

# Waste Data Shortfalls: Reflecting on the Statistics in the *Monitoring of Solid Waste in Hong Kong Report*

Published every December, the *Monitoring of Solid Waste in Hong Kong Report* (hereinafter “the Report”) serves as Hong Kong’s report card on waste reduction and environmental performance. It allows environmental groups, citizens concerned about green issues, and the general public to understand the city’s waste management situation clearly and to participate in suggesting improvements to related policies.

In 2024, despite challenges in waste policies, the government proactively released data before the Report was published, claiming that “Hong Kong’s waste volume has already passed its peak.”

In 2025, on the day a typhoon struck Hong Kong, the authorities announced the suspension of municipal solid waste charging and disclosed partial waste data to demonstrate the effectiveness of waste-reduction efforts. The claim that “waste has passed its peak” must be verified by time and accurate statistics. Unfortunately, in recent years the Report has been repeatedly “simplified”. Its statistics and classifications have become less transparent and insufficiently detailed, resulting in data that are “incomplete” and fail to accurately reflect the real situation.

The Environmental Protection Department (EPD) should revise the Report’s statistical classifications so that both the public and the government can jointly formulate appropriate waste-reduction measures.

## **1. Missing disposal and/or recovery quantities for products regulated under Producer Responsibility Schemes (PRS)**

Plastic bags, beverage glass bottles, and (some) electrical and electronic equipment are already regulated under producer responsibility schemes. These schemes aim to reduce waste, encourage businesses to improve product design, and promote recycling and reuse. However, the Report does not fully provide disposal quantities and/or recovery quantities for these products (see table below), making it difficult for the public to evaluate the effectiveness of the reduction plans.

<b>Producer Responsibility Scheme Regulated Item</b>	<b>Does the Report Provide Disposal Quantity?</b>	<b>Does the Report Provide Recovery Quantity?</b>
<b>Plastic bags</b>	Yes	No
<b>Beverage glass bottles</b>	Yes <sup>1</sup>	No
<b>Electrical and electronic equipment</b>	No	Yes

For example, the 2023 and 2024 Reports both state: “coupled with the continuous increase in the public’s awareness of recycling of other WEEE, the recovery rate of WEEE remained high”. Yet the Reports disclose neither the recycling rates nor the disposal quantities. It is impossible to gauge how high these figures actually are. If the Department would restore the missing data in the Report, this claim would be far more convincing.

Looking ahead, the government plans to bring plastic beverage bottles, paper-based beverage cartons, lead-acid batteries, and rubber tires into the producer responsibility scheme. At present the Report does not comprehensively track the recovery and disposal quantities of these products (see table below), so the public cannot meaningfully discuss the waste-reduction potential and environmental benefits of the schemes.

<b>Item to Be Included in Producer Responsibility Scheme</b>	<b>Does the Report Provide Disposal Quantity?</b>	<b>Does the Report Provide Recovery Quantity?</b>
<b>Plastic beverage bottles</b>	Yes, but only under “plastic bottles”	No
<b>Paper-based beverage cartons</b>	Yes (“Tetrapak”)	No
<b>Rubber tyres</b>	Yes	No (included under “Others”)
<b>Lead-acid batteries</b>	No	No

Most plastic beverage bottles on the market are made of polyethylene terephthalate (PET), while personal-care bottles are mostly high-density polyethylene (HDPE). Since 2020, however, the EPD has cited “simplification of waste composition categories” as the reason for merging all “plastic bottles” into a single statistic and has stopped disclosing separate disposal quantities for PET bottles or recovery quantities for PET material. For paper-based beverage cartons, the

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<sup>1</sup> The Report provides the disposal quantity for “glass bottles,” which includes containers other than beverage containers.

Report provides disposal quantities under “Tetrapak.” Although there are recycling facilities for these cartons in Hong Kong, the Report provides no recovery figures.

Rubber tyres were previously reported with both disposal and recovery quantities for many years, but since 2023 only disposal quantities have been published; recovery quantities are now lumped under “Others.” Given that the producer responsibility scheme already has a clear development roadmap, the EPD should start collecting and disclosing the relevant disposal and recovery data as soon as possible so that the effectiveness of the scheme can be properly assessed.

## **2. Too Few Categories for Plastics and Paper; Food Waste Deserves Composition Analysis**

For plastic waste, the Report only monitors disposal quantities for “plastic bags,” “plastic bottles,” and “Plastic / Polyfoam dining wares.” In 2023, these three plastic categories together accounted for just 61.75 % of all plastic waste, with “Others” making up nearly 40 %.

For paper, the Report tracks only “Cardboard / Newsprint / Office paper” and “Tetrapak.” In 2024, the two paper categories together represented only 26.12 % of all paper waste, while “Others” reached 73.9 %.

The authorities should consider monitoring more types of plastic and paper waste and compressing the “Others” proportion to 20 % or below. More detailed categories would also help the public think about how to reduce waste at source and improve recycling, thereby minimising plastic and paper in the waste stream.

The Report also contains no analysis of food waste composition. Food waste composition directly affects the efficiency of downstream recycling. Hong Kong’s O-Park 1 and O-Park 2 mainly produce biogas and compost. Plant-based food waste (e.g. vegetable and fruit scraps) is more suitable for composting, whereas cooked food waste with high salt and oil content degrades compost quality.

South Korea leads the world in food waste management, achieving a 98 % recycling and composting rate. Designing an efficient recovery system requires not only advanced facilities and high public awareness but also in-depth knowledge of food waste composition. South Korea’s *National Waste Statistical Survey* analyses both the quantity and quality of food waste (Figures 1 & 2)<sup>2</sup>. It discloses food waste quantities by region and further breaks it down by source, industry, and composition (vegetables, fruit, grains, fish and meat, leachate, etc.).

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<sup>2</sup> 전국폐기물통계조사 <https://www.recycling-info.or.kr/sds/strProcessIndex.do?menuNo=M130303>

7. 依城市規模劃分的食物垃圾物理成分的密度

分配	餐廚垃圾基本單位產生量及實體成分比例 (克/天/人·%)								
	密度 (公斤/公升)	全部的	蔬菜	水果	穀物	魚和肉	滲濾液 (肉湯)	ETC	非食品
平均的	1.029	367.95	121	48.1	91.86	59.89	20.43	14.74	11.93
		100	32.89	13.07	24.96	16.28	5.55	4.01	3.24
特別城市	0.797	389.95	107.09	48.63	127.41	76.54	9.12	12.92	8.24
		100	27.46	12.47	32.67	19.63	2.34	3.31	2.11
大都會	1.265	534.99	176.63	58.74	118.17	72.25	65.57	15.52	28.09
		100	33.02	10.98	22.09	13.51	12.26	2.9	5.25
中小城市	1.405	349.14	126.89	50.28	73.12	58.08	13.32	19.45	8.01
		100	36.34	14.4	20.94	16.63	3.81	5.57	2.3
樓息	0.534	185.32	70.61	29.37	39.41	22.65	7.45	7.56	8.27
		100	38.1	15.85	21.27	12.22	4.02	4.08	4.47

Figure 1: National Waste Statistical Survey — Density and physical composition of food waste by city size

6. 依來源劃分的食物垃圾成分的單位產生量

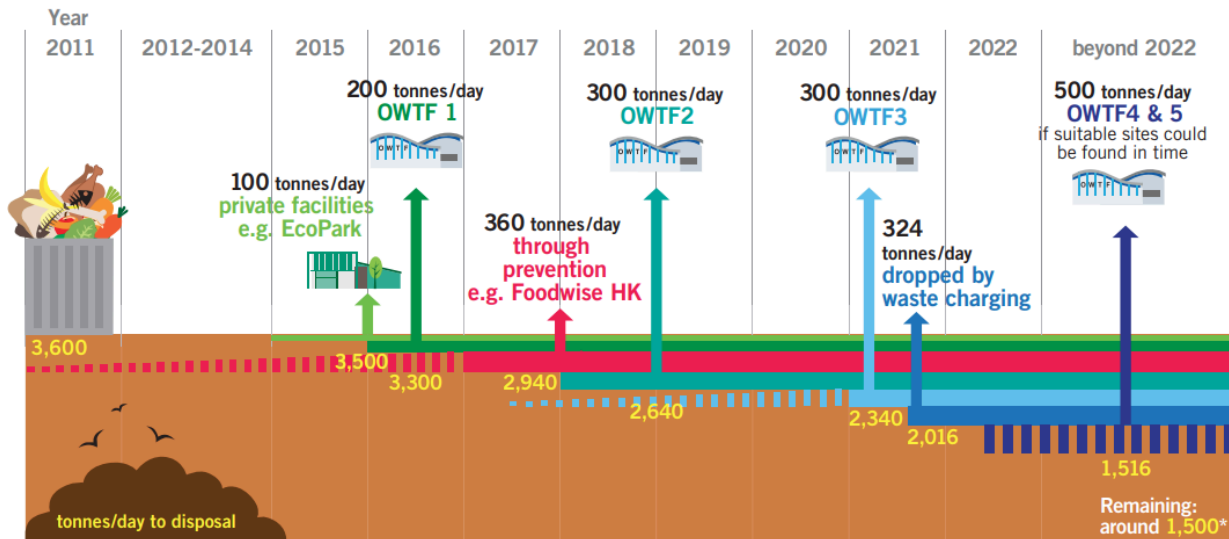
(單位: 克/天/人)

分配	餐廚垃圾產生強度 (克/天/人)									
	全部的	蔬菜	水果	穀物	魚和肉	滲濾液 (肉湯)	ETC	非食品		
整體平均	367.94	121	48.1	91.85	59.89	20.43	14.74	11.93		
家庭部門	平均的	180.67	55.14	33.76	35.42	29.11	11.63	6.3	9.31	
	獨立式住宅	108.85	30.32	22.76	19.43	14.6	11.5	4.6	5.63	
	公寓大樓	公寓	213.01	70.72	40.49	43.71	36.23	5.75	6.21	9.9
		連棟住宅/多戶住宅	247.24	69.39	35.86	49.55	44.65	22.81	9.28	15.7
非政府部門	平均的	187.27	62.15	23.15	48.02	30.52	10.19	7.62	5.62	
	生產/製造	44.72	16.86	5.13	10.89	5.82	3.2	1.66	1.16	
	市場/購物中心	225.96	64.81	35.2	55.53	30.36	22.34	11.88	5.85	
	商業設施	18.81	6.53	2.37	4.86	2.97	0.94	0.55	0.6	
	服務業	153.88	52.66	22.83	41.15	22.25	5.74	5.52	3.74	
	教育機構	210.14	69.79	25.92	55.89	35.3	9.33	8.5	5.41	
	餐飲業	985.7	324.36	98.03	251.17	189.94	44	42.71	35.49	
	住宿業	316.8	97.34	46.35	82.48	48.37	20.93	11.7	9.62	

Figure 2: National Waste Statistical Survey — Per capita generation of food waste components by source

In contrast, the Hong Kong government has promoted the “Food Wise Hong Kong Campaign” for more than 11 years. Its most visible achievement may be the mascot “Big Waster,” yet food waste remains the city’s number-one waste stream. In 2024, the daily disposal of food waste reached 3,001 tonnes, accounting for 28.5 % of municipal solid waste — still far from the target set in *A Food Waste and Yard Waste Plan for Hong Kong 2014-2022*.

**Figure 6** Projected Reduction in Food Waste Volume



\* About 2,000 tonnes of food waste still to be dealt with if OWTF4 and 5 cannot be built in time.

Figure 3: Estimates from the *A Food Waste and Yard Waste Plan for Hong Kong 2014-2022* — It was projected that even without the third to fifth phases of organic waste treatment facilities and waste charging scheme, food waste could still be reduced to 2,640 tons per day by 2019.

### 3. Industrial and Commercial Waste Volumes Should Be Reported Separately to Prevent Imported Waste from Being Concealed

Some may argue that Hong Kong’s industrial sector is no longer as important as before, so combining industrial and commercial waste statistics is acceptable.

We respectfully disagree.

In 2018, The Green Earth discovered that industrial waste amounts had surged for five consecutive years, rising 70 % cumulatively, with a 24.4 % increase in 2018 alone compared with 2017<sup>3</sup>. Based on multiple sources, we suspected that unscrupulous traders were importing large quantities of foreign waste, extracting valuable materials for resale, and sending the residual waste to landfills — causing the sharp rise in industrial waste amounts.

<sup>3</sup> [HK01: 工業垃圾棄置量5年飆升7成環團:情況失控促政府堵塞漏洞](#)

Given that Hong Kong's industrial base has long declined, any sudden large increase in industrial waste should raise red flags. Industrial waste data therefore serve as a "rapid test" for the suspicious waste import, helping both the government and the public to block unwanted foreign waste.

Regrettably, since 2019 the EPD has eliminated the "industrial waste" category and merged it into "commercial and industrial waste." In 2024 the Legislative Council amended local legislation to tighten controls on electronic waste imports and exports in accordance with the Basel Convention; the new rules took full effect in early 2025. Hong Kong is also discussing with the Mainland the creation of a "Zero Waste Bay Area," which may allow local recyclables to be sent to the Mainland for centralised processing.

We are concerned that unscrupulous traders could exploit this channel by importing foreign waste through Hong Kong, mixing it with local recyclables, and then shipping it onward. To fulfil international obligations, the EPD should reinstate separate monitoring of "industrial waste" to prevent a resurgence of imported waste.

#### **4. "Household Waste" Category Is Too Broad — Residential and Street Waste Should Be Reported Separately**

The Report's "household waste" category is overly broad. According to the EPD:

"Household waste refers to domestic waste, waste arising from the daily activities of public institutions (e.g. schools and government offices), and waste collected by public cleansing services. Public cleansing services include waste and refuse collected by the Food and Environmental Hygiene Department, marine refuse collected by the Marine Department, and waste collected by the Agriculture, Fisheries and Conservation Department in country parks."

In mixed commercial-residential areas, domestic, commercial, street, and municipal facility waste are sometimes collected together. This inflates "household waste" figures above the average and prevents an accurate reflection of residents' actual domestic waste volumes and recycling needs.

In past discussions on waste reduction, residents often point out insufficient recycling facilities in their districts. Yet the current "household waste" statistics do not allow the public to determine precisely which areas need the most recycling support, making it difficult for community groups to design the most suitable waste reduction measures. The authorities should try to disaggregate the sub-items under "household waste" — for example, by providing separate data for residential waste, street waste, and marine refuse — so the public can better understand district-specific needs.

The government could learn from South Korea. South Korea publishes its *National Waste Statistical Survey*, which includes quarterly waste volume updates (Figure 4) and waste quantities broken down by source (Figure 5). These data enable the government, NGOs, property management companies, businesses, and residents to implement targeted waste-reduction measures.

1. 季節產生的強度

(單位：克/天/人)

分配		全部的	即用即付	程式	回收
全部的	平均的	929.9	255.43	367.95	306.52
	春天	1,082.23	278.86	360.08	443.29
	夏天	977.09	290.25	420.16	266.67
	秋天	853.62	241.6	315.37	296.64
	冬天	806.5	210.96	376.12	219.41
家庭部門	平均的	437.28	129.88	180.67	126.73
	春天	482.07	154.53	179.32	148.22
	夏天	449.54	126.15	211.92	111.47
	秋天	431.42	125.24	155	151.18
	冬天	386.09	113.62	176.44	96.04
非政府部門	平均的	492.62	125.55	187.28	179.79
	春天	600.16	124.33	180.77	295.07
	夏天	527.55	164.1	208.25	155.2
	秋天	422.2	116.37	160.37	145.46
	冬天	420.4	97.34	199.68	123.38

Figure 4: National Waste Statistical Survey — Quarterly waste volume

分配		全部的	即用即付	程式	回收
整體平均		929.9	255.43	367.95	306.52
家庭部門	平均的	437.28	129.88	180.67	126.73
	獨立式住宅	318.85	104.56	108.85	105.44
	公寓	490.51	129.94	213.01	147.56
	公寓·多代	547.37	192.29	247.24	107.85
非政府部門	平均的	492.62	125.55	187.28	179.79
	生產、製造	320.32	80.37	44.72	195.23
	市場、購物中心	554.35	104.61	225.98	223.77
	商業設施	134.37	55.93	18.81	59.62
	服務業	453.22	146.98	153.9	152.34
	教育機構	423.51	125.95	210.15	87.41
	餐飲業	1,764.12	338.51	985.79	439.82
	住宿業	1,239.26	769.78	316.83	152.65

Figure 5: National Waste Statistical Survey — Waste volumes from different venues

## 5. Waste Treatment Costs and Remaining Landfill Capacity Are Not Disclosed

Although the Report mentions waste transfer, treatment, and landfill routes, as well as the daily intake of various facilities, it provides no information on the costs of waste transfer and landfilling or on the remaining capacity (or expected lifespan) of landfill sites. It is therefore difficult to understand the public expenditure on waste management or to discuss the risk of “waste besieging the city.”

Researchers from The Green Earth have requested the relevant data from the EPD and confirmed that the Department does maintain these records — but they are simply not published in the Report.

According to EPD data, the cost of landfilling one tonne of waste in 2024 was HK\$371. We estimate the annual cost reached HK\$1.427 billion.

Using the 2023–24 public housing construction cost of HK\$970,000 per unit, this sum would be enough to build nearly 1,500 public housing units — equivalent to an entire estate the size of Cheung Sha Wan Estate.

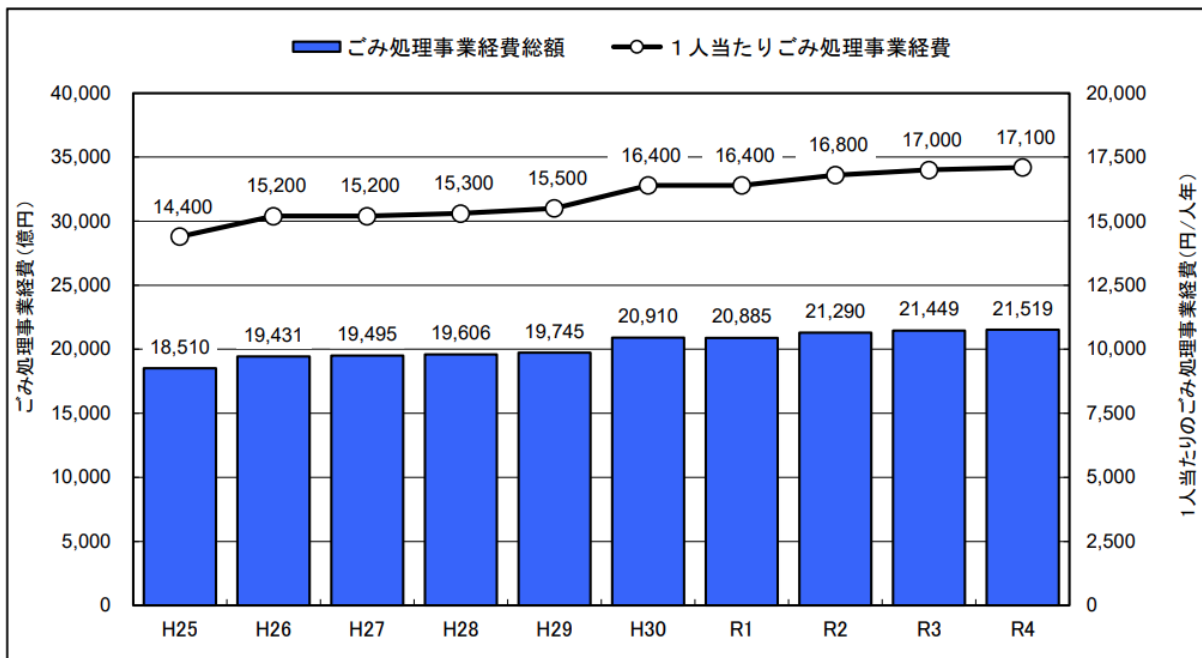
Over the past decade, landfilling costs have doubled from HK\$682 million in 2014. Incineration costs are even higher: excluding construction and transportation, the 15-year operating cost of HK\$13.4 billion translates to HK\$815.83 per tonne — more than double the landfilling cost.

Rising disposal costs create a heavy fiscal burden, yet the Report says nothing about them, which does little to motivate citizens to reduce waste. In contrast, Japan's Ministry of the Environment publishes the *Survey on Disposal of General Waste* (一般廃棄物処理事業実態調査の結果<sup>4</sup>) every year. It proactively discloses per-capita waste treatment costs over the past decade, as well as the remaining capacity and lifespan of landfills nationwide (Figures 7 & 8). To encourage waste reduction, the report also lists the municipalities with the lowest waste volumes and the highest recycling rates (Figures 9 & 10) to recognise outstanding local efforts.

表－４ 一般廃棄物最終処分場の施設数と残余年数の推移

区分 年度	最終処分場数					埋立面積 (千㎡)	全体容量 (千m <sup>3</sup> )	残余容量 (千m <sup>3</sup> )	残余年数 (年)
	山間	海面	水面	平地	計				
平成25年度	1,243	25	9	446	1,723	44,125	464,829	107,410	19.3
平成26年度	1,223	26	9	440	1,698	44,077	467,174	105,824	20.1
平成27年度	1,210	25	9	433	1,677	44,347	464,788	104,044	20.4
平成28年度	1,194	25	10	432	1,661	43,875	468,395	99,963	20.5
平成29年度	1,187	25	9	430	1,651	43,191	470,002	102,873	21.8
平成30年度	1,180	25	10	424	1,639	42,827	469,639	101,341	21.6
令和1年度	1,167	25	10	421	1,623	42,787	470,884	99,577	21.4
令和2年度	1,147	25	10	420	1,602	42,009	468,345	99,836	22.4
令和3年度	1,129	23	9	411	1,572	41,927	467,365	98,448	23.5
令和4年度	1,119	23	8	407	1,557	41,746	466,674	96,663	23.4

Figure 7: Changes in the Number and Remaining Life of General Waste Final Disposal Sites



<sup>4</sup> [一般廃棄物処理事業実態調査の結果\(令和4年度\)について](#)

Figure 8: Waste disposal expenditure trends

表-6 リデュース(1人1日当たりのごみ排出量<sup>注25)</sup>取組の上位10位市町村 <sup>注26)</sup>, <sup>注27)</sup>, <sup>注28)</sup>

人口10万人未満		人口10万人以上50万人未満		人口50万人以上	
令和4年度	令和3年度	令和4年度	令和3年度	令和4年度	令和3年度
1. 長野県 川上村 283.3 ㊦㊦/人日	1. 長野県 南牧村 306.6 ㊦㊦/人日	1. 東京都 日野市 600.5 ㊦㊦/人日	1. 静岡県 掛川市 622.6 ㊦㊦/人日	1. 東京都 八王子市 726.8 ㊦㊦/人日	1. 東京都 八王子市 748.2 ㊦㊦/人日
2. 長野県 南牧村 319.4 ㊦㊦/人日	2. 長野県 川上村 327.6 ㊦㊦/人日	2. 静岡県 掛川市 614.5 ㊦㊦/人日	2. 東京都 日野市 630.7 ㊦㊦/人日	2. 愛媛県 松山市 754.0 ㊦㊦/人日	2. 京都府 京都市 757.8 ㊦㊦/人日
3. 徳島県 神山町 393.0 ㊦㊦/人日	3. 徳島県 神山町 378.9 ㊦㊦/人日	3. 東京都 小金井市 619.6 ㊦㊦/人日	3. 東京都 小金井市 635.3 ㊦㊦/人日	3. 京都府 京都市 757.3 ㊦㊦/人日	3. 愛媛県 松山市 761.0 ㊦㊦/人日
4. 長野県 北栢木村 422.1 ㊦㊦/人日	4. 宮崎県 高原町 416.1 ㊦㊦/人日	4. 東京都 西東京市 648.7 ㊦㊦/人日	4. 東京都 立川市 665.7 ㊦㊦/人日	4. 神奈川県 川崎市 766.7 ㊦㊦/人日	4. 神奈川県 川崎市 791.7 ㊦㊦/人日
5. 北海道 更別村 426.4 ㊦㊦/人日	5. 北海道 更別村 427.9 ㊦㊦/人日	5. 東京都 小平市 655.7 ㊦㊦/人日	5. 静岡県 藤枝市 672.0 ㊦㊦/人日	5. 神奈川県 横浜府 793.9 ㊦㊦/人日	5. 神奈川県 横浜府 807.1 ㊦㊦/人日
6. 宮崎県 高瀬町 430.5 ㊦㊦/人日	6. 長野県 天龍村 430.3 ㊦㊦/人日	6. 東京都 府中市 660.0 ㊦㊦/人日	6. 東京都 西東京市 672.2 ㊦㊦/人日	6. 埼玉県 川口市 795.0 ㊦㊦/人日	6. 埼玉県 川口市 813.9 ㊦㊦/人日
7. 長野県 泰阜村 432.7 ㊦㊦/人日	7. 長野県 阿南町 443.7 ㊦㊦/人日	7. 東京都 東村山市 661.8 ㊦㊦/人日	7. 東京都 小平市 672.6 ㊦㊦/人日	7. 静岡県 浜松市 808.1 ㊦㊦/人日	7. 静岡県 浜松市 819.7 ㊦㊦/人日
8. 長野県 阿南町 434.2 ㊦㊦/人日	8. 長野県 泰阜村 444.1 ㊦㊦/人日	8. 東京都 立川市 662.9 ㊦㊦/人日	8. 東京都 国分寺市 677.7 ㊦㊦/人日	8. 広島県 広島市 816.7 ㊦㊦/人日	8. 広島県 広島市 825.5 ㊦㊦/人日
9. 長野県 下條村 438.6 ㊦㊦/人日	9. 長野県 高森町 451.9 ㊦㊦/人日	9. 東京都 国分寺市 666.7 ㊦㊦/人日	9. 東京都 東村山市 679.3 ㊦㊦/人日	9. 埼玉県 さいたま市 822.6 ㊦㊦/人日	9. 北海道 札幌市 831.5 ㊦㊦/人日
10. 長野県 中川村 439.6 ㊦㊦/人日	10. 長野県 下條村 456.7 ㊦㊦/人日	10. 静岡県 藤枝市 667.5 ㊦㊦/人日	10. 東京都 府中市 680.9 ㊦㊦/人日	10. 千葉県 船橋市 825.7 ㊦㊦/人日	10. 埼玉県 さいたま市 845.3 ㊦㊦/人日

Figure 9: Top 10 municipalities with the least daily per capita waste

表-7 リサイクル(リサイクル率<sup>注29)</sup>)取組の上位10位市町村 <sup>注26)</sup>, <sup>注27)</sup>, <sup>注28)</sup>

人口10万人未満		人口10万人以上50万人未満		人口50万人以上	
令和4年度	令和3年度	令和4年度	令和3年度	令和4年度	令和3年度
1. 鹿児島県 大崎町 84.0 %	1. 北海道 豊浦町 87.1 %	1. 神奈川県 鎌倉市 56.3 %	1. 神奈川県 鎌倉市 52.6 %	1. 千葉県 千葉市 34.4 %	1. 千葉県 千葉市 33.3 %
2. 徳島県 上勝町 81.1 %	2. 鹿児島県 大崎町 81.6 %	2. 東京都 国分寺市 45.0 %	2. 東京都 小金井市 44.8 %	2. 東京都 八王子市 28.3 %	2. 東京都 八王子市 27.3 %
3. 鹿児島県 志布志市 76.0 %	3. 徳島県 上勝町 79.9 %	3. 東京都 小金井市 44.6 %	3. 東京都 国分寺市 44.5 %	3. 愛知県 名古屋市中区 26.9 %	3. 愛知県 名古屋市中区 26.7 %
4. 北海道 豊浦町 74.4 %	4. 鹿児島県 志布志市 74.3 %	4. 岡山県 倉敷市 44.1 %	4. 岡山県 倉敷市 43.5 %	4. 福岡県 北九州市 24.2 %	4. 福岡県 北九州市 25.4 %
5. 北海道 小平町 65.8 %	5. 北海道 小平町 66.1 %	5. 埼玉県 加須市 37.7 %	5. 埼玉県 加須市 37.4 %	5. 新潟県 新潟市 23.6 %	5. 新潟県 新潟市 24.4 %
6. 長野県 木島平村 64.3 %	6. 長野県 木島平村 65.8 %	6. 東京都 立川市 36.3 %	6. 東京都 東村山市 36.4 %	6. 神奈川県 横浜市 22.6 %	6. 神奈川県 横浜市 23.2 %
7. 福岡県 大木町 63.9 %	7. 福岡県 大木町 64.7 %	7. 愛知県 小牧市 36.1 %	7. 愛知県 小牧市 36.1 %	7. 埼玉県 川口市 22.5 %	7. 埼玉県 川口市 22.8 %
8. 鳥取県 日吉津村 53.8 %	8. 北海道 喜茂別町 61.4 %	8. 東京都 東村山市 35.7 %	8. 東京都 立川市 35.5 %	8. 埼玉県 さいたま市 20.9 %	8. 埼玉県 さいたま市 22.1 %
9. 奈良県 斑鳩町 50.9 %	9. 北海道 鹿追町 60.8 %	9. 東京都 西東京市 34.1 %	9. 東京都 調布市 34.6 %	9. 千葉県 船橋市 20.6 %	9. 千葉県 船橋市 21.3 %
9. 北海道 下川町 50.9 %	10. 鳥取県 日吉津村 53.2 %	10. 東京都 調布市 33.8 %	10. 東京都 西東京市 33.9 %	10. 北海道 札幌市 19.6 %	10. 北海道 札幌市 20.5 %

Figure 10: Top 10 municipalities with the highest recycling rates

We believe the Hong Kong authorities should consider Japan’s approach, ensuring transparency in waste management expenditure and encouraging active public participation in waste reduction.

### 6. Looking Ahead: Is Incinerated Waste “Disposed Of” or ...?

The Shek Kwu Chau incinerator (or I-Park 1) will commence operation by the end of this year and can process 3,000 tonnes of waste per day. The government promotes the facility as turning “waste into energy” and even defines the electricity generated from incineration as “renewable energy.” This raises a critical question: in future, will waste sent to the incinerator be counted as “disposal,” or will it be reclassified as the government’s recent favourite terms — “resource recovery” or even “recycling”?

Researchers from The Green Earth inquired with the EPD about the statistical treatment of incinerated waste. The Department's reply was thought-provoking:

“Regarding the statistical figures for waste treated by incineration, as well as their definitions and classifications, please refer to the *Monitoring of Solid Waste in Hong Kong* for the statistical year after the commissioning of Phase 1 of the Integrated Waste Management Facilities.”

Researchers obviously cannot predict the future, but Hong Kong once operated waste incinerators. At that time the *Monitoring of Solid Waste in Hong Kong (1991–92)* explicitly defined incineration as “disposal”:

“Municipal solid waste is defined as the aggregates of domestic/public cleansing waste, commercial waste and industrial waste. This grouping together with construction waste ... represent the majority of solid waste **disposed of** at the municipal waste incinerators and landfills.”<sup>5</sup>

The labels “disposal” and “recycling” directly determine how the government will achieve the targets in the *Waste Blueprint for Hong Kong 2035*. If incineration is redefined as “energy recovery” or “waste-to-energy,” the government could simply build more incinerators, burn all the waste, and easily meet the 55 % recycling target — rendering community recycling and source reduction meaningless.

Whether waste incineration qualifies as “disposal” or “energy recovery” has been debated internationally. In 2003 the European Court of Justice ruled that a facility must meet all three conditions to be considered an “energy recovery” facility<sup>6</sup>:

- The main purpose of the operation must be to enable the waste to be used as a means of generating energy
- The amount of energy generated by, and recovered from, the combustion process must be greater than the amount of energy consumed during the process. In turn, this energy has to be used effectively, either in the form of heat or, after processing, in the form of electricity; and
- The waste must be used principally as a fuel, which means that the greater part of the waste must be consumed during the operation and the greater part of the energy produced must be recovered and used

Arguments during the litigation regarding pollutant types, calorific value, and waste mixing were not taken into account. In other words, Europe applies very strict criteria for “energy

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<sup>5</sup> [Monitoring of Solid Waste in Hong Kong \(1991–92\)](#)

<sup>6</sup> [Incineration as recovery and disposal of waste: Analysis and interpretation of the judgements of the European Court of Justice](#)

recovery,” directly preventing greenwashing. An incinerator remains an incinerator; it is not rebranded as a “waste-to-energy facility”.

Japan, despite being a major waste-incineration country, does not count incineration as recycling or “resource recovery.” Its calculation formula for recycling rates makes no mention of incineration (Figure 13).

(参考)

家電4品目の家電処理量及び家電再商品化量<sup>注9)</sup>を考慮した場合のリサイクル率

$$\text{リサイクル率 (\%)} = \frac{\text{直接資源化量} + \text{中間処理後再生利用量} + \text{集団回収量} + \text{家電再商品化量}}{\text{ごみの総処理量} + \text{集団回収量} + \text{家電処理量}} \times 100$$

= 20.6%

ごみ燃料化をエネルギー回収とし、リサイクルから除いた場合のリサイクル率

$$\text{リサイクル率 (\%)} = \frac{\text{直接資源化量} + \text{中間処理後再生利用量 (ごみ燃料化を除く)} + \text{集団回収量} + \text{家電再商品化量}}{\text{ごみの総処理量} + \text{集団回収量} + \text{家電処理量}} \times 100$$

= 19.8%

Figure 13: Calculation of Recycling Rate: The entire calculation formula does not mention waste incineration.

The United Nations also clearly states that recycling does **not** include “reuse as fuel”:

“Recycling is defined as any reprocessing of material in a production process that diverts it from the waste stream, except reuse as fuel. Both reprocessing as the same type of product, and for different purposes should be included.”<sup>7</sup>

Since 1999, South Korea’s overall recycling rate statistics have included a “thermal recovery” category, inflating the rate by more than 10 percentage points. “Thermal recovery” mainly refers to burning waste plastics and tyres as fuel in cement plants or similar facilities. Although this reduces the use of conventional fuels, it causes serious pollution. In recent months, South Korea’s Ministry of Environment has announced plans to revise the recycling rate methodology and stop counting incineration as “recycling,” aligning with international standards used by developed economies<sup>8</sup>.

South Korea’s proactive correction of inflated data sets a good precedent. We hope Hong Kong’s relevant departments will follow suit and avoid changing the definition of “recycling” merely to promote incineration.

## 7. Conclusion

<sup>7</sup> [WASTE TREATMENT AND DISPOSAL Consumption and Production Patterns Waste Generation and Management Core indicator 1. INDICATOR \(a\)](#)

<sup>8</sup> [South Korea plans to stop calling incinerated plastic ‘recycling’](#)

The *Monitoring of Solid Waste in Hong Kong* Report published every year is the report card that evaluates the effectiveness of waste-reduction efforts. In recent years the Report has been repeatedly simplified. While this has saved some space, it has also weakened the Report's ability to monitor waste effectively. Effective waste-reduction policies require comprehensive and accurate waste data as their foundation.

We believe the EPD's waste data is incomplete. It should draw on international best practices, strengthen data disclosure, and encourage the public to participate in waste-reduction policy discussions. We recommend that the authorities adopt the following measures to improve the Report's data reporting:

1. Clearly state the sources and industries generating waste (e.g. residential, industrial, commercial, etc.).
2. Provide in-depth analysis of waste composition and characteristics, especially for food waste, plastics, and paper.
3. For producer responsibility schemes, disclose both disposal and recovery quantities of regulated items.
4. Publish waste transfer and landfilling costs, as well as remaining landfill capacity and lifespan, in the Report.
5. Do not classify incineration as recycling in order to promote waste-to-energy facilities.

## **Enquiries**

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