

Zero Waste Hong Kong Within 4 Years - Yes We Can

Zero waste plans are well advanced worldwide. San Francisco is already at 80 per cent recycling, with plans to reach 100 per cent by 2020. Taiwan, with a zero waste policy since 2003, defines it as “effectively recycling and utilising resources through green production, green consumption, source reduction, recovery, reuse and recycling”.

In Italy 40 million people in 4,000 municipalities now recycle all food and green waste, and Rossano Ercolini, the winner in 2013 of a Goldman Environmental Prize, has inspired five million people in three years to adopt zero waste with 85 per cent recycling.

The key action is simple - separation at source, aided by positive waste charging and simple digital measurement. People are not charged for what they properly separate, but only for what they do not separate. It is a highly effective incentive.

These results are not difficult to comprehend or expensive. They do require new thinking and a new mindset, that, “All waste is a valuable community resource”. Governments and decision-makers must work with a new set of principles, the opposite of traditional ones - transparency, simplicity, participation, open-mindedness, experimentation and visibility. A fair-process involvement results in a community actively embracing zero waste plans. People become fully engaged in the strategy and this can result in self-organisation and innovation.

User-friendly and efficient 100 per cent food and green waste recycling, based on proven “carbon to earth not air” technologies, would eliminate around 50 per cent of Hong Kong waste to landfills. Singapore's construction waste recycling rate is now 99 per cent compared to Hong Kong's purported 85 per cent. The difference is 4,300 tonnes a day, around 25 per cent of Hong Kong's waste. Singapore requires all developers and contractors to hold a recycling licence to operate, and produces construction aggregates. District based single-track systems for recyclable waste paper, glass, metal and plastic remove another 20 to 25 per cent. The balance of 5 to 10 per cent hazardous, toxic and non-recyclable waste is dealt with by 'no carbon to air' ultra high-temperature plasma 'non-incineration' producing energy and vitrified aggregates. This results in no waste going to landfills, no pollution from such waste, no carbon to air and complete sustainability. This could be done within 4 years.

Landfill extensions and a super incinerator involve substantial capital and operating expenditure, are not sustainable and threaten public health.

Peter Reid, Chairman, Zero Waste Smart City Resources Association Limited

知源無廢物智慧型城市協會有限公司”.

用四年時間將香港建成"零廢物之城"--"我們做得到."

先進的零廢物處理計劃不單已廣為世界各地實施，亦是今后廢物處理時的普遍認知和標準。就以三藩市為例，現在已能 80% 的廢物再循環變為資源，並計劃於此 2020 年前達到 100% 再循環的目標。而鄰近地區台灣，自 2003 年起已實施一系列有效的善用資源，循環減廢的措施和政策，透過綠色生產，綠色消費，源頭減廢，收復再用和轉廢物為資源達至"零廢物"的目標。在意大利，已有 4000 社區共四千萬人口已參與廚餘或有機廢物的綠化處理。其中 Rossano Ercolini 女士鼓勵了五百萬人於三年內達到 85% 廢物再循環的水平。

所以香港四年內達到"零廢物"的目標是完全能做到。透過廢物／資源的源頭分類，輔以公平的垃圾徵費政策，豁免對配合減廢源頭政策的人士徵費，而對未經處理的廢物實施收費，促進各社會人士對零廢物，轉廢物為資源的生活責任起到積極作用。

這些都不是天馬行空，難以實行而又複雜昂貴的空談。的確，政府和決策者極需要一套新思維，把陳舊固化的觀念轉變。建立新思維模式將廢物全部轉變為社會資源。

行政上要具透明度，簡單直接，開啟思維及讓公眾參與。技術上要與世界接軌，要有先進視角，切合本港和週邊地區實際情況，可持續發展。使整體社會上下對零廢物策略的推行有理性和感性的認同。

顯然易見，利用現有行之有效的技術，將食物和有機廢物再循環再造，即可減少有機廢物傾倒於堆填區達 50%。以外，星加坡循環建築廢料高達 99%，比本港的 85% 有效。其主要原因乃本港每日有 4300 噸，即大約 25% 的建築廢料被傾倒於堆填區。現時星加坡的做法是，所有的建築公司都需要領有廢物再循環牌照並需負責收集和處理這些廢料。此外，使用可循環紙張，對玻璃，金屬和塑膠可循環 20% 至 25%。其餘不可循環的，有害有毒的物料會比運往新型的氣化設施處理。

所得的效果：零廢物排放，零廢物堆填，零污染運輸。

達標時間：四年

所需投入資金：為現時計劃的超級焚化爐和擴建堆填區之 50%

操作投入：零排放

期望第二階段：零堆填區

Zero Waste with 4 Years - Vision Summary: All Waste as a Valuable Community Resource

1. Zero Waste Plan Primary Objectives: All Categories of Waste Totally Recycled; No Waste to Landfills; Zero Carbon and Zero Pollutants to Air; Zero Waste Collection and Processing Pollution using 1,800 E-Trucks; Zero Non-Sustainability; Zero Wasted Energy or Elements; Active, Intensive and Ongoing: (i) ONE (Outdoor, Nature and Eco) Education for All Students from Primary to Tertiary Education with at least one week a year in the outdoors every year of school or college (Love Nature, Love Your Country Side, Love Your Country !) and (ii) All Households and Businesses in 8 R's (Re-Think, Re-Engineer, Re-Design, Re-Move, Reduce, Re-Use, Re-Cycle and Be Re-Sponsible) using 3 E's (Engage, Explain and Expectation Clarity) Techniques; Creation of ONE WORLD Park in the Soko Islands, the unused Peninsula from Tai O Southwards and South Lantau to deal with a capacity of 25,000 students and visitors at any one time in an 8 month season); Creation of a Sustainable District based Bioeconomy; Target Zero Public Capital Expenditure (Capex) and Operating Expenditure (Opex) by Privatisation of the Complete Waste Management Process; Create 30,000 Quality Jobs through out the Plan.

2. The Keeling Test (Ralph Keeling) for any New Waste Process: Does it put Fossil Carbon to Earth or Air?

If the process puts 'Carbon to Air', it replaces the Waste Problem with an even worse Global Warming Pollution Problem i.e. If the process fails the Keeling Test, it simply should not be used. **All measures now proposed by Government (IWME, OWTF and Landfills Extensions) totally fail the crucial Keeling Test. In addition, the HK\$6 B (Billion) Tim Wan sewage sludge quad-incinerator, the world's largest, now under test, completely fails the Keeling Test.**

3. Zero Waste - Component Capex and Opex Costs

	Capex (HK\$ Billion)	Opex (HK\$ Billion)
1. Education All Students; Community Household and Business Sectors	HK\$6 B	HK\$3 B
Education is the Key Priority including for the ONE Park.		
2. District Food and Green Organic Waste Plants with 18 'No Carbon to Air' Food Waste Plants' for High Quality Fish Food each with Average Capacity of 500 Tonnes a Day	HK\$5 B	0 by 12 Months Operation
3. Fish and Vegetable Production Plants Natural Fresh, Salt and Sea Water Fish and Vegetables Output Net ROI 40 % Positive Net Revenue HK\$4 B)	HK\$5 B	0 by 12 Months Operation
4. Construction Waste Recycling Licence Scheme and District Aggregates Plants	HK\$6.5 B	0 by 12 Months Operation
5. District Single Track Recyclables 18 Plants for Plastic, Paper, Metal and Glass Waste Recyclables.	HK\$5.5 B	0 by 12 months Operation
6. Hazardous, Toxic and Non-Recyclable Waste Closed Cycle with Two 'No Carbon to Air' High Temperature Plasma 'Non-Incinerators '	HK\$6.5 B	0 by 12 months Operation
7. 1,800 E-Trucks	HK\$4.5 B	HK\$1 B
8. Contingencies 15% for Capex 25% Opex	HK\$6 B	HK\$1 B
TOTAL ZERO WASTE CAPEX	HK\$45 B	OPEX HK\$5 B (Actually Zero)

Note 1: Target Return on Investment (ROI) in Food and Green Waste to Fish & Vegetable Production is 40 % a Year.

Note 2: Revenues from all combined recycling are expected to lead to a Positive Opex i.e. No Opex Costs from Public Funds.

4. Comparison with Government Proposals: Landfills Extensions, Super Incinerator IWTF, OWTFs and Tim Wan, the World's Largest Sewage Burner, (now under test!) with Ancillary Works (present day prices!)

TOTAL CAPEX Estimated at HK\$90 Billion ?, OPEX HK\$10 Billion Plus ?

5. Summary Government Plans: Waste dealt with 50%, Carbon and Pollutants to Air 1,369,000 Tonnes a Year; Toxic Residues produced requiring Storage 456,000 Tonnes a Year; Totally Unsustainable with High Capex, High Opex, High Energy Losses; No Element Recovery; All 'Carbon to Air' Global Warming Pollution i.e. Total Failures of the Keeling Test;, Destruction of HK Environment and Eco System; and the Creation of Severe Hazards to Public Health, Safety and Wellbeing. The recent 'Carbon to Air' OWTF (Biogas) tender illustrates the level of manipulated waste expenditure, showing a 'beyond incredible' 800% price uplift of HK\$1.53 Billion, compared with a more advanced UK plant in a very difficult site with extensive compliance criteria, tendered at 14.5 million pounds <http://www.waste-management-world.com/articles/2014/02/imtech-wins-14-5m-contract-for-3mw-food-waste-to-biogas-ad-plant-in-herts.html> .

Note 3: The Zero Waste Plan's suspected, largest hidden implementation cost, would be for **the termination of the existing long term', unsustainable, extremely wasteful, non-recycling waste contracts, with two incumbent primary vested pecuniary interests Veolia Environnement and Sita (now Indo Environnement).**

This hidden termination cost is estimated to be HK\$60 Billion plus? A far higher cost than implementing the Zero Waste HK Plan. The Government has kept quiet on the cost of terminating these long term unsustainable waste contracts, which

only exist by dubiously 'doing nothing for over 16 years'.

In 'Follow the Money' tracking terms this issue is actually about ongoing mega financial waste giving rise to the presumption *juris tantum* of '**Cronyism Waste Management being the Pork Barrel of Hong Kong**'.

Public power and authority comes with responsibility and accountability. It is time the easily identifiable, highly paid public officers and officials, clearly and unambiguously responsible for this extremely mendacious, egregious and deleterious state of affairs, were held to account. It is time this 'Waste Pork Barrel' was finally stopped for the public good.

In Europe, No Recyclable Waste will be sent to Landfills by 2020, No Recyclable Waste will be sent to Incineration by 2020. Hong Kong is actually planning to do the reverse. To start sending waste to a proposed Super Incinerator and to have the largest sewage sludge burner in the world at Tim Wan, Tuen Mun, which is just starting testing. Recyclables will be sent to both the Super Incinerator and the Landfills Extensions. See the pertinent video documenting the rejection of an incinerator <http://www.zerowasteurope.eu/2014/02/game-over-guipuzkoas-incinerator/>. There are many more to be found on youtube.com.

This plan is irrational, unreasonable, inconvenient, threatens the eco-system and environment, and puts at risk the health, safety and well being of Hong Kong people. The proposals should never be allowed. All official justifications for these facilities are blatant fraudulent misrepresentation and a conspiracy to defraud the people of Hong Kong, based on repeated untrue official statements of material fact, as well as keeping quiet when there is a duty to give salient information, by the failure to state material facts necessary for the statements made not to be misleading and fraudulent misrepresentation. It is asserted that these acts, actions and omissions, constitute the serial commission of misconduct in public office, by the concerned public officers and officials.