How to prepare an ESG Report

Appendix 2: Reporting Guidance on Environmental KPIs

Introduction

This appendix contains practical guidance on how to collect, calculate and report the information called for under each of the KPIs in Part C "Subject Area A. Environmental" of the ESG Code. This guidance is for general reference only. Depending on the issuer's industry and geographical location(s) of its operations, it may refer to other resources. Furthermore, when compiling data for these KPIs, the issuer should consider its own circumstances to determine the depth and breadth of disclosure that is material and appropriate for its business.

<table>
<tr><th colspan="2">KPIs</th><th>What to Report / How to Report</th></tr>
<tr><td colspan="3">Aspect A1: Emissions</td></tr>
<tr><td>A1.1</td><td>The types of emissions and respective emissions data.

Note: Air emissions include NOx, SOx, and other pollutants regulated under national laws and regulations.</td><td>This KPI is concerned with air pollution produced by the issuer. The issuer needs to identify operational activities that give rise to emissions of air pollutants. In Hong Kong and the Pearl River Delta, for example, key air pollutants are nitrogen oxides ("NO_X"), sulphur oxides ("SO_X") and respiratory suspended particles ("RSP", also known as Particulate Matter ("PM")) produced locally by motor vehicles, marine vessels, power plants, and industrial and commercial processes. NO_X and SO_X emissions are also generated from cement, construction and textiles industries.

What to report

✧ Emissions data from gaseous fuel consumption; and
✧ Emissions data from vehicles.

How to report

<u>Emissions Data from Gaseous Fuel Consumption</u>

(1) Data collection
Units of fuel consumed (1 unit of gas consumed is equal to 48 megajoules ("MJ") for Towngas or 46 MJ for liquefied petroleum gas ("LPG")).
(2) Calculation
For Towngas:
Formulas: NO_X emissions (kg) = units of fuel consumed x 48MJ x Emission Factor
SO_X emissions (kg) = units of fuel consumed x 48MJ x Emission Factor
For LPG:
Formulas: NOx emissions (kg) = units of fuel consumed x 46MJ x Emission Factor
SOx emissions (kg) = units of fuel consumed x 46MJ x Emission Factor

NO_X Emission Factors by fuel type
<table><tr><th>Fuel type</th><th>Emission Factor</th><th>Unit of Emission Factor</th></tr><tr><td>Towngas</td><td>4.00</td><td>kg / million MJ of gas</td></tr><tr><td>LPG</td><td>4.00</td><td>kg / million MJ of gas</td></tr></table>
SOx Emission Factors by fuel type
<table><tr><th>Fuel type</th><th>Emission Factor</th><th>Unit of Emission Factor</th></tr><tr><td>Towngas</td><td>0.02</td><td>kg / million MJ of gas</td></tr><tr><td>LPG</td><td>0.02</td><td>kg / million MJ of gas</td></tr></table>
Gaseous fuel consumption is not a significant source of PM emissions.
Note on Emission Factors: The Emission Factors above are based on "The Clean Air Charter - A Business Guidebook" published by the Hong Kong General Chamber of Commerce and the Hong Kong Business Coalition on the Environment (http://www.cleanair.hk/eng/guidebook/guidebook_eng_r.pdf) and data from the Towngas Sustainability Report 2018 (https://ocp.towngas.com/sustainabilityrpt/2018/en/index.html).</td></tr>
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<table>
<tr><th colspan="2">KPIs</th><th>What to Report / How to Report</th></tr>
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Emissions Data from Vehicles

(1) Data collection

- Kilometres travelled by vehicles; and
- Units of fuel consumed by vehicles (in litres)

(2) Calculation

For NO_X:

Formula: **NO_X emissions (g) = kilometres travelled x Emission Factor**

NO_X Emission Factor by vehicle type

Vehicle type	Emission Factor	Unit of Emission Factor
Private cars	0.0747	g / km
Light goods vehicles (<=2.5tonnes)	0.885	g / km
Light goods vehicles (2.5-3.5tonnes)	1.1546	g / km
Light goods vehicles (3.5-5.5tonnes)	2.4216	g / km
Medium & Heavy goods vehicles (5.5-15tonnes)	3.1332	g / km
Medium & Heavy goods vehicles (>=15tonnes)	5.6923	g / km

For SO_X:

Formula: **SO_X emissions (g) = units of fuel consumed x Emission Factor**

SO_X Emission Factor by fuel type

Fuel type	Emission Factor	Unit of Emission Factor
Diesel	0.0161	g / L
Petrol	0.0147	g / L

For PM:

Formula: **PM emissions (g) = kilometres travelled x Emission Factor**

PM Emission Factor by vehicle type

Vehicle type	Emission Factor	Unit of Emission Factor
Private cars	0.0055	g / km
Light goods vehicles (<=2.5tonnes)	0.0848	g / km
Light goods vehicles (2.5-3.5tonnes)	0.1075	g / km
Light goods vehicles (3.5-5.5tonnes)	0.1123	g / km
Medium & Heavy goods vehicles (5.5-15tonnes)	0.3106	g / km
Medium & Heavy goods vehicles (>=15tonnes)	0.4093	g / km

Notes on Emission Factors

The Emission Factors above are based on:

- The Hong Kong Environmental Protection Department's ("EPD") EMFAC-HK Vehicle Emission Calculation model (http://www.epd.gov.hk/epd/english/environmentinhk/air/guide_ref/emfac-hk.html) and the United States Environmental Protection Agency's Vehicle Emission Modeling Software - MOBILE6.1 (http://www3.epa.gov/otaq/m6.htm) (subject to future revisions or updates); and
- Assumptions of 80% relative humidity, a temperature of 25 degrees Celsius, an average speed of 30kmh, and include running exhaust emissions only.

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<tr><td>A1.2</td><td>Direct (Scope 1) and</td><td>This KPI is concerned with the global warming effect of greenhouse gas ("GHG") emissions. The issuer needs to identify operational</td></tr>
</table>

KPIs	What to Report / How to Report
energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). *Note: Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.*	activities that give rise to GHG emissions. This KPI will be most relevant to issuers with high energy use and those involved in industrial processes such as manufacture of cement, glass, chemicals, etc. GHG emissions can be classified into three scopes: ✧ **Scope 1** – Direct emissions from operations that are owned or controlled by the company; ✧ **Scope 2** – "Energy indirect" emissions resulting from the generation of purchased or acquired electricity, heating, cooling and steam consumed within the company; and ✧ **Scope 3** – All other indirect emissions that occur outside the company, including both upstream and downstream emissions. **Note:** The Frequently Asked Questions in relation to Appendix 27 to the Main Board Listing Rules and Appendix 20 to the GEM Listing Rules explain the scopes. Reporting on Scope 3 emissions is not required as part of this KPI. **What to report** ✧ **Scope 1** – Direct emissions by equipment that is controlled by the issuer and/ or located within the physical boundary of its operations. These principally result from the following activities: - Combustion of fuels in stationary sources (excluding electrical equipment) to generate electricity, heat, or steam. For example: electricity gene rators, boilers, gas cooking stoves, etc.; - Combustion of fuels in mobile sources (e.g. motor vehicles and ships) controlled by the reporting entity; - Intentional or unintentional GHG releases from equipment and systems. For example: Hydrofluorocarbons ("HFC") and perfluorocarbons ("PFC") emissions during the use of refrigeration and air conditioning equipment and other fugitive emissions; and - Issuers may also report GHG emissions reductions/ removals such as through assimilation of carbon dioxide into biomass though tree planting. ✧ **Scope 2** – Energy indirect emissions. The issuer should quantify and report GHG emissions associated with consumption of purchased electricity and / or gas that is consumed by its controlled equipment or its operations within the physical building boundary. The two main sources of Scope 2 emissions are: - Electricity purchased from power companies; and - Gas purchased from Towngas (for companies with operations in Hong Kong); and ✧ **Scope 3** – Other indirect emissions (optional). The issuer may choose to quantify and report other indirect GHG emissions that are relevant to their activities and goals. Scope 3 GHG emissions may include: - Methane gas generation at landfill in Hong Kong due to disposal of paper waste; - GHG emissions due to electricity used for fresh water processing by the Water Services Department; - GHG emissions due to electricity used for sewage processing by the Drainage Services Department; - Business travel by employees; - Emissions from outsourced activities or other contractual arrangements; - Use of sold products and services; and - Waste disposal other than those covered in the above list. **How to report** For many issuers, consuming non-renewable fuels is the main source of direct (Scope 1) GHG emissions, while consuming purchased electricity is the main source of indirect (Scope 2) GHG emissions. **Scope 1 – Direct emissions or removals from sources** Formula: **CO_2 equivalent emissions (E) = A + B + C - D** ***E*** *= Emissions, in terms of CO_2 equivalent, summed over all types of fuel used (kg)* ***A, B, C, D*** *= Main categories of Scope 1 emissions as outlined in the following table*

KPI A1.2 has been repealed on 1 January 2025.

Please refer to HKEX's Implementation Guidance for Climate Disclosures under HKEX ESG reporting framework for latest guidance regarding calculation of greenhouse gas emissions.

Main categories of Scope 1 emissions	Data collection
A. GHG emissions from stationary combustion sources	Units of fuel consumed
B. GHG emissions from mobile combustion sources	Units of fuel consumed
C. HFC and PFC emissions	Refrigerant inventory at beginning of reporting period, refrigerant added to inventory during reporting period, refrigerant disposed of through environmentally responsible means, and refrigerant inventory at end of reporting period

KPIs		What to Report / How to Report

D. GHG removals from newly planted trees	Number of additional trees planted since the relevant building was constructed	

Calculation:

A. GHG emissions from stationary combustion sources

For CO_2:

Formula: **CO_2 equivalent emissions (E) = A × EF**

E *= Emissions, in terms of CO_2 equivalent, summed over all types of fuel used (kg)*

A *= Amount of fuel consumed (in terms of volume (e.g. litre) or mass (e.g. kg) for particular fuel)*

EF *= Emission Factor of CO_2 (see table below)*

Emission Factor by fuel type (for stationary combustion sources)

Fuel type	Emission Factor	Unit of Emission Factor
Diesel oil	2.614	kg / L
LPG	3.017	kg / kg
Kerosene	2.429	kg / L
Charcoal	2.97	kg / kg
Towngas	2.549	kg / Unit

KPI A1.2 has been repealed on 1 January 2025.

Please refer to HKEX's Implementation Guidance for Climate Disclosures under HKEX ESG reporting framework for latest guidance regarding calculation of greenhouse gas emissions.

For CH_4 / N_2O:

Formula: **CO_2 equivalent emissions (E) = A × EF × GWP**

E *= Emissions, in terms of CO_2 equivalent, summed over all types of fuel used (kg)*

A *= Amount of fuel consumed (in terms of volume (e.g. litre) or mass (e.g. kg) for particular fuel)*

EF *= Emission Factor of CH_4 / N_2O (see tables below)*

GWP *= Global Warming Potential [1]*

- *CH_4 has a GWP of 28**
- *N_2O has a GWP of 265**

*Source: The Intergovernmental Panel on Climate Change (IPCC) Synthesis Report (AR5) (2014)

CH_4 Emission Factor by fuel type (for stationary combustion sources)

Fuel type	Emission Factor	Unit of Emission Factor
Diesel oil	0.0000239	kg / L
LPG	0.000002	kg / kg
Kerosene	0.0000241	kg / L
Charcoal	0.005529	kg / kg
Towngas	0.0000446	kg / Unit

N_2O Emission Factor by fuel type (for stationary combustion sources)

Fuel type	Emission Factor	Unit of Emission Factor
Diesel oil	0.0000074	kg / L
LPG	0	kg / kg
Kerosene	0.0000076	kg / L
Charcoal	0.0000276	kg / kg
Towngas	0.0000099	kg / Unit

[1] Reflects relative strength of GHGs which indicates how much that GHG contributes to global warming as compared to CO2.

KPIs		What to Report / How to Report

KPI A1.2 has been repealed on 1 January 2025.

Please refer to HKEX's Implementation Guidance for Climate Disclosures under HKEX ESG reporting framework for latest guidance regarding calculation of greenhouse gas emissions.

B. GHG emissions from mobile combustion sources for road, air and water transport

For CO_2:

Formula: **CO_2 equivalent emissions (E) = A × EF**

E *= Emissions, in terms of CO_2 equivalent, summed over all types of fuel used, all transport modes and vehicle categories(kg)*

A *= Amount of fuel consumed (in terms of volume (e.g. litre) for particular fuel, transport mode and vehicle category)*

EF *= Emission Factor of CO_2 (see table below)*

Emission Factor (For mobile combustion sources)

Fuel type	Emission Factor	Unit of Emission Factor
Diesel oil	2.614	kg / L
Unleaded petrol	2.36	kg / L
LPG	1.679	kg / L
	3.017	kg / kg
Gas Oil (for ships only)	2.645	kg / L
Kerosene (including jet kerosene)	2.429	kg / L

For CH_4 / N_2O:

Formula: **CO_2 equivalent emissions (E) = A × EF × GWP**

E *= Emissions, in terms of CO_2 equivalent, summed over all types of fuel used, all transport modes and vehicle categories(kg)*

A *= Amount of fuel consumed (in terms of volume (e.g. litre) for particular fuel, transport mode and vehicle category)*

EF *= Emission Factor of CH_4/N_2O (see tables below)*

GWP *= Global Warming Potential (same as above: CH_4 = 28; N_2O = 265)*

CH_4 Emission Factor (For mobile combustion sources)

Vehicle type	Fuel type	Emission Factor	Unit of Emission Factor
Motorcycle	Unleaded petrol	0.001422	kg / L
Passenger car	Unleaded petrol	0.000253	kg / L
	Diesel oil	0.000072	kg / L
Private van	Unleaded petrol	0.000203	kg / L
	Diesel oil	0.000072	kg / L
	LPG	0.000248	kg / L
Public light bus	Diesel oil	0.000072	kg / L
	LPG	0.000248	kg / L
Light goods vehicle	Unleaded petrol	0.000203	kg / L
	Diesel oil	0.000072	kg / L
Medium goods vehicle	Diesel oil	0.000145	kg / L
Heavy goods vehicle	Diesel oil	0.000145	kg / L
Ship	Gas oil	0.000146	kg / L
Aviation	Jet kerosene	0.000069	kg / L
Other mobile machinery	Diesel oil	0.0000239	kg / L
	LPG	0.0000036	kg / L
		0.000006	kg / kg
	Kerosene	0.0000241	kg / L

N_2O Emission Factor (For mobile combustion sources)

Vehicle type	Fuel type	Emission Factor	Unit of Emission Factor
Motorcycle	Unleaded petrol	0.000046	kg / L

KPIs	What to Report / How to Report			
	Passenger car	Unleaded petrol	0.001105	kg / L
		Diesel oil	0.00011	kg / L
	Private van	Unleaded petrol	0.00114	kg / L
		Diesel oil	0.000506	kg / L
		LPG	0	kg / L
	Public light bus	Diesel oil	0.000506	kg / L
		LPG	0	kg / L
	Light goods vehicle	Unleaded petrol	0.001105	kg / L
		Diesel oil	0.000506	kg / L
	Medium goods vehicle	Diesel oil	0.000072	kg / L
	Heavy goods vehicle	Diesel oil	0.000072	kg / L
	Ship	Gas oil	0.001095	kg / L
	Aviation	Jet kerosene	0	kg / L
	Other mobile machinery	Diesel oil	0.000007	kg / L
		LPG	0	kg / L or kg / kg
		Kerosene	0.0000076	kg / L

KPI A1.2 has been repealed on 1 January 2025.

Please refer to HKEX's Implementation Guidance for Climate Disclosures under HKEX ESG reporting framework for latest guidance regarding calculation of greenhouse gas emissions.

C. HFC and PFC emissions for refrigeration / air-conditioning (both commonly known as refrigerants)

Formula: **CO_2 equivalent emissions (E) = (C_s + C_i – C_d – C_e) × GWP**

E *= Emissions, in CO_2 equivalent, from operation of equipment due to release of refrigerant (kg)*

C_s *= Refrigerant inventory at beginning of reporting period (in storage) (kg)*

C_i *= Refrigerant added to inventory during reporting period (kg)*

C_d *= Refrigerant disposed of through environmentally responsibly means/recycled during reporting period (kg)*

C_e *= Refrigerant inventory at end of reporting period (in storage) (kg)*

GWP *= Global Warming Potential (different GWP for different refrigerants – see table below)*

GWP of Common Refrigeration / Air-Conditioning Refrigerants

Refrigerant/Blend	GWP	Refrigerant/Blend	GWP
HCFC-21	148	HFC-152	16
HCFC-22	1,760	HFC-152a	138
HCFC-123	79	HFC-161	4
HCFC-124	527	HFC-227ea	3,350
HCFC-141b	782	HFC-236cb	1,210
HCFC-142b	1,980	HFC-236ea	1,330
HCFC-225ca	127	HFC-236fa	8,060
HCFC-225cb	525	HFC-245ca	716
HFC-23	12,400	HFC-245fa	858
HFC-32	677	HFC-365mfc	804
HFC-41	116	PFC-14	6,630

KPIs	What to Report / How to Report

HFC-43-10mee	1,650
HFC-125	3,170
HFC-134	1,120
HFC-134a	1,300
HFC-143	328
HFC-143a	4,800

PFC-116	11,100
PFC-218	8,900
PFC-318	9,540
PFC-31-10	9,200
PFC-41-12	8,550
PFC-51-14	7,910

(Source: IPCC AR5(2013))

Refrigerant/Blend	GWP
R-407A	1,770
R-407B	2,285
R-407C	1,526
R-407D	1,428
R-407E	1,363
R-410A	1,725
R-410B	1,833
R-507	3,300
R-507A	3,300
R-508A	10,175
R-508B	10,350

(Source: Environmental Protection Department (2010)

Note: More updated figures can found in the following global references:

- US Government EPA's emission factors for greenhouse gas inventories (p.5)
- EU's guidance for importers of equipment containing fluorinated greenhouse gases (p.40))

KPI A1.2 has been repealed on 1 January 2025.

Please refer to HKEX's Implementation Guidance for Climate Disclosures under HKEX ESG reporting framework for latest guidance regarding calculation of greenhouse gas emissions.

D. GHG removals from newly planted trees

Formula: **CO_2 removal (R) = T x RF**

R *= CO_2 removed by trees in one year (kg)*

T *= Net number of additional trees planted since the relevant building was constructed*

RF *= Removal Factor of CO_2 per tree planted*

Additional trees planted	Removal Factor	Unit of Removal Factor
Tree	23	kg / tree

Note on Removal Factor: According to the EPD's "Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong", this Removal Factor is applicable to trees commonly found in Hong Kong that are able to reach at least five metres in height.

Scope 2 – Energy indirect emissions (main sources from purchased electricity and gas)

- **Data collection**
  - Units of electricity consumed; and
  - Units of gas consumed.
- **Calculation**

Formula: **CO_2 equivalent emissions (E) = Q × EF**

E *= Emissions in CO_2 equivalent (kg)*

Q *= Quantity of purchased electricity / gas*

EF *= Emission Factor*

KPIs		What to Report / How to Report

KPI A1.2 has been repealed on 1 January 2025.

Please refer to HKEX's Implementation Guidance for Climate Disclosures under HKEX ESG reporting framework for latest guidance regarding calculation of greenhouse gas emissions.

Emission Factors for Hong Kong based operations

Electricity / fuel type	Emission Factor	Unit of Emission Factor
Electricity supplied by Hong Kong Electric	0.71*	kg / Unit (kWh)
Electricity supplied by CLP	0.37#	kg / Unit (kWh)
Gas supplied by Towngas	0.592^	kg / Unit

* source: Hong Kong Electric Sustainability Report 2020

source: CLP 2020 Sustainability Report

^ source: Towngas ESG Report 2020

National Emission Factors for Mainland China: 0.6101 kg CO_2/kWh (source: The Ministry of Ecology and Environment of People's Republic of China (2019))

Note on Emission Factors: Issuers with operations in Hong Kong should refer to the latest sustainability reports of the relevant power company and Towngas for the most updated Emission Factors. Issuers with operations outside Hong Kong should apply the relevant Emission Factors in those countries/ territories.

Scope 3 – Other indirect emissions (optional)

Examples of activities from which indirect GHG emissions arise	Data collection
A. Paper waste disposed at landfills	Paper inventory at beginning of reporting period, paper added to inventory during reporting period, paper collected for recycling purposes, and paper inventory at end of reporting period
B. Electricity used for processing fresh water and sewage by government departments	Amount of water and fresh water consumed (as listed on water supply bill)
C. Business air travel by employees	Details of air travel (e.g. airports of origin and destination, cabin class)

Calculation:

A. Paper waste disposed at landfills

Formula: **CO_2 equivalent emissions (E) = $(P_s + P_i - P_r - P_e) \times EF$**

E *= Emissions in CO_2 equivalent (kg)*

P_s *= Paper inventory at beginning of reporting period (in storage) (kg)*

P_i *= Paper added to inventory during reporting period (kg)*

P_r *= Paper collected for recycling purposes (kg)*

P_e *= Paper inventory at end of reporting period (in storage) (kg)*

EF *= 4.8 kg CO_2 equivalent/kg (this takes into account the carbon content of the paper waste and the GWP of CH_4)*

B. Electricity used for processing fresh water and sewage by government departments

For fresh water processing:

Formula: **CO_2 equivalent emissions (E) = A × EF**

E *= Emissions in CO_2 equivalent (kg)*

A *= Amount of water consumed (as listed on water supply bill)*

EF *= Unit electricity consumption of fresh water (from Water Supplies Department) × Territory-wide default value (i.e. 0.7kg / kWh) of purchased electricity*

For sewage processing:

Formula: **CO_2 equivalent emissions (E) = A × EF**

E *= Emissions in CO_2 equivalent (kg)*

A *= Amount of water consumed (as listed on water supply bill)*

EF *= Default Emission Factor (see table below)*

The Default Emission Factor is determined according to the purpose of water used as follows:

KPIs		What to Report / How to Report

Source description	Default Emission Factor (kg / m^3)
Restaurants and catering services	(0.7 × Emission Factor) assuming 70% of the fresh water consumed will enter the sewage system.
Other commercial, residential and institutional purposes	(1.0 × Emission Factor) assuming 100% of the fresh water consumed will enter the sewage system.

Note on Emission Factors: "Emission Factors" in the above table = Unit electricity consumption of processing sewage (obtained from Drainage Services Department) × Territory-wide default value (i.e. 0.7kg / kWh) of purchased electricity. These Emission Factors apply to issuers with Hong Kong operations. Issuers with operations outside Hong Kong would have to apply the relevant Emission Factors in those countries / territories and from the relevant government departments.

C. Business air travel by employees

The International Civil Aviation Organization ("ICAO"), a United Nations agency, has developed a methodology to calculate the CO_2 emissions from air travel and provides a carbon emissions calculator on its website ("ICAO Carbon Emissions Calculator") (http://www.icao.int/environmental-protection/CarbonOffset/Pages/default.aspx). Issuers need only input the airports of origin and destination of their employees' air travel, and the cabin class in which they travelled, into the ICAO Carbon Emissions Calculator (http://www.icao.int/environmental-protection/CarbonOffset/Documents/Methodology%20ICAO%20Carbon%20Calculator_v7-2014.pdf for more information on the ICAO methodology). Individual airlines generally provide carbon emissions calculators on their own websites as well.

Note: The guidance for reporting on GHG emissions set out above is based on the EPD's "Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong" (https://www.climateready.gov.hk/files/pdf/Guidelines_English_2010.pdf); and the "Carbon Audit Toolkit for Small and Medium Enterprises in Hong Kong" published by the University of Hong Kong and City University of Hong Kong (http://www6.cityu.edu.hk/aerc/sme/guideline.asp). Issuers may also find it helpful to refer to the Greenhouse Gas Protocol (www.ghgprotocol.org/) and various carbon calculators set out on the EPD website (http://www.epd.gov.hk/epd/english/climate_change/indiv_actions_carboncalculator.html).

Intensity

GHG intensity = E / U

E *= Emissions in CO_2 equivalent (kg)*

U *= Organisation-specific metrics*

Intensity ratios can be provided for, among others, products, services or sales. Organisation-specific metrics include units of product, production volume (e.g. metric tons, liters, or MWh), size (e.g. m^2 floor space), employment (e.g. headcount or FTE) and monetary units (e.g. revenue or sales).

**FTE* measures hours worked rather than number of workers. Calculations of FTE are often based on workers' scheduled hours divided by the employer's standard hours for a full-time workweek e.g. If an issuer has a 40-hour workweek, workers who are scheduled to work 40 hours per week are 1.0 FTEs, but workers scheduled to work 20 hours per week represent 0.5 FTEs.

Useful reference(s)

- GRI 305 GHG Emissions 2016: https://www.globalreporting.org/standards/media/1012/gri-305-emissions-2016.pdf (Disclosure 305-1 Direct (Scope 1) GHG emissions, Disclosure 305-2 Energy indirect (Scope 2) GHG emissions and Disclosure 305-4 GHG emissions intensity)
- Grid-based emissions factors for countries/ territories outside Hong Kong are available from the Institute of Global Environmental Strategies: https://iges.or.jp/en/pub/list-grid-emission-factor/en

KPI A1.2 has been repealed on 1 January 2025.

Please refer to HKEX's Implementation Guidance for Climate Disclosures under HKEX ESG reporting framework for latest guidance regarding calculation of greenhouse gas emissions.

A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). *Note: Hazardous*	This KPI is concerned with the production of hazardous waste that possesses any of the characteristics contained in Annex III of the Basel Convention, or that is considered to be hazardous by domestic legislation. The issuer needs to identify those operational activities which result in production of hazardous waste. **What to report** ✧ Total annual hazardous waste produced and the intensity with reference to the definition(s) of "hazardous waste" from relevant national regulations in the jurisdiction(s) in which your business operates. ✧ If possible, issuers should report hazardous waste split by:

KPIs		What to Report / How to Report
	wastes are those defined by national regulations.	• Management method e.g. reuse, recycling, other recovery (including energy recovery), incineration (without energy recovery), landfilling or other waste management methods specified by the issuer; and • Waste streams that are relevant to its sector, e.g. construction waste, electronic waste, general office waste, etc. **How to report** **(1) Data collection** Some examples of common items that may be classified as hazardous include oil products, cleaning/ pool chemicals, pesticides, paints, electrical equipment, batteries and fluorescent light bulbs. Since disposal of hazardous waste is subject to regulation, it is usually handled by specialised contractors who should record data on the type and quantity removed from an issuer's facilities. Hong Kong has adopted the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their disposal, 1989 (http://www.epd.gov.hk/epd/english/international_conventions/hazardous_wastes/hazardous_wastes_main.html). The Convention defines the types of waste that should be classified as "hazardous" including clinical and chemical waste, inks, dyes, paints and lacquers products waste, etc. Hong Kong has legislation regulating: • Chemical wastes: Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C of the Laws of Hong Kong); • Clinical wastes: The Clinical Waste Control Scheme, comprising Section 2 and Schedule 8 of the Waste Disposal Ordinance (Cap.354 of the Laws of Hong Kong), the Waste Disposal (Clinical Waste) (General) Regulation (Cap. 354O of the Laws of Hong Kong), and various pieces of additional legislation; and • Hazardous chemicals: The Hazardous Chemicals Control Ordinance (Cap. 595 of the Laws of Hong Kong). **(2) Calculation** **Hazardous waste intensity = HW / U** ***HW** = Annual hazardous waste produced (in tonnes)* ***U** = Organisation-specific metrics* Intensity ratios can be provided for, among others, products, services or sales. Organisation-specific metrics include units of product, production volume (e.g. metric tons, liters, or MWh), size (e.g. m^2 floor space) and employment (e.g. headcount or FTE) or monetary units (e.g. revenue or sales). **Useful reference(s)** Hong Kong legislation: • Chemical waste: http://www.epd.gov.hk/epd/english/environmentinhk/waste/prob_solutions/chemical_wminhk.html • Clinical waste: http://www.epd.gov.hk/epd/clinicalwaste/en/scheme.html • Hazardous chemicals: http://www.epd.gov.hk/epd/english/laws_regulations/comp_guides/cg_hazardous_chemical.html
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	This KPI is concerned with non-hazardous waste, which is anything for which the issuer has no further use and that is either disposed of or released into the environment, excluding hazardous waste, as defined above. The issuer needs to identify operational activities that result in production of non-hazardous waste, which may include construction/ demolition waste, commercial waste, residential/ domestic waste, grease trap waste and garden waste. **What to report** **(1) Information required to comply** ✧ Total annual non-hazardous waste produced in metric tonnes and the intensity. ✧ If possible, issuers should report non-hazardous waste split by: • Management method e.g. reuse, recycling, other recovery (including energy recovery), incineration (without energy recovery), landfilling or other waste management methods specified by the issuer; and • Waste streams that are relevant to its sector, e.g. construction waste, food waste, electronic waste, general office waste, etc. **(2) Explanation(s) for non- or partial- disclosure** ✧ It is common for issuers to have difficulty collecting and reporting good quality data for non-hazardous waste streams, particularly for general waste that is not subject to any particular waste management approach and disposed of via municipal services. If data is not available for all types of waste, identify the types of waste excluded from this disclosure and explain why they have been

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		excluded. **How to report** **(1) Data collection** Data can be obtained from facilities managers and/ or waste contractors. If weight data is not available, issuers may estimate the weight using available information on waste density and volume collected, mass balances and etc. **(2) Calculation** **Non-hazardous waste intensity = NHW / U** ***NHW*** *= Annual non-hazardous waste produced (in tonnes)* ***U*** *= Organisation-specific metrics* Intensity ratios can be provided for, among others, products, services or sales. Organisation-specific metrics include units of product, production volume (e.g. metric tons, liters, or MWh), size (e.g. m^2 floor space), employment (e.g. headcount or FTE) and monetary units (e.g. revenue or sales). **Useful reference(s)** ✧ GRI Exposure Draft of 306 Waste (Disclosure 306-3 Waste managed): https://www.globalreporting.org/standards/media/2237/exposure-draft-of-gri-waste-standard.pdf (Currently under review by GRI with updated standard expected to be released in 2020)
A1.5	Description of emission target(s) set and steps taken to achieve them.	For this KPI, issuers should disclose any targets for reduction of emissions, as well as measures employed to mitigate emissions. **What to report** ✧ Targets for reduction of emissions as reported under KPI A1.1 and KPI A1.2; ✧ Measures employed to mitigate these emissions; and ✧ Steps taken. **How to report** **(1) Data collection** Describe any targets concerning emissions of air pollutants (e.g. NOx, SOx and PM) and GHGs, and steps taken to achieve them. **(2) Calculation** When reporting on targets, issuers should disclose the following information (as applicable): • Baseline and context • Range and location of entities included • Expected results and timeline for achieving them • Whether they are voluntary or mandatory (i.e. based on legislation), and if mandatory, then specify the relevant legislation Reduction targets are commonly expressed in percentage terms by a particular date with reference to a baseline level e.g. “20% reduction over five years compared with 2015.” **Useful reference(s)** • Step-by-step Guide by Science Based Target Initiative: https://sciencebasedtargets.org/step-by-step-guide/ • An Analysis of the Goals and Targets by the Global Reporting Initiative and the UN Global Compact : https://www.globalreporting.org/resourcelibrary/GRI_UNGC_Business-Reporting-on-SDGs_Analysis-of-Goals-and-Targets.pdf (Target 3.9 and SDG 13: Climate Action)
A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken	This KPI is concerned with issuers’ management approach to waste. The waste management hierarchy ranks waste management methods from the most to least environmentally favourable. At the top of the waste management hierarchy is waste prevention, followed by reuse, recycling, and energy or other recovery. Landfilling and incineration without energy recovery are the least environmentally favourable. **What to report** ✧ How hazardous and non-hazardous wastes are handled. Relevant information may include: • Whether a management system has been implemented and if so, which recognised risk management and/or management system standards/guidelines have been adopted • Whether waste prevention solutions are being implemented • Scope of waste types, operations, activities, and processes covered

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	to achieve them.	• Who is responsible, what do they do and who they report to ✧ Targets for waste reduction, including waste prevention and waste diversion ✧ Steps taken **How to report** **(1) Definition** **Waste prevention** can be defined as measures taken before a substance, material or product has become waste, that reduce: (a) the quantity of waste, including through the re-use of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health; (c) the content of harmful substances in materials and products. Waste prevention solutions can include innovative product design that requires fewer input materials or extends the product life cycle etc. **Waste diversion** means diverting materials to be reused, recycled, or composted, instead of being incinerated or buried in a landfill. To achieve waste diversion, different types of materials like paper, metals, recyclable plastic, organic waste and electronic/ hazardous waste must first be sorted from general waste. **(2) Calculation** When reporting on targets, issuers should disclose the following information (as applicable): • Baseline and context • Range and location of entities included • Expected results and timeline for achieving them • Whether they are voluntary or mandatory (i.e. based on legislation), and if mandatory, then specify the relevant legislation Reduction targets are commonly expressed in percentage terms by a particular date with reference to a baseline level e.g. "20% reduction over five years compared with 2015." **Useful reference(s)** • GRI Exposure Draft of 306 Waste (Disclosure 306-2 Management of waste-related impacts): https://www.globalreporting.org/standards/media/2237/exposure-draft-of-gri-waste-standard.pdf (Currently under review by GRI with updated standard expected to be released in 2020) • An Analysis of the Goals and Targets by the Global Reporting Initiative and the UN Global Compact: https://www.globalreporting.org/resourcelibrary/GRI_UNGC_Business-Reporting-on-SDGs_Analysis-of-Goals-and-Targets.pdf (SDGs: Target 3.9, Target 11.6, Target 12.3, Target 12.4, Target 12.5.)
Aspect A2: Use of Resources		
A2.1	Direct and/ or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	This KPI is concerned with consumption of energy. For many issuers, consuming non-renewable fuels (e.g. petrol and diesel) is the main form of direct energy consumption, while consuming purchased electricity is the main form of indirect energy consumption. **What to report** ✧ Energy consumption by type, including: • **Non-renewable fuel (direct)** e.g. distilled from petroleum or crude oil, such as gasoline, diesel fuel, jet fuel, and heating oil; natural gas, such as compressed natural gas (CNG), and liquefied natural gas (LNG); fuels extracted from natural gas processing and petroleum refining, such as butane, propane, and liquefied petroleum gas (LPG); and coal • **Renewable energy (direct)** generated from renewable sources including geothermal, wind, solar, hydro, and biomass • **Purchase of energy (indirect)** in the form of electricity, heating, cooling and steam • **Sale of energy** in the form of electricity, heating, cooling and steam ✧ Intensity can be calculated by reference to the units of production volume, the area and number of employees of the operation (e.g. for an office, energy consumption per square meter, per employee) and/ or the business unit (per hotel room night), etc. **How to report** **(1) Data collection** This data is usually available from bills, meter readings, expense claims and other internally/ externally generated records. To ensure data collection captures all relevant energy sources, compile a list of: • Equipment owned/ controlled by the issuer in which fuel is combusted (e.g. boilers, furnaces, heaters, turbines, flares,

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		incinerators, generators and/ or vehicles) • Sites and facilities owned/ controlled by the issuer at which energy in the form of electricity, heating, cooling and steam is consumed • Equipment owned/ controlled by the issuer that generates renewable energy e.g. solar panels Collect data for all of the following (as applicable): • Amount of combustible fuel (e.g. in litres or kg) purchased and consumed from external sources • Amount of indirect energy (in multiples of kWh or Joules) purchased and consumed from external sources in the form of electricity, heating, cooling and steam • Amount of internally generated energy (in multiples of kWh or Joules) from equipment that is owned/ controlled by the issuer • Amount of energy sold to third parties (in multiples of kWh or Joules) in the form of electricity, heating, cooling and steam **(2) Calculation** When compiling data for this KPI, issuers should: • Use numbers at the end of the reporting period for energy consumption that occurred, unless the issuer adopts another calculation approach that should be fully disclosed; and, • Provide absolute data and explanatory notes. **Total energy consumption = NRF + RF + PE + SGE - ES** ***NRF*** **=** (direct) non-renewable fuel consumed ***RF*** **=** (direct) renewable energy consumed ***PE*** = (indirect) electricity, heating, cooling and steam purchased for consumption ***SGE*** **=** (direct) self-generated electricity, heating, cooling and steam ***ES*** = (direct) electricity, heating, cooling and steam sold To convert data collected in other units to kWh, issuers may apply the following conversion factors sourced from the Energy Statistics Manual issued by the International Energy Agency, or use other values provided that the source(s) are fully referenced. **NRF combustible fuel** | **Litres per tonne** | **Gross calorific value (GJ/T)** Petrol | 1,350 | 47.10 Diesel | 1,185 | 45.66 **1 GJ = 277.778 kWh** For example: To calculate energy from 1000 litres of diesel: 1000 (L) divided by 1185 (L/T) multiplied by 45.66 (GJ/T) equals 38.53 GJ 38.53 (GJ) multiplied by 277.778 equals 10,703 kWh **Energy consumption intensity= EG / U** ***EG*** *= Total energy consumed ('000 kWh)* ***U*** *= Organisation-specific metrics* Intensity ratios can be provided for, among others, products, services or sales. Organisation-specific metrics include units of product, production volume (e.g. metric tons, liters, or MWh), size (e.g. m^2 floor space) and employment (e.g. headcount or FTE) and monetary units (e.g. revenue or sales). **Useful reference(s)** • GRI 302 Energy 2016: https://www.globalreporting.org/standards/media/1009/gri-302-energy-2016.pdf (Disclosure 302-1 Energy consumption within the organization, Disclosure 302-2 Energy consumption outside of the organization, and Disclosure 302-3 Energy intensity) • Energy Statistics Manual from the International Energy Agency (Annex 3 Units and Conversion Equivalents): https://ec.europa.eu/eurostat/ramon/statmanuals/files/Energy_statistics_manual_2004_EN.pdf
A2.2	Water consumption	This KPI concerns consumption of water by the issuer. Issuers are encouraged to disclose information for this KPI from a localised

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	in total and intensity (e.g. per unit of production volume, per facility).	perspective. Operations in water stressed locations are not only likely to have more significant impacts on local stakeholders, but are also likely to be more sensitive to changes in the operating environment. **What to report** **(1) Information required to comply** ✧ Water consumption amount and intensity. ✧ If possible, issuers should provide: • Data at facilities-level for operations located in water stressed locations; and • Breakdown of water withdrawn and discharged by source e.g. surface water, groundwater, seawater and third-party water (including municipal supplies). **(2) Explanation(s) for non- or partial- disclosure** ✧ Some issuers may have difficulties obtaining data for this KPI, particularly if they operate in leased premises with the supply and discharge of water controlled by building management and no sub-metering for individual occupants. In such cases, the issuer can explain why data for this KPI is not available. **How to report** **(1) Definition** 'Water stress' refers to the ability, or lack thereof, of local water sources to meet the human and ecological demand for water. **(2) Data collection** Data can be collected by taking measurements at the source of water abstraction (direct), or from utilities bills (indirect)). To learn more about locations where an issuer's water-related impacts might be significant and therefore where actions to address them are most needed, the issuer should refer to publicly available and credible tools for assessing areas with water stress. These include the World Resources Institute 'Aqueduct Water Risk Atlas', and the WWF 'Water Risk Filter'. **(3) Calculation** **Water consumption intensity = W / U** ***W** = Annual water consumption (in cubic metres)* ***U** = Organisation-specific metrics* Intensity ratios can be provided for, among others, products, services or sales. Organisation-specific metrics include units of product, production volume (e.g. metric tons, liters, or MWh), size (e.g. m2 floor space), employment (e.g. headcount or FTE) and monetary units (e.g. revenue or sales). **Useful reference(s)** • GRI 303 Water and Effluents 2018: https://www.globalreporting.org/standards/media/1909/gri-303-water-and-effluents-2018.pdf (Disclosure 303-1 Interactions with water as a shared resource, Disclosure 303-3 Water withdrawal, Disclosure 303-4 Water discharge, Disclosure 303-5 Water consumption) • World Resources Institute 'Aqueduct Water Risk Atlas': https://www.wri.org/aqueduct • WWF 'Water Risk Filter': https://waterriskfilter.panda.org/
A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	This KPI addresses the issue of using less energy to achieve the same level of business output by eliminating energy waste. Improved energy efficiency brings a variety of benefits such as reducing greenhouse gas emissions and lowering costs. **What to report** ✧ Targets for energy use efficiency. ✧ Steps taken, including energy conservation measures. **How to report** **(1) Definition** **Energy conservation** refers to efforts made to reduce consumption of energy by using less of an energy service. This can be achieved either by using energy more efficiently (using less energy for a constant service) or by reducing the amount of service used (e.g., by raising the target temperature for an air-conditioning system from 22°C to 25°C). Common examples include process redesign, conversion and retrofitting of equipment, changes in employee behavior; and other operational changes. If applicable, the issuer may report on reductions in energy requirements of sold products and services.

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		(2) Calculation When reporting on targets, issuers should disclose the following information (as applicable): • Baseline and context • Range and location of entities included • Expected results and timeline for achieving them • Whether they are voluntary or mandatory (i.e. based on legislation), and if mandatory, then specify the relevant legislation Reduction targets are commonly expressed in percentage terms by a particular date with reference to a baseline level e.g. "20% reduction over five years compared with 2015." **Useful reference(s)** • GRI 302 Energy 2016: https://www.globalreporting.org/standards/media/1009/gri-302-energy-2016.pdf (Disclosure 302-4 Reduction of energy consumption, Disclosure 302-5 Reductions in energy requirements of products and services) • An Analysis of the Goals and Targets by the Global Reporting Initiative and the UN Global Compact: https://www.globalreporting.org/resourcelibrary/GRI_UNGC_Business-Reporting-on-SDGs_Analysis-of-Goals-and-Targets.pdf (SDG 7: Affordable and clean energy)
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	This KPI concerns the issuer's management approach to water from a localised perspective. It also concerns efforts by the issuer to use less water to achieve the same level of business output by eliminating waste. Improved water efficiency brings a variety of benefits such as mitigating impacts of water use on local stakeholders and lowering costs. **What to report** ✧ Issues in sourcing sufficient quantity and quality of water for business operations, particularly in locations with high water stress ✧ Targets for water efficiency ✧ Steps taken, such as water conservation measures **How to report** **(1) Definitions** **Water stress** refers to the ability, or lack thereof, of local water sources to meet the human and ecological demand for water. To learn more about locations where an issuer's water-related impacts might be significant and therefore where actions to address them are most needed, the issuer should refer to publicly available and credible tools for assessing areas with water stress. These include the World Resources Institute 'Aqueduct Water Risk Atlas', and the WWF 'Water Risk Filter'. **Water conservation** refers to efforts made to reduce consumption of water by using less of a water service. This can be achieved either by using water more efficiently (e.g. using less water for a constant service) or by reducing the amount of service used (e.g. by removing decorative fountains). Common examples of water conservation initiatives may include process redesign, conversion and retrofitting of equipment, changes in employee behavior; and other operational changes. **(2) Calculation** When reporting its targets, issuers should provide the following information (as applicable): • Baseline and context • Range and location of entities included • Expected result and timeline for achieving • Whether they are voluntary or mandatory (i.e. based on legislation), and if mandatory, then specify the relevant legislation Reduction targets are commonly expressed in percentage terms by a particular date with reference to a baseline level e.g. "20% reduction over five years compared with 2015." **Useful reference(s)** • GRI 303 Water and Effluents 2018: https://www.globalreporting.org/standards/media/1909/gri-303-water-and-effluents-2018.pdf (Disclosure 303-1 Interactions with water as a shared resource, Disclosure 303-3 Water withdrawal, Disclosure 303-4 Water discharge, Disclosure 303-5 Water consumption) • World Resources Institute 'Aqueduct Water Risk Atlas': https://www.wri.org/aqueduct • WWF 'Water Risk Filter': https://waterriskfilter.panda.org/ • Water conservation for non-domestic water use accounts from Water Supplies Department of HKSAR: https://www.wsd.gov.hk/en/water-conservation/non-domestic/index.html • An Analysis of the Goals and Targets by the Global Reporting Initiative and the UN Global Compact: https://www.globalreporting.org/resourcelibrary/GRI_UNGC_Business-Reporting-on-SDGs_Analysis-of-Goals-and-Targets.pdf

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		(SDG 6: Ensure availability and sustainable management of water and sanitation for all)
A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	This KPI calls for issuers to track their use of packaging materials with a view to prompting them to reduce, reuse and/ or recycle. Disposal of products and packaging materials after use is a steadily growing environmental challenge. **What to report** **(1) Information required to comply** ✧ Total packaging material used and intensity. ✧ If possible, issuers should provide a breakdown of materials by type. **(2) Explanation(s) for non- or partial- disclosure** ✧ Issuers may consider their own circumstances to determine whether this KPI is material for their business. For example, if an issuer's operations do not involve any packaged products, it can explain this in its ESG report. **How to report** **(1) Data collection** Total packaging material used by type (e.g. plastic, paper, metal) in total metric tonnes. Data can be collected from procurement records. **(2) Calculation** **Intensity of packaging material use = PA / U** ***PA*** *= Total packaging material used (in tonnes)* ***U*** *= Organisation-specific metrics* Intensity ratios can be provided for, among others, products, services or sales. Organisation-specific metrics include units of product, production volume (e.g. metric tons, liters, or MWh), size (e.g. m^2 floor space), employment (e.g. headcount or FTE) and monetary units (e.g. revenue or sales).
Aspect A3: The Environment and Natural Resources		
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	This KPI concerns the issuer's overall impacts on the environment and natural resources (including emissions, use of resources and others, such as biodiversity); as well as how it manages these impacts and communicates this information to stakeholders. It is largely complementary to the other KPIs in this Subject Area, as it calls for a narrative statement to give meaning to the quantitative disclosures under the other KPIs. **What to report** ✧ Significant impacts of activities on the environment and natural resources. ✧ Policies and/or measures adopted specific to the environment and natural resources. Relevant information may include: • Whether an environmental management system (e.g. ISO 14000) and/or certification schemes (e.g. Renewable Energy Certificate) have been implemented and if so, which recognised standards/guidelines have been adopted • Scope of operations and activities covered • Who is responsible, what do they do and who they report to • Leading indicators used to inform management and other stakeholders (e.g. regulators) about significant impacts **How to report** An issuer should specify its criteria for identifying "significant" impacts of its activities on the environment and natural resources. In doing so, it may cross-reference other information disclosed in its ESG report, such as: Statement from the board on ESG Governance (ESG Code, paragraph 13); Application of the Reporting principles, specifically the principle of Materiality (ESG Code, paragraph 14); and, Description of the Report boundary (ESG Code, paragraph 15).
Aspect A4: Climate Change		
A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	This KPI prompts issuers to consider the recommendations of the Taskforce on Climate-related Financial Disclosure (TCFD) on identifying and disclosing the potential impacts of climate-related risks on their businesses. **What to report** ✧ Significant climate-related issues which have impacted and/or may impact the issuer, such as: **Physical risks** • Acute physical risks, which arise from particular events, especially weather-related events such as storms, floods, fires

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	or heatwaves that may damage production facilities and disrupt value chains. • Chronic physical risks, which arise from longer-term changes in the climate, such as temperature changes, rising sea levels, reduced water availability, biodiversity loss and changes in land and soil productivity. **Transition risks** • Policy risks, for example as a result of energy efficiency requirements, carbon-pricing mechanisms which increase the price of fossil fuels, or policies to encourage sustainable land use. • Legal risks, for example the risk of litigation for failing to avoid or minimise adverse impacts on the climate, or failing to adapt to climate change. • Technology risks, for example if a technology with a less damaging impact on the climate replaces a technology that is more damaging to the climate. • Market risks, for example if the choices of consumers and business customers shift towards products and services that are less damaging to the climate. • Reputational risks, for example the difficulty of attracting and retaining customers, employees, business partners and investors if a company has reputation for damaging the climate. ✧ The core elements of recommended climate-related financial disclosures, including: • Governance - the issuer's governance around climate-related risks • Strategy - the actual and potential impacts of climate-related risks on the issuer's businesses, strategy, and financial planning, where such information is material • Risk Management - how the company identifies, assesses, and manages climate-related risks • Metrics and Targets - the metrics and targets used to assess and manage relevant climate-related risks where such information is material ✧ Steps taken to manage the risks **How to report** An issuer should specify its criteria for identifying "significant" climate-related issues that impact its business activities. In doing so, it may cross-reference information disclosed in its ESG report. Issuers should implement action steps to lay the groundwork for effective climate-related disclosures, including integrating climate change into key governance processes and enhancing board-level oversight through audit and risk committees; looking specifically at the financial impacts of climate risk and how it relates to revenues, expenditures, assets, liabilities, and financial capital; and, adapting existing enterprise-level and other risk management processes to take account of climate risk. Look at existing tools to collect and report climate-related financial information, such as the CDP questionnaire. **Useful reference(s)** • Annex to the TCFD Recommendations Report: Implementing Recommendations of the TCFD published in June 2017: https://www.fsb-tcfd.org/publications/final-implementing-tcfd-recommendations/ • Various resources to understand and implement the TCFD recommendations available from TCFD: https://www.tcfdhub.org/ • Guidelines on reporting climate-related information published by the European Commission in 2019: https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines_en.pdf • Various resources on TCFD implementation and good practice available from SASB: https://www.sasb.org/knowledge-hub/ • Climate Change questionnaire and guidance from CDP: https://www.cdp.net/en/guidance