



綠 惜 地 球
THE GREEN EARTH

Environmental Data Disclosure Campaign

Hang Seng Index Constituents'

ESG Report Analysis

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Executive Summary

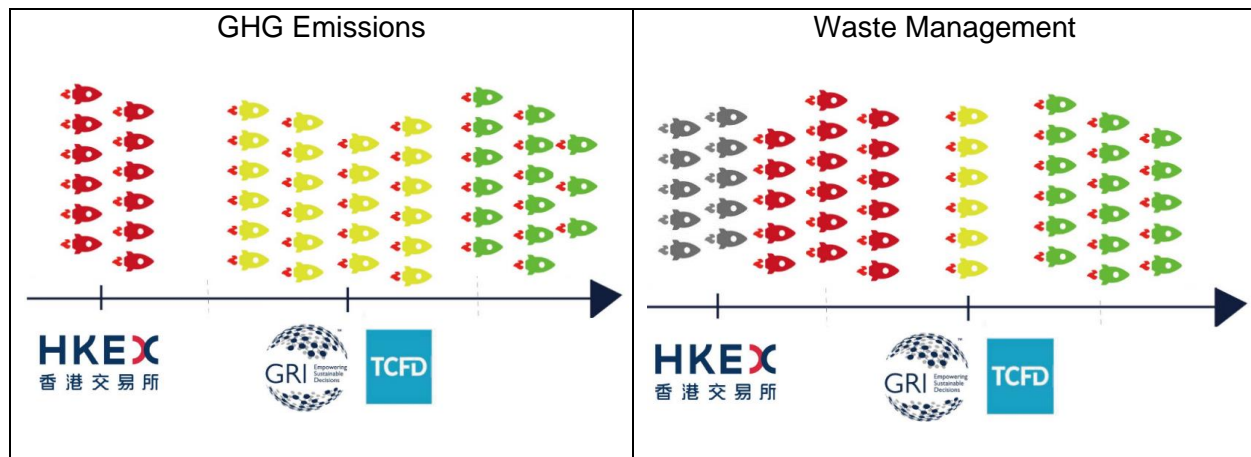
Between May and July 2019, Hong Kong Exchange and Clearing Limited (HKEX) initiated a public consultation regarding its Environmental, Social and Governance Reports Guide (ESG Guide). The goal was to enhance the current ESG Guide that has been used since 2016 to catch up with International Standards published between 2017 and 2018.

The Green Earth (TGE) is particularly concerned about Greenhouse Gas (GHG) Emissions and Waste Management information disclosure. This research has reviewed information disclosure in the ESG Reports of the 50 constituents of the Hang Seng Index.

TGE urges all listed companies to disclose GHG emissions and Waste Management data in details. Therefore, TGE has introduced a 3-tier grading system to grade the ESG reports of 2017 and 2018 in terms of the level of details of GHG emission and Waste Management.

This report presents the background and methodology of the research, with support of case studies to exemplify the benchmarking procedure. Under the results section, this report shows the position of the 50 constituents in catching up with International Standards' GHG emission and Waste Management requirement.

The following is a graphical illustration of companies (rockets) catching up with ESG standards, from the current HKEX standard on the left, and GRI and TCFD standards in the middle. TGE is pleased to note there were quite a number of well-performing companies (rockets in green) that have even gone beyond the International Standards.



Firms with rooms of improvement were in yellow, red or even worse-- grey of “ungraded”. Details are provided in the results section of this report.

This report is published for stakeholders of the stock market, including but not limited to listed companies' sustainability team, ESG consultants, investment banks and financial experts.

TGE is pleased to engage in discussion and provide analysis to ESG reports. TGE is also interested to know if your firm has got any plan to improve environmental data disclosure, especially for GHG emissions and waste management.

For more details, please contact our Mr. Edmond Lau at 3708 8380 or edmondlau@greenearth.org.hk.

行政摘要

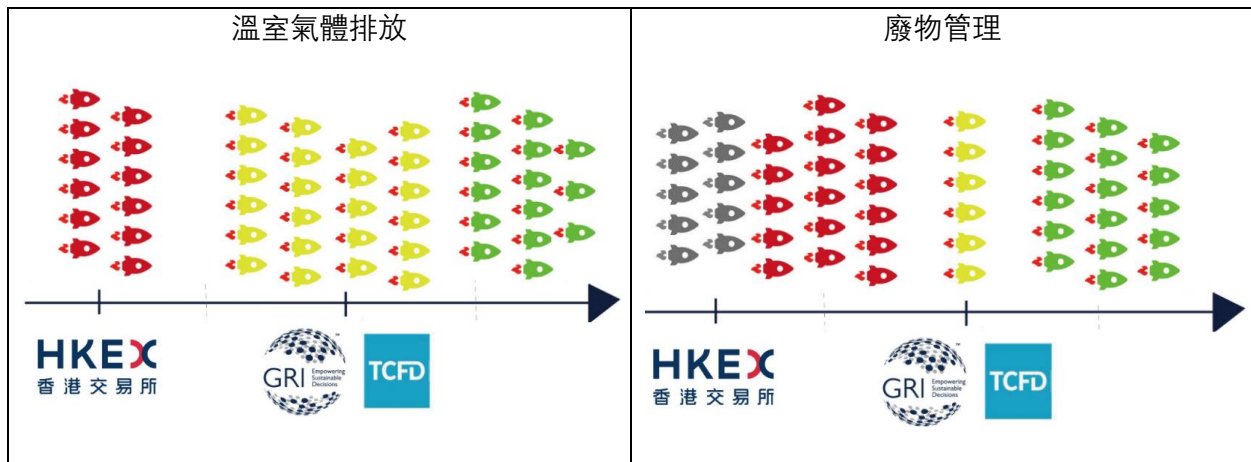
在 2019 年 5 月到 7 月，香港聯合交易所（港交所）進行了為期兩個月的公眾諮詢，檢討《環境、社會及管治報告指引》及相關《上市規則》的條文，藉此追上環境、社會及管治報告（ESG 報告）的國際指引水平。

綠惜地球呼籲所有上市公司應竭盡力公開溫室氣體排放及廢物管理相關的資料，增加透明度，及讓投資者知悉企業在相關領域的表現。

綠惜地球在公眾諮詢期內，檢視了恆生指數 50 隻成份股 2017 年及 2018 年的 ESG 報告，以三個級別評價出各成份股的相關環保成績。

這報告說明了是次研究的背景、調查方法，配以實例簡述評分，同時反映各成份股與國際水平的差距。

以下圖表展示了成份股企業（以火箭代表）追隨 ESG 匯報標準的情況。X-軸的左面為現行港交所 ESG 標準，中間為國際標準 GRI 及 TCFD。部分企業對於溫室氣體排放及廢物管理的訊息公開表現超越上述國際標準，以綠色火箭標示。綠惜地球歡迎『綠色火箭企業』的良好表現。



表現較遜色的企業為黃色、紅色，甚至『不能評級』的灰色火箭。研究明細會在結果部分說明。

綠惜地球歡迎企業聯絡我們討論 ESG 報告表現，如有需要，我們可以提供報告分析服務。查詢：項目主任劉兆朗：電話：3708 8380 或電郵 edmondlau@greenearth.org.hk。

1. Introduction

Background

Environmental, Social and Governance Reporting Guide (ESG Guide) was introduced by the Hong Kong Exchange and Clearing Limited (HKEX) in 2013, listed Companies on the Hong Kong Stock Exchange were advised to publish ESG reports thereafter.

The Guide has listed requirement of two ESG subject areas—Environmental and Social; while Governance was separated in the HKEX's Corporate Governance Code. Each subject area listed its General Disclosure and Key Performance Indicators (KPIs). Together with four main reporting principles—Materiality, Quantitative, Balance and Consistency. For more details, please refer to the current ESG Guide or links at the reference section of this report.

The Guide had revised once in 2016 to stringent the requirements into “comply or explain”. This year (2019) in May, HKEX put forward a consultation for another revision and to be effective in 2020.

The Green Earth (TGE) sees HKEX actively exploring more stringent ESG reporting requirement as it will help listed companies manage ESG-related risks. Climate-related issues and Environmental policy updates are the two main aspects of the consultation. Details of the consultation paper refer to HKEX's publication or links at the reference section of this report.

As the anti-single-use plastic movement has become a hot topic in recent years, TGE has great concern about waste reduction and anti-single-use plastic efforts done by these listed companies of the Hong Kong Stock Market. Coverage of this topic in their ESG reports is also reviewed.

Proposed Changes in the HKEX ESG Reporting Guide

The review this year focuses on four areas:

- Raising the bar to catch up with international standards by 2020
- Introducing mandatory reporting requirements

- Asking listed companies to explain the role of the Board of Directors in supervising the ESG reporting process
- Asking listed companies to explain reporting boundary according to the four reporting principles

To review the most representative ESG reports, The Green Earth (TGE) has analyzed the 50 constituents of Hang Seng Index.

TGE focuses on the disclosure performances regarding greenhouse gas emissions and waste management to grade the reports into three levels (I to III), where Level I is the best-performed group.

Adopted International Standards

GRI and TCFD are two standards repeatedly quoted in this HKEX's guidelines update activity.

GRI

Global Reporting Initiative (GRI) is a globally recognized standard for writing ESG reports. It is very comprehensive and provides guidance on reporting different kinds of data under different situations. However, there are local conditions that the one-for-all guideline could not cater to. TGE takes waste management as an example to elaborate that in the later sections.

TCFD

Task Force on Climate-related Financial Disclosure (TCFD) is led by big names like Michael Bloomberg and Mark Carney in C40. It pushes climate-related information disclosure since the Paris Agreement made in 2015.

Below tabulated comparisons between the current HKEX ESG Guide, GRI and TCFD standards:

Category	HKEX Environmental, Social and Governance Reporting Guide	GRI* (Global Initiative) Reporting	TCFD (Task Force on Climate-related Financial Disclosure)
GHG Emission	KPI A1.2 Greenhouse gas emissions <u>in total</u> (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	305-1 <u>Direct (Scope 1)</u> GHG emissions or 305-2 <u>Energy indirect (Scope 2)</u> GHG emissions or 305-3 <u>Other indirect (Scope 3)</u> GHG emissions	Core Element 4: Metrics & Targets b) Disclose <u>Scope 1, Scope 2, and, if appropriate, Scope 3</u> greenhouse gas (GHG) emissions, and the related risks and c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets
Waste Management	KPI A1.3 <u>Total</u> hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	306-2 Waste by type <u>and disposal method</u>	Not Applicable
	KPI A1.4 <u>Total</u> non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)		

Note*: For GRI standards, firms often chose to report according to their Core approach. Taking GHG emissions as an example, once GHG emissions (305 series) is found material to report, reporting party discloses information per at least one of the subsections (eg. 305-1, 305-2, ...).

Other International Standards

CDP

CDP is the Carbon Disclosure Project; a non-profit organization owns a global database of companies' and governments' environmental performances. It uses a survey system to collect information from parties regarding climate change, water footprint and forest conservation. The survey asks about actions and views across a firm from top management to frontline executives.

CDP scores the data collected and disclosed to the public on their simple search engine “Search and view past CDP responses”. For those who need more detailed information, particularly investors, companies and government, to support investment, funding or other business decisions can purchase a detailed report from them.

Firms refused to provide information get a “No Response” status or an “F” score shown on their database search. A sample is shown below (Tingyi is a major food and snacks supplier in the Greater China Region):

Tingyi (Cayman Islands) Holdings Corp.
Country: China, Hong Kong Special Administrative Region

Year	Program	Status	Score
2019	Forests 2019	No Response	Not Scored
2019	Climate Change 2019	No Response	Not Scored
2019	Water Security 2019	No Response	Not Scored
2018	Forests 2018	No Response	F F F F
2018	Climate Change 2018	No Response	F

Note: Not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information to CDP to be evaluated will receive an F. An F does not indicate a failure in environmental stewardship.

SBT

Science-Based Targets (SBT) is an initiative following the Paris Agreement in 2015 of limiting global warming to 2 degrees Celsius. It specifies how companies can respond to the Paris Agreement by writing a clearly defined and quantitative target.

Companies following their guidance commits to “*meet the goals of the Paris Agreement – to limit global warming to well-below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C*”. This includes one defines a baseline year and a quantified target percentage of reduction.

2. Methodology

TGE has reviewed 50 constituents of the Hang Seng Index as their performance will affect the Index, and therefore proper information disclosure is of paramount importance. These mega-companies should have the skills and resources in preparing the best ESG reports and to show other listed companies in the Hong Kong Stock Market in disclosing environmental data including GHG emissions and waste management.

Having examined their ESG reports of 2017 and 2018 posted on the HKEX website, a wide range of ESG data disclosure performance was identified. TGE is surprised by the huge difference—one could provide a numerical breakdown of emission types and recyclables by business sectors while another merely provides information of activities with graphics, however, both companies are the constituents of Hang Seng Index.

TGE found the need to address the differences by introducing a benchmarking system. After cross-referencing international standards including GRI and TCFD, also TGE's stance in the past, TGE has used a 3-tier benchmark to grade ESG reports of the 50 constituents.

TGE's 3-tier Benchmarking System

The system grades ESG reports into three levels, where Level I is the highest.

Details of the benchmarks are summarized in the following table:

Category \ Level	I	II	III
Greenhouse Gas (GHG) Emissions	<ul style="list-style-type: none"> Align with the corresponding GRI Standards Emission data of <u>Scope 1,2, and 3</u> 	<ul style="list-style-type: none"> Align with the corresponding TCFD Standards Emission data of <u>Scope 1 and 2</u> 	<ul style="list-style-type: none"> Align with corresponding Current HKEX Standards <u>Total</u> GHG Emissions
Waste Management*	<ul style="list-style-type: none"> Align with TGE's suggested Standards Better than the corresponding GRI 	<ul style="list-style-type: none"> Align with the corresponding GRI Standards Data on <u>Recycled</u> 	<ul style="list-style-type: none"> Align with corresponding Current HKEX Standards Data on <u>Hazardous</u>

Category \ Level	I	II	III
	Standards <ul style="list-style-type: none"> • <u>Breakdown of recycling data</u> according to types of recyclables • Waste generation and disposal data should also be addressed 	<u>materials</u>	<u>and non-hazardous waste</u>

Note*: There were firms did not disclose any waste generation, disposal and recycling data. They couldn't be rated by this assessment methodology.

For GHG emissions, Level III reports align with HKEX Standards, which means these firms need to catch up with the coming new HKEX ESG guidelines. Level I and II ones align with International Standards GRI and TCFD respectively.

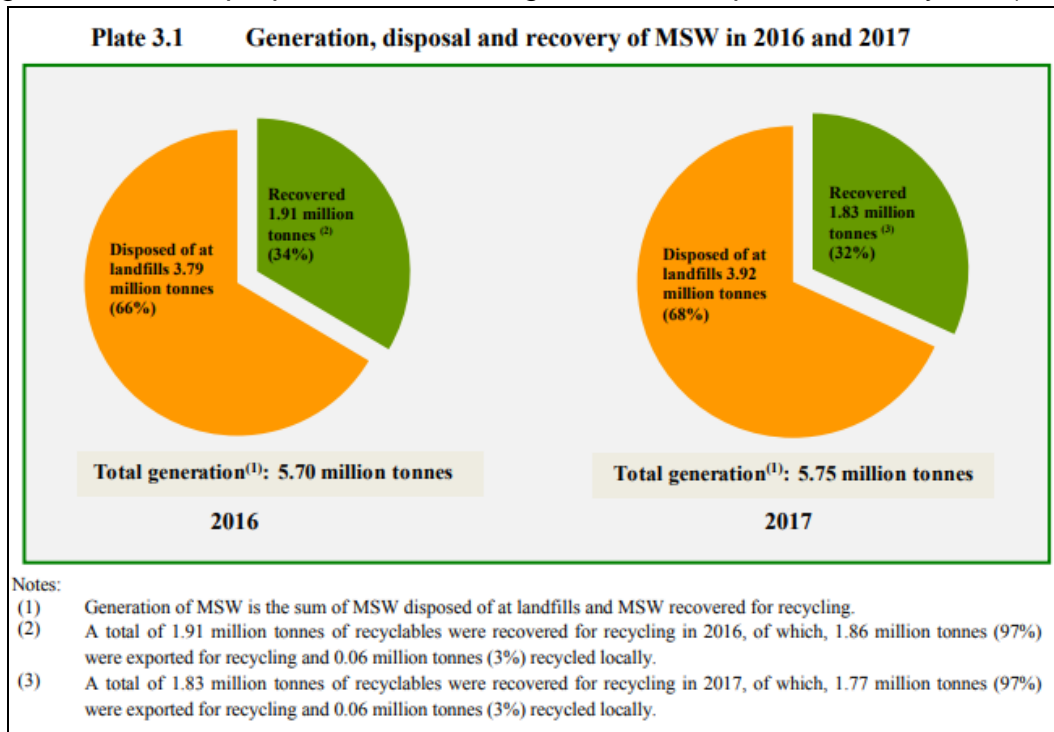
For waste management, Level III reports align with HKEX Standards; while Level II reports aligning with GRI and the top tier Level I reports align with TGE's suggestions. There were firms that did not disclose any waste generation, disposal or recycling data. They couldn't be rated by this assessment methodology and therefore regarded as "Ungraded".

The waste management criteria set by TGE was made to be more stringent than that of the international standards to customize for the situation of Hong Kong. Taking recycling data as an example, the GRI standard requires an ESG report to disclose the total weight of recycled hazardous and non-hazardous waste.

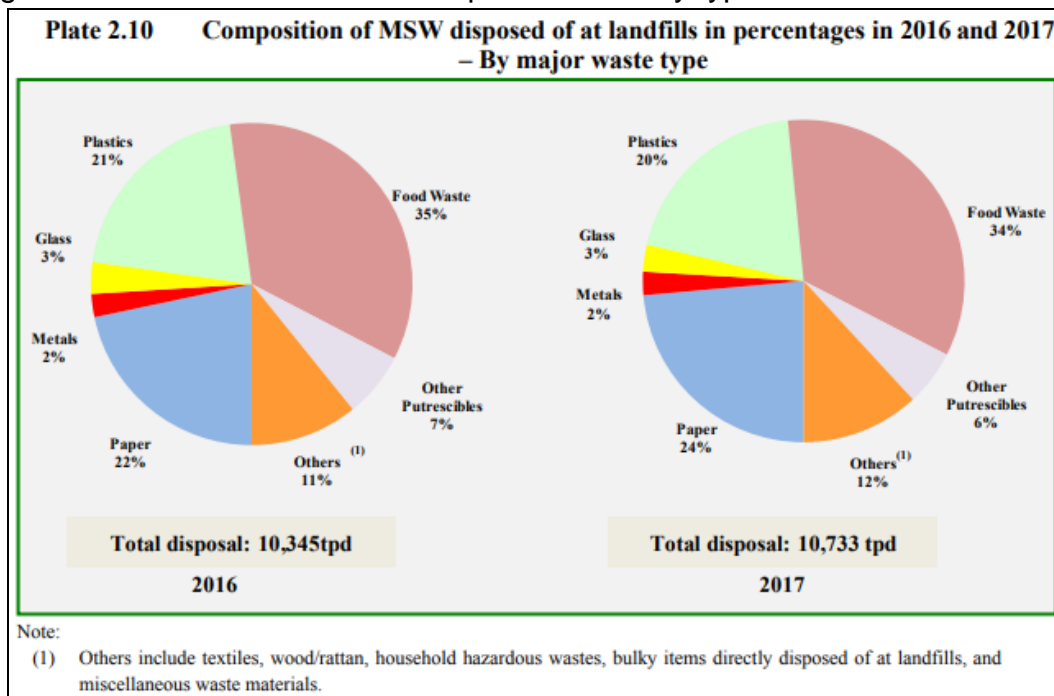
Merely presenting a total recycling weight cannot reflect the waste management performance of a company holistically. TGE finds the Environmental Protection Department's (EPD) waste statistics a good example—where the government could produce such detailed data, individual companies should adopt a similar presentation for data disclosure.

EPD has included waste generation, disposal, and recycling (recovery) data in their waste statistics monitoring report 2017. The report also disclosed a breakdown of waste and recyclables by type. Below are figures extracted for reference:

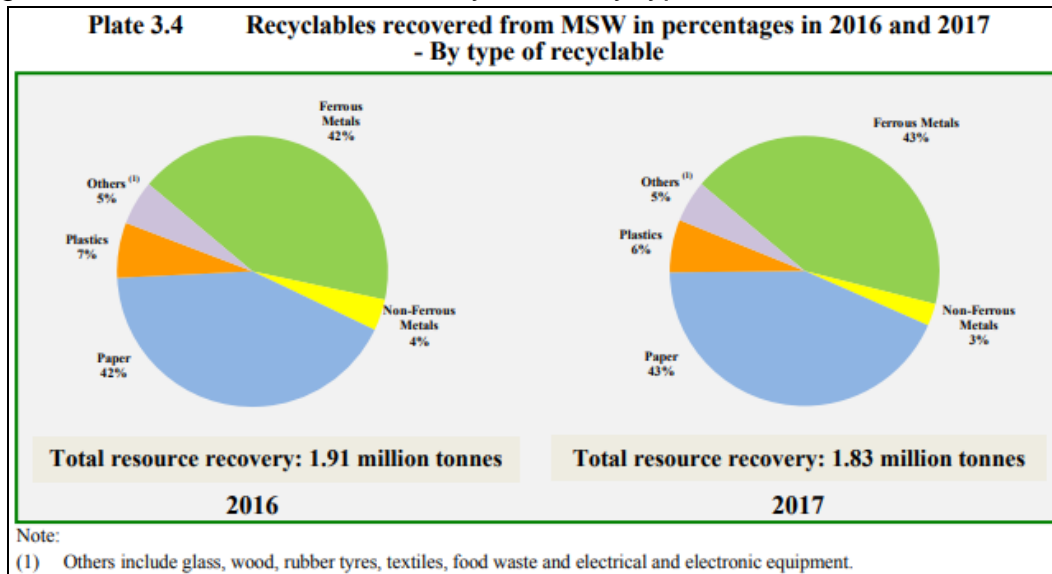
This figure shows the proportions of waste generation, disposal and recycled (recovery):



This figure shows the breakdown of disposed waste by type:



This figure shows the breakdown of recyclables by type:



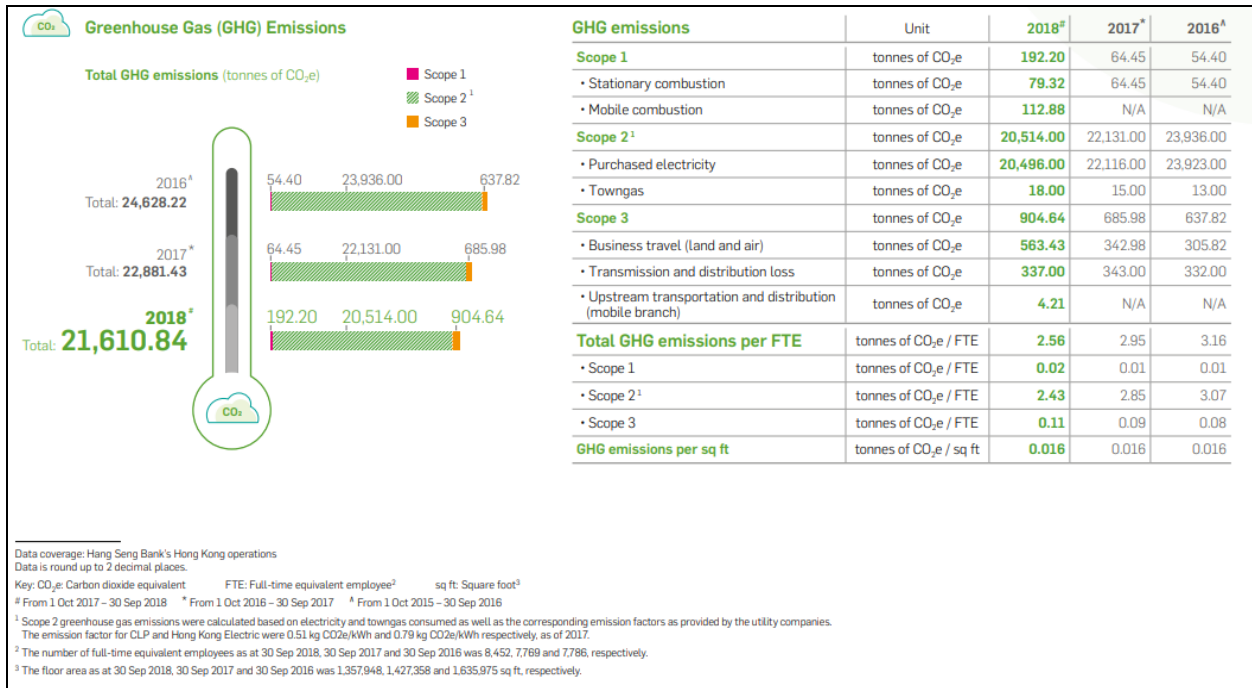
3. Observations and Results

Observations

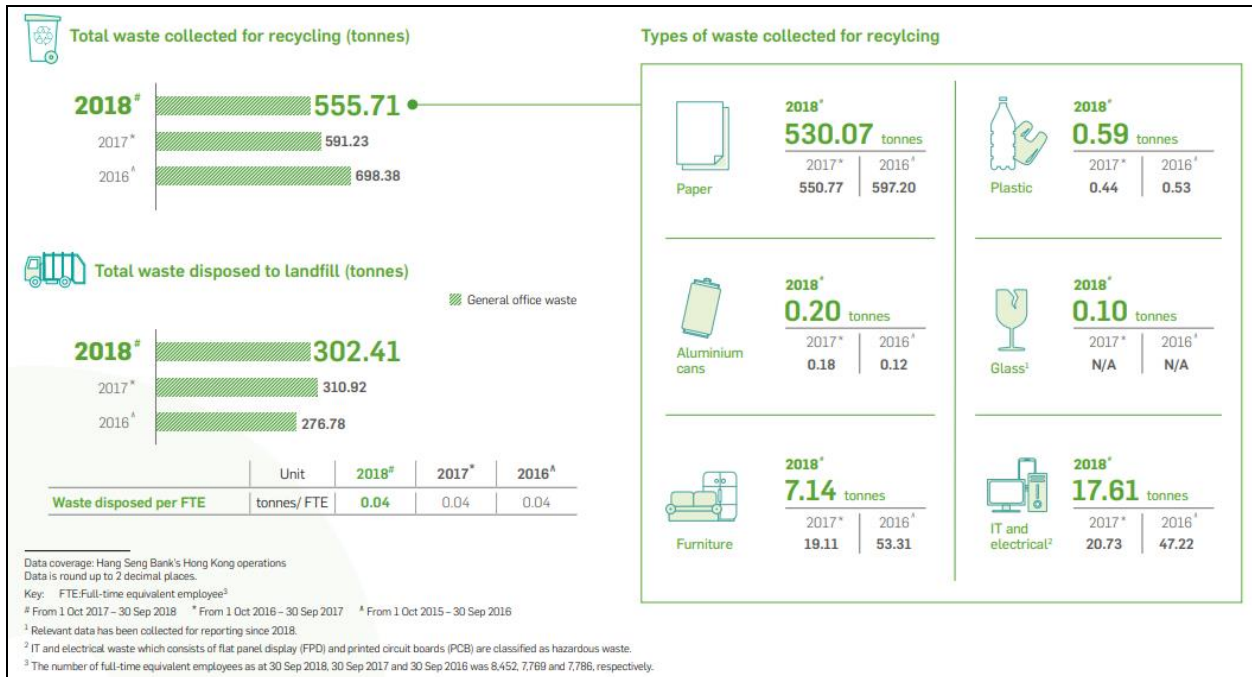
TGE has selected three cases out of the 50 constituents of Hang Seng Index to exemplify the diversity of ESG information disclosure performance regarding GHG emissions and Waste Management.

Hang Seng Bank: Level I, both GHG and Waste

Hang Seng Bank's 2018 ESG Report states Scope 1, 2 and 3 GHG emissions clearly with a detailed breakdown of each category. It also clearly states the emission prediction referenced to the "Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong" issued by EMSD in 2010.



For waste management, Hang Seng Bank provides a breakdown of recycled materials, also waste disposal rate. Data of previous years are plotted onto bar charts for easy comparison.



CR Land: Level III GHG, Level II Waste

CR Land's 2018 Sustainability Report scores Level III on GHG emissions and Level II in waste management data. They present all environmental data in their datasheet in Appendix 2.

TGE found total carbon dioxide emissions (total GHG) from its data with emission intensity per HKD10,000. This achieves Level III of our benchmark.

For Waste Management, TGE found a simple breakdown of waste disposal and recycled/reused paper/recover. This is simple but still fulfills our Level II requirement.

ESG Indicator Data List				
ESG Indicator	Unit	Data of 2016	Data of 2017	Data of 2018
A.Environment				
A1.Emissions				
A1.2	Total greenhouse gas emissions and intensity^[Note 2]			
	Carbon dioxide emission	Ton	546,467.18	497,472.14
	Carbon dioxide emission per 10,000 HKD revenue	Ton/10,000 (HKD)	0.0500	0.0419
				0.055 (per RMB10,000)
A1.3	Total hazardous wastes produced and density			
	Waste fluorescent tubes ^[Note 3]	Piece	-	116,862
				90,541
A1.4	Total non-hazardous wastes produced and density			
	Earthwork wastes ^[Note 4]	Cubic meter	-	10,198,587
	Rebar wastes ^[Note 5]	Ton	-	34,279
				44,690
A1.6	How hazardous and hazardless wastes are reduced and results achieved			
	Recycled and re-used waste paper/cover ^[Note 6]	Kg	-	65,000
				125.63

China Unicom: Level III GHG, Ungraded Waste

China Unicom provides its total GHG emissions as well as emission intensity per operating income, which achieves Level III requirement of our benchmark.

Type	Indicator	Unit	2016	2017	2018
Low-carbon development	Special investment in energy conservation and emission reduction	RMB million	200	100	100
	Energy consumption per unit of information flow	kg ce/TB	6.47	7.5	3.14
	Petrol consumption	Thousand tons	45.6	29.1	28.6
	Diesel consumption	Thousand tons	12.8	24.5	8.1
	Natural gas consumption	Thousand m ³	10,995.6	7,081	10,145.2
	Electricity consumption	Billion KWH	13.893	13.986	14.19
	Water consumption	Million tons	22,892.5	22,210.6	18,573.1
	Water consumption/operating income	Tons/RMB million	83.49	80.82	63.85
	Coal consumption	Thousand tons	110.6	72.7	58
	Energy conservation	Thousand tons	156.5	169.2	163.2
	Greenhouse gas emission	Thousand tons	5,098.9	5,188	5,296
	Greenhouse gas emission/operating income	Tons/RMB million	18.60	18.88	18.21
	Sulphur dioxide emission	Thousand tons	6.6	8.9	2.4
	Chemical oxygen demand (COD)	Thousand tons	18.3	25.4	21.1
Recycling upon scrappage and disposal	RMB million	2,711	1,242	621	

However, it did not provide waste management data. It claims that due to its massive entity size in producing waste production statistics, but the company is working on it. Details refer to the screenshot below:

Name of Index	Page Disclosed	Name of Index	Page Disclosed	Name of Index	Page Disclosed	Name of Index	Page Disclosed
A1	P41, 74	A2.4	P41-42, 74	B3	P26-27, 73	B6.2	P37-38
A1.1	P41, 74	A2.5	Note 1	B3.1	P26-27, 73	B6.3	P20, 59, 63, 73
A1.2	P41, 74	A3	P42-46	B3.2	P26-27, 73	B6.4	P32-33
A1.3	Note 2	A3.1	P42-46	B4	P14, 26	B6.5	P39-40
A1.4	Note 2	B1	P25-26, 73	B4.1	P14, 26	B7	P21
A1.5	P41, 74	B1.1	P25, 73	B4.2	P14, 26	B7.1	P21
A1.6	P44	B1.2	P25, 73	B5	P42, 62-64	B7.2	P21
A2	P41-46, 74	B2	P26, 29, 73	B5.1	63	B8	P46-51, 74
A2.1	P42-43, 74	B2.1	—	B5.2	P42, 62-64	B8.1	P46-51, 74
A2.2	P42-43, 74	B2.2	—	B6	P20, 32-40, 59-63, 73	B8.2	P46-51, 74
A2.3	P42-43, 74	B2.3	P26, 29, 73	B6.1	N/A		

Note 1: As the Company mainly engages in the provision of telecommunication services, packaging material used for the finished products is not applicable to the Company's business practice.

Note 2: As China Unicom is a massive entity and its business covers a wide geographical region, currently the Company is not able yet to produce full statistics regarding its waste production. The Company will establish related data collection system as soon as possible.

For KPI A1.6, it mentioned its monetary worth of reused and upcycled materials by its effort on green operation enhancement initiatives. TGE often found ESG reports only show results of company initiatives while not providing the actual waste generation, disposal and recycling rates. Therefore, TGE has given this report an “Ungraded” level on its waste management data disclosure.

50 Hang Seng Index Constituents in Tiers

For GHG emissions, 24% (or 12 firms) could only align with the current HKEX disclosure requirement, which provides total GHG emissions with an emission density, so they are rated Level III.

Another 46% (23 firms) have their reports achieved Level II, they reported Scope 1 and 2 emissions. And for those who reported material scope 1, 2 and 3 emissions, align with GRI and TCFD criteria, accounted for 30% (15 firms).

GHG Emissions Data Disclosure

Level	I	II	III
No. of firms and percentages	15(30%)	23(46%)	12(24%)
Firms (according to Stock Code)	<ul style="list-style-type: none"> • HSBC • Hang Seng Bank • MTR • Sino Properties • Hang Lung Properties • HKEX • Techtronic Industries • China Overseas Land & Investment • Link REIT • CK Asset Holdings • AIA • Sands China • Ping An of China • Sunny Optical • Bank of China (Hong Kong) 	<ul style="list-style-type: none"> • CK Hutchison • Towngas • Power Assets Holdings • Henderson Land • Sun Hung Kai Properties • New World Development • Swire • Galaxy Entertainment • Geely Holding • Sinopec • Tencent • CNOOC • China Construction Bank • China Mobile • CK Infrastructure Holdings • Heng An • ICBC • Wharf REIC • Country Garden HK • AAC Tech. • China Life • Bank of 	<ul style="list-style-type: none"> • CLP* • Want Want China • CITIC • WH Group • China Unicom • PetroChina • China Shen Hua • CSPC Pharmaceutical • CR Land • Sino Biopharmaceutical • Shen Zhou International • Meng Niu Dairy

Level	I	II	III
		Communications <ul style="list-style-type: none"> Bank of China 	

Note*: CLP believes their energy use (scope 2 emissions) are using energy generated by themselves (scope 1 emission), so scope 2 is embedded in scope 1 data and should not be double-counted. After reviewing similar firms as CLP that provide a detailed breakdown, TGE believes this presentation could only reflect the total emissions of the firm, therefore rated the report as Level III.

For waste management data, results show a large number—34% (17 firms) just merely aligned with the current HKEX standard to provide the total hazardous and non-hazardous waste data, which is Level III. 12% or six firms took a step further and provide a total recycling rate to be Level II.

For those who are willing to let readers get a full understanding of their waste management and recycling situation, have published a breakdown of recycling materials are Level I, accounts for 34% or 17 firms.

On the other hand, there are 20% or 10 firms who did not provide any waste generation, disposal and recycling data. They were classified as “ungraded”.

Waste Management Data Disclosure

Level	I	II	III	Ungraded
No. of firms and percentages	17(34%)	6(12%)	17(34%)	10(20%)
Firms (according to Stock Code)	<ul style="list-style-type: none"> CLP Towngas Hang Seng Bank Sun Hung Kai Properties New World Development Swire 	<ul style="list-style-type: none"> HSBC MTR CR Land AAC Tech. Shen Zhou International Sunny Optical 	<ul style="list-style-type: none"> CK Hutchison Power Assets Holdings Henderson Land Want Want China CITIC Sinopec Techtronic 	<ul style="list-style-type: none"> Galaxy Entertainment Geely Holding China Unicom Link REIT Petro China CSPC Pharmaceutical AIA

Level	I	II	III	Ungraded
	<ul style="list-style-type: none"> • Sino Properties • Hang Lung Properties • WH Group • HKEX • China Overseas Land & Investment • China Mobile • CK Asset Holdings • Sands China • Wharf REIC • Bank of China (Hong Kong) • Bank of Communications 		<ul style="list-style-type: none"> • Industries • Tencent • CNOOC • China Construction Bank • CK Infrastructure Holding • Heng An • China Shen Hua • Sino Biopharmaceutical • Country Garden HK • Meng Niu Dairy • Bank of China 	<ul style="list-style-type: none"> • ICBC • Ping An of China • China Life

Conclusion

TGE found that the constituents of the Hang Seng Index tend to disclose GHG emissions data better than waste management data. 76% or 38 firms reached Level I and II GHG emissions data disclosure, while only 46% or 23 firms reached Level I and II waste management data disclosure. TGE considers there are still many listed companies that can have room for improvement.

4. Recommendation

TEG welcomes the consultation and suggestions for improvement by HKEX, and at the same time TGE raises the following suggestions:

GHG Emissions and Waste Management

- Mandatory requirements in scope 1+2 GHG emissions is not enough to reflect the environmental performances of a firm. TGE recommends disclosing all scopes 1,2 and 3 in their ESG reports. Moreover, TGE suggests firms with consumer products and services as their major business to consider disclosing GHG emissions for the whole lifecycle of products and services (from cradle to grave);

Below is extracted from the ESG report of a major beverage provider in Japan, they considered the scope 3 GHG emissions from cradle to grave, items shown in the red box are the GHG emissions of a product's end-of-life:

Category	2015	2016	2017	2018
(1) Products and services purchased	1,821	1,845	1,821	1,862
(2) Capital goods	81	314	141	98
(3) Fuel not included in Scope 1 and 2 and energy-related activities	61	61	60	60
(4) Transportation and delivery (upstream)	433	417	370	386
(5) Waste generated in the business	5	4	4	4
(6) Business trip	1	1	1	1
(7) Commute of employees	4	3	3	3
(8) Lease assets (upstream)	Not applicable	Not applicable	Not applicable	Not applicable
(9) Transportation and deliver (downstream)	148	143	137	138
(10) Processing of sold products	Not applicable	Not applicable	Not applicable	Not applicable
(11) Use of sold products	362	327	325	296
(12) Disposal of sold products	45	55	50	52
(13) Lease assets (downstream)	Not applicable	Not applicable	Not applicable	Not applicable
(14) Franchising	Not applicable	Not applicable	Not applicable	Not applicable
(15) Investments	Not applicable	Not applicable	Not applicable	Not applicable
Total GHG emissions	2,960	3,169	2,912	2,899

CO₂ emissions from the assets being leased are excluded from (8) Lease assets (upstream) because they are counted in Scope 1 + 2.

No interim products exist and (10) Processing of sold products is not applicable.

The CO₂ emissions from the assets being leased are not applicable for (13) Lease assets (downstream), because they are counted in Scope 1 + 2.

(14) Franchising is not applicable because nothing applies to it.

(15) Investments are not applicable due to business characteristics.

- TGE agrees that firms should not only share the outcomes of certain initiatives carried out but a holistic “reduction target” to respond to the current global challenges on climate change and waste reduction;
- About waste data, firms often disclose merely a recycling amount or a recycling rate. TGE urges them to show data of recycled materials being used and the reduction in the use of virgin materials;
- Firms with consumer products and services should disclose the use of plastic packaging and show the progress of reaching the zero-microplastic target; and
- To provide measurable and meaningful data according to various business units of the firm. Firms of similar business should also come up with a common emissions density unit for GHG emissions, waste generation, disposal and recycling so the public could easily compare their performances.

Governance

- To disclose details of consultation with stakeholders (top management, front-line staff, customers, investors) regarding ESG issues, and to present the whole picture of stakeholder’s views and company’s responses and action plans; and
- To satisfy all the environmental responsibilities along the supply chain-- Request suppliers, contractors and collaborating parties to provide environmental data of their supplies and services to the firm. Including GHG emissions density, waste generation density and recycling rates. Listed firms should include those data into their own GHG emissions schedule.

Data visualization

- Firms should reassess their methodologies of data collection, calculation and presentation. They should describe their data boundaries in detail, with the aid of tables and charts;

- TGE recommends keeping all environmental data (including all data in detail and the third-party verification statement) in the ESG report. Listed companies shall facilitate the public to have easy access to data, instead of fishing in different sections of the company's website; and
- This consultation suggests ESG reports to going paperless hereafter. TGE welcomes this suggestion and suggests putting hyperlinks at the contents and indexes for easy navigation in the report.

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References

1. HKEX consultation
<https://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2016-Present/May-2019-Review-of-ESG-Guide/Consultation-Paper/cp201905.pdf?la=en>
2. HKEX reporting guide
https://www.hkex.com.hk/Listing/Rules-and-Guidance/Other-Resources/Listed-Issuers/Environmental-Social-and-Governance/ESG-Reporting-Guide-and-FAQs?sc_lang=en
3. GRI
<https://www.globalreporting.org/standards/getting-started-with-the-gri-standards/>
4. TCFD
<https://www.fsb-tcf.org/about/#>
5. CDP
<https://www.cdp.net/en/info/about-us>

https://www.cdp.net/en/responses/21584?back_to=https%3A%2F%2Fwww.cdp.net%2Fen%2Fresponses%3Futf8%3D%25E2%259C%2593%26queries%255Bname%255D%3Dtingyi&queries%5Bname%5D=tingyi

6. SBT

<https://sciencebasedtargets.org/what-is-a-science-based-target/>

7. EPD Waste Monitoring Report 2017

<https://www.wastereduction.gov.hk/sites/default/files/msw2017.pdf>

8. Quoted companies ESG reports

- Hang Seng Bank

<https://www1.hkexnews.hk/listedco/listconews/sehk/2019/0517/ltn20190517383.pdf>

- CR Land

<https://www1.hkexnews.hk/listedco/listconews/sehk/2019/0626/ltn20190626393.pdf>

- China Unicom

<https://www1.hkexnews.hk/listedco/listconews/sehk/2019/0626/ltn20190626583.pdf>

- Asahi

<https://www.asahigroup-holdings.com/en/csr/environment/greenhousegases.html>