

Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

JT Group is a leading global tobacco company and our products are sold in over 130 markets. We are also active in pharmaceutical and processed food businesses, and we expect them to establish a foundation for future profit contribution, as we strive for sustainable growth. Headquartered in Tokyo, JT is listed on the Tokyo Stock Exchange and our company comprises three main business units: Tobacco business: headquartered in Geneva, Switzerland since 2022, manufactures and offers tobacco products all over the world. Our leading brands are Winston, Camel, MEVIUS and LD in combustibles, as well as Ploom and Logic in RRP (Reduced-Risk Products). Pharmaceutical business: Our pharmaceutical business focuses on the R&D, manufacturing, and sale of prescription drugs, concentrating on three specific therapeutic areas: Cardiovascular, Renal and Metabolism (CVRM); immunology; and neuroscience. Processed food business: Our processed food business handles the frozen and ambient food business, mainly for frozen noodles, frozen okonomiyaki (Japanese savory pancakes), and packaged cooked rice, and the seasonings business, focusing on seasonings including yeast extracts.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

No

C0.3

(C0.3) Select the countries/areas in which you operate.

Algeria
Andorra
Armenia
Austria
Azerbaijan
Bangladesh
Belarus
Belgium
Bolivia (Plurinational State of)
Brazil
Bulgaria
Cambodia
Canada
China
Colombia
Czechia
Denmark
Egypt
Ethiopia
Finland
France
Georgia
Germany
Greece
Hong Kong SAR, China
Hungary
Indonesia
Iran (Islamic Republic of)
Ireland
Italy
Japan
Jordan
Kazakhstan
Kyrgyzstan
Lebanon
Lithuania
Malawi
Malaysia
Mexico
Mongolia
Morocco
Myanmar
Netherlands

Nigeria
Norway
Philippines
Poland
Portugal
Republic of Korea
Republic of Moldova
Romania
Russian Federation
Serbia
Singapore
Slovakia
South Africa
South Sudan
Spain
Sudan
Sweden
Switzerland
Taiwan, China
Tajikistan
Thailand
Tunisia
Turkey
Ukraine
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America
Viet Nam
Zambia

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

JPY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?

	Relevance
Agriculture/Forestry	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]
Processing/Manufacturing	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Distribution	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Consumption	Yes [Consumption only]

C-AC0.6b/C-FB0.6b/C-PF0.6b

(C-AC0.6b/C-FB0.6b/C-PF0.6b) Why are emissions from agricultural/forestry activities undertaken on your own land not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Evaluated but judged to be unimportant

Please explain

JT Group partially owns a small amount of land, but emissions related to these activities are not material to our overall emissions

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodity

Tobacco

% of revenue dependent on this agricultural commodity

More than 80%

Produced or sourced

Sourced

Please explain

91.0% of JT Group’s revenue is dependent on tobacco. The remainder of the revenue comes from pharmaceuticals (3.1%), processed foods (5.9%) and others (0.1%). Tobacco accounts for a significant proportion of revenue and accounts for the majority of emissions and so will be the only commodity presented in this response.

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	JP3726800000

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Chief Sustainability Officer (CSO)	<p>JT Group considers climate-related issues to be strategically important for our business. As such, high level board oversight is critical. The person directly responsible for climate-related issues is the Chief Sustainability Officer (CSO) of JT. This position reports directly to Representative Director and Executive Vice President of JT on corporate, sustainability management, pharmaceutical and processed food business. The Representative Director and Executive Vice President is Member of the Board also serving as Executive Officer. They are directly responsible for developing and implementing strategies and plans for Sustainability Management, including climate-related issues.</p> <p>Based on societal expectations, the board members determined that it is necessary to establish a long-term plan to tackle the environmental challenges we face as a company and the society. Also, to better understand long-term risks and opportunities from climate change, the board members decided that the business would carry out Climate Scenario Analysis and endorsed the recommendations of the Task Force on Climate-related Financial Disclosures</p>

	(TCFD). In 2021, the board members decided to set our new net zero target, aiming to be net zero across our entire value chain by 2050, which was officially announced in 2022.
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C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing and guiding employee incentives Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets Reviewing and guiding the risk management process	Climate-related issues are discussed in Board level meetings 4 times a year as part of environmental planning. This includes the following: 1) Review of Annual and Strategic Planning (ASP) 2) Approving the annual operation plan, which includes the yearly environmental plan. 3) Review of previous year performance as part of the Board meeting in May 4) Review of Sustainability Strategy The governance mechanisms are implemented within the four processes above, which contribute to the oversight of climate-related issues. Selected climate-related issues are integrated into these processes to manage governance.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

Board member(s) have competence on	Criteria used to assess competence of board member(s) on climate-related issues
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	climate-related issues	
Row 1	Yes	Our board has members with expertise in the area of sustainability, environment and society including climate-related issues, and we have disclosed board member's skills matrix. This matrix is based on board members' past experience and the knowledge they have developed through this experience.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

Chief Sustainability Officer (CSO)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
 Developing a climate transition plan
 Implementing a climate transition plan
 Integrating climate-related issues into the strategy
 Conducting climate-related scenario analysis
 Setting climate-related corporate targets
 Monitoring progress against climate-related corporate targets
 Assessing climate-related risks and opportunities
 Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Corporate Sustainability/CSR reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

1) The Chief Sustainability Officer (CSO) is in charge of JTG Sustainability Management. This position reports directly to the Representative Director and Executive Vice President of JT who is directly responsible for developing and implementing strategies and plans, including Climate-related issues.

2) We recognize climate-related issues are an important management issue to us as well as our stakeholders and this is why responsibility for these issues lies at such a senior level.

3) CSO is responsible for climate-related issue management and more broadly, sustainability management. In 2019, among other responsibilities, CSO had oversight of the establishment of the renewed JTG Environment Plan, including the setting of a science-based GHG emission reduction target subsequently validated by SBTi. In December 2020, the company also has endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The Sustainability function monitors and assesses climate-related issues, coordinates activities, gathers data and provides information to the JTG's Board of Directors.

In 2021, new Net-Zero target was set, aiming to be net zero across our entire value chain by 2050.

The near-term targets for 2030 was also set, which supports achieving the net zero by 2050, was validated by SBTi as being in line with 1.5°C scenario in 2022.

Climate-related management activities and performance are reported to the Board 4 times a year, so that the Board can provide supervisions with; Annual and Strategic Planning review, Annual operation plan approval, review of Sustainability Strategy and Board meeting in May to review previous year performance.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	The remuneration for the directors who also serve as executive officers is composed of base salary, executive bonus, restricted stock remuneration plan and performance share unit plan (PSU). PSU is a performance-linked stock compensation system that aims to strengthen shared value with shareholders, to enhance company value over the mid to long term and to commit to achieving business results over the mid-term. For the performance evaluation period starting in 2022, we have decided to introduce an ESG-related index on top of profit as KPIs for PSU. This index is introduced in order for us (evaluatee) and shareholders (evaluator) to seek agreement on what is conducive to corporate value. In 2022, we adopted our progress on initiatives to realize net zero as ESG-related index, specifically target attainment rates to reduce GHG emissions.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

Chief Executive Officer (CEO)

Type of incentive

Monetary reward

Incentive(s)

Shares

Performance indicator(s)

Board approval of climate transition plan
Achievement of climate transition plan KPI
Progress towards a climate-related target
Achievement of a climate-related target

Incentive plan(s) this incentive is linked to

Long-Term Incentive Plan

Further details of incentive(s)

Performance Share Unit Plan provides monetary remuneration claims to allot the Company's ordinary shares and cash as a performance-linked stock compensation. The monetary remuneration claims and cash are calculated after the performance evaluation period that is aligned with the duration of the Company's three-year Business Plan that starts from the fiscal year. It is subject to provision in accordance with the rate of achievement of performance and other targets during the Performance Evaluation Period, which are determined through deliberations of the Advisory Panel on Nomination and Compensation of the Company. Thus, the monetary remuneration claims to allot ordinary shares of the Company and cash are provided to Eligible Persons for Performance Share Units after the Performance Evaluation Period expires, in principle.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The remuneration for the directors who also serve as executive officers, including the CEO, is composed of base salary, executive bonus, restricted stock remuneration plan and performance share unit plan (PSU). PSU is a performance-linked stock compensation system that aims to strengthen shared value with shareholders, to enhance company value over the mid to long term and to commit to achieving business results over the mid-term. For the performance evaluation period starting in 2022, we have decided to introduce an ESG-related index on top of profit as KPIs for PSU. This index is introduced in order for us (evaluatee) and shareholders (evaluator) to seek agreement on what is conducive to corporate value. In 2022, we adopted our progress on initiatives to realize net zero as ESG-related index, specifically target attainment rates to reduce GHG emissions.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	Consistent with the business' 3-year annual planning cycle
Medium-term	3	15	Consistent with the JT Group Environment Plan; the plan currently in place is from 2015 to 2030.
Long-term	15	30	We have longer term commitments which are aligned with climate change scenarios up to 2050 and with the Paris Agreement

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

The JTG definition for substantive impact focuses on 3 key areas (which can be considered in isolation or combination):

- i) Financially: a materiality threshold of anything with an impact or estimated impact of 1 billion Yen. Financial risk is judged by combining the following two factors: "magnitude of possible impact" on our business and "likelihood of its occurrence."
- ii) Attention in the mainstream media (national or international outlets, such as press, television, etc.).
- iii) Attention from shareholders who have a 1% or larger share in the business.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

i) The JTG process for identifying risks and opportunities in our direct operations that may have a material financial impact or strategic impact is embodied in the Group's Enterprise Risk Management (ERM) process. Business critical risks are identified as part of JT Group's ERM processes, in which various business functions are involved, e.g. Corporate Strategy, Sustainability Management, JTI Finance-Corporate Controlling, Processed Food Business Planning, Pharma Business Planning, etc. We identify risks that could have impacts on the business, based on internal knowledge, regulations and results of scenario analysis. Each function reviews the list of potential risks and assesses whether they exceed the threshold for the definition of "substantive impact on the business". In relation to climate related risks, the risk response and management process incorporates plans to mitigate, transfer, accept or control climate related-risks and to capitalize on opportunities. Where we can materially impact a risk, we decide to either mitigate that risk or transfer the risk via insurance policy. In relation to opportunities, these are typically developed into business cases which if approved are incorporated into our Annual and Strategic Planning process.

ii) A case study of how the process has been applied to Physical risks and opportunities: Climate-related risks, such as water availability, water stress, extreme weather events etc., are further considered in our water risk assessment process of our manufacturing sites. We have completed a water risk assessment of our manufacturing sites and have identified concerns that the sites further analyzed and addressed. We consider flood risk through water risk assessments and insurance. We decide if we can control or mitigate the flood risk through technical or procedural measures, e.g. in our factory in Turkey in 2021 we increased the siphonic drainage system capacity and installed a roof membrane to prevent leakage into the tobacco leaf storage warehouse, and capacity of the drainage channels by making them wider and deeper to ensure the collection points are not under the water level and cause backlog, to mitigate risk of flooding. However, in cases where this is not possible, we adapt to the risk using flood insurance, for example for the tobacco business in 2022 the annual cost was about 365 million Yen.

iii) A case study of how the process has been applied to transitional risks and opportunities: To address Article 8 of the EU Energy Efficiency Directive and the compliance risk, we established a regional approach to energy audits. In many countries, carbon tax schemes and/or further regulations on refrigerants are being discussed. In order to avoid a significant increase in the business cost, we implement

energy reduction activities across all sites in the group, look to use more renewable energy and install more energy efficient facilities and/or move to the use of non-fluorocarbon systems. One of the examples is our Sweden factory that minimizes emissions and energy consumption by combining green energy alternatives and cost-effective energy-saving projects. It sources bio-steam from a nearby facility and uses a steam-to-hot-water conversion system to heat the office, which contributed to a total reduction of 37% of GHG emissions for this factory since 2015.

iv) Time horizon applied to the risk management process and frequency of assessment: To ensure sustainable business growth, we conducted climate scenario analysis with a long-term horizon (15-30 years), which identified the implications of the risks that we need to consider in the medium term. This allows us to establish objectives and targets that we need to achieve in the medium term to mitigate and adapt to identified risks. A recent example is our Group Environment Plan. For achieving those objectives and targets, we consider initiatives that need to be implemented in the short term. All the above processes, as well as 1) Annual and Strategic Plan (short-term), 2) Performance progress/results and 3) Initiatives, are reviewed by the Board at least 4 times a year. We have board oversight of other climate related issues, e.g. when an extreme weather event occurs. Our ERM process, reviewed by the Board, identifies climate-related risks in the short to medium-term, so that we can proactively address those risks.

v) Other value chain stages

We identify, assess and respond to risks in the upstream stage of the value chain by asking our key suppliers of leaf, logistics and non-tobacco materials, equipment manufacturers to respond to CDP Supply Chain. The risks identified are analyzed and mitigation measures developed accordingly.

Risks relating to our clients and customers: There is continued growth in consumer interest and demand for products produced ethically and in an environmental and sustainable way. Company specific example: Recent JTG consumer research shows increasing interest in the environmental impact of our products. Should the JTG's stakeholders have the perception that we are not addressing issues such as climate change and sustainability, this could potentially have a negative impact on our business performance. We regularly conduct studies to understand our consumer and their expectations on Sustainability. We consider consumer as one of the key stakeholders when setting our Sustainability strategy and developing new products. In 2022 we introduced new Product Stewardship, Circularity and Waste pillar as a part of Corporate sustainability. One of the focus area of this pillar is to identify risks relating to our clients and customers, to set up clear strategy and execution plan. Furthermore, there have been the identified set of targets to reduce the environmental impact of our products and packaging through design solutions, facilitating responsible collection and disposal, and consumer awareness and education. Currently we are reviewing targets.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	<p>JT Group operates across many countries globally and reviews current regulation in those countries.</p> <p>Company specific example: The EU and national governments have mandated targets for GHG emissions reduction and have cap and trade schemes designed to achieve compliance with these targets in many of our operating areas. We participate in the schemes currently in locations affected by this legislation. The risk is that if schemes are modified rapidly or changed significantly, organizations such as ours risk being non-compliant if they do not adapt quickly enough.</p> <p>Corporate and functional sustainability teams and relevant legal teams are responsible for feeding regulatory information into company-wide risk assessment.</p> <p>Company specific example: in Europe, our tobacco business is obligated by the European Union Energy Efficiency Directive (EED). The EED from 2012 established a set of measures to enable the EU to meet its 20% energy efficiency target by 2020 and it was updated in 2018 with a more stringent target and additional measures. We are tracking the implementation of the new Directive in the EU countries where we operate and the requirements of energy audits in buildings in countries where the legislation is yet to be updated. The risk is we could incur additional time and cost associated with complying with the updated legislation.</p>
Emerging regulation	Relevant, sometimes included	<p>JT Group operates across many countries globally and reviews emerging regulation in those countries. Corporate and functional sustainability teams and relevant legal teams are responsible for feeding regulatory information into company-wide risk assessment.</p> <p>Company specific example: it is anticipated that there will be increasing carbon taxation and/or the introduction of carbon trading schemes in some countries where we operate, e.g. Brazil, Ukraine, Indonesia, Turkey, amongst others. This will likely have financial impact and bring additional compliance obligations for our business and are therefore considered in our risk assessments.</p>
Technology	Relevant, always included	<p>We are actively investigating and monitoring renewable energy technology which reduces our carbon footprint and our energy spend. It has become even more important given JTG commitment to use only renewable sourced energy by 2050.</p>

Legal	Relevant, always included	<p>Legal risks are included in our climate scenario analysis, in our water risk assessments and in our Enterprise Risk Management approach, be it with respect to the potential impact of business on climate change and water safety (e.g. compliance with regulatory requirements or conventional objectives), or to the potential impact that climate-related risks may have on the business (e.g. heat stress or extreme weather events impacting JTI employees or contractors). If climate-related risks are not properly managed and appropriate mitigation measures put in place, this could potentially represent a legal risk.</p>
Market	Relevant, always included	<p>As a business JT Group is reliant on the availability and quality of a number of agricultural commodities that are affected by climate, such as tobacco and paper.</p> <p>Company specific example: Climate Change may cause the prices of raw materials and fuels to increase, which could increase the price of our products resulting in decreasing sales. On an annual basis, overall trends in climate/weather are taken into consideration when discussing and aligning best agronomic practices and best timings for leaf production stages.</p> <p>Business functions are responsible for providing information relevant for company-wide risk assessment.</p>
Reputation	Relevant, always included	<p>There is increasing stakeholder interest in climate-related issues which we factor into our planning and reporting process.</p> <p>Company specific example: The JT Group's 4S model outlines the 4 key groups of stakeholders with interest in our business: Consumers, shareholders, employees, and wider society. There is increasing interest around climate related issues from all of our stakeholders and there is reputational risk if we do not appropriately manage these issues. We use CDP Climate Change as a vehicle to communicate JT Group climate governance to stakeholders.</p> <p>Business functions are responsible for providing information relevant for company-wide risk assessment.</p>
Acute physical	Relevant, always included	<p>From time to time, we experience acute physical events that impact our business. For example, extreme weather events, typhoons, floods etc.</p> <p>Company specific example: in 2021, one of our factories in the Middle East experienced flooding. This resulted in operational impacts and additional cost.</p> <p>During 2020-2022 we have conducted country-specific climate scenario analysis in relation to our operations in Brazil, Tanzania, Bangladesh, Philippines, Zambia, USA, Turkey, Indonesia, Serbia, Malawi and Poland. This has included modelling future acute physical risks such as extreme weather and flooding that could impact our operations.</p>

		Business functions are responsible for providing information relevant for company-wide risk assessment.
Chronic physical	Relevant, always included	<p>There are a number of chronic physical issues that could impact our business. For example: UN reports have established that one effect of climate change will be to increase the water stress of particular geographical areas; there will be an increased risk of drought depending on the area.</p> <p>Water related issues could impact the JT Group as well as our suppliers and consumers, leading to disruption of our business and negatively impacting financial results.</p> <p>Company specific example: One of our operations in the Middle East is located in a water stressed area. Identification of this issue has allowed us to put in place mitigation measures to address the risk. Climate change could result in making the Middle East more water stressed, which impacts our operations with less water availability. During 2020-2022 we have conducted country-specific climate scenario analysis in relation to our operations in Brazil, Tanzania, Bangladesh the Philippines, Zambia, USA, Turkey, Indonesia, Serbia, Malawi and Poland. This has included modelling future chronic physical risks such as future heatwaves and coastal flooding that could impact our operations.</p> <p>Business functions are responsible for providing information relevant for company-wide risk assessment.</p>

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Other, please specify

Increased cost of products due to increased cost of raw materials and company tax increased

Company-specific description

Increased carbon tax may increase procurement cost of tobacco leaf and other materials and services as well as additional company expenditures due to tax increase for the Group's direct operations. If a carbon tax is imposed on raw or secondary materials or services used in each phase of the agricultural value chain (e.g. agricultural chemicals, agricultural machineries, processing machineries, storage and distribution), then JT Group will bear additional cost and/or it will be transferred onto raw material price.

We monitor emerging carbon pricing related regulation such as carbon tax. It is likely that we will see increased carbon taxation levels in some countries where we operate, affecting our operating costs. For example, in Japan, where our group headquarters are located, the level is currently at 2.6USD / tCO₂e. According to IEA World Economy Outlook 2018, the level of carbon tax in developed countries in 2040 is anticipated to be 140 USD/tCO₂ under a 2C global warming scenario and when it is the case also in Japan, it will pose a significant cost increase to our business. This risk was identified through conducting a climate scenario analysis to identify long-term risks to 2050.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

650,000,000

Potential financial impact figure – maximum (currency)

7,500,000,000

Explanation of financial impact figure

In our climate scenario analysis, we assumed that under a 4C global warming scenario carbon tax will increase to 36-43 USD/ton of GHG emissions, and based on 2C scenario, to 125-140 USD per tons of GHG emissions in 2050, based on IEA World Economy Outlook 2018.

We calculate financial impact by multiplying forecast GHG emissions in 2050 in regions where carbon tax may exist, by the carbon tax level in those locations. GHG emissions in 2050 are predicted taking into account expected emission reduction and the company's sales growth. In the 4C scenario, the calculation was made assuming the EU and Canada as the affected areas ($105,502 \text{ tCO}_2\text{e} \times 6,026 \text{ yen / tCO}_2\text{e} + 3,468 \text{ tCO}_2\text{e} \times 4,565 \text{ yen / tCO}_2\text{e} = 650 \text{ million yen}$). In the 2C scenario, the calculation was made assuming developed and developing countries ($245,004 \text{ tCO}_2\text{e} \times 20,962 \text{ yen / tCO}_2\text{e} + 119,810 \text{ tCO}_2\text{e} \times 19,684 \text{ yen / tCO}_2\text{e} = 7.5 \text{ billion yen}$).

Cost of response to risk

1,493,700,000

Description of response and explanation of cost calculation

We manage this risk by reducing our energy consumption through capital investment and energy saving programs as well as renewable energy programs (onsite generation of renewable energy, green energy purchase). The cost of responding to the risk was calculated as $52,608 \text{ Yen / tCO}_2\text{e}$ saved (marginal abatement cost from 2022 capital investment projects to reduce carbon) * carbon reductions needed to 2030 to meet our environmental Plan 2030 GHG target ($227,143 \text{ tCO}_2\text{e}$) / 8 years (for annual cost estimations) = 1,493.7 million yen.

Case study:

Emerging regulation and carbon pricing mechanisms are a potential risk for JTI, therefore, we continue to implement multiple initiatives to reduce our emissions and energy usage to mitigate the risk. For example, in Tanzania in 2022 we installed photovoltaic solar energy generation. This helps use to reduce emissions by $441 \text{ tCO}_2\text{e}$ annually and has a payback period of 10 years.

Comment

Nothing further to disclose.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Chronic physical

Other, please specify

Change in yield of tobacco leaf due to climate change

Primary potential financial impact

Increased direct costs

Company-specific description

Changes in environmental conditions such as higher temperatures, erratic precipitation patterns, more frequent and intense extreme events (drought, floods), El Nino and La Nina intensity can impact availability and quality of key natural resources for sustainable tobacco leaf production and supply to JT Group, in addition to influencing crop management practices to cope with these environmental changes (e.g. management of pests and diseases occurrence). This could occur in one or more of our tobacco sourcing countries, for example Bangladesh and Brazil from where we procure 39% of our total tobacco leaf volume. As a result, the cost of sourcing tobacco leaf can increase. This risk was identified through conducting a climate scenario analysis to identify long-term risks to 2050 and using a 4C and a 2C scenarios.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

32,300,000,000

Potential financial impact figure – maximum (currency)

36,700,000,000

Explanation of financial impact figure

We assume, that based on 4C global warming scenario tobacco leaf yield will change by -15.3% to +1.8% by 2050, and based on a 2C scenario by -13.7% to +6% by 2050. We calculate financial impact by multiplying the procurement cost by country in 2018 by production growth rate and by the cost change rate assuming fluctuation of yield by country where we source leaf. The main target countries are Brazil, the United States, India, Tanzania, Malawi, Japan and Indonesia. The financial impact in the 4C scenario was 36.7 billion yen, and in the 2C scenario it was 32.3 billion yen. The main countries due to the cost increase were Brazil (4C: 15.9 billion, 2C: 14.2 billion) and India (4C: 7.1 billion, 2C: 4.4 billion).

Cost of response to risk

162,700,000

Description of response and explanation of cost calculation

We manage this risk by developing action plans to reduce financial impact to our business which could include shifting leaf growing regions based on identified climate-

related impacts, implementing climate change adaptation measures, e.g. smart agriculture and breeding, as well as measures to improve yield in growing regions, so as to mitigate potential decrease in procurement volumes and increased costs.

Primarily, to date we have managed this risk via building strong relationships with our suppliers and having a geographically diversified supply chain (for example, the JT Group source tobacco leaf from over 30 different countries). Most importantly, the JT Group regards growers and key suppliers as some of its most important partners.

Case study:

Within the tobacco business, we support growers to manage climate risk and other forms of risk through selecting tobacco varieties with disease resistance relevant to local conditions, financial assistance during incidents of natural disaster and via reforestation / sustainable tree planting programs since 2012. In addition, we promote efficient use of materials by continually reviewing the manufacturing process and product specifications where possible. Moreover, in Japan, since 1978 we have operated a financial support system to compensate tobacco farmers' incomes whose tobacco plants/crops have suffered from natural disasters, based on the degree of the damages. The system offers financial support to tobacco growers so that they are not forced to cease production and therefore improves the stability of our supply chain.

The primary financial costs for managing these risks come from Grower Support Programs. In 2022, the JT Group spent about 162.7 million Yen globally on Grower Support Programs.

Comment

Nothing further to disclose.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Some of our facilities are located in areas, for example, MENA countries, which could be exposed to change in precipitation patterns that may cause increased frequency/severity of flooding. This could lead to loss of production capacity which in turn could lead to losses in sales and therefore revenue. Company specific example: In 2021 our factory in Turkey had a significant risk of flooding due to heavy rainfall and

poor water discharging systems from the roof of the leaf storage warehouse. The increased intensity of rainfall has been attributed to changing climate in the region.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,168,450,000

Potential financial impact figure – maximum (currency)

19,863,650,000

Explanation of financial impact figure

Financial impact was calculated based on potential loss of production capacity of a typical factory due to flooding resulting in loss of sales. Assuming 38 finished goods factories in our tobacco business which had a revenue of 2,315,200 million yen in 2022. 17 out of 38 (45%) factories have a medium-high flood risk. As such for the purposes of risk calculation, assuming a typical medium-high risk factory is shut down for 7 days per year due to flooding, the potential estimated range of financial impact is 1.169 billion yen (1 factory flooded: $(2315200 \cdot 0.45) / 17 / 365 \cdot 7$) to 19.864 billion yen (the 17 medium-high risk factories flooded $(2315200 \cdot 0.45) / 365 \cdot 7$).

Cost of response to risk

404,748,000

Description of response and explanation of cost calculation

As part of our water risk assessments of factories we consider changing flood risks which could be as a result of climate change. The outputs of these assessments are used to determine our mitigation measures.

Case study:

Flooding has been identified as a risk at some JTI factories. To mitigate against the flood risk measures have been implemented such as; business continuity plans, physical flood mitigation infrastructure and insurance coverage. One of example, in 2021 in our factory in Turkey we installed a new drainage system and reinforced existing drainage channels. Going forward, these improvements will reduce the risk of flooding and therefore reduce potential impacts on production capacity. Cost of management includes cost associated with water risk assessment (6.748 million yen), physical flood

mitigation infrastructure (33 million yen) and flood insurance premiums (365 million Yen). Total cost to mitigate the risk is $6,748,000 + 33,000,000 + 365,000,000 = 404,748,000$.

Comment

Nothing further to disclose.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Reputation
Shifts in consumer preferences

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

The JT Group produces tobacco, processed food and pharmaceutical products. There is an ongoing growth in consumer interest and demand for products produced ethically and in an environmental and sustainable way.

Company specific example: Perception by JTG consumers and external stakeholders that we are not addressing issues such as climate change and sustainability could lead to reduced demand for our products leading to loss of revenue. Recent JTG consumer research across ten key markets shows the increasing importance of sustainable solutions in their product choices. For instance, based on that research online consumer conversation around sustainability has increased by 194% from 2017-2020. Euromonitor Lifestyles Surveys indicate increase in number of consumers globally that felt they could make a difference to the world through their choices and actions up from 45% in 2015 to 54% in 2020.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000,000

Potential financial impact figure – maximum (currency)

4,000,000,000

Explanation of financial impact figure

It is difficult to estimate financial implications of changing consumer behaviour across our diverse product range and markets. However, if a 0.05-0.15% reduction in consumer demand and sales of our products occurred, it would result in a reduction in revenues of approximately 1-4 billion yen.

Cost of response to risk

705,100,000

Description of response and explanation of cost calculation

We provide information on JT Group's commitment to the environment and managing climate change related issues via our website and in external publications at least on annual basis. By being transparent in these external communication channels, our customers and shareholders are able to view information on our environmental progress to date and future environmental priorities.

Case study:

Consumer demand for sustainable projects is a potential risk for JT. To mitigate against this we continue to implement a range of environment-related community investment programs and projects, key details of which are communicated publicly on our website. For example, in 2019, we set up the global JTI Water, Sanitation and Hygiene (WASH) initiative to support communities in developing markets with reliable access the world's most precious resource. Current WASH programs are executed in partnership with specialized local and international organizations in countries diverse as Bangladesh, Indonesia, Ethiopia, Mexico and Bolivia. We also support and promote sustainable agricultural practices within our value chain – especially with local growers. These initiatives improve both the social and environmental sustainability of our products.

Separately, we have undertaken Life Cycle Assessment (LCAs) on some of our products to identify (and communicate publicly where necessary) reductions in the environmental footprint of our products in 2020-2022.

The costs associated with our annual Integrated Report 79.3 million yen and our environment-related community investment programs were approximately 374.2 million yen in 2022. Costs of our Grower Support Programs are 162.7million yen and to date costs for undertaking our LCA projects are approximately 88.9 million yen (79.3 + 374.2 + 162.7+ 88.9= 705.1 million).

Comment

Nothing further to disclose.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

There are a number of different drivers creating opportunities for further improvements in resource efficiency and therefore cost efficiency. For example, greater societal awareness of climate change risks has created demand for innovation, which is driving down cost of technology enabling resource use reduction. We also consider that the regulatory drivers can become opportunity drivers for the JT Group. Rising of fuel /energy prices as a result of taxes may become a risk in an initial phase, but if we respond to the risks, we can gain bigger benefits than the initial phases. The JT Group is engaging in energy-saving initiatives with a group-wide cooperation, which include implementation of capital investment projects at our facilities and promotion of sustainability and carbon reduction across our value chain. By these efforts, we can reduce our future operational costs. Our tobacco business has initiated the development of formalized energy management systems with subsequent certification to ISO50001 across all manufacturing facilities. The overall objective was to deliver a further 5% reduction in absolute carbon emissions (on top of that achieved through capital investment projects) by 2020. Overall, we reduced emissions by 30% (2015-2022). In Europe, our tobacco business is obligated by the introduction of The European Union Energy Efficiency Directive (EED). The EED (updated in 2018) establishes a set of measures to enable the EU to meet its 32.5% energy efficiency target by 2030. Article 8 of the EED requires large enterprises in member countries to undertake energy audits

every 4 years to identify potential energy reduction opportunities. Through the combination of expanding geographical footprint (for example, our recent acquisitions in Bangladesh, Ethiopia, Indonesia and Russia) and developments in technology, we anticipate greater opportunities in resource efficiency.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

60,000,000

Potential financial impact figure – maximum (currency)

70,000,000

Explanation of financial impact figure

Introduction of fuel/energy taxes is generally predicted to lead to increase in energy costs. However, we expect that, by implementing energy-saving project/activities, our future financial implications by this opportunity in terms of energy and cost savings will result in the opposite results. We anticipate that the outcome of the energy audits in EU Markets and development of formalized energy management systems with subsequent certification to ISO 50001 are anticipated to deliver savings of approximately 60-70 million Yen annually across 38 of the tobacco production factories and EU markets. This estimation is based on a circa 1% energy cost saving on our total energy cost.

Cost to realize opportunity

11,000,000

Strategy to realize opportunity and explanation of cost calculation

Realizing these opportunities will primarily come through the identification and implementation of energy reduction measures with associated cost savings. We reduce energy consumption at all our sites by capital investment, behavioural / process change and energy saving, through promotion of the EAP (Environment Annual Plan) and operating the EMS (Environmental Management System) of the JT Group.

We are continuously investing in fuel and energy reduction activities. The costs associated with developing formalized energy management systems with subsequent certification to ISO 50001 are minimal and mainly relate to management time, training,

certification and additional metering and measurements. Costs to date in relation to the EED mainly relate to internal time and external expenditure to establish our compliance strategy. In 2022 we conducted assessment against ISO 50001 at 3 locations, which cost us about 11 million Yen. For next 4 years we plan to spend about 91.5 million Yen for such assessments.

Case Study:

Process optimization has been identified as an opportunity for JT Group. To capitalise on this, multiple initiatives were implemented in 2022. An example of this is the update/replacement of machinery in the manufacturing sites in Jordan, Russia and Malawi. This results in improved efficiency and saved 230 tCO₂e annually with a payback period between 4-10 years.

Comment

Costs presented exclude CAPEX costs such as those associated with the specific examples. Cost represented for certification includes certification of Environment, Health and Safety and Energy management system.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

There are a number of different drivers creating opportunities for the use of renewable energy. For example, greater societal awareness of climate change risks has created a demand for innovation, and the cost of renewable energy generation is falling. We believe that regulatory drivers can become opportunity drivers for JT Group. Increase in carbon taxation may become a risk initially, but the way we respond to the risk may give us an opportunity; by increasing the proportion of renewable energy we buy or generate ourselves. Already, the JT Group purchase renewable energy and low carbon energy in Austria, Belgium, Brazil, Greece, UK, Turkey, Switzerland, Canada, Germany, Serbia, Philippines, Japan, the Netherlands, Poland, Romania, Sweden and generate renewable energy in Brazil, the Philippines, Turkey, Tanzania, Jordan, Thailand, Sweden, Japan, Malawi. We are also looking for new opportunities to use renewable energy; currently, we have a commitment to use 50% of renewable electricity in our operation by 2030 and 100% by 2050 (as at the end of 2022 we were at 24%).

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,311,000,000

Potential financial impact figure – maximum (currency)

5,098,000,000

Explanation of financial impact figure

Introduction of carbon taxes is generally predicted to lead to an increase in operational cost. We assumed that under a 4C global warming scenario, carbon tax will increase to 36-43 USD/ton of GHG emissions, and based on 2C scenario, to 125-140 USD per tons of GHG emissions in 2050, based on IEA World Economy Outlook 2018. JTG has a commitment to use 100% of renewable electricity by 2050. We calculate financial impact by multiplying current GHG emissions from electricity (276,638 tCO₂e) by predicted tax in 2050 (Minimum impact = $36 \times 276,638 \times 131.62 = 1,310,800,000$, maximum impact = $140 \times 276,638 \times 131.62 = 5,097,553,490$) (131.62 exchange rate USD/Yen).

Cost to realize opportunity

304,000,000

Strategy to realize opportunity and explanation of cost calculation

Realizing these opportunities will primarily come through the purchase and generation of renewable energy.

Case study:

To realise the opportunity of using lower emission energy sources in 2022 we implemented two new renewable generation projects, one cogeneration of heat and power and one installation of a photovoltaic system in Tanzania. Combined, these projects avoid 1,551 tCO₂e per year. Renewable electricity cost in 2022 represented 108,378 USD (14,264,734 yen). We are continuously investing in renewable energy generation projects. The CAPEX cost associated with these initiatives in 2022 was 2,201,000 USD (about 289,700,000 yen). In total about 304 million yen (14,264,734+289,700,000).

Comment

Nothing further to disclose.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

The JT Group produces tobacco, processed food and pharmaceutical products. Through our research into consumer understanding of sustainability we have confirmed that there is increasing consumer interest and demand for products produced ethically and sustainably including lower carbon. 33% of consumers confirmed that products and processes that use / create minimal or no carbon is a consideration in their decision-making. Therefore, by differentiating our products from competitors by promoting our sustainable agriculture activities and by continuing to reduce the environmental impact in our own operations, we could increase revenue and market share of our existing products. Regarding sustainable agricultural practices, an example is Market Match, promoted to our growers in Zambia and Malawi, which encourages seasonal crop rotations by matching our growers to viable global market off-takers of non-tobacco commodity crops e.g. groundnuts, maize, or soya. The benefits of this are additional income, improved food security, and soil conservation.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000,000

Potential financial impact figure – maximum (currency)

4,000,000,000

Explanation of financial impact figure

It is difficult to estimate financial implications of changing consumer behaviour across our diverse product range and markets. However, if a 0.05-0.15% increase in consumer demand for our products and sales occurred, it would result in an increase in revenues of approximately 1-4 billion yen. For context, our total revenue in 2022 was 2,657,800 MM Yen.

Cost to realize opportunity

705,100,000

Strategy to realize opportunity and explanation of cost calculation

We provide information on our commitment to the environment and managing climate change related issues via our website and in external publications on annual basis. In addition, we continue to implement a range of environment-related community investment programs and projects. We also manage this opportunity by supporting and promoting sustainable agricultural practices within our value chain – especially with local growers. We have undertaken Life Cycle Assessment (LCAs) in 2020-2022 on some of our products to identify (and communicate where necessary) reductions in the environmental footprint of our products.

The costs associated with our annual Integrated Report 79.3 million yen and our environment-related community investment programs were approximately 374.2 million yen in 2022. Cost of our international Grower Support Programs is 162.7 million yen and to date costs for undertaking our LCA projects are approximately 88.9 million yen to date. An example of our response to changing consumer preference for more sustainable products is our 2016 acquisition of Natural American Spirit. (79.3 + 374.2 + 162.7 + 88.9 = 705.1 million yen).

Comment

Cost presented exclude those associated with the acquisition of Natural American Spirit (560 billion yen).

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan

Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

We have the opportunity to meet with each of our various shareholders throughout the year to collect feedback on our environmental goals and initiatives, including our transition plan.

Frequency of feedback collection

More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)

JTGNetZero.pdf

 JTGNetZero.pdf

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

Use of climate-related scenario analysis to inform strategy	
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 8.5	Other, please specify Business wide, Country/area		We have conducted country specific physical climate modelling on 11 countries during 2020-2022. For modelling we focused on operations within each country and conducted RCP2.6 and RCP8.5 scenario modelling with a timeframe up to 2040. Analysis was qualitative & quantitative looking at the changes in: extreme rainfall, coastal flooding, heatwaves & water stress, and the occurrence of extreme weather.
Transition scenarios IEA SDS	Company-wide		We conducted a scenario analysis in the tobacco and processed food businesses, which account for more than 95% of our sales. We selected the rising

			price of carbon taxes as one of the transition risks affecting the business. Based on the IEA SDS scenario, we quantitatively analyzed the impact on our business by assuming a carbon price in 2050.
Physical climate scenarios RCP 6.0	Company-wide		We conducted a scenario analysis in the tobacco and processed food businesses, which account for more than 95% of our sales. We selected changes in leaf tobacco yield as one of the physical risks affecting the business. Based on the RCP 6.0 scenario, we quantitatively analyzed the impact on our business by assuming the tobacco leaf yield in 2050.
Transition scenarios IEA NZE 2050	Company-wide		We conducted a scenario analysis in our entire business. We selected the rising price of carbon taxes as one of the transition risks affecting the business. Based on the IEA NZE 2050 scenario, we quantitatively analyzed the impact on our business by assuming a carbon price in 2050.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

JTI country specific modelling

The country specific modelling has been focused on assessing if and how our operations could be impacted by climate change in the future for both a 2C world as well as a +4C scenario. We have prioritized countries that are our largest sources for directly contracted growers and third party sourced leaf.

The second question was understanding which stage of our operations (leaf growing, our factories, or our markets) had the highest exposure to physical climate change in each country.

Our third primary focal question is how resilient our operations currently are and the adaptation options available to us where the modelling has identified physical climate change could impact us materially.

Results of the climate-related scenario analysis with respect to the focal questions

JTI country specific modelling:

Since 2020 we have completed scenario modelling in 11 countries across 5 continents (Europe, North America, South America, Africa and Asia). Through these scenarios we have identified which physical climate risks have the potential to impact our operations by 2040. For example, we identified that sea-level rise will, for the most part, not impact our operations in either a 2C or +4C scenario. The modelling has helped us to understand this risk has the potential to affect one south-east Asian country and within this country sea level rise is projected to affect less than a third of our operational sites.

IPCC’s RCP2.6 and RCP8.5 scenarios were selected for modelling so the risk impacts could be assessed across both a <2°C and a 4°C scenario, aligning to the recommendation of the TCFD.

Climate Scenario Analysis has provided JTI a picture of the physical risks faced by the business which has informed the inclusion of climate related risk as an enterprise level risk through our business. In turn climate related risks are incorporated into our enterprise risk management program.

The modelling has also helped us understand which risks affect which stage of our operations most per risk and in each country. Functions and locations are required to assess climate related risks for inclusion in their risk inventories and risk assessments. For example, we understand that hurricanes pose the greatest threat to tobacco growers in North America while heat stress is more likely to impact our factories and markets in Africa and Asia.

Finally, we used the results to consult with local teams and understand what mitigation options are being looked at or currently implemented to understand resilience. Adaptation and mitigation actions identified through the risk assessment process are incorporated into the three-year annual and strategic planning processes. An example of resilience in our operations through risk mitigation can be found at one of our factories in North America. The factory roof was identified as needing upgrading in the short term to withstand higher winds and rainfall caused by extreme storms. This work is currently being done and is expected to be completed in 2023. Equally, we’ve found that in multiple countries the warehouses & offices our market functions use are flexible geographically and could be relocated to new premises less likely to be impacted by climate impacts such as river flooding or typhoons.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

Have climate-related risks and opportunities	Description of influence
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	influenced your strategy in this area?	
Products and services	Yes	<p>How have climate-related risks influenced the strategy: The JT Group has ongoing projects within the business to reduce carbon impact of our product and packaging.</p> <p>Case study and time horizon: In 2021 we introduced new targets in our Environment Plan 2030 in relation to product and packaging waste: We will reduce the environmental impact of our products and packaging through: Redesigning our products and packaging, facilitating responsible collection and disposal of used products and packaging, encouraging consumers to dispose of our products and packaging responsibly. More specifically, we will reduce our packaging (including plastic) and ensure that the remaining is 88% reusable or recyclable by 2025, rising to 100% by 2030, and, in total, recycled content accounts for 20% of our tobacco business packaging by 2025.</p> <p>JTG established new Product Stewardship, Circularity and Waste pillar as a part of Corporate Sustainability in tobacco business, who set company strategy and provide direction to development and marketing of products & services with aim to minimizing their environmental impact. Cross-functional teams work on initiatives roadmaps to help fulfill targets.</p> <p>Since 2021 we work on global initiatives roll out. Firstly, we replaced aluminum inner liners in cigarette packaging with paper ones. It improves recyclability and reduces emissions associated with packaging materials purchased. Secondly, we reduced the volume of cardboard used in packaging by using lighter weight board. It reduces emissions by approximately 2,186 tons each year. Thirdly, we have reduced the thickness of polypropylene overwraps, it enables us to reduce our use of fossil-based plastic as well as reducing emissions by up to 769 tons. With fourth initiative we are focusing on using 100% recycled content in shipping cases for transportation within domestic markets and 70% for export markets for our products across our factories and markets by 2025. It contributes to reduction of carbon impact of each shipping case we use.</p> <p>Another example, in several markets we launched new containers for our Winston Make Your Own product, which enable us to save 369 tons of plastics per year and reduces the carbon impact of each box. In addition, we continue conducting series of LCAs to identify hot spots and further</p>

		opportunities for carbon impact reduction across our product and packaging mix.
Supply chain and/or value chain	Yes	<p>How have climate-related risks influenced the strategy: JT Group decided to include Scope 3 (supply chain) emissions reduction targets in our JTG Environment Plan 2030 and the tobacco business Sustainability Strategy with time horizon to 2030.</p> <p>Case study: In the JTG Tobacco Sustainability Strategy we now have a target related to emissions reduction associated with purchased goods and services. We will reduce emissions associated with our purchased goods and services by 28% in 2030 comparing to 2019. This will be achieved through reduction from our leaf supply chain and reductions in our non-tobacco materials, such as packaging. Each of our direct leaf sourcing origins has developed an action plan to help achieve the 2030 target. Currently we already achieved 13% reduction in scope 3 category 1 emissions against a 2019 baseline.</p>
Investment in R&D	Yes	<p>How have climate-related risks influenced the strategy: JTG now gives increased consideration to the carbon impacts in product and packaging design and materials, in line with our commitment in our JTG Environment Plan 2030 to further reduce the environmental impacts of waste associated with our processes and products. Time horizon is 2030, in line with our JTG Environmental Plan.</p> <p>Case study: in 2019-2022 our tobacco business R&D function invested in building an LCA model to better understand the carbon impacts of our conventional and reduced risk product packaging and to identify the focus areas to reduce emissions associated with tobacco product packaging. Going forward, R&D is implementing measures related to hotspots identified and is expanding the use of LCAs to other packaging types. The next phases of this work are currently underway and are planned to be completed by 2023.</p>
Operations	Yes	<p>How have climate-related risks influenced the strategy: JT Group revisited targets for emission reductions and renewables in the JTG Environment Plan 2030: We will reduce greenhouse gas emissions from our own operations by 47% by 2030 compared to 2019 and we will increase proportion of renewable electricity that we use to 50% by 2030 and 100% by 2050. We plan to achieve these targets by time horizon of 2030 through energy reduction initiatives, renewable energy generation and purchase as well GHG emission reduction from our fleet vehicles e.g. procurement</p>

		<p>of green fleet vehicles. Currently we already achieved 16%. Case Study: Through our Environment Opportunities Scheme, our factories have identified and invested in more than 269 projects with total investment of 65 million Yen. Total savings amounted about 263 million Yen. This had an overall simple payback of approximately 3 months. The total carbon saved is about 7,000 tCO2e per annum.</p>
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C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Acquisitions and divestments Assets	<p>The description of influence for each financial planning elements (including case study and time horizon) are as below:</p> <p>1) Revenues Flood insurance within JT Group includes lost revenue. Insurance premiums are factored into annual operating costs. One of our third-party manufacturers previously experienced a flood at the factory which affected production in 2018. JT Group revenues were impacted for 7 months with estimated impact of 300 million yen. This was an insured loss. We view the potential magnitude of this impact to be medium. This is considered over a short & medium time horizon.</p> <p>2) Direct costs Costs associated with EU-ETS and cap and trade schemes, as with other operating costs, are included in the Annual and Strategic Plans (ASP) of relevant factories. For example, 314 million yen was included in the ASP plans for our German facility. If operating costs arise from the identification of risks, budget can be requested and approved through the BAP (Business Approval Process) system. We view the potential magnitude of this impact to be low. This is considered over a short time horizon.</p> <p>3) Capital expenditures If capital expenditures arise from the identification of risks, budget can be requested and approved through the BAP (Business Approval Process) system. We also seek to identify opportunities that reduce carbon emissions and cost at the same time. One of the examples is our factory in Jordan. Thanks to solar steam generation, the factory can cover the majority of its thermal energy demands for tobacco processing and convert part of the solar energy into energy for building heating and for cooling. This reduces the factory's annual carbon footprint over 100 tons and energy cost. Although the direct financial impact for the</p>

		<p>Company is low, the environmental impact is viewed as medium and hence through improved reputation there is a potential for indirect financial impact to be medium. This is considered over a short & medium & long-time horizon</p> <p>4) Acquisitions and divestments Factored into the JT Group business integration planning processes, the costs for which are captured and approved through the BAP (Business Approval Process) system. In particular, we are expanding our geographical footprint and this could increase our carbon footprint. As the company is committed to tackling climate-related issues, we also consider how to reduce emissions at those acquired operations through our financial planning process. In addition, we specifically consider sustainability issues within our due diligence processes. In one of our recent acquisitions, we specifically considered and assessed climate-related risks (including natural disasters). For this particular acquisition it was viewed as a high impact. For the business overall it is viewed as medium impact.</p> <p>5) Assets Some of JT Group’s assets are at risk from climate-related flooding. We insure against this risk. The annual cost of insuring our direct operations against flooding is factored into our financial planning. In 2022, the cost of flood-specific insurance was about 365 million yen. We view the potential magnitude of this impact to be medium. This is considered over a short & medium time horizon.</p>
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C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?

Identification of spending/revenue that is aligned with your organization’s climate transition	
Row 1	No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO₂e)

368,175.88

Base year Scope 2 emissions covered by target (metric tons CO₂e)

367,026.046

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO₂e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

Base year total Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

735,201.926

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

47

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

389,657.02078

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

340,162.17

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

276,638.021

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO₂e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

616,800.191

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

34.2652237702

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Based on the SBTi criteria, a more ambitious GHG emissions target has been set in 2021. This target has been validated by the SBT initiative in 2022.

Plan for achieving target, and progress made to the end of the reporting year

Targets to increase the proportion of renewable electricity that we use to 50% by 2030 and 100% by 2050. In 2021 23% renewable electricity was used. There has been a 12% decrease in S1&2 emissions since 2019.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 2

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 1: Purchased goods and services

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

7,793,345.697

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

Base year total Scope 3 emissions covered by target (metric tons CO2e)

7,793,345.697

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

7,793,345.697

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO₂e)

83

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO₂e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO₂e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO₂e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO₂e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO₂e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO₂e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO₂e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO₂e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO₂e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO₂e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO₂e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO₂e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO₂e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO₂e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO₂e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO₂e)

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

83

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

83

Target year

2030

Targeted reduction from base year (%)

28

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

5,611,208.90184

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

6,960,397.207

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

6,960,397.207

**Total emissions in reporting year covered by target in all selected scopes
(metric tons CO₂e)**

6,960,397.207

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

38.1712316042

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Based on the SBTi criteria, a more ambitious GHG emissions target has been set in 2021. This target has been validated by the SBT initiative in 2022.

Plan for achieving target, and progress made to the end of the reporting year

To achieve there is a focus on leaf supplier engagement to reduce emissions for purchased leaf. Emissions have decreased 25% since 2019.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2021

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Base year

2019

Consumption or production of selected energy carrier in base year (MWh)

143,863.302543281

% share of low-carbon or renewable energy in base year

13.67

Target year

2030

% share of low-carbon or renewable energy in target year

50

% share of low-carbon or renewable energy in reporting year

23.99

% of target achieved relative to base year [auto-calculated]

28.4062758051

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

Company-wide, no exclusions

Plan for achieving target, and progress made to the end of the reporting year

Purchase and generate more renewable electricity. Renewable energy % currently

23.99%

List the actions which contributed most to achieving this target

Target reference number

Low 2

Year target was set

2021

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Base year

2019

Consumption or production of selected energy carrier in base year (MWh)

143,861.819543281

% share of low-carbon or renewable energy in base year

13.67

Target year

2050

% share of low-carbon or renewable energy in target year

100

% share of low-carbon or renewable energy in reporting year

23.99

% of target achieved relative to base year [auto-calculated]

11.9541295031

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

Company-wide, no exclusions

Plan for achieving target, and progress made to the end of the reporting year

Purchase and generate more renewable electricity. Renewable energy % currently

23.99%

List the actions which contributed most to achieving this target

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Abs2

Target year for achieving net zero

2050

Is this a science-based target?

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Please explain target coverage and identify any exclusions

JT Group will reduce its emissions and commits to be Carbon Neutral for its own operations by 2030 and achieve Net-Zero Greenhouse Gas emissions across its entire value chain by 2050

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

47% reduction in Scope 1&2 emission and 28% reduction in Scope 3 Category 1 emissions by 2030 comparing to 2019.

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	18	81,250
To be implemented*	16	15,834
Implementation commenced*	31	14,626
Implemented*	14	8,493
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes
Combined heat and power (cogeneration)

Estimated annual CO2e savings (metric tonnes CO2e)

1,110

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

4,983,461

Investment required (unit currency – as specified in C0.4)

99,669,219

Payback period

16-20 years

Estimated lifetime of the initiative

16-20 years

Comment

Initiative category & Initiative type

Energy efficiency in production processes
Machine/equipment replacement

Estimated annual CO₂e savings (metric tonnes CO₂e)

230

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

8,719,825

Investment required (unit currency – as specified in C0.4)

69,758,600

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Initiative category & Initiative type

Low-carbon energy generation
Solar PV

Estimated annual CO₂e savings (metric tonnes CO₂e)

441

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

34,236,752

Investment required (unit currency – as specified in C0.4)

190,049,294

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

173

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3,498,156

Investment required (unit currency – as specified in C0.4)

32,495,400

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Initiative category & Initiative type

Energy efficiency in production processes
Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)

80

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3,158,880

Investment required (unit currency – as specified in C0.4)

41,065,440

Payback period

11-15 years

Estimated lifetime of the initiative

16-20 years

Comment

Initiative category & Initiative type

Low-carbon energy generation

Other, please specify

Low-carbon electricity mix

Estimated annual CO2e savings (metric tonnes CO2e)

6,095

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

Initiative category & Initiative type

Energy efficiency in production processes
Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

100

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

26,734,667

Investment required (unit currency – as specified in C0.4)

401,020,000

Payback period

11-15 years

Estimated lifetime of the initiative

11-15 years

Comment

Initiative category & Initiative type

Energy efficiency in production processes
Fuel switch

Estimated annual CO2e savings (metric tonnes CO2e)

90

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

6,196,000

Investment required (unit currency – as specified in C0.4)

61,960,000

Payback period

4-10 years

Estimated lifetime of the initiative

6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

174

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

18,422,600

Investment required (unit currency – as specified in C0.4)

276,339,000

Payback period

11-15 years

Estimated lifetime of the initiative

11-15 years

Comment

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	In Europe, our tobacco business is obligated by The European Union Energy Efficiency Directive (EED). The EED (updated in 2018) establishes a set of measures to enable the EU to meet its 32.5% energy efficiency target by 2030. Article 8 of the EED requires large enterprises in member countries to undertake energy audits every 4 years to identify potential energy reduction opportunities.

Financial optimization calculations	The JT Group Business Approval Process (BAP) for CAPEX and OPEX requires detailed calculation of capital investment, associated project costs, savings and payback as well as for example impacts on utilities, energy and emissions.
Marginal abatement cost curve	To help compare various GHG reduction projects, in terms of anticipated emissions reduction, the cost of that reduction, and also project payback, we have adopted a tailored MACC tool. This helps us better plan and prioritize projects and focus our GHG reduction efforts.
Other Energy Opportunity Scheme	Through our Environment Opportunities Scheme, our factories have identified and invested in about 270 projects with total investment of 52 million Yen. Total savings amounted about 260 million Yen. This paid back over a period of 3 months. The total carbon saved is over 7000 tCO ₂ e per annum.
Internal price on carbon	An internal carbon price has been set in 2022 and for our manufacturing sites has been integrated into project investment assessment. The inclusion of the ICP has allowed multiple projects to be approved which would previously have not met our criteria. These projects contribute to our emissions reduction in-line with our near-term reduction targets and longer-term Net-Zero commitment.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

No

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

Change(s) in methodology, boundary, and/or reporting year definition?	
Row 1	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

368,175.88

Comment

No further comment

Scope 2 (location-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

303,151.618

Comment

No further comment

Scope 2 (market-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

367,026.046

Comment

No further comment

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

7,793,345.697

Comment

No further comment

Scope 3 category 2: Capital goods

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

392,995.666

Comment

No further comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

152,851.229

Comment

No further comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

398,439.871

Comment

No further comment

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

18,216.348

Comment

No further comment

Scope 3 category 6: Business travel

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

222,821.731

Comment

No further comment

Scope 3 category 7: Employee commuting

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

54,102.271

Comment

No further comment

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

636.518

Comment

No further comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

288,599.832

Comment

No further comment

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

1,039.742

Comment

No further comment

Scope 3 category 11: Use of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

12,770.146

Comment

No further comment

Scope 3 category 12: End of life treatment of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

77,727.813

Comment

No further comment

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

1,223.462

Comment

No further comment

Scope 3 category 14: Franchises

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

5,386.491

Comment

No further comment

Scope 3 category 15: Investments

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

0

Comment

No further comment

Scope 3: Other (upstream)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

0

Comment

No further comment

Scope 3: Other (downstream)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

0

Comment

No further comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superseded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO₂e?

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

340,162.17

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

No further comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO₂e?

Reporting year

Scope 2, location-based

414,257.806

Scope 2, market-based (if applicable)

276,638.021

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

6,960,397.207

Emissions calculation methodology

Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

72.13

Please explain

For emissions associated with tobacco leaf, we used the emission factor derived from Life Cycle Assessments (LCAs) that used tobacco farmers' primary activity data.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

265,074.162

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

145,281.747

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

78.84

Please explain

Fuel and energy related emissions are calculated using Scope 1 and 2 primary data.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

385,268.277

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

64.72

Please explain

For the emissions associated with transportation by distributors outside of the JT Group, we applied primary logistics data provided by distributors.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

11,461.898

Emissions calculation methodology

Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

62,938.505

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

56,637.305

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

635.822

Emissions calculation methodology

Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

252,388.084

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

For the emissions associated with transportation by distributors outside of the JT Group, we use the ton.km figure provided by distributors as primary logistics data.

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,390.147

Emissions calculation methodology

Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

25,439.904

Emissions calculation methodology

Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

95,179.762

Emissions calculation methodology

Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on published data. We do not collect data from suppliers or value chain partners related to this category.

Downstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

91.549

Emissions calculation methodology

Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

We gather energy consumption data from those leased buildings.

Franchises

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

6,674.072

Emissions calculation methodology

Franchise-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

We do not collect data from suppliers or value chain partners related to this category, we use our internal company data.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

We exclude this category from the calculation. To judge exclusion or inclusion of this category, we have checked whether our investment destinations, that are applicable to our Scope 3, have relation to JT's business or not, by referring to Box 31: "Relevance criteria for Scope 3 emissions sources" in "Guidance for companies reporting on climate change on behalf of investors & supply chain members 2014". (a) "Size": Of our investment destinations, companies which have significant emissions in the Investment category (e.g. Japan Filter Technology, Ltd., Fuji Flavor Co., Ltd., etc.) were already included in our Scope 1 and 2 emissions. Thereby, we confirmed that those emissions do not contribute significantly to our total Scope 3 emissions. (b) "Influence": For our investment destinations, many companies have little relation to JT's businesses (e.g. finance company and railroad company). For that reason, we confirmed that we have little potential to reduce such companies' emissions. (c) Rest of the Criteria: We confirmed that our investment destinations do not fall under any of the rest of the Criteria.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?

Yes

C-AC6.8a/C-FB6.8a/C-PF6.8a

(C-AC6.8a/C-FB6.8a/C-PF6.8a) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)

107,424.775

Methodology

Field measurements

Please explain

One of our food business sites generates energy using rice husk and the figure stated is associated with the combustion.

CO2 emissions from biofuel combustion (other)

Emissions (metric tons CO2)

3,247.635

Methodology

Default emissions factors

Please explain

Bioethanol fuel consumption in our vehicles is multiplied by an emissions factor of 0.0054 kgCO₂e per litre of fuel, as published by DEFRA/BEIS.

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

Agricultural commodities

Tobacco

Do you collect or calculate GHG emissions for this commodity?

Yes

Reporting emissions by

Total

Emissions (metric tons CO2e)

5,020,760.09363803

Denominator: unit of production

Change from last reporting year

Much Higher

Please explain

We calculate GHG emissions associated with different tobacco leaf types from our directly contracted growers using emission factors calculated by Life-Cycle Assessments. Regional averages from the LCAs are also applied to tobacco leaf sourced from third party suppliers. Emissions increased in 2022 comparing to 2021 due to sourcing from regions with higher emission factors.

Explain why you do not calculate GHG emission for this commodity and your plans to do so in the future

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.232068916

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

616,800.19

Metric denominator

unit total revenue

Metric denominator: Unit total

2,657,832

Scope 2 figure used

Market-based

% change from previous year

16.62

Direction of change

Decreased

Reason(s) for change

Change in renewable energy consumption

Please explain

Revenue increased by 14%, emissions reduced by 5% which in total brought 17% reduction of intensity. Main activities to reduce emissions are installation of energy efficient equipment, improvements in the management of compressed air, and increasing the proportion of renewable energy used on-site, e.g. increased proportion of green electricity purchased.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	316,923.543	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	23,238.627	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Americas	12,542.037
Asia Pacific (or JAPA)	151,600.076

Eastern Europe	68,312.267
Western Europe	44,494.309
Middle East and North Africa (MENA)	63,213.479

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

By facility

By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO ₂ e)
Tobacco	252,024.944
Food	81,608.701
Pharma	6,337.367
Other	191.158

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO ₂ e)	Latitude	Longitude
Tokyo	88,137.226	35.665421	139.745131
Geneva	252,024.944	46.22222	6.146135

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO ₂ e)
Manufacturing	252,397.72
R&D	8,976.707
Use of company owned vehicles	73,170.687
Sales/office work	5,617.055

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?

Yes

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

Activity

Processing/Manufacturing

Emissions (metric tons CO₂e)

252,397.72

Methodology

Default emissions factor

Please explain

We capture energy, fuel and refrigerant data and calculate our Scope 1 emissions associated with these, in line with the GHG Protocol. The emissions are associated with our activities on manufacturing and processing operations, excluding vehicle related emissions. Relevant source data provided by our global manufacturing facilities is multiplied by the relevant emissions factor for the fuel type in question.

Activity

Distribution

Emissions (metric tons CO₂e)

6,300.722

Methodology

Default emissions factor

Please explain

We capture fuel data and calculate our Scope 1 emissions associated with these, in line with the GHG Protocol. The emissions are associated with activities on our internal logistics companies, excluding external third party distribution and logistics.

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Americas	7,283.818	3,256.46

Asia Pacific (or JAPA)	264,154.15	220,187.943
Eastern Europe	96,786.664	32,671.615
Western Europe	23,850.547	2,754.727
Middle East and North Africa (MENA)	22,182.627	17,767.275

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

- By business division
- By facility
- By activity

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Tobacco	292,107.815	157,502.346
Food	11,985.441	108,092.221
Pharma	108,282.527	9,665.077
Other	1,882.023	1,378.378

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Tokyo	122,149.991	119,135.675
Geneva	292,107.815	157,502.346

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Manufacturing	363,751.059	233,699.281
R&D	24,133.849	18,052.53
Warehousing/Logistics	253.515	210.222
Sales/Office work	26,119.383	24,675.987

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name

JPPM Fuji Flavor

Primary activity

Chemicals wholesale & distribution

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

The Corporate Numbers are 13-digit identifiers assigned by the National Tax Agency to companies and other organizations registered in Japan.

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

5013101000755

Scope 1 emissions (metric tons CO₂e)

1,246.536

Scope 2, location-based emissions (metric tons CO₂e)

1,237.621

Scope 2, market-based emissions (metric tons CO₂e)

1,068.523

Comment

<https://www.houjin-bangou.nta.go.jp/en/index.html>

Subsidiary name

JPPL Japan Filter Technology

Primary activity

Paper products

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

The Corporate Numbers are 13-digit identifiers assigned by the National Tax Agency to companies and other organizations registered in Japan.

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

6011001045259

Scope 1 emissions (metric tons CO₂e)

836.062

Scope 2, location-based emissions (metric tons CO₂e)

7,383.492

Scope 2, market-based emissions (metric tons CO₂e)

7,292.607

Comment

<https://www.houjin-bangou.nta.go.jp/en/index.html>

Subsidiary name

JT Logistics

Primary activity

Intermodal transport

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

The Corporate Numbers are 13-digit identifiers assigned by the National Tax Agency to companies and other organizations registered in Japan.

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

9011001044828

Scope 1 emissions (metric tons CO₂e)

371.976

Scope 2, location-based emissions (metric tons CO₂e)

226.112

Scope 2, market-based emissions (metric tons CO₂e)

217.05

Comment

<https://www.houjin-bangou.nta.go.jp/en/index.html>

Subsidiary name

JT Engineering

Primary activity

Other professional services

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

The Corporate Numbers are 13-digit identifiers assigned by the National Tax Agency to companies and other organizations registered in Japan.

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

1010601031169

Scope 1 emissions (metric tons CO₂e)

9.181

Scope 2, location-based emissions (metric tons CO₂e)

97.615

Scope 2, market-based emissions (metric tons CO₂e)

93.399

Comment

<https://www.houjin-bangou.nta.go.jp/en/index.html>

Subsidiary name

TableMark Co., Ltd.

Primary activity

Food & beverage wholesale

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

The Corporate Numbers are 13-digit identifiers assigned by the National Tax Agency to companies and other organizations registered in Japan.

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

8470001010919

Scope 1 emissions (metric tons CO₂e)

44,805.189

Scope 2, location-based emissions (metric tons CO₂e)

38,360.102

Scope 2, market-based emissions (metric tons CO₂e)

39,980.44

Comment

<https://www.houjin-bangou.nta.go.jp/en/index.html>

Subsidiary name

Fuji Foods Corporation

Primary activity

Food & beverage wholesale

Select the unique identifier(s) you are able to provide for this subsidiary

Another unique identifier, please specify

The Corporate Numbers are 13-digit identifiers assigned by the National Tax Agency to companies and other organizations registered in Japan.

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

2020001030496

Scope 1 emissions (metric tons CO2e)

3,556.425

Scope 2, location-based emissions (metric tons CO2e)

3,599.866

Scope 2, market-based emissions (metric tons CO2e)

2,910.723

Comment

<https://www.houjin-bangou.nta.go.jp/en/index.html>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable	0	No change	0	

energy consumption				
Other emissions reduction activities	8,492	Decreased	1.3123	JT Group continue to invest in emissions reductions activities in our operations. The result of these expenditures as well as operational changes delivered in 2022 direct emissions reductions equating to 8,492 tCO ₂ e (8,492tCO ₂ e / 647,099 tCO ₂ e (total Scope 1 and 2 emissions) in 2021 =1.31% percentage decrease).
Divestment	0	No change	0	Dominican Republic operation was divested in 2022, but based on JTG recalculation policy related data was deducted from previous year, therefore there is no change in emissions.
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	21,807.26	Decreased	3.37	JT Group tobacco production volume reduced comparing to 2021 resulting in emissions reduction by 21,807 tCO ₂ e.Emissions year on year change (18088 tCO ₂ e / 647,099 tCO ₂ e in 2021 = 2.80 % percentage reduction). Processed food business production volume reduced comparing to 2021 resulting in emissions reduction by 3,719 tCO ₂ e.Emissions year on year change (3,719 tCO ₂ e / 647,099 tCO ₂ e in 2021 = 0.57 % percentage reduction).
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh

Consumption of fuel (excluding feedstock)	LHV (lower heating value)	252,709.67	1,572,632.11	1,825,341.78
Consumption of purchased or acquired electricity		219,038.32	621,047.3	840,085.62
Consumption of purchased or acquired heat		0	10,128.92	10,128.92
Consumption of purchased or acquired steam		401.31	0	401.31
Consumption of self-generated non-fuel renewable energy		9,487.04		9,487.04
Total energy consumption		481,636.33	2,203,808.33	2,685,444.67

C8.2b

(C8.2b) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

LHV

Total fuel MWh consumed by the organization

252,709.67

MWh fuel consumed for self-generation of electricity

48,736.53

MWh fuel consumed for self-generation of heat

203,973.14

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

833.83

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

10,992.95

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

483,201.48

MWh fuel consumed for self-generation of electricity

1,192.39

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

1,044,895.61

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

33,542.42

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

928,442.56

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

1,825,342.12

MWh fuel consumed for self-generation of electricity

49,928.91

MWh fuel consumed for self-generation of heat

1,133,249.54

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	1,192.39	1,192.39	9,487.04	0
Heat	1,133,249.54	1,133,249.54	204,806.97	203,973.14
Steam	31,545.44	31,545.44	31,545.44	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption

Germany

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

28,283.88

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Germany

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG sites in Germany purchase electricity from third parties which is sourced from renewable generation sources backed by Guarantees of Origin

Country/area of low-carbon energy consumption

Romania

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Wind, Hydropower, Solar, Biomass

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

16,573.17

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Romania

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG sites in Romania purchase electricity from third parties which is sourced from renewable generation sources backed by Guarantees of Origin

Country/area of low-carbon energy consumption

Sweden

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2,003.35

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Sweden

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2013

Comment

JTG sites in Sweden purchase steam from third parties which is sourced from renewable generation sources backed by Guarantees of Origin

Country/area of low-carbon energy consumption

Canada

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

11,031.79

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Canada

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

Hydro power based supply in Canada

Country/area of low-carbon energy consumption

Serbia

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

3,274.47

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Serbia

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG sites in Serbia purchase electricity from third parties and separately also purchase Guarantees of Origin which are retired on their behalf

Country/area of low-carbon energy consumption

Philippines

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

39,357.84

Tracking instrument used

I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

Philippines

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2017

Comment

A JTG site in Asia Pacific purchases electricity from third parties which is sourced from renewable / low carbon generation sources backed by energy attribute certificates (iRECs/TIGRs)

Country/area of low-carbon energy consumption

Poland

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Wind, Hydropower, Solar, Biomass

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

66,667.32

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Poland

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2022

Comment

JTG sites in Poland purchase electricity from third parties and separately also purchase Guarantees of Origin which are retired on their behalf

Country/area of low-carbon energy consumption

Greece

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

5,013.31

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Greece

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG site in Greece purchase electricity from third parties and separately also purchase Guarantees of Origin which are retired on their behalf

Country/area of low-carbon energy consumption

Sweden

Sourcing method

Heat/steam/cooling supply agreement

Energy carrier

Heat, steam and cooling combined

Low-carbon technology type

Sustainable biomass

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

335.72

Tracking instrument used

No instrument used

Country/area of origin (generation) of the low-carbon energy or energy attribute

Sweden

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

Steam purchased by our site in Sweden generated from a renewable source

Country/area of low-carbon energy consumption

Japan

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Sustainable biomass

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

5,450.3

Tracking instrument used

Other, please specify

Certified by JQA (Japan Quality Assurance)

Country/area of origin (generation) of the low-carbon energy or energy attribute

Japan

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2012

Comment

It is a certificate of the environmental value generated electricity and heat by renewable energy. It is certified by JQA(Japan Quality Assurance)

Country/area of low-carbon energy consumption

Belgium

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

99.78

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Belgium

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG site in Belgium purchases electricity from third parties and separately also purchase Guarantees of Origin which are retired on their behalf

Country/area of low-carbon energy consumption

Netherlands

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

141.02

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Netherlands

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG site in the Netherlands purchases renewable electricity from a third party which is backed by RECs

Country/area of low-carbon energy consumption

Austria

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

3,340.12

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Austria

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG site in Austria purchases renewable electricity from a third party which is backed by RECs

Country/area of low-carbon energy consumption

Switzerland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2,551.12

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Switzerland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG site in Switzerland purchases renewable electricity from a third party which is backed by RECs

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2,393.74

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

JTG site in the UK purchases renewable electricity from a third party which is backed by RECs

Country/area of low-carbon energy consumption

Turkey

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Hydropower, Wind, Geothermal

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2,925.72

Tracking instrument used

I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

Turkey

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2017

Comment

JTG site in Turkey purchases electricity from third parties and separately also purchase Guarantees of Origin which are retired on their behalf

Country/area of low-carbon energy consumption

Brazil

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

4,347.81

Tracking instrument used

I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

Brazil

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2020

Comment

JTG site in Brazil purchases electricity from third parties and separately also purchase Guarantees of Origin which are retired on their behalf

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Algeria

Consumption of purchased electricity (MWh)

31.94

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

31.94

Country/area

Andorra

Consumption of purchased electricity (MWh)

388.53

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

388.53

Country/area

Armenia

Consumption of purchased electricity (MWh)

38.23

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

18.65

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

56.88

Country/area

Austria

Consumption of purchased electricity (MWh)

3,243.66

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

2,021

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

5,264.66

Country/area

Azerbaijan

Consumption of purchased electricity (MWh)

112.2

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

112.2

Country/area

Bangladesh

Consumption of purchased electricity (MWh)

5,363.28

Consumption of self-generated electricity (MWh)

5,741.62

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

11,104.9

Country/area

Belarus

Consumption of purchased electricity (MWh)

120.97

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

306.67

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

427.64

Country/area

Belgium

Consumption of purchased electricity (MWh)

119.88

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

119.88

Country/area

Bolivia (Plurinational State of)

Consumption of purchased electricity (MWh)

85.05

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

85.05

Country/area

Brazil

Consumption of purchased electricity (MWh)

15,702.54

Consumption of self-generated electricity (MWh)

21.43

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

31,545.44

Total non-fuel energy consumption (MWh) [Auto-calculated]

47,269.41

Country/area

Bulgaria

Consumption of purchased electricity (MWh)

156.73

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

47.74

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

204.47

Country/area

Cambodia

Consumption of purchased electricity (MWh)

462.29

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

462.29

Country/area

Canada

Consumption of purchased electricity (MWh)

13,505.86

Consumption of self-generated electricity (MWh)

1.6

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

13,507.46

Country/area

China

Consumption of purchased electricity (MWh)

50.75

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

50.75

Country/area

Colombia

Consumption of purchased electricity (MWh)

6.07

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

6.07

Country/area

Czechia

Consumption of purchased electricity (MWh)

169.56

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

169.56

Country/area

Denmark

Consumption of purchased electricity (MWh)

6.9

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

6.9

Country/area

Egypt

Consumption of purchased electricity (MWh)

2,095.46

Consumption of self-generated electricity (MWh)

5.18

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

2,100.64

Country/area

Ethiopia

Consumption of purchased electricity (MWh)

2,078.84

Consumption of self-generated electricity (MWh)

1,063.72

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

3,142.56

Country/area

France

Consumption of purchased electricity (MWh)

219.78

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

219.78

Country/area

Georgia

Consumption of purchased electricity (MWh)

140.78

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

6.23

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

147.01

Country/area

Germany

Consumption of purchased electricity (MWh)

28,283.88

Consumption of self-generated electricity (MWh)

29,025.57

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

57,309.45

Country/area

Greece

Consumption of purchased electricity (MWh)

5,383.62

Consumption of self-generated electricity (MWh)

1.18

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

5,384.8

Country/area

Hong Kong SAR, China

Consumption of purchased electricity (MWh)

212.17

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

212.17

Country/area

Hungary

Consumption of purchased electricity (MWh)

96.75

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

96.75

Country/area

Indonesia

Consumption of purchased electricity (MWh)

10,775.31

Consumption of self-generated electricity (MWh)

3.55

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

10,778.86

Country/area

Iran (Islamic Republic of)

Consumption of purchased electricity (MWh)

14,417.82

Consumption of self-generated electricity (MWh)

14,705.37

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

29,123.19

Country/area

Ireland

Consumption of purchased electricity (MWh)

54.6

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

54.6

Country/area

Italy

Consumption of purchased electricity (MWh)

134.03

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

134.03

Country/area

Japan

Consumption of purchased electricity (MWh)

179,286.56

Consumption of self-generated electricity (MWh)

3,372.07

Consumption of purchased heat, steam, and cooling (MWh)

743.81

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

183,402.44

Country/area

Jordan

Consumption of purchased electricity (MWh)

8,751.64

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

194.58

Total non-fuel energy consumption (MWh) [Auto-calculated]

8,946.22

Country/area

Republic of Korea

Consumption of purchased electricity (MWh)

0

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

0

Country/area

Lebanon

Consumption of purchased electricity (MWh)

9.84

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

9.84

Country/area

Lithuania

Consumption of purchased electricity (MWh)

70.36

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

101.73

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

172.09

Country/area

Malawi

Consumption of purchased electricity (MWh)

5,580.4

Consumption of self-generated electricity (MWh)

158.17

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

5,738.57

Country/area

Malaysia

Consumption of purchased electricity (MWh)

386.4

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

386.4

Country/area

Mexico

Consumption of purchased electricity (MWh)

52.36

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

52.36

Country/area

Republic of Moldova

Consumption of purchased electricity (MWh)

0

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

0

Country/area

Morocco

Consumption of purchased electricity (MWh)

86.38

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

86.38

Country/area

Myanmar

Consumption of purchased electricity (MWh)

1,253.49

Consumption of self-generated electricity (MWh)

1,974.14

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

3,227.63

Country/area

Netherlands

Consumption of purchased electricity (MWh)

141.02

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

141.02

Country/area

Nigeria

Consumption of purchased electricity (MWh)

49.78

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

49.78

Country/area

Philippines

Consumption of purchased electricity (MWh)

41,642.96

Consumption of self-generated electricity (MWh)

8,069.25

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

49,712.21

Country/area

Poland

Consumption of purchased electricity (MWh)

67,662.37

Consumption of self-generated electricity (MWh)

2.85

Consumption of purchased heat, steam, and cooling (MWh)

407.52

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

68,072.74

Country/area

Portugal

Consumption of purchased electricity (MWh)

33.65

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

33.65

Country/area

Romania

Consumption of purchased electricity (MWh)

17,640.59

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

17,640.59

Country/area

Russian Federation

Consumption of purchased electricity (MWh)

0

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

0

Country/area

Serbia

Consumption of purchased electricity (MWh)

3,433.29

Consumption of self-generated electricity (MWh)

0.32

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

3,433.61

Country/area

Singapore

Consumption of purchased electricity (MWh)

186.56

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

186.56

Country/area

Slovakia

Consumption of purchased electricity (MWh)

12.57

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

12.57

Country/area

South Africa

Consumption of purchased electricity (MWh)

29.43

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

29.43

Country/area

Spain

Consumption of purchased electricity (MWh)

246.11

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

246.11

Country/area

Sudan

Consumption of purchased electricity (MWh)

15,176.6

Consumption of self-generated electricity (MWh)

3,129.39

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

18,305.99

Country/area

Sweden

Consumption of purchased electricity (MWh)

1,656.56

Consumption of self-generated electricity (MWh)

52.72

Consumption of purchased heat, steam, and cooling (MWh)

533.02

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

2,242.3

Country/area

Switzerland

Consumption of purchased electricity (MWh)

11,476.56

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

11,476.56

Country/area

Taiwan, China

Consumption of purchased electricity (MWh)

27,781.15

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

27,781.15

Country/area

United Republic of Tanzania

Consumption of purchased electricity (MWh)

0

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

0

Country/area

Thailand

Consumption of purchased electricity (MWh)

47.71

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

47.71

Country/area

Tunisia

Consumption of purchased electricity (MWh)

30.33

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

30.33

Country/area

Turkey

Consumption of purchased electricity (MWh)

10,786.09

Consumption of self-generated electricity (MWh)

31,975.91

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

42,762

Country/area

Ukraine

Consumption of purchased electricity (MWh)

9,560.05

Consumption of self-generated electricity (MWh)

688.29

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

10,248.34

Country/area

United Arab Emirates

Consumption of purchased electricity (MWh)

75.81

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

75.81

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

2,925.72

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

2,925.72

Country/area

United States of America

Consumption of purchased electricity (MWh)

5,231.42

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

5,231.42

Country/area

Viet Nam

Consumption of purchased electricity (MWh)

8.69

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

8.69

Country/area

Zambia

Consumption of purchased electricity (MWh)

851.24

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

851.24

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Energy usage

Metric value

9,697,334,848.52

Metric numerator

MJ

Metric denominator (intensity metric only)

% change from previous year

2.17

Direction of change

Decreased

Please explain

Reduction in energy usage due to energy efficiency initiatives

Description

Waste

Metric value

115,797,065.51

Metric numerator

kg

Metric denominator (intensity metric only)

% change from previous year

5.89

Direction of change

Decreased

Please explain

JTG level waste generated decreased in 2022 compared to the previous year due to combination of process improvement initiatives and reuse program.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Independent_Assurance_Statement_Environment.pdf

Page/ section reference

All

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Independent_Assurance_Statement_Environment.pdf

Page/ section reference

All

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Purchased goods and services

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Independent_Assurance_Statement_Environment.pdf

Page/section reference

All

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

89

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C9. Additional metrics	Energy consumption	ISAE3000	JT Group obtained verification of its total energy consumption data for 2022
C9. Additional metrics	Other, please specify Waste data	ISAE3000	JT Group obtained verification of its total waste generated in operations data for 2022, which is used in relation to calculation of Scope 3 Category 5 emissions.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS

96.79

% of Scope 2 emissions covered by the ETS

93.57

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

3.31

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO₂e

340,162.17

Verified Scope 2 emissions in metric tons CO₂e

276,638.02

Details of ownership

Facilities we own and operate

Comment

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Our strategy for complying with our responsibilities under EU ETS is twofold. Firstly, we have established internal systems and procedures which ensure our ongoing compliance with the requirements of the scheme. Secondly, we retain external auditors to review and verify our processes, systems data and annual emissions reports, this annual verification work is scheduled to be concluded well ahead of compliance deadlines to ensure those deadlines are met.

Our internal systems and procedures to ensure compliance with our responsibilities under EU ETS have been integrated into environmental (EMS) and energy management systems. Our EMS has been in place since 1998, when it was first implemented at our Trier site, and procedures under EU ETS were first integrated once EU ETS was introduced. Our EMS allocates responsibility for compliance to named individuals at site level as well as oversight at a group level through our internal audit process. The environmental and energy systems are subject to external verification against ISO 14001 and ISO 50001 which in turn ensures compliance. We are monitoring compliance obligations on ongoing basis and changing approach if appropriate.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price

Shadow price

How the price is determined

Price with material impact on business decisions

Objective(s) for implementing this internal carbon price

Drive energy efficiency

Drive low-carbon investment

Stress test investments

Scope(s) covered

Scope 1
Scope 2

Pricing approach used – spatial variance

Uniform

Pricing approach used – temporal variance

Evolutionary

Indicate how you expect the price to change over time

An initial price has been set by analyzing a portfolio of historical and future investment projects related to energy efficiency and renewable energy for our facilities. As this is our first year setting an internal carbon price, we will continue to review the price and change it where necessary to keep us on track to meet our carbon targets.

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

10,529.6

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

10,529.6

Business decision-making processes this internal carbon price is applied to

Capital expenditure
Operations

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for some decision-making processes, please specify
ICP is used for CAPEX projects, relating to energy efficiency/reduction and renewables. ICP is applied through business decision-making processes, including Business Approval Process, Enterprise Asset Management and Annual Strategic Planning.

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

For our manufacturing facilities the ICP is now integrated into our project investment assessment showing the NPV with and without the ICP applied. The inclusion of the ICP has allowed multiple projects to be approved which would previously have not met our criteria. These projects contribute to our emissions reduction in-line with our near-term reduction targets and longer-term Net-Zero commitment.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Innovation & collaboration (changing markets)

Details of engagement

Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number

94.43

% total procurement spend (direct and indirect)

65.04

% of supplier-related Scope 3 emissions as reported in C6.5

65.13

Rationale for the coverage of your engagement

Within JT Group, leaf, Non-Tobacco Materials, logistics, equipment suppliers of our tobacco business have been engaged via CDP Supply Chain. These materials are, for example, tobacco leaf, paper and cardboard and cellulose based acetate tow. We also engage with logistics and producers of production equipment. In order to have a representative number of suppliers, we selected these using a Pareto analysis to get close to 80% coverage based on procurement spend in these categories of materials suppliers.

Our tobacco business engages with Leaf and other suppliers via CDP Supply Chain to better understand emissions management in our value chain and how climate change risks are being assessed and managed by suppliers. This does not include direct engagement with growers.

Our tobacco business also engages with our supply chain through a range of initiatives; direct engagement with certain suppliers, and indirect engagement with a wider range of other suppliers. Our direct engagement activities include visiting each of our contracted tobacco growers at least 7 times throughout each crop season to help them improve their agronomy practices and tobacco leaf curing efficiencies, and, through our Scope 3

engagement program, working together with our tier 1 suppliers to better understand mutually beneficial process improvements.

Our strategy for prioritizing engagement favors direct engagement with suppliers where their contribution to our value chain emissions is most significant and where we believe we have the most influence to drive improvement. For suppliers that we have yet to engage directly with we follow an indirect engagement approach with third parties assisting us, such as the CDP Supply Chain team.

Impact of engagement, including measures of success

We seek to encourage innovation to reduce climate impacts on products and services. Through the engagement with Japanese tobacco farmers, we have identified an opportunity to reduce fuel related emissions by introducing innovative energy efficient leaf dryers on tobacco farms. This will result in cost reduction for farmers and subsequently could contribute to reductions in the price of tobacco we purchase. Measure of success: Engagement resulting in implementation of innovation solutions such as updating curing barns.

Through the introduction of innovative tobacco curing barns and curing processes in Zambia, Brazil and Tanzania, our growers are reducing wood consumption and associated emissions, whilst improving tobacco yield, quality and revenues. We monitor amount of wood used to cure 1 kg of tobacco. In 2022 Brazil used 100% sustainable wood for curing and in Tanzania and Zambia the amount of sustainable wood increased to 11%. Based on current tree planting activities we estimate we are on a path to achieve consolidated 98% renewable wood sourcing by 2029.

We will continue to measure success quantitatively through identification of potential emissions reduction opportunities across our value chain, and qualitatively through deeper and more active supplier engagement.

Comment

No further comment

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Our other partners are other companies also signed up to climate initiatives working together to reduce carbon emissions.

Case Study: JT Group recognizes the importance of engaging with other partners in the value chain. As part of its engagement strategy, JT G has joined the Japan Climate Initiative (JCI) and understands the importance of and support the Net-Zero commitment announced by the Japanese Government. To achieve this commitment an increase in renewable energy is required. Through the Japan Climate Initiative (JCI) and in conjunction with the other initiative members, JTG placed a statement to request the Japanese government to strengthen its renewable energy target for 2030 from 22-24% to 40-50%.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?

Yes

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-PF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Management practice reference number

MP1

Management practice

Afforestation

Description of management practice

Tree growing initiatives. Each contracted tobacco grower is expected (under contractual clause) to plant a quantified number of trees and/or or ensure purchase of wood from sustainable sources, such as in Brazil, according to an average wood requirement for tobacco curing.

Minimum Forestry Standards - set of guidelines and technical recommendation on best forestry practices per production areas in Vertically-Integrated Origins.

100% of leaf production team and 100% of contracted tobacco growers in countries where wood resources are used for tobacco production receive technical assistance on best forestry practices and wood production.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

JTG is committed to promote wood resources production to achieve a renewable and sustainable supply of wood for tobacco production. Contracted tobacco growers either implement afforestation and adopt forestry best practices to increase wood production and/or are required to purchase from sustainable and compliant sources. Forestry

technical assistance and field days at demonstration plots. Regular trainings are conducted to build capacity amongst internal employees that provide technical assistance to the grower base. A clause in the contract between JTG and a grower requires that the grower must ensure wood for tobacco production comes from renewable and sustainable sources. JTG also has dedicated Forestry Research and development at Agronomy Development & Extension Training (ADET) centers in Brazil and Zambia, focused in maximizing small-scale woodlot productivity.

Climate change related benefit

Emissions reductions (mitigation)

Comment

No further comment

Management practice reference number

MP2

Management practice

Fertilizer management

Description of management practice

Good fertilizer management rests on the principles of using the correct fertiliser from the right source, at the right application rate, at the right time and with the right placement. Each production system/area has a specific fertilization program that contributes to the production of targeted crop style and improve productivity. Research and development conducted at JTI's Agronomy Development and Extension Training (ADET) centers validate fertilizer application recommendations. 100% of contracted growers receive technical assistance in this matter.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

JTG is committed to encourage contracted growers to adhere to the Minimum Agronomic Standards (MAS) and implement best agronomy practices. This includes a specific section related to responsible and sustainable use and management of fertilizers. JTG provides technical assistance and training to contracted growers through dedicated visits and field days. JTG pre-finances and delivers crop inputs in a grower pack to contracted growers, that includes recommended fertilizers per type and quantity.

Climate change related benefit

Emissions reductions (mitigation)

Comment

No further comment

Management practice reference number

MP3

Management practice

Low carbon energy use

Description of management practice

Improved curing efficiencies, optimized use of crop inputs are crop husbandry activities related to low carbon energy use. These are well addressed in our Good Agricultural Practices Protocol, Minimum Agronomic Standards (MAS) and Minimum Forestry Standards (MFS), which are a set of technical guidelines and recommendations, as well as best practice to which a contracted grower should adhere. 100% of contracted growers receive technical assistance in this matter.

Improving curing efficiency through innovation, development and enhancing curing barn facilities results in reduced wood consumption. Thus, it reduces the requirement of wood resources for tobacco production and curing, and consequently reduces emissions that come from sourcing wood from unsustainable sources.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

JTG is committed to encourage contracted growers to follow to the MAS (Minimum Agronomic Standard) and implement best agronomy practices. This includes specific sections related to responsible and sustainable use and management of wood resources, wood production, tobacco curing efficiency, responsible and appropriate use and management of crop inputs (fertilizers, Crop Protection Agents - CPAs etc.). JTG provides technical assistance and training to contracted growers through dedicated visits and field days.

Climate change related benefit

Emissions reductions (mitigation)

Comment

No further comment

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-PF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?

Yes

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

JTGNetZero.pdf

 JTGNetZero.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

JT Group has a dedicated environmental team in Tokyo which is responsible for coordination of activities related to climate change strategy and engagement, including the engagement with policy makers. This team ensures that climate-related engagements throughout the business are in line with the Environment Plan 2030, which reflects our overall climate change strategy.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

J-Credit Scheme

Category of policy, law, or regulation that may impact the climate

Carbon pricing, taxes, and subsidies

Focus area of policy, law, or regulation that may impact the climate

Emissions trading schemes

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Japan

Your organization's position on the policy, law, or regulation

Neutral

Description of engagement with policy makers

J-Credit is a system under which the government certifies the amount of CO2 reductions and absorption. The system was launched in 2013, and we participated in a demonstration experiment conducted by the Ministry of the Environment of Japan to revitalize the J-credit scheme by utilizing blockchain technology from 2021 to 2022. The credits we purchased resulted from renewable energy.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

The J-Credit Scheme is a system under which the Japanese government certifies as credits the amount of CO2 emission reductions including the introduction of energy-saving equipment and the use of renewable energy. We believe this initiative is part of creating a sustainable mechanism for accelerating low-carbon investment and achieving Japan's and our greenhouse gas targets under the Paris Agreement.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

 integrated2022_E_all.pdf

Page/Section reference

Governance: P88-113 / Sustainability: P36-43 / Risk factors: P116-119 / Non-financial performance review: P14-15 / Improving our environmental impact: P78-81 / Other elements of sustainability: P44-87

Content elements

Governance

Strategy
 Risks & opportunities
 Emissions figures
 Emission targets
 Other metrics

Comment

Nothing further to disclose

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization’s role within each framework, initiative and/or commitment
Row 1	Task Force on Climate-related Financial Disclosures (TCFD) Other, please specify Science-Based Targets Initiative, Declaration of Biodiversity by Keidanren	JTG aligns its reporting on climate risks and opportunities to the recommendations of the TCFD. JTG has emissions reduction targets verified by the Science-Based Targets Initiative. JTG endorsed the Declaration of Biodiversity by Keidanren, which is an ambitious action guideline that summarizes specific biodiversity-related activities in Japan.

C13. Other land management impacts

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?

Yes

C-AC13.2a/C-FB13.2a/C-PF13.2a

(C-AC13.2a/C-FB13.2a/C-PF13.2a) Provide details of those management practices implemented by your suppliers that have other impacts besides climate change mitigation/adaptation.

Management practice reference number

MP1

Overall effect

Positive

Which of the following has been impacted?

- Biodiversity
- Soil
- Water
- Yield
- Other, please specify
Forests, Environmental regulation

Description of impacts

Biodiversity Inventory and Monitoring project in Brazil provides for an overview of biodiversity in tobacco farms, and most suitable conservation practices to be adopted by the growers to enhance and/or conserve ecosystem services. It also serves an important purpose in relation to farmers' awareness and education on environmental matters and impacts on agricultural productivity.

Have any response to these impacts been implemented?

Yes

Description of the response(s)

Achievements from the JTI Bio Project for Biodiversity Inventory and Monitoring are the development of a robust Biodiversity inventory and monitoring Protocol that is used by sample growers and adoption of necessary conservation actions at farm level to enhance and/or conserve biodiversity and natural resources; as well as to comply with any environmental regulation required.

Management practice reference number

MP2

Overall effect

Positive

Which of the following has been impacted?

- Biodiversity
- Soil
- Water
- Yield

Description of impacts

Our Good Agricultural Practices Protocol, Minimum Agronomic Standards (MAS) and Minimum Forestry Standards (MFS); are a set of technical guidelines to sustainably and efficiently produce tobacco, establish live barns for Burley tobacco curing and establish woodlots for wood fuel production. Principles from MAS and MFS can be applied to other crops thus also contributing to farm improved productivity. MAS includes the minimum requirements a grower needs to adopt with regards to planning, land preparation, soil conservation and management practices, seedling production, cultivation, fertilization programs, the use and management of crop protection agents,

topping, harvesting, curing, market preparation and leaf integrity, whilst MFS includes all best forestry practices to ensure trees are planted and grow to their best potential – be it as pole, as wood fuel. General best forestry practices are applicable to any tree species.

Have any response to these impacts been implemented?

Yes

Description of the response(s)

Increase in yield and quality of leaf. Reduced impact on ecosystem services.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	Board and executive management have oversight of the Environment Plan 2030 which includes a target to replace all wood from natural forests used in the tobacco curing process of our directly contracted growers with renewable fuel sources. This includes protecting and restoring natural forests and researching best forestry and agricultural practices. JTI's environment policy, which has management-level and board oversight also focuses on "protecting the environment, minimizing use of natural resources and respecting people, communities and biodiversity". In 2023, we have also developed a JT Group Biodiversity statement which have been signed by the CSO to accelerate our commitment for biodiversity.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed

Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Adoption of the mitigation hierarchy approach Commitment to not explore or develop in legally designated protected areas Commitment to respect legally designated protected areas Other, please specify Ensure a sustainable wood supply for our product supply chains.	SDG Other, please specify Declaration of Biodiversity by Keidanren and Action Policy.
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C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

Yes

Value chain stage(s) covered

Direct operations

Upstream

Tools and methods to assess impacts and/or dependencies on biodiversity

CBD – Global Biodiversity Framework

ENCORE tool

TNFD – Taskforce on Nature-related Financial Disclosures

Other, please specify

Aqueduct country ranking EPI Score

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

The tobacco business's impact on biodiversity was qualitatively analyzed using the IUCN Guidelines (2021) as mentioned in the TNFD, CBD, ENCORE, Aqueduct country rankings (for water stress) and EPI score. The scope, severity and control of impact were qualitatively rated for each region and multiplied together to assess overall impact. We are planning to do quantitative assessments at local level and expand the assessment to all parts of the business and entire value chain.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

Yes

Value chain stage(s) covered

Direct operations
Upstream

Tools and methods to assess impacts and/or dependencies on biodiversity

CBD – Global Biodiversity Framework
ENCORE tool
TNFD – Taskforce on Nature-related Financial Disclosures
Other, please specify
Aqueduct country ranking EPI Score

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

The tobacco businesses’ dependance on biodiversity was qualitatively analyzed using the IUCN Guidelines (2021), as mentioned in the TNFD, CBD, ENCORE, Aqueduct country rankings (for water stress) and EPI score. The scope, severity and control of impact were qualitatively rated for each region and multiplied together to assess overall impact. We are planning to do quantitative assessment at local level and expand the assessment to all parts of the business and the entire value chain.

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

Not assessed

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Education & awareness Other, please specify As part of our commitment to biodiversity in 2022, we conducted a qualitative assessment for considering measurements of biodiversity. The assessment included dependency and impact evaluation on biodiversity.

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Response indicators

C15.7

(C15.7) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Other, please specify Initiatives to secure biodiversity in our direct leaf supply chain	<ul style="list-style-type: none"> Responding to the challenge (https://www.jti.com/news-views/responding-challenge): JT Biodiversity Statement Environment and our operations (https://www.jt.com/sustainability/environment/operations/index.html):  1

 1biodiversity_statement.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer (CEO)	Chief Executive Officer (CEO)