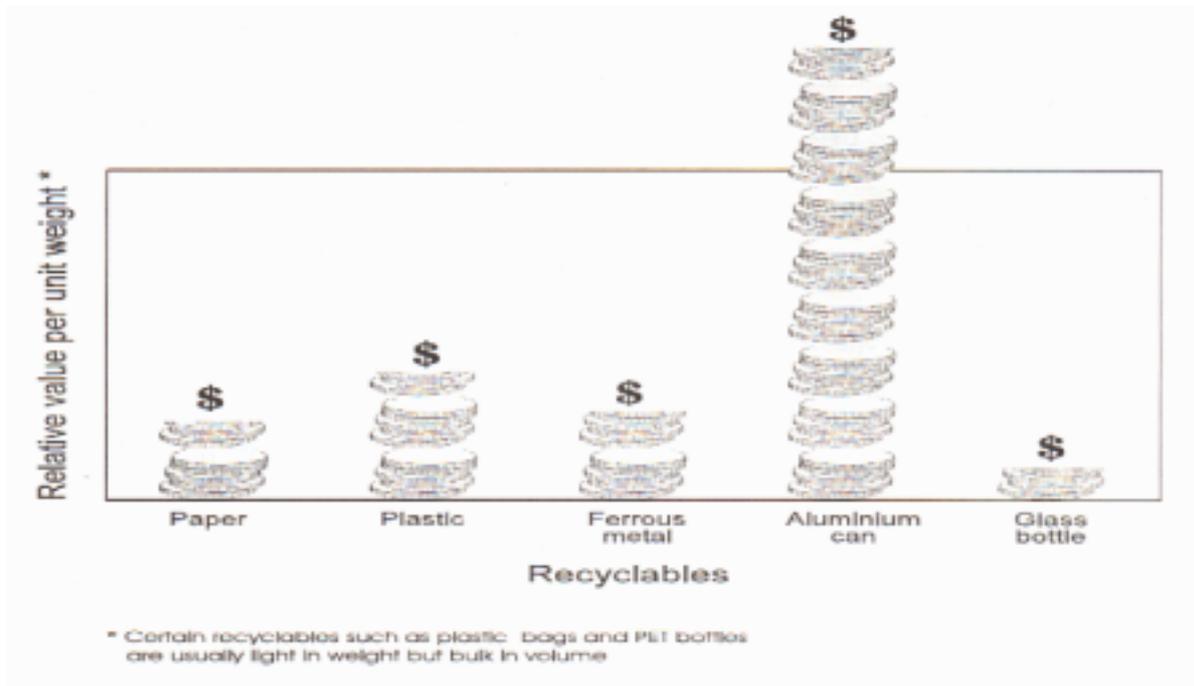
Step 4 - Draw up Your Implementation Programme

After securing a recyclable outlet for your programme and finalising the list of recyclables to be recovered, you need to draw up an implementation programme for your waste recovery initiative. Sufficient and continuous commitment from both the organiser and the participants, clear instructions on waste separation procedures, continuous monitoring and review on the achievements of the programme are among the essential elements for a successful waste recovery programme. More detailed illustration of the essential elements of such an implementation programme can be found in *Appendix III*. Please contact EPD's Hotline Service at 2755 2750 for enquiry or if you need further help.

A. Importance of Waste Separation

Waste separation at source can enhance the homogeneity of the waste recovered and minimise its level of contamination. Both the technical and economic hurdles for recycling can then be lowered and this increase the recycling viability.

The following figures illustrate the relative price of different kinds of well-sorted recyclables:



B. Some Tips to Increase the Value of Your Relatively Low-value Recyclables

Paper

Paper waste is divided mainly into 5 grades in the market: high grade paper such as white writing paper & computer printout, paper board & containers, corrugated containers, old newspaper and mixed paper, in decreasing order of market price. It is advisable to sort separately for the high grade paper if its quantity is substantial. For most recovery programmes, sorting for mixed paper is easily manageable. Stick to the following separation practice to ensure the waste paper recovered is recyclable :

<u>Do Collect</u>	<u>Don't Collect</u>
<ul style="list-style-type: none"> · Pure paper waste (e.g. office paper, letter, forms, envelopes [remove plastic window], newspaper and magazine [not on glossy paper], books & reports [remove plastic covers and plastic ring binders], etc.). [Note : paper clips, staples, rubber bands need not be removed] · Clean and dry paper waste. 	<ul style="list-style-type: none"> · Composite materials (e.g. packaging with paper, plastics, aluminum foil and other materials, glossy paper, plastic coated paper, etc.). · Wax paper, adhesive paper, carbon paper, blue print & fax (thermal) paper. · Contaminated paper waste such as tissue and toilet paper, lunch boxes, paper cups.

Plastics

Plastic waste is divided by resin type (chemical form) and there are quite a number of resin types being used in the market. As the homogeneity of the feedstock waste is particularly important in plastic recycling, the plastic waste being recovered in Hong Kong is mainly industrial scrap which is relatively homogeneous, dry, clean and stable in supply. Recovery of domestic (post-consumer) plastic waste has a very limited market because of its heterogeneous and contaminated characteristics. The major forms of domestic plastic waste in the market include PET bottles (mostly mineral water and soft drink bottles), film canisters and large plastic containers such as baskets. It is advisable for you to secure an outlet before deciding on the form of plastic waste to be recovered in your programme.

<u>Do Collect</u>	<u>Don't Collect</u>
<ul style="list-style-type: none"> · Homogeneous waste (of a single resin type such as PET bottles, film canisters). · Clean and dry waste. · For bottles, rinse and remove accessories such as lids and labels which are usually made of other materials or resins. 	<ul style="list-style-type: none"> · Composite materials such as plastic packagings. · Contaminated waste such as food containers.

Glass Bottles

While most of the locally-filled glass beverage bottles are being recovered for reuse by the beverage manufacturers through deposit-refund schemes, there is only a very limited

market for the non-refundable glass bottles. These non-refundable glass bottles, if recovered, are either rinsed for reuse or crushed for overseas recycling. It is advisable for you to secure an outlet before recovering these non-refundable glass bottles.

<u>Do Collect</u>	<u>Don't Collect</u>
<ul style="list-style-type: none"> <li data-bbox="212 383 735 416">· Bottles with deposit-refund scheme. <li data-bbox="212 495 748 528">· Bottles with lids and labels removed. 	<ul style="list-style-type: none"> <li data-bbox="817 383 1315 454">· Small or irregular-shaped bottles unless you have secured an outlet. <li data-bbox="817 495 1326 566">· Containers of hazardous chemicals unless thoroughly rinsed.
<ul style="list-style-type: none"> <li data-bbox="212 595 671 629">· Bottles with residues removed. 	<ul style="list-style-type: none"> <li data-bbox="817 595 1370 701">· Other forms of glass such as light bulbs, window glass and mirror unless you have secured an outlet.

Acquisition of Outlet for Recyclable

Appendix II

Name of Collector Contact Person Telephone Number		Collector A		Collector B		Collector C	
		Interested (✓/X)	Return, if any (\$/Kg)	Interested (✓/X)	Return, if any (\$/Kg)	Interested (✓/X)	Return, if any (\$/Kg)
Initial List of Recyclables a. newspaper b. office paper c. aluminium can d. plastic bottles e. _____ f. _____		Estimated Quantity _____ _____ _____ _____ _____		Interested (✓/X)		Return, if any (\$/Kg)	
1) Shop Service for Receiving Recyclables							
a. Address _____		_____		_____		_____	
b. Business Hour _____		_____		_____		_____	
2) Pick-up Service							
a. Any on-site pick up service ? (If Yes, frequency ?)		_____ Days/trip		_____ Days/trip		_____ Days/trip	
b. Any service charge required ? (If yes, charge rate ?)		_____ \$/trip		_____ \$/trip		_____ \$/trip	
3) Conditions for Pick-up Service							
a. Minimum quantity for pick-up service ? (If Yes, how much ?)		_____ Kg/trip		_____ Kg/trip		_____ Kg/trip	
b. Other desired characteristics, if any ?		Sorted / Baled / Dry / Rinsed / Others *		Sorted / Baled / Dry / Rinsed / Others *		Sorted / Baled / Dry / Rinsed / Others *	
4) Availability of Receiptacle							
a. Any receiptacle available ? (✓/X)		_____		_____		_____	
b. Any service charge/deposit required ? (If Yes, how much ?)		_____ \$		_____ \$		_____ \$	
5) Form of Agreement							
a. Any agreement with collector ? (✓/X)		_____		_____		_____	
b. What is the form of agreement ?		Contract / Agreement letter / Verbal agreement / Others *		Contract / Agreement letter / Verbal agreement / Others *		Contract / Agreement letter / Verbal agreement / Others *	

* Circle where appropriate

Essential Steps in Organising a Waste Separation and Recovery Programme in Residential Building/Estate

- (a) approaching relevant parties such as Incorporated Owners Committee, Mutual Aid Committee, property management company and cleansing contractor with a view to co-organising a waste recovery programme in the premises
- (b) forming a task force with representations from the residents, management company and, if possible, cleansing contractor to develop the programme
- © identifying the targeted recyclable(s) for the recovery programme and securing market outlet(s) for the recyclable(s)
- (d) developing an appropriate waste separation and collection system for the programme
- (e) defining a set of challenging but achievable recovery target(s) for the programme
- (f) implementing the programme with necessary publicity support
- (g) setting-up a suggestion scheme to invite comments and suggestions from the residents on the programme
- (h) monitoring and reviewing the programme regularly to maximise its achievements
- (I) announcing the progress and achievements of the programme to keep up the momentum of the residents.

There will always be some kinds of unforeseeable practical difficulties in implementing a new kind of waste recovery initiative. Most of these difficulties can be overcome with the continuous efforts and support of all parties concerned in running and improving the programme.