



Legco Members Panel on Environmental Affairs

17<sup>th</sup> July 2013

Dear Hon Cyd Ho and members of the Legco Panel on Environmental Affairs,

The Government has had different municipal solid waste plans over the years wherein it has shown its intentions and policy direction.

The latest Government policy blueprint is basically unchanged:

- *Extend the landfills, ignore the NIMBIES*
- *Build 3 toxin spewing incinerators in 3 phases to burn the waste*
- *Send the resultant 30% incinerated ash by weight to landfills, that will be full, hence the need to build expensive man-made ash lagoon islands in the sea at taxpayer expense to contain the daily ash, ad infinitum*
- *Ignore new technology such as gasification or plasma gasification of wastes that*
- *A) are modular and capable of handling any required quantity of MSW and construction waste (just the calorific value of the waste changes) and syngas from such can be used to generate clean electricity or can be converted to biofuels*
- *B) have no toxic ash residues to landfill*
- *C) produce inert plasmarok vitrified slag that can be reliably used in construction projects to replace imported aggregate*

Elsewhere in the world Governments are adopting Zero Waste policies and legislating the same. Conversely the HKG Government has recently approached Legco for funding of the expansion of the landfills and has met severe public and lawmaker resistance. However the Government yet again fails to listen to the people and to lawmakers nor to consider alternative solutions to its outdated policy which was already rebuffed; instead they arrogantly intend to continue to bang their heads against the common sense door:

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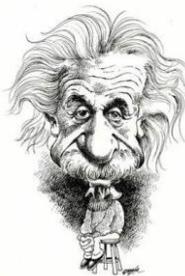
**All three landfill expansion plans to be resubmitted to Legco**

Shelved Tseung Kwan O dump extension to be revived, says Carrie Lam, signalling new battle

<http://www.scmp.com/news/hong-kong/article/1282084/all-three-landfill-expansion-plans-be-resubmitted-legco>

This brings to mind a quote from a person of brilliance:

**"Doing the same thing over and over and expecting different results is insanity" --- Albert Einstein**



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In 2012 Government approached Legco Panel on Environmental Affairs for blessing of the Shek Kwu Chau incinerator project. (where would the other two intended incinerators be built ?)

The 2012 Panel's response to Government is **highlighted** below:

<http://www.legco.gov.hk/yr12-13/english/panels/ea/papers/ea0527cb1-1079-2-e.pdf>

13. Details of the funding proposals for the three landfill extension projects are set out in LC Paper No. CB(1)1369/11-12(01) which is hyperlinked in the Appendix. According to the Government, IWMF **would require some seven years for reclamation, construction and commission**, while landfill extension would need a few years for site preparation works. In this connection, the IWMF Phase I project and the landfill extension projects should be pursued as a package to ensure that Hong Kong could maintain environmental hygiene and handle waste properly and timely. Deliberations by the Panel on the funding proposals for landfill extension are summarized in the ensuing paragraphs.

15. The Panel held another special meeting on 20 April 2012 to continue discussion on the funding proposals.

**Noting that many measures pertaining to the Policy Framework had yet to be implemented, members were opposed to the reliance on landfills for waste disposal in view of the associated environmental nuisances, as well as the long lead time and cost incurred from restoration of landfills. They stressed the need for a holistic package of waste management measures (including waste reduction, separation and recycling) with waste incineration as a last resort and better communication between the two terms of Government on environmental policies, in particular on the need for incineration. They also urged the Administration to identify other suitable outlying islands for IWMF and promote the local recycling industry. In view of the foregoing, members did not support the submission of the funding proposals to the Public Works Subcommittee for consideration.**

The Honourable members of the current Panel on Environmental Affairs should seriously consider whether the Government has complied with the 2012 Panel's guidance directives **shown above** or has arrogantly ignored them completely, has changed nothing policy wise nor enacted polluter pays charging legislation promised in 2006 and 2007, yet expects this current Panel to rubber stamp its regurgitated blinkered ideas.

In order to assist Hon members to assess the contents of previous failed Government policy promises and failure to enact such policies and waste charging legislation we provide herewith below **highlighted extracts** from the 1989 and 2004 drafted Policy documents.

#### PLAN 1

##### Hong Kong Government Waste Disposal Plan 1989

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/prob\\_solutions/files/WDP.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/waste/prob_solutions/files/WDP.pdf)

Consultant

[http://davidcwilson.com/index.php?option=com\\_content&task=view&id=3&Itemid=5](http://davidcwilson.com/index.php?option=com_content&task=view&id=3&Itemid=5)

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109 To reverse the increasing trend of waste generation, there is a need to educate the public and to **encourage a change in attitude towards waste generation.**

111 Therefore, apart from close monitoring of the extent of recycling activity, **further opportunities to recover wastes and to establish stable markets for recycling should be explored and promoted.**

112 The principles of Government support and assistance being considered cover the following:

**Giving preference & assistance in the establishment of commercial recovery & recycling schemes** that are able to reduce the demand for waste disposal;

Giving favourable consideration in the procurement & application of recycled products within Government;

Increasing the effectiveness of the dissemination of information on waste recovery and recycling to the industry;

Increasing the relative recovery value of waste **materials through possible imposition of waste disposal fees on waste producers.**

113. It remains the Government's view that direct participation in waste recovery & recycling activities is not appropriate for the Government **With its greater degree of flexibility and marketing ability, the private sector is better placed to embark on resource recovery ventures based on innovative technology.**

*CTA: Government was offered a FREE private sector 150,000 tpa plasma gasification plant that could have been sited on a landfill to reverse-mine the landfill back to beneficial (housing) usage state thus reducing not increasing landfill area & offering the obvious opportunity to study the technology reliability. Such plants take only 30 months to build. Offer Rejected. Meanwhile gasification technology has been embraced worldwide for years and plasma gasification technology has come of age (as acknowledged by AECOM USA). 1000 tpd Air Products plant comes online mid 2014 in UK and a second adjoining plant underway. Solena Fuels/British Airways MSW to biofuels plant 1500 tpd is underway and commissioning mid 2015. Europlasma predicts 650 gasification plants in Europe alone by 2030.*

114 There is also scope for **promoting a larger extent of waste separation at source so as to facilitate waste recycling.** However any such arrangement would require more public participation & cooperation & education will be an essential component of any related promotion campaign.

115 **It is therefore the government intention that in future the possibility of private sector involvement in the design, construction & operation of waste treatment & disposal facilities be investigated whenever it is appropriate**



117 To reduce the cost disincentive & to encourage the full utilization of transfer stations, **there is a need to review the existing charging arrangement**

#### Appendix D

4.3 The divisions between these two categories are not hard & fast. **Incineration, for example, is effectively a disposal method for 70% of its waste intake since this proportion of the intake is discharged to the atmosphere after combustion**

#### 4.4 Treatment methods

(i) they usually require substantial investment in plant and machinery and tend to be expensive;

(ii) they may involve processes which have not yet been adequately proven; **one potentially attractive resource recovery method is pyrolysis** (the thermal decomposition of organic material in the absence of oxygen to produce liquid or gaseous fuels) but *unfortunately most pyrolysis processes appear to have been tested only on a laboratory or small pilots-plant scale; experience on near-commercial scale is very limited and certainly not sufficient to be able to recommend the method for treatment of Hong Kong's waste;*

*CTA: this is no longer the case – gasification technology advances & is operational & capable of treating large volumes*

(iii) **the viability of resource recovery methods depends upon uses or markets being found for the materials recovered;** experience with the Chai Wan composting plant has shown how difficult it can be to ensure that the product recovered is marketable; &

*CTA: HKG has the wettest MSW foodwaste in the world at 90% moisture content from wet markets. Food waste is 42.3% of HKG daily MSW (+ yard waste 1.6%, diapers 4.3%) so 48% of our MSW is putrescible. AD Compost from such waste is low quality & non exportable. It could however be consumed for calorific value (avg. reject compost CV 11.6 MJ/kg (2770 kcal/kg versus wet food waste <4 MJ/kg whilst at least 6 MJ/kg is needed for combustion)*

(iv) **invariably with resource recovery processes, a substantial residue of waste remains which still has to be finally disposed of; the amount requiring final disposal may be expected to range from 20 to 40% of the intake** but if attempts to find markets for the products fail, up to 100% of the intake may require final disposal; the Chai Wan composting plant is again a case in point.

*CTA: this is most definitely not the case with gasification and plasma gasification technology the residues are vitrified slag that can be used and sold for construction aggregate instead of the need for the landfilling of toxic incineration residues.*

4.6 Although public sector involvement in waste treatment processes based on resource recovery is considered to be unwise, **this does not mean that proposals from the private sector to set up treatment facilities based on resource recovery would be discouraged. On the contrary such private sector initiatives are to be welcomed and, as far as is practicable, supported.**



*CTA: plasma gasification companies are willing to Finance-design-build-operate their plants AT NO COST to the taxpayers of HKG other than to provide the land usage. They would charge a gate fee per tonne of MSW and would either sell the electricity to PRD or the local grid if interconnection allowed or would produce bio fuels for shipping and airlines as well as bio naphtha for local plastic bottle production. This is an incredible opportunity yet our Government remains blinkered.*

4.8 On the technical and environmental side incineration suffers from a number of disadvantages as a method of waste treatment & disposal. These are as follows :~  
(i) it is limited to combustible wastes so that a *suitable repository still has to be found for non-combustible wastes*;  
(ii) it does not dispose of waste completely; a residue constituting 21 ~ 28% dry weight of the refuse burned, & 5-7% of the volume, *remains to be disposed of after incineration*;  
(iii) it has the potential to be a major cause of air pollution.

*CTA: Hence in Government's own words it is a no-brainer to continue with this outdated polluting and toxic technology.*

4.10 The most significant of the disadvantages is the potential for air pollution. Measures that could be taken to reduce the pollution problem significantly fall into two broad categories namely -

- (i) those aimed at reducing the quantity of pollutants emitted from the plant; and
- (ii) those aimed at ensuring sufficient dispersal of pollutants so that receptors are not adversely affected; such measures can include siting of the facility as well as design.

*CTA: abundant peer reviewed expert independent reports show deaths, birth defects, cancers and other horrible diseases increasing with proximity to modern incinerators. FACT.*

4.13 In addition it may be necessary to construct unusually high stacks to ensure adequate dispersal & dilution of flue gases and, possibly, to construct incinerators only in remote areas. *The cost implications of these measures are such that if other alternatives are available they are likely, in most instances, to be preferred.*

*CTA: if the modern incinerators are so safe why not build one at TAMAR or on the Peak and why would such high stacks be needed? Whereas a plasma plant stack is only 15 meters and releases – steam.*

Disposal methods

4.18 A means of final disposal of waste will always be necessary no matter what treatment and disposal strategy is adopted. If resource recovery or incineration were to be adopted there would have to be some way of getting rid of the residues remaining after treatment. For certain wastes, such as construction wastes, there are few treatment options available & some means of final disposal will always be necessary to cater for these.

*CTA: this is no longer the case. Construction waste can be gasified or plasma gasified and the resultant vitrified slag used as road or building aggregate.*

4.36 The options for (excrement) disposal are :



- i) digestion at sewage treatment works with sewage sludges;
- ii) disposal to land (i.e. used as a fertiliser);
- iii) disposal at landfill;
- iv) disposal at sea; &
- v) incineration

**Incineration has to be discounted because it is too expensive.**

**CTA: it appears the Govt changed its mind hence the sludge facility in Tsang Tsui.**

Disposal at sea would not be economic on its own but following the decision to construct facilities for the disposal of Sha Tin's sewage treatment works sludge at sea it may well be feasible to dispose of some livestock waste by this route also, provided it is stabilised first,

**4.50 Third, PFA (pulverised fuel ash) and FBA (furnace bottom ash) are relatively rich in concentrations of potentially toxic heavy metals. Deposit of these in a concentrated manner on the sea bed may pose a threat to marine life and, through possible concentration through the food chain, a threat to public health.**

**CTA: at least the Government of the day realised this salient fact. Many countries such as Japan accurately define both bottom ash and fly ash as hazardous waste. In Japan all ash residues are treated by plasma gasification supplied by Tetronics. Incineration in UK incinerators produces 23% by weight bottom ash of what is thermally converted. The highly toxic fly ash from the bags and flues is 10-20% of residues (source EPA USA website). What burns by incineration goes into the air, drops on the land and into the sea and enters our food chain. Incinerators kill.**

## PLAN 2

### Policy Framework for the Management of MSW 2005-2014

[http://www.epd.gov.hk/epd/english/boards/advisory\\_council/files/30-2005-Annex-A.pdf](http://www.epd.gov.hk/epd/english/boards/advisory_council/files/30-2005-Annex-A.pdf)

This Policy Framework advocates what we plan to do to tackle our waste problem head-on. Its core message is clear and simple: **we must be responsible for what we consume and what we dispose of.** We must all be responsible for avoiding, reducing, reusing, recycling and treating waste, **and use our landfills as a final repository only for the unavoidable waste after waste treatment.**

True to our belief in "big market, small government", the Policy Framework proposes simple, yet effective, economic tools based on the **"polluter-pays" principle** that would create incentives for us all to recycle more and throw less. They include measures tried and proven effective in other jurisdictions. We ask you to help make such waste reduction decisions that make sound economic and environmental sense. We must work together to tackle our waste problem now **so that our future generations will not be burdened with cleaning up the mess we leave behind.**

**CTA: exactly we cannot leave them toxic polluting incinerators when there is better more modern and far less polluting technology already available let alone proceeding along Zero Waste policies.**



The Government Acts

**We must address the waste problem in an holistic manner.** This Policy Framework sets out a comprehensive strategy consisting of a series of tried and proven policy tools and measures to tackle our waste problem head on and achieve the following targets:

Target 1: To reduce the amount of municipal solid waste (MSW) generated in Hong Kong by 1% per annum up to the year 2014.

Target 2: To increase the overall recovery rate of MSW to 45% by 2009 and 50% by 2014.

Target 3: To reduce the total MSW disposed of in landfills to less than 25% by 2014.

**CTA: were these targets achieved ? Moreover our Government issued recycling figures seem to include the waste trade imports and re-exports to China without any local recycling input.**

Tackling the Problem at Source

Waste avoidance and minimization are our top priorities. We introduced a territory-wide waste recovery programme in January 2005 to facilitate waste separation at the household level. We aim to expand the scheme to cover 80% of the population by 2010, and significantly increase the recovery of our domestic waste. **To make proper use of the recyclables recovered, we must have a robust recycling industry locally**

**CTA: is this in place ?**

Throw less, Pay less

The core of our comprehensive strategy is the "polluter-pays" principle.

We propose to introduce producer responsibility schemes (PRSs) that hold the manufacturers, importers, retailers and consumers responsible for what they produce and consume. **We aim to introduce to the Legislative Council the Product Eco-responsibility Bill in 2006 to provide a legal framework for PRSs.**

<http://www.info.gov.hk/gia/general/201304/30/P201304300491.htm>

Product Eco-responsibility (Amendment) Bill 2013 to be gazetted Apr 30 2013

With PRSs in place, we can consider introducing landfill disposal bans so as to make better use of our landfills as the final repository of unavoidable and properly treated wastes. **We also propose introducing legislation on waste charging by 2007 as a direct economic incentive to avoid and reduce waste.**

State-of-the-art Treatment

While our proposed policy measures would have substantial impact on waste reduction and recycling, we must face up to the reality that **there will still be unavoidable waste that we must handle.** We propose to develop **state-of-the art** Integrated Waste Management Facilities with incineration as the core technology for final waste treatment.

In developing the Facilities, **we will adopt the most stringent emission standards to minimize their impact on the environment.**

**CTA: the 'most stringent incineration emission standards' are a misnomer. Incinerators kill.**

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2 Clearly, Hong Kong must find a system of managing MSW now and in the years to come that is economically, **financially and environmentally sound.**

#### **Recommendations of the SDC on Solid Waste Management**

1. The Government should further promote solid waste recovery and recycling.
2. Legislation for PRSs should be introduced.
3. Solid waste recovery targets of 45% and 50% by 2009 and 2014 respectively should be achieved in Hong Kong.
4. The Government should identify alternative forms of waste treatment, in order to reduce the amount of solid waste that is disposed of in landfills.
5. The Government should introduce legislation on direct MSW charges, in order to encourage households and businesses to reduce the waste volume.
6. The Government should review the current waste management mechanism.

Table 1. The SDC states the wishes of the stakeholders

17. **Our landfills take up in total 270 ha. of land**, cost \$6 billion to construct, and their running costs in 2004 amounted to \$432 million. The annual costs of the Government's waste collection and transfer service amount to another \$435 million and \$355 million respectively. The simple truth is that if we do not reduce the growth in the amount of waste that we produce, then, given the lead time to develop a modern landfill, within the next few years **we will have to identify about 400 hectares of space for new landfills** to serve Hong Kong up to 2030. This is equivalent to slightly less than one-third the area of Hong Kong International Airport, **or is enough land to absorb & house half of Hong Kong's population growth for the next decade.**

*CTA: enhanced landfill mining could bring our landfills back to their original state and provide ample land for public housing.*

20. Most of the costs of MSW disposal are being paid for out of the public revenue and the costs appear insignificant or even non-existent for most waste producers. **There are virtually no incentives for anyone to recycle or reuse waste that they produce, or to reduce the volume of material, because they are not being made to pay directly for what they are throwing away.**

*CTA: what has changed*



21. The free waste management service in Hong Kong not only provides no incentives for the general public to avoid waste, but also affects the growing costs for disposal. **That MSW producers do not have to pay to dispose of their waste is not conducive to the development of the recycling industry.** At the same time, all the hidden costs paid for by taxes make it hard for the general public to appreciate how cost-effectively MSW collection and management services are being run.



22. **The stark truth is that we need to generate less waste.** This will require concerted efforts of the whole community, with the guidance of **firm policies**. **How we achieve this is the purpose of the Policy Framework.**

*CTA: and what have all these words achieved ?*

26. **Another notable factor is that about a quarter of MSW consisted of putrescibles, or primarily food waste.** If poorly handled, this biodegradable waste can pose serious **public health challenges**. Furthermore, this kind of waste when landfilled contributes significantly to emissions of methane gas, one of the recognised causes of the greenhouse effect.

*CTA: the UK alone just commissioned its 100<sup>th</sup> anaerobic digestion facility. Hong Kong has 48% total putrescible MSW per day (4000 tonnes per day) yet is commissioning just two small AD plants; one to treat 200 tpd and the next to treat 300 tpd. It continues along the flawed thinking that it will incinerate the remaining 3500 tpd food waste. For combustion we need at least 6 MJ/kg calorific value (CV) in the feedstock and our wet food waste is up to 90% moisture with CV of <4MJ/kg – hence to burn water, higher CV feedstock must be co-combusted. By doing so we would need high CV waste that ought to be recycled let alone we need more energy to burn this ultra-wet feedstock and minimal resultant saleable electricity will be produced.*

Strategic Objective 1

.As a community, to make every effort to avoid generating waste and to reduce the amount of solid waste that needs final disposal, by adopting measures **to facilitate the separation of discarded material, the recovery and reuse of material and the recycling of non-reusable material.**

Strategic Objective 2

. **To apply the "user-pays principle"** as a means of reducing volumes of waste for disposal.

Strategic Objective 3

. **To adopt advanced technologies** and practices to treat waste requiring final disposal and to create new economic opportunities.

Table 2. The Government's strategic objectives on MSW

38. The Government can only serve the community when it has its support in first acknowledging the presence of a problem and then accepting the solution.

In MSW management, it requires the community to clearly see the real price for waste management services and to **embrace the "polluter-pays" principle.**

46. **Clearly, domestic waste has the greatest potential for improvement in terms of recovery and recycling, and this is exactly where we shall devote our attention and enhance our efforts.** With the very low recovery rate for domestic waste, we must take ownership of the problem, and take actions at a personal level.

48 **Policy Tools**



**Proposed Waste charging - provides a significant effect on changing behaviour and puts in place the "polluter-pays" principle PRSs - put the onus on the producers and users of products** (i.e. the community) to share the responsibility for all the economic, social and environmental impacts of a product throughout its lifecycle Landfill disposal bans - divert MSW away from premium and expensive landfill space

Support Public education and Partnership - soft measures to raise awareness, increase measures understanding, and foster partnerships with the community and businesses

**Legislation - necessary to ensure compliance and penalise those who engage in environmentally harmful behaviour and practices**

50. To establish a clear linkage between consumption and the environmental costs entailed, **we propose to impose a direct and explicit charge on each individual for the amount of waste one discards.** In other words, the full cost of managing MSW would be placed squarely on those people who generate MSW in the first place. This is fully consistent with the "polluter-pays" principle, which the public generally support. International experience has shown that where waste charges are in operation, the waste volume decreases and the rate of avoidance, as well as recycling, goes up.

51. **Waste charging is a direct tool to change behaviour.**

56. Landfill disposal bans protect our precious landfills. **Biodegradable wastes like kitchen and restaurant waste are known to create LFG and leachate. LFG is malodorous and potentially suffocating, flammable and explosive. Leachate is highly polluting and, if not properly controlled, may seriously contaminate water bodies through infiltration or direct discharge of leachate.** The decomposition of biodegradable waste is a slow and nonhomogenous process. This results in differential settlement of the landfill surface that may lead to slope instability problems for many years. In fact, the total cost of maintaining some 300 ha of closed landfill sites to address their environmental problems amounts to \$62 million per year. **We must save our precious landfill capacity and reserve it for inert or unavoidable waste. A ban on biodegradable waste, proposed to be introduced in the longer term,** allows landfills to last longer and makes them less of a long term environmental burden. Such ban is also in line with overseas practices such as the EU Landfill Directive, which lays down progressively **lower limits on the biodegradable content of landfilled waste.**

1. **Legislative backing for the policy tools is needed.**

**The Government must be firm and fair,** and legislative backing for our proposed policy tools is indispensable. Once legislation is enacted, regulatory measures will be put in place to **ensure that MSW charging, PRSs and landfill disposal bans are complied with.** Monitoring and enforcement will deter and penalize those environmentally harmful practices such as "fly-tipping", and **ensure that products and materials are properly recovered for reuse or recycling.**

63. **To put these policy tools at work, legislation will be introduced.**



The Government will also reinforce the key message of waste reduction and recycling through public education and partnership.

64. We must translate the proposed waste management strategy into action. All the best strategies in the world cannot achieve the desired results **unless the implementation is decisive and timely.** Therefore, the public needs to know how the strategy and policy tools relate to them, and under what timeframe these will come into force. This chapter explains how the measures will be executed in relation to our three major targets.

66. These targets are tangible reductions in MSW and tell us exactly where we need to focus our efforts. With the proposed policy tools and the concerted efforts of our entire community, **we are confident that these laudable targets are achievable.**

68. **The driving force of the strategy comes from the policy tools of waste charging, PRSs and landfill disposal bans.** These are supported by public education and partnership, and legislation.

69. Discouraging wasteful habits is the first step. **Waste charging is the key policy tool in waste avoidance and minimisation.** By putting a price on generating waste, we can induce change in people's wasteful habits and behaviour.

70. What is a suitable means of imposing waste charges? While there are several methods of doing so, we consider a variable charge by the amount of waste more appropriate for Hong Kong. **The charge will be imposed only on mixed waste,** which is the remainder after reusable and recyclable materials are taken out.

71. An MSW charging system of a variable rate can operate in different modes such as weight-based, frequency-based or volume-based. Volume-based systems that involve bags, bins or stickers are gaining popularity overseas and can serve as a good reference for Hong Kong. The detailed design of a **variable-rate system will of course need to take into account Hong Kong's unique characteristics and the multi-occupant high rise living environment.** A method being considered, amongst others, is to use **pre-paid waste disposal bags.**

72. Pre-paid waste disposal bags will come in different sizes. The prices of the bags should be set at a rate high enough to recover the cost of treatment and encourage a change in behaviour. **These pre-paid bags will be the only ones accepted by waste collectors.** As a major initiative that has territory-wide implications, the public will be fully consulted on the specific proposal we draw up. **Subject to public consultation, legislation specifying how MSW will be charged and suitable sanctions on non-compliance will be introduced into the Legislative Council.**

**To allow sufficient time for the public to build consensus, we envisage that the MSW charging Bill can be introduced in 2007.**



**SCMP Plan to charge households, businesses for rubbish disposal**

Environment official says **introduction of charging by 2016** could ease landfill pressures

**Wednesday, 17 July, 2013, 4:49am** Cheung Chi-fai [chifai.cheung@scmp.com](mailto:chifai.cheung@scmp.com)

<http://www.scmp.com/news/hong-kong/article/1284293/plan-charge-households-and-businesses-rubbish-disposal>

81. **Legislation will be introduced into the Legislative Council in 2006** to provide the framework for PRSs, with product-specific measures introduced through subsidiary legislation subsequently

84. We may impose landfill disposal bans on certain end-of-life products. Consumers or commercial users will be required to separate from their main MSW streams the banned materials or products, for example vehicle tyres and bulky electrical appliances, and prepare them for proper recycling or treatment outlets. In this way, the flow of recyclable materials from commercial and industrial operations to the waste recycling industry can be further strengthened. Landfill disposal bans will come into effect after the concerned PRS is introduced.

86. **Source separation can be achieved in Hong Kong by encouraging and assisting property management companies to provide waste separation facilities on each building floor, where feasible, and broadening the range of recyclables to be recovered.** Initial results of a pilot scheme run at the Eastern District housing estates to facilitate the separation of domestic waste by residents at source were encouraging. Some of the 13 estates more than doubled the quantity of recovered recyclables by actively encouraging the participation of the community across all ages.

95. **Waste recycling is a key element in our MSW strategy. The Government's intention is to promote the local recycling industry and jumpstart a "circular economy".**

105. Landfill disposal bans are employed overseas to **divert biodegradable waste from landfills**, which help to prolong their lives and reduce the long-term liability of leachate and LFG generated from the landfills. **In Hong Kong's case, as appropriate technologies such as composting or anaerobic digestion come on line, landfill disposal bans will, in the longer term, be extended to cover biodegradable waste, such as food waste.**

106. **We still need treatment technologies to further reduce the volume of waste before final disposal.** Several technologies are being considered. These were selected from submissions made by local and overseas companies Through MSW separation at source, recyclable materials will be recovered for recycling. Biodegradable materials such as food waste from commercial and industrial establishments can be separately collected at source for biological treatment such as composting and anaerobic digestion. **Composting requires stringent control on the composting conditions and on the emissions to reduce odour problem. The volume of biodegradable waste which could be treated by biological methods also depends on the available outlets for the by-products, which are very limited in Hong Kong since we do not have much agricultural activities, and exporting compost to the Mainland is not practicable due to the strict import control on the quality of compost**

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produced from MSW. We estimate that Hong Kong is able to take up soil conditioners produced from about 500 tonnes of biodegradable waste per day.

*CTA: so the Govt has tendered two plants to handle just 500 tpd putrescibles when we have 4,000 tpd putrescible waste.*

112 Depending on progress of the waste reduction measures and the effectiveness in reducing the volume of unavoidable waste, we can confirm the need and the size of the remaining components of the IWMF before they are built and commissioned in the second phase. **We aim to commission the IWMF in mid 2010s subject to the implementation of the "polluter-pays" principle.**

114. **The reality is that we will continue to rely on landfills as our final means of disposal.** More studies will be conducted to consider new landfills but it is important to note that, based on our focus on waste avoidance and recovery and recycling, **we now have bought enough time for longer term strategic planning and hopefully reduced the need for future facilities.**

*CTA: this is not reality – this is defeat. Modern technology does not need extended landfills and produces beneficial usable products instead of a mountain of toxic thermally converted toxic ash and toxic emissions.*

117 **This Policy Framework for the ten years from 2005 to 2014 proposes the milestones to be met by the Government and the public hand-in-hand.**

*CTA: were the Framework targets achieved, is the relevant legislation promised 2006 and 2007 in place and operational*



119. We propose to impose an explicit charge on MSW so that everyone can fully appreciate the significant environmental costs entailed by a consumption-led lifestyle. **Placing a charge on MSW** makes everyone in Hong Kong think twice when making purchasing and disposal decisions that will benefit their bottom line and also to make a commitment to Hong Kong's well-being. **It is this change in people's attitudes towards waste and purchasing and disposal habits that is paramount in reducing the flow of MSW to landfills.**

125. MSW management is a **top priority in our policy agenda**. It is now the time to step up our efforts in tackling the imminent MSW problem.

*CTA: Top priority ? god knows where we would be if this were backburner priority.*

We have set out in this Policy Framework the proposed action plan.



**HKG Government provided RECYCLING figures genuine or flawed ?**

HKG Recycling = Reshipping ?

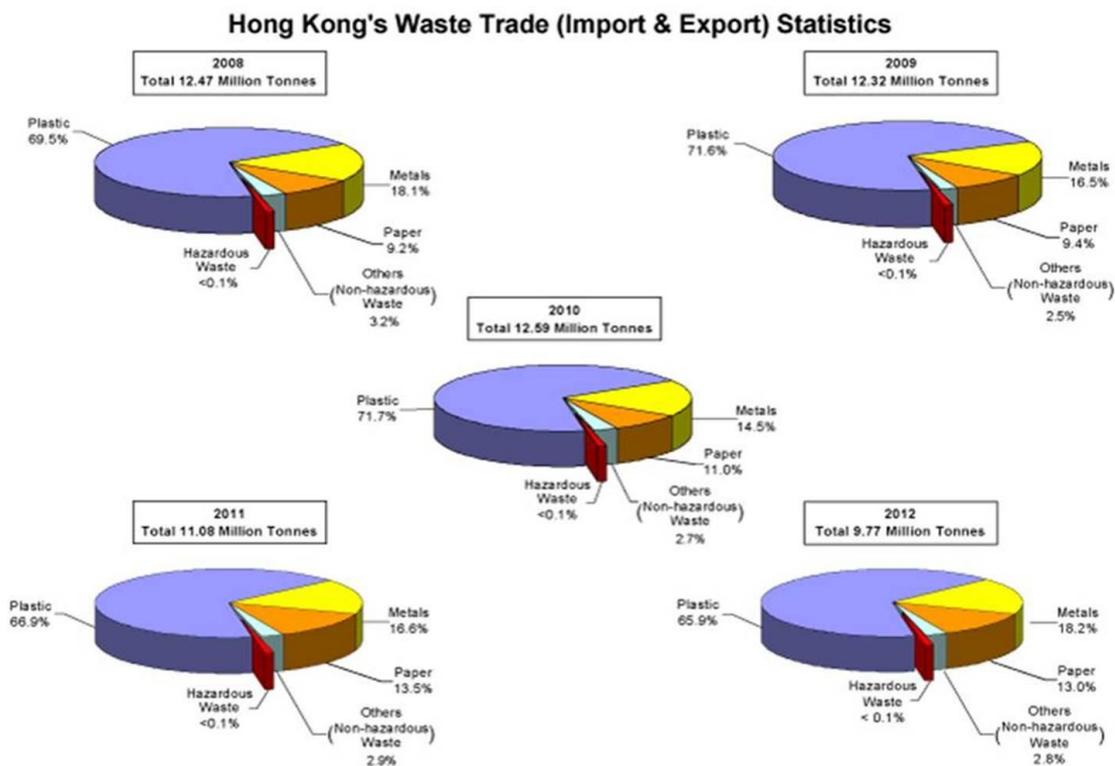
<http://news.yahoo.com/china-puts-green-wall-us-trash-134108953.html>

Hong Kong Government’s ‘recycling’ statistics ?

Import waste - Do nothing with it – Export it to China – Enhance local recycling figures?

**Legco Panel members - Please find out the real numbers .**

China ‘GREEN FENCE’ will seemingly decimate HKG’s ‘recycling’ figures.



[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/stat\\_wt.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/stat_wt.html)

**Control on Import and Export of Waste**

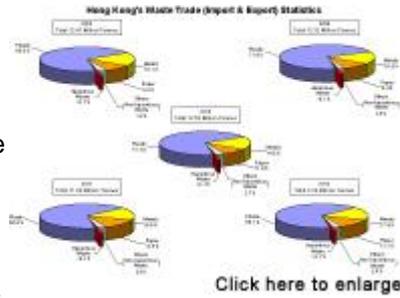
**Statistics**

**Waste Trade Statistics**

8/F Eastwood Centre - 5, A Kung Ngam Village Road - Shaukeiwan, Hong Kong  
 Tel: 25799398 26930136 Fax: (+852) 25659537 26027153  
 Website: [www.cleartheair.org.hk](http://www.cleartheair.org.hk) Email : [chair@cleartheair.org.hk](mailto:chair@cleartheair.org.hk)



The transboundary movements of waste in Hong Kong are mainly caused by international trading of waste for recycling purposes. The majority of these recyclable non-hazardous wastes such as plastic waste, metal waste and scrap paper are destined for recycling in Hong Kong or the nearby areas.

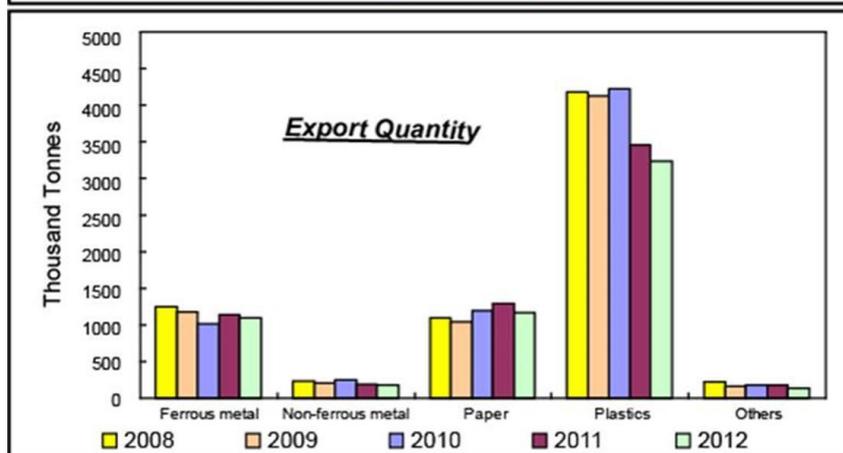
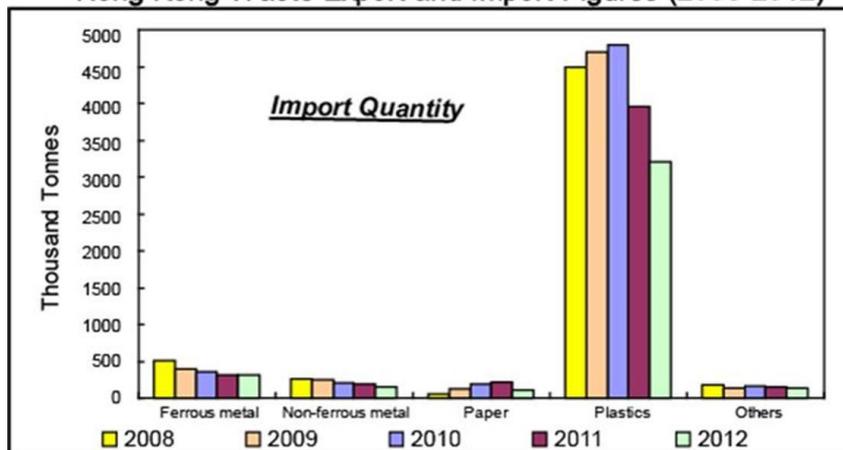


The substantial volume of waste import, export and re-export activities are driven mainly by the manufacturing and industrial activities in southern China and their demand for recovered scrap materials as raw materials.

- [Statistics by Waste Types](#)
- [Statistics by Countries/Areas](#)

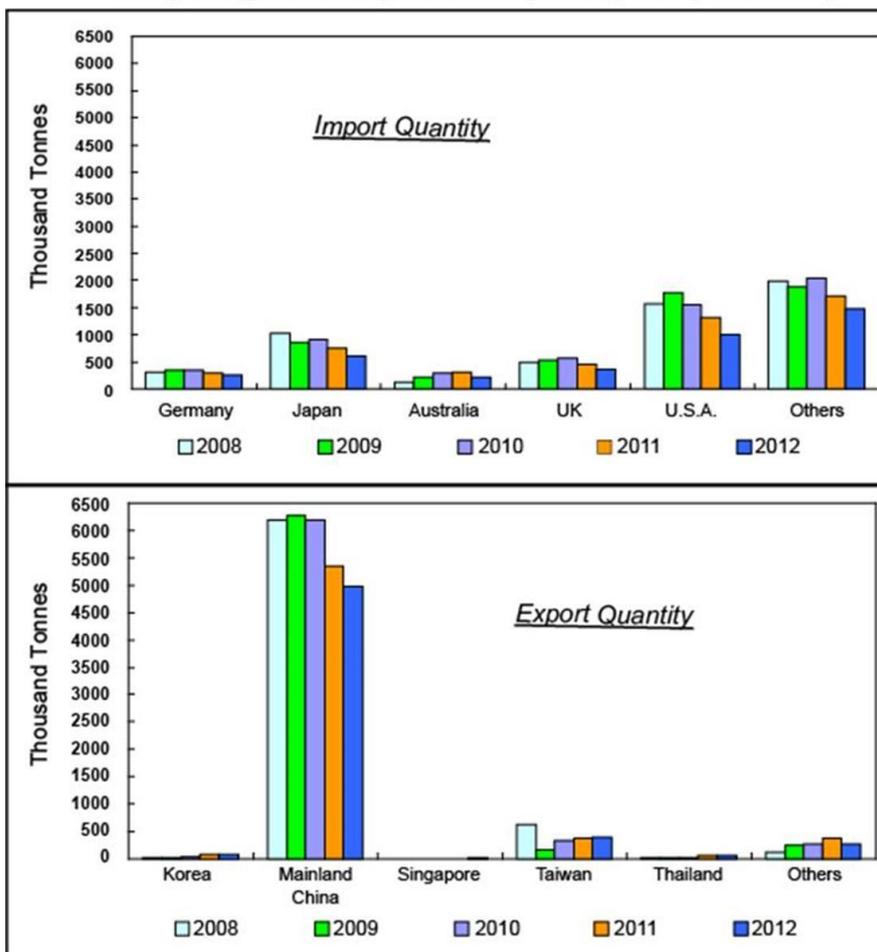
The USA, Japan, and other regions in southern China are the major waste trade partners of Hong Kong. In general, waste is shipped from developed countries such as the USA, Japan, and the United Kingdom through Hong Kong into southern China.

**Hong Kong Waste Export and Import Figures (2008-2012)**





Hong Kong Waste Import and Export Figures (2008-2012)

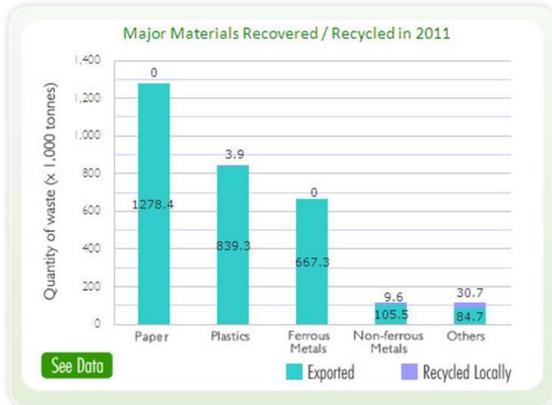


## Hong Kong Waste Import



Waste reduction and recycling are **very important elements of the local waste management framework**. They help both to conserve natural resources and to reduce demand for valuable landfill space.

Through the existing waste recovery system, about 3.02 million tonnes of municipal solid waste were recovered in Hong Kong in 2011. Of that total, 1% was recycled locally and **99% was exported to the Mainland and other countries for recycling**, with an export earning of HK\$8.2 billion for Hong Kong.

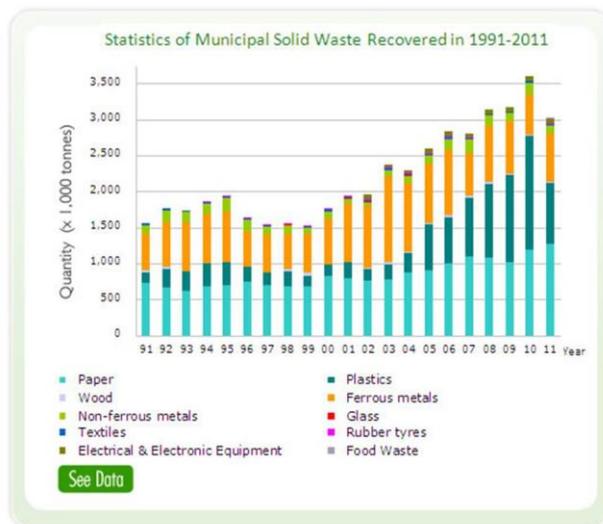




The Environmental Protection Department encourages waste reduction and recycling activities. Since 1991 it has provided a helpline service to organize waste reduction and recycling programmes. It also provides recyclers and technical advice on waste recovery and recycling. In 2011, it received 5,000 enquiries from the public.



Remark: Percentages may not add up to 100 due to rounding off.





<http://www.zerowasteurope.eu/2011/04/zero-zabor-new-zero-waste-groups-in-the-basque-country/>  
'I want to breathe fresh air' **watch the FLASH DANCE** – Enjoy!

“[New Zero Waste groups](#) are appearing in the Basque Country. Following the experience of Usurbil, a municipality that has **achieved 88% separate collection** after only two years of implementation of the door-to-door collection, and after the municipalities of Hernani and Oiartzun have joined this system of separate collection, [7 new groups of citizen-led Zero Zabor](#) (Zero Waste) groups have appeared in the region of Guipuzkoa in the Spanish Basque Country. Usurbil was pioneer in challenging the separate collection by means of road container (which was achieving rates always below 40%) and decided to implement door-to-door system. Hernani (20.000hab) and Oiartzun followed this example a year later and currently the three of them are all above 75% of separate collection.

However the region of Guipuzkoa still insists in building an incinerator and, in view of the success of the Zero Zabor experiences, has speeded-up the works to stop other municipalities from joining the Zero Waste model. Moreover the Guipuzkoa region refuses to increase the current composting capacity of only 2.500tn and the 4.400tn of high quality organic waste that is separately collected can't be composted –as the European waste hierarchy would request-.

But the Zero Waste philosophy counts with the support not only of some engaged municipalities but also of citizen groups that are tirelessly working to spread the word that reducing waste and increasing recycling is not only necessary but also possible. By replicating the experienced pioneered by Usurbil and followed by Hernani, Oiartzun and others, Guipuzkoa could create more jobs, less pollution and more local economy and save the 400 million euros that the new unnecessary incinerator will cost. In Guipuzkoa a struggle between the past and the future is taking place, between those who want to burn waste and those who want to reuse and recycle resources. The Zero Waste strategy is showing the alternative to end-of-pipe obsolete technologies and with the new groups in the Basque Country and the already existing Catalan Zero Waste network the change is advancing in Spain. “

See what People Power and Zero Waste policies achieved:

<http://www.noticiasdegipuzkoa.com/2013/07/13/sociedad/euskadi/gkh-suspende-la-ejecucion-de-la-incineradora-sin-poner-en-marcha-un-plan-alternativo>

***GHK suspends progress of the Guipuzkoa incinerator without launching an alternative plan***  
*Shows that the project does not meet the required environmental standards*  
*Iraitz Astarloa - Saturday, July 13, 2013 - Updated at 06:27 h*

Kind Regards,  
*James Middleton*

Chairman  
[www.cleartheair.org.hk](http://www.cleartheair.org.hk)

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