



Environmental issues are of increasing societal concern and have brought many challenges to our society. Today we are facing the consequences of climate change such as melting ice caps, rising sea levels, and changing weather patterns. We all need to address these issues and, as a global organization, we recognize that we have a key role to play in reducing our environmental impact.

As with most industries, the environment has a direct impact on our business. We also know that our operations impact the environment, through resource usage, emissions, and waste generation, and we strive to minimize this impact.

By implementing sustainable business practices, we are able to conserve resources, protect biodiversity, reduce waste, manage costs, and meet the growing consumer demand for more sustainable products bringing benefits to both the environment and our business.

This approach is explained in the JT Group Environment Policy.

Environmental management

Environment and our operations

Product stewardship, circularity and waste

Environmental data / External verification Please see <u>CDP All 2024</u> [*] for our latest submission.

In setting specific goals and initiatives for '<u>the JT Group Sustainability Targets</u> ', we placed importance on the relationships and ties with the revised materiality, while also including past initiatives. In pursuing our materiality 'Living with the Planet', we set targets related to environmental issues.

Please refer to the following for targets related to 'Living with the Planet'.

Mate	riality	Target topics	Targets
9-A		Biodiversity impact assessment	Each of the JT Group businesses will perform assessments to evaluate its impact and dependency on ecosystem, including biodiversity aspects. Impact assessments of our tobacco business will be performed by 2024, and our pharmaceutical and processed food business by 2025.
Pà		Emissions reduction	 The 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. By 2030, we commit to reduce absolute Scope 1 and 2 GHG emissions by 47% in line with a 1.5°C reduction pathway against a 2019 base year By 2030, we commit to reduce absolute Scope 3 GHG emissions associated with purchased goods and services by 28% against a 2019 base year Our tobacco business will be Carbon Neutral for its own operations by 2030 and will achieve Net Zero greenhouse gas emissions across its entire value chain by 2050. In support of this, the tobacco business will reduce emissions from its own operations by 47% and emissions associated with leaf and nontobacco materials by 28%, against a 2019 base year Our processed food business will promote energy-saving initiatives and introduce renewable energy to contribute to the Group's emission reduction targets and to improve impact on environment
\$ 2		Renewable energy	 By 2050, the JT Group will transition all of our energy use to zero carbon energy by 2050. We will increase the proportion of renewable electricity that we use to 50% by 2030 and 100% by 2050. In our tobacco business, 50% by 2025 and 100% by 2040
%		Protecting water	 The JT Group will engage in responsible water management and will pursue the following: We will monitor the Group's use of water in areas with water scarcity. Our tobacco business will reduce water withdrawal in its own operations by 33% by 2030 against a 2019 base year. Our processed food business will pursue efficient water use and wastewater quality management to preserve water stewardship as a member of the local community We will monitor water recycling at the Group's production facilities We will prevent water pollution based on the Group's standards, which should be equal to or stricter than local legal requirements Our tobacco business will have 100% of its eligible production facilities certified against the Alliance for Water Stewardship standard by 2030
? A		Enhancing biodiversity - No deforestation, no conversion	 With a view to enhancing biodiversity, the JT Group will contribute further to preserving forestry by pursuing the following in our tobacco business supply chain: Replace all wood from natural forests used in the tobacco curing process of its directly contracted leaf growers with renewable fuel sources by 2030 No deforestation of natural forests in the operations and supply chains for tobacco leaf, paper and pulp-based materials by 2025 and in our entire supply chain by 2030 No conversion of natural ecosystem in the tobacco business' own operations and supply chains for tobacco, paper and pulp-based materials in high conservation value areas by 2025 and all natural lands by 2030 Zero net deforestation of managed natural forests in the entire tobacco business supply chain by 2030

ž		Waste reduction	 The JT Group will further reduce the environmental impacts of waste associated with its processes and products. Zero factory waste to landfill by 2030 in our tobacco business Our tobacco business will engage trade and consumers on responsible disposal of devices through take-back schemes for Ploom, and through anti-littering campaigns for consumables Our processed food business will pursue waste reduction to contribute to a circular society and will aim to recycle 95% of all waste from its Japanese offices (excluding waste heat recovery)
X		Designing for circularity - packaging, product and device	 The JT Group will reduce its packaging (including plastic) and ensure that the remaining is 88% reusable or recyclable by 2025, rising to 100% by 2030. Our tobacco business will reduce packaging and achieve 85% recyclability by 2025, rising to 100% by 2030 In total, recycled content will account for 20% of our tobacco business packaging by 2025. The tobacco business will seek to further increase the use of recycled materials in its packaging In our tobacco business, plastic in our packaging mix is only 7% by weight. The tobacco business will aim to further reduce the use of virgin plastic in its packaging. We are also working to develop more sustainable filter alternatives Our tobacco business will take a phased approach in embedding learnings in its circular device development globally, by achieving battery removability & replaceability for 100% of its RRP devices shipped to the EU by 2027 Our processed food business will reduce packaging weight and utilize renewable plant-based resources to reduce environmental impact of its products
ž		Sustainable agriculture	Our tobacco business will complete the elimination of Criterion 1 Highly Hazardous Pesticides (HHPs) from its direct tobacco leaf supply chain in 2024 and eliminate the use of all HHPs by 2040. 100% of our directly-contracted growers will have adopted Good Agricultural Practices (GAP) Protocol of our tobacco business by 2030.
Ý	が いい 変	Internal and external collaboration*	To promote collaborations within the Group across regions and functions, we will provide opportunities for collaborations while also proactively engage in collaborating with external parties to contribute to the development of inclusive and sustainable communities. Between 2015 and 2030, our employees will contribute 300,000 volunteering hours.
X		Community investment*	Between 2015 and 2030 we will invest US\$600 million to help make communities inclusive and resilient, with our employees contributing 300,000 volunteering hours.

Read more on Environment and our operations.

* Read more on Community investment.

The JT Group Sustainability Targets updated with following the initiatives of JT Group Environment Plan 2030, which was the original target set for 2023.

Read more about our progress toward JT Environment Plan 2030

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C Environmental management

In our more complex operations, we align our approach to environmental management with the internationally recognized standards ISO 14001 and ISO 50001.* In our smaller and less complex operations in Japan, we have implemented our own JT Green System, which promotes a simple and consistent approach.

ISO 14001 encourages businesses to think more broadly about environmental issues – not only those associated with their direct operations, but throughout their entire value chains. ISO 50001 provides a framework for our energy management system and helps us to continually improve our energy performance.

We are also working to streamline and better integrate our environmental and energy management systems with other business considerations, such as quality, occupational health and safety, and business continuity.

To objectively review our approach to environmental management and our overall performance, we use external disclosures and ratings agencies, such as CDP and the Dow Jones Sustainability Index (DJSI).

ISO 14001 certification

We use ISO 14001 as the framework for our environmental management systems to manage significant environmental aspects, mitigate risks, and optimize opportunities. We track the proportion of our cigarette and tobacco-related factories that are certified under ISO 14001. See data for the current and past certification of our factories.

*ISO 14001 and ISO 50001 are the internationally recognized standards for environmental management systems and energy management systems, respectively. These standards do not prescribe absolute performance requirements. Rather, they provide us with a framework to help build effective management systems that deliver continual improvement in environmental and energy performance.

CDP 2024 A List and Supplier Engagement Leader 2023

We achieved a place on CDP's prestigious "A List" for tackling climate change in the CDP 2024 disclosure program. CDP recognized us as Supplier Engagement Leader 2023 in addressing climate change for the fifth consecutive year.

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We are honored that the JT Group has been recognized on CDP's A List for the sixth consecutive year. This inclusion reflects our ongoing efforts to preserve ecosystems and enhance our transparency in sharing information. To fulfill the JT Group purpose of "Fulfilling Moments, Enriching Life", we will continue to pursue our vision of sustainability and maintain the trust of our stakeholders by enhancing our efforts that are distinctive of the JT Group in collaboration with our suppliers.

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Hisato Imokawa

Chief Sustainability Officer (As of Feb 12, 2025)



Please see <u>CDP All 2024</u> [*] for our latest submission.

A greener approach to procurement

Green procurement is critical to improving environmental performance. We established the Sustainable Procurement Department in June 2020. This department leads sustainability-related initiatives, mainly for packaging and other relevant categories, supports sustainability activities to achieve the JT Group Sustainability Targets, and engages with suppliers on sustainability topics through close collaboration.

In our Japanese operations, we have green procurement guidelines to ensure that the products and services we purchase cause minimal environmental impact. These guidelines include lists of green products and services, such as stationery, computers, and transportation services. We review and update the guidelines periodically, based on the availability of new products and services, and monitor how many of the listed products and services we purchase.

Our green procurement approach is not only about purchasing goods and services. We also encourage and work with our suppliers to improve their overall environmental management and performance. Energy efficiency is one of the key criteria for the purchase of goods and services in our Global Supply Chain Division. In 2021, we launched the Green Mobility Program in our tobacco business. The purpose of the program is to help decarbonize our fleet and reduce emissions associated with work-related and private travel. The program is supported by our Green Mobility Handbook and awareness campaigns across the business. Since the program began, we have reduced GHG emissions from our fleet by 16%. We are now gathering information on GHG emissions at our leading material suppliers and their emission reduction goals and action plans. We will identify opportunities to reduce emissions toward Net-Zero and reinforce our collaboration with them.

Building environmental awareness and expertise

Across the Company, we strongly believe in the importance of raising awareness of environmental issues among all employees. To do this, we run training and awareness campaigns on environmental matters such as energy consumption reduction, waste reduction and water efficiency management every year, and we regularly publish articles and updates on our Company intranet.

To improve the environmental performance of our operations, we have appointed personnel responsible for environmental management at each of our business sites. These employees are trained in environmental management systems and the relevant regulatory requirements. We also offer a more advanced course for staff who are responsible for internal auditing and reporting environmental data.

In addition, our internal auditors go through a certification process to ensure that we apply a consistent approach across the JT Group.

As a further step to raise awareness of environmental issues and our sustainability initiatives, we hold regular Sustainability Awards and Sustainability Days.

There are also many other activities and events at global and local levels, including information sessions on emissions, resources, and waste.

Currently, we are enhancing our sustainability communications, increasing awareness and engagement of employees on sustainability matters.

Related links



JT

Environment and our operations



Case studies



We strive to further reduce the environmental impact of our operations, focusing on the most significant environmental risks and opportunities for our business and stakeholders. These currently include climate change, the sustainable use of resources, and responsible waste management.

Tackling climate change

Climate change is the biggest environmental challenge facing society and our business. The effects of climate change, such as global warming and changing weather patterns, could have serious implications for our supply chain - given that our products are mainly agriculture-based - and also for our own operations.

We are committed to tackling this issue and are reducing Greenhouse Gas (GHG) emissions across our entire value chain to support global action on climate change, with the longer-term aim of achieving Net-Zero GHG emissions from our operations.

The JT Group supports the Paris Agreement to limit global warming to well below 2°C. Our statement on the Paris Agreement can be found <u>here.</u>

Task Force on Climate-related Financial Disclosures

The potential for financial impact associated with climate change is now well known, and concern is growing about its mid- to long-term impact on business operations and financial market stability. We officially endorsed the recommendations of The Task Force on Climate-related Financial Disclosures (TCFD) in December 2020.

A key aspect of the TCFD recommendations relates to the identification, assessment and management of climate-related risks and their integration into overall risk management.

In line with the expectations of the TCFD, we conducted climate scenario analyses of long-term business risks based on several scenarios.

Governance

Climate-related issues are of strategic importance to our business. Through our business-wide enterprise risk management process, we have identified climate-related risk as one of our enterprise-level risks for our tobacco business, which also needs to be considered in local risk inventories and assessment processes. Board oversight is critical and climate-related issues, especially those that may have impacts on business strategy, are brought up in quarterly Board-level meetings.

Our corporate governance system can be found here.

Strategy

Through climate scenario analysis, we identified two main risks: potential cost increases due to governments raising carbon taxes to further reduce GHG emissions and the impact on tobacco leaf growing due to changes in environmental conditions. Our plan is to mitigate these risks by continuing to implement climate-related initiatives across our value chain and address areas for improvement.

See the <u>JT website</u> for general information on environmental initiatives.

Risk Management

We consider climate-related risks and identify risk mitigation and management approaches through our Enterprise Risk Management (ERM) process. We also include these risks in local risk inventories, assessment processes, and action plans, which are partly based on our ongoing country-level climate scenario analyses. We will compare business-wide risks from local assessments and identify the most critical ones.

Metrics and Targets

We have set a target to reduce GHG emissions from our own operations by 47% (2030 versus 2019). We have also set a longer-term GHG emissions reduction target, as well as targets for renewable electricity, backed by our Group-wide climate scenario analysis. Read more on Environment, Environmental data / External verification and Data calculation / Consolidation methods.

Details of Climate Scenario Analysis

We are aiming to achieve net-zero in line with the 1.5°C target and are examining various risk factors that may have significant financial and strategic implications for our business over short-term (0-5 years), medium-term (5-10 years), and long-term (10-30 years) timeframes. We utilized the IEA NZE2050 climate change scenarios by the International Energy Agency (IEA) for the assessment of transition risks, and scenarios based on typical concentration pathways outlined by the Intergovernmental Panel on Climate Change (IPCC), such as Representative Concentration Pathways (RCP2.6, RCP4.5 and RCP8.5) for physical risks.

Please refer to the following for the results of our analysis, which focused on extreme cases of temperature increase.

	Risks and opportu-	Applied scenarios and financial impacts (billion yen)		Time frame			Impacts	Countermeasures	
	mues	1.5°C	4°C	Short	Medi- um	Long			
risks	Measures and policies to address climate-change effect	-8.5	-2.8	•	•	•	• Land-use restrictions limiting mate- rial production	 Closely examine policy trends Deepen low-carbon production methods 	
ansition I	Carbon pricing	-108.9	-2.7	•	•	•	 Higher procurement costs for raw materials and others Higher in-house operational costs 	 Closely monitor carbon-tax trends Promote advanced decarbonization Collaborate with suppliers 	
Ē	Demand/supply shift for materials and energy	-0.9	3.3	•	•	•	 Increasing/decreasing costs for oil, electricity and materials, including batteries 	Procure with future costs in mind	
S	Changes in farming environments due -3.5 to rising average temperatures		-34.8	•	•	•	 Higher costs for raw materials, like tobacco leaf and rice, due to chang- es in farming environments 	 Continuous reviews to ensure procurement from best locations Apply smart farming methods Reinforce relationships with key farmers 	
Physical rish	More frequent, larger-scale abnormal climatic events	-7.1	-18.8	•	• •		 Impediment to plant operations Raw-material shortages and higher material costs 	 Develop or choose weather-resistant varieties Diversify supply and production locations 	
	Tight water supply	-0.1	-0.1		•	•	 Suspension of plant operations due to drought Increase processing costs with reduced produce quality 	 Increase efficiency of water use at production sites 	
'tunities	Changes in customer lifestyles	0.1	0.7		•	•	 Higher demand for ethical products Increased demand for processed and frozen foods due to a growing need for easy meal preparation, an effect of rising temperatures 	 Monitor consumer trends Develop products catering to customer needs 	
Oppor	Effects of rising temperatures on supplier locations and methods	0.2	1.1		•	•	 Harsher price competitiveness for higher-yielding wheat varieties and the like 	 Promote smart farming and better varieties Partnerships with startup firms 	

Country-level climate scenario analyses

To further understand climate-related issues and potential risks at a more granular level, we have carried out a program of country-level climate scenario analyses in our tobacco business.

From 2020-2022, we completed climate scenario analyses for eleven countries. We prioritized countries where our business includes tobacco leaf sourcing, manufacturing and markets. We used consistent risk modeling and global warming scenarios across all four years.

We assessed potential exposure and vulnerability to climate-related issues for tobacco leaf sourcing, processing, manufacturing and markets using the following indicators: river flooding, sea level rise, heat stress, rainfall variability, water stress, drought, hurricanes, extreme rainfall and frost. We assessed potential exposure using climate modeling based on scientific research and literature, and assessed vulnerability through interviews with local employees. For our analysis, we used three warming projections called Representative Concentration Pathways: RCP2.6, RCP4.5 and RCP8.5.

Emissions reduction / Renewable energy

We are expanding our sustainability ambitions across the entire value chain and accelerating our efforts to reduce GHG emissions. To date, this has been through a combination of energy and emissions reduction initiatives, increasing the proportion of energy we use that comes from renewable sources and production impacts. Going forward, the main programs projected to achieve the target relate to further improvements in energy efficiency, renewable energy, and vehicle fuel type and efficiency.

As part of our efforts to meet our energy and emissions target, we will increase the proportion of renewable electricity among the forms of energy we use to 50% by 2030, in support of our goal of reaching 100% by 2050. In our tobacco business, we are aiming for 50% by 2025 and 100% by 2040.

In our direct operations, this renewable electricity target will be achieved through on-site generation and sourcing of third-party renewable energy.

To achieve our goals, we will continue introducing renewable energy sources at our operations and investing to raise the ratio of electricity derived from renewables among the forms of energy we use. To accelerate reduction of GHG emissions, we are making use of options available from utility firms to use all or part of the renewable energy they offer, green energy certificates for renewables from third parties, and similar purchasing agreements. See our road map to achieving Net-Zero GHG emissions.

How the JT Group plans to achieve Net-Zero



Progress toward quantitative targets

By the end of 2023, 33% of the electricity used in our tobacco business came from renewable sources (either purchased or generated on-site), accounting for 26% of the electricity used Groupwide in 2023. Moving forward, we have plans in place to further increase the proportion of renewable energy among the forms of energy we use.



Between 2015 and 2023, JT Group tobacco-related plants implemented 274 projects to reduce energy consumption efficiently with low investment. These have reduced GHG emissions by over 7,000 tonnes, representing cost savings of over US\$2.3 million, with recoupment averaging three months.

Vehicle emissions are another important consideration for us, and we encourage all of our locations to select alternative, more environmentally friendly fleet vehicles and change the way in which travel is planned, improve the ways in which employees drive or commute, etc. Within our tobacco business, we have launched our Green Mobility Program, designed to reduce emissions associated with our fleet.

GHG emissions in our supply chain

As part of the JT Group Sustainability Targets, we are committed to reducing GHG emissions associated with our supply chain. We recently updated our absolute Scope 3 GHG emissions targets to reducing our GHG emissions associated with purchased goods and services by 28% by 2030 (compared to 2019) and achieving Net-Zero GHG emissions for our entire value chain by 2050.

In Japan, we have a long-standing relationship with tobacco growers, which brings benefits to our suppliers, our business, and our planet. Working closely with tobacco leaf growers and our machinery supplier, we have developed an innovative drying machine which improves fuel efficiency in the tobacco curing process, reducing both the use of non-renewables and GHG emissions. In addition, the new machines help growers to save costs and improve quality, directly impacting our business and improving the environmental impact associated with our tobacco value chain. By the end of 2023, our tobacco leaf growers were using a total of 825 of these drying machines across Japan. We plan to further advance the program by improving the efficiency of the curing system to

make the process even more sustainable and environmentally friendly.

We continue focusing our efforts on improving curing efficiency, through barn furnace upgrades and new heat exchange designs. These not only optimize tobacco leaf quality, but also reduce wood fuel consumption. In addition, we are addressing the production of wood resources required for tobacco curing through dedicated agroforestry programs and tree-growing initiatives in Tanzania and Zambia, for instance.

Please see other detailed efforts on the JT International sustainability website.

Progress toward quantitative targets

In 2023, GHG emissions related to purchased raw materials and services increased by 3% compared with 2019. The increase was mainly due to temporary procurement increases from Tanzania and other nations that will require more time to shift to renewable energy sources in the leaf-drying process, as a result of business scale expansion and climatic influences.



GHG EMISSIONS IN OUR VALUE CHAIN IN 2023 CO2e thousand tons



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Science Based Targets

GHG emissions reduction targets for 2030 from our operations have been validated by the Science Based Targets Initiative (SBTi) as being in line with the 1.5℃ global warming scenario. In June 2024, we submitted a commitment letter to establish science-based GHG emission reduction targets within two years for achieving netzero emissions across our entire value chain.

Protecting water

In the JT Group Sustainability Targets, we commit to supporting global water stewardship by reducing our water use and encouraging water risk management in our supply chain. We have set a target to reduce our tobacco business-associated water use by 33% relative to 2019 levels by 2030.

Societal demand for water is increasing globally and water-related issues such as availability, quality, flooding, drought, or regulatory changes can have a major impact on society and our business.

Our tobacco and food manufacturing activities all use water. However, for our main operation, the tobacco business, the water that is required for tobacco crops comes predominantly from rainfall, while tobacco processing and manufacturing are not water-intensive.

As part of our approach to good water stewardship, we committed to carrying out water risk assessments at 100% of our factories. In 2020, we completed the first risk assessments at all of our factories, and we are now working on a program of reassessments. Our water risk assessments consider water availability and quality, changing legislation, natural disasters such as floods and drought, and future water stress. From the assessments, we develop action plans to reduce risk and improve overall water management and security.

We will continually support global water stewardship by reducing our water usage and encouraging water risk management throughout our supply chain.

Please see other detailed efforts for water stewardship on the <u>JT International sustainability website</u>.

Progress toward quantitative targets

Through our initiative for efficient water use, we reduced water use associated with our tobacco business by 26% from 2015 to 2023, well ahead of our target of 15% by 2030. Encouraged by this, we have set even more ambitious goals in the JT Group Sustainability Targets, with 2019 as the baseline year.



Biodiversity

Responsible management of biodiversity is important for the JT Group. Our focus is on conservation of biodiversity during tobacco growing, where our biggest impact is. One of the JT Group Principles in Tobacco Leaf Production is to reduce environmental impact and ensure efficient use of natural resources while striving to conserve biodiversity. Biodiversity is also included as a focus area in the Tobacco Leaf Sustainability Framework. We endorsed the <u>Declaration of Biodiversity by Keidanren</u> , which is an ambitious action guideline that summarizes specific biodiversity-related activities in Japan.

Please see the <u>JT Group Biodiversity Statement</u> for more on our commitment and ambitions.

Biodiversity risk assessment

In 2022, we conducted an initial risk assessment of our impact and dependency on biodiversity for our tobacco business, with reference to TNFD v0.3 and the International Union for Conservation of Nature's (IUCN) guidelines. The scope of the assessment covers our own operations, upstream activities, and downstream activities.

When carrying out the impact assessment, we firstly broke down our business activities into raw material sourcing, manufacturing, and disposal and evaluated the impact of each activity. On top of that, since biodiversity is closely related to the natural resources of specific regions or countries, we analyzed the main countries in which we operate regarding scope and severity, and calculated qualitative impact scores accordingly. This has helped us to identify the locations where our business is assumed to have a high impact on biodiversity. During the assessment, we referred to data from ENCORE*, the National Biodiversity Index (NBI), and the Environmental Performance Index (EPI).

Regarding dependency, we used the same methodology utilized to assess our impact and have identified areas and locations where our business has high levels of dependency on biodiversity.

Through these impact and dependency analyses, terrestrial ecosystem use, water pollutants and soil pollutants were identified as potential impacts on biodiversity in the tobacco supply chain. Regarding dependency, the prevention of flood and storm, land stabilization, water supply are possible areas with high dependency on ecosystem services.

Looking ahead, we will further carry out both qualitative and quantitative risk assessments covering the whole Group step by step, with the aim to define our main focus areas, objectives, plans and targets to address the issues. Our second round of Group-wide risk assessment is completed in September 2023.

*Natural Capital Finance Alliance (Global Canopy, UNEP FI, and UNEP-WCMC) (2022). ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. [On-line], [December, 2022], Cambridge, UK: the Natural Capital Finance Alliance. Available at: <u>https://encore.naturalcapital.finance.</u> DOI: <u>https://doi.org/10.34892/dz3x-y059.</u>

Biodiversity conservation actions

When moving forward with our actions based on risk assessments, we are embracing the Science-Based Targets for Nature (SBTN) guidance on the mitigation hierarchy following the AR3T framework. The following initiatives are examples of our approaches:

Avoid

We are working to replace Highly Hazardous Pesticides (HHPs) with safer, more environmentally friendly options across the Company.

In January 2022, we updated our internal standards for Crop Protection Agent (CPA) residue. HHP limits have now been applied to all processed tobacco from crops transplanted in 2022. If, through

our analysis, we detect that the residue level of HHP Criterion 1 pesticides exceeds the LoQ, we do not purchase the tobacco. We formally communicated this to all our tobacco suppliers in February 2021.

In addition, we made it clear that we expect them to avoid environmental contamination and, more importantly, to protect people and animals from exposure to hazardous CPAs. We stressed that using less hazardous CPAs is as critical as wearing the correct personal protective equipment.

Reduce

In 2022, we introduced a new sustainability governance model with a focus on product stewardship, circularity and waste. It aims to manage the safety and environmental and social impacts of our products and their packaging at all stages of their life cycle, in order to avoid waste through product circularity or reduce it by operating an effective waste management system.

We will reduce our packaging (including plastic) and ensure that the remaining is 88% reusable or recyclable by 2025, and 100% by 2030. Our tobacco business will reduce packaging and achieve 85% recyclability by 2025, rising to 100% by 2030. In total, recycled content will account for 20% of our tobacco business packaging by 2025.

Regenerate

In Zambia, we are taking proactive approaches to biodiversity regeneration and forest conservation. The Shishamba Forest Livelihoods Project in Zambia is an initiative for the sustainable management of Miombo woodlands. It includes, among other things, the promotion of woodland conservation practices such as fire management and assisted natural regeneration. Local communities are empowered to use and manage forest resources responsibly and sustainably.

Restore

We are partnering with the Wildlife Research and Environmental Education Society and the National Bank for Economic and Social Development (BNDES) to restore over 300 hectares of permanently protected areas in Brazil with the participation of our contracted growers. This area includes parts of a national nature reserve as well as land owned by tobacco growers.

The restoration work started in 2018, when we replaced 35 hectares of pine trees in the Pirai do Sul National Forest with native species to help restore the natural landscape. We also trained 33 local college students in ecological restoration.

By planting some 140,000 seedlings of native species and installing 200,000 meters of protective fences, more than 195 hectares have been restored on 200 small farms in Permanent Preservation Areas, and we have only 6 hectares left before we reach our restoration target.

We are also restoring 75 hectares of the Meia Lua Nature Reserve, in the municipality of Ponta Grossa. The project was audited and approved by the BNDES, the funding partner, in November 2022 and completed in May 2023.

Transform

We have continued a partnership with the LIFE Institute, an international non-profit standard-setting organization, since 2017 to measure and improve our impacts on biodiversity.

The LIFE Methodology for Business and Biodiversity has helped our tobacco leaf business in Brazil

to enhance its sustainability performance and deepen its understanding of and commitment to biodiversity. An important benefit of the partnership with LIFE is reflected in information management. Organization and standardization of environmental data make investment decisions based on evidence possible, allowing investments to bring greater environmental benefits and lowering risks to companies.

Our partnership with LIFE, together with other companies, led to the launch of the LIFE Coalition for Business and Biodiversity, a group of leading companies which share the ambition of scaling up biodiversity conservation at a global level through LIFE solutions. This group provides a great opportunity to exchange best practice experiences to mitigate impacts related to the methodology's indicators: carbon footprint, water use, waste generation, land use, and energy use, all leading to biodiversity conservation.

Read more on <u>Supply Chains</u> and see other detailed efforts for biodiversity on the <u>JT International sustainability website.</u>

Each of the JT Group businesses will perform assessments to evaluate their impact and dependency on the ecosystem, including biodiversity aspects as set in the JT Group Sustainability Targets. Assessments for the tobacco business will be performed by 2024, and for the pharmaceutical and processed food businesses by 2025.

Forestry

Ensuring a sustainable wood supply and contributing to conserving and rehabilitating forests are key objectives set out in the $\underline{\mathsf{JT}}$ Group Sustainability Targets. One of our targets is to achieve net-zero deforestation of managed natural forests throughout the entire tobacco business supply chain by 2030. Our focus is to establish and monitor woodlots with higher productivity and usability, securing a sufficient, renewable supply of wood for tobacco production while also reducing wood consumption through improved curing efficiency. Due to the importance of forestry conservation for our business and society as a whole, we are currently reviewing our environment plan to update our targets.



Progress toward quantitative targets

Improvements in tree planting and wood production

Based on our 2023 tree-planting activities in Tanzania, Zambia, and Brazil, we estimate 103% renewable wood supply in crop year 2030, based on actual tree-planting data captured with the Agroforestry App in CY2023 (November 2022–February 2023).

Improvements in tree seedling production

Improved adoption of our Minimum Forestry Standards (MFS) has already shown results in enhanced tree seedling quality and uniformity. Quality tree seedlings are the basis for successful woodlot establishment and optimized tree growth potential.

Please see other detailed efforts related to forestry on the JT International sustainability website.

Waste Reduction

From a societal and stakeholder perspective, concern is increasing surrounding waste, particularly plastic waste. From a business perspective, all waste has a direct cost (handling and disposal) and an indirect cost (resource and processing costs).

We consider waste impacts at each stage of our operations from receiving materials and services to post-consumer disposal of our products and packaging. That's why waste management is a key component of the JT Group Sustainability Targets. Across the JT Group, we apply a "reduce, reuse, recycle" approach. As reducing waste helps to conserve resources, we have also set targets in that regard, which in turn helps to minimize our environmental impact and cut business costs.

Progress toward quantitative targets

Based on 2023 results, we have reduced waste associated with our tobacco business by 20% compared to 2015, successfully achieving our waste reduction target of 20% by 2030 ahead of schedule. This was driven predominantly by waste reduction initiatives (e.g., production yield improvement) and waste reuse programs (e.g., reuse of tobacco cases).

We will aim to further reduce our environmental impact by realizing the targets set in the JT Group Sustainability Targets, which focus on resource recycling.

Read more on Product stewardship, circularity and waste.

Designing for circularity - Packaging, products and devices

The JT Group has set a target to reduce its packaging (including plastic) and ensure that the remaining is 88% reusable or recyclable by 2025, rising to 100% by 2030.

Please see other detailed efforts on the <u>JT International sustainability website.</u>

Sustainable agriculture

As set in the JT Group Sustainability Targets, the JT Group's directly contracted tobacco leaf growers will eliminate the use of Criterion 1 HHPs by 2024, and all HHPs by 2040. By 2030, 100% of our directly contracted growers will have adopted our Good Agricultural Practices (GAP) Protocol. For more information, please visit the <u>JT International sustainability website</u>.

Case studies

Sustainability is deeply embedded in our operations. We work hard to minimize our environmental impact by focusing on energy efficiency, GHG emission reduction, water efficiency, and waste reduction. Many programs and initiatives are already in place, both globally and locally. These include everything from the way we source raw materials to the way we ship finished products. Read more about our local and global activities:

In our Japanese business operations (Japanese website) □ In our tobacco business □

Related links



Product stewardship, circularity and waste

We are committed to achieving continuous improvement in the sustainability of our products and packaging.

In 2022 we introduced a new sustainability governance model with a focus on product stewardship, circularity and waste. It aims to manage the safety and the environmental and social impacts of our products and their packaging at all stages of their life cycle - and to avoid waste through product circularity or reduce it by operating an effective waste management system.

We will reduce our packaging (including plastic) and ensure that the remaining is 88% reusable or recyclable by 2025, and 100% by 2030. Our tobacco business will reduce packaging and achieve 85% recyclability by 2025, rising to 100% by 2030. In total, recycled content will account for 20% of our tobacco business packaging by 2025.

Read more about product stewardship, circularity and waste on <u>JT International sustainability website.</u>

RRP return/collection scheme

In 2019, we published company-wide internal guidelines for RRP waste management and recycling. These guidelines help markets to determine and implement appropriate initiatives.

We encourage consumers to recycle or dispose of our RRP products safely. In some markets we offer return schemes adapted to local needs.

Case study

Ploom - Return scheme in Japan



In Japan, we launched a program in 2019 to collect used Ploom devices, capsules and cartridges via convenient collection boxes at around 300 shops in Tokyo. In 2020, this program was extended to include additional tobacco players and it was launched throughout Japan in 2021. Since then, around 1,200 collection points have been established in all 47 prefectures.

Case study

Biomass plastic as a raw material for the packaging

A by-product of rice milling is crushed rice: rice that is broken during the milling process and can no longer be used for manufacturing. In a first for the industry, we are now using the domestic carbon-neutral biomass plastic RiceResin^{®*}, which contains 10% crushed rice generated by our Group, as a raw material for the packaging of some of our cooked rice products. In addition to using RiceResin[®], we have reduced the amount of petroleum-based plastic in our packaging by around 4.2% compared to conventional products. We have done this by making the exterior film even thinner.

Rice Resin[®]

* RiceResin[®] is a registered trademark of Rice Resin inc. Old rice that is not edible and crushed rice generated during rice milling are upcycled into plastic using new technology.

Various information on Environment and our product can be found at the followings.

For the goals set forth in the Tobacco Business Sustainability Strategy, Read about <u>Product stewardship, circularity and waste (Environment)</u>.

About our reporting

Our referenced guidelines(GRI), notes on data (BoR), and scope of our data (*A-E).

Related links



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Environment data verification statement

Independent Assurance Statement for the JT Group

Environmental data

Group-wide Scope 1 and 2 GHG data, some Scope 3 GHG data, energy, proportion of renewable electricity, water withdrawal, water discharge and waste-related data have been externally assured. The calculation methodology and scope are outlined in our <u>Basis of Reporting</u>.

Energy

Energy consumption (Terajoules)	2019	2020	2021	2022	2023
Fossil fuels purchased and consumed	5,958	5,527	5,792	5,657	5,724
Electricity (non-renewable) purchased	2,741	2,497	2,390	2,243	2,051
Steam / heating / cooling and other energy (non-renewable) purchased	66	56	35	34	28
Total renewable energy purchased or generated	1,388	1,571	1,697	1,769	1,729
- Total renewable electricity purchased or generated	529	733	849	860	910
- Total renewable energy purchased or generated excluding electricity	858	838	847	909	819
Total energy sold	-0.005	-0.004	-0.008	-1.088	-0.025
Total	10,153	9,650	9,913	9,702	9,531

Energy consumption breakdown (Terajoules)	2019	2020	2021	2022	2023
Non-renewable fuel consumed	5,952	5,527	5,792	5,657	5,724
Renewable fuel consumed	850	828	832	899	812
Electricity, heating, cooling and steam purchased for consumption	3,331	3,278	3,257	3,082	2,937
Self-generated electricity, heating, cooling and steam	20	17	32	65	59
Electricity, heating, cooling and steam sold	-0.005	-0.004	-0.008	-1.088	-0.025
Total	10,153	9,650	9,913	9,702	9,531

Proportion of renewable electricity (%)	2019	2020	2021	2022	2023
Total	14%	20%	23%	24%	26%

GHG

GHG emissions (1,000 tons CO2e)	2019	2020	2021	2022	2023
CO2	343	314	328	317	320
HFCs	25	25	24	23	22
Total (Scope 1)	368	339	352	340	342
Scope 2	369	319	295	276	240
Total (Scope 1 + 2)	737	658	647	616	582
Purchased goods and services	6,293	6,018	5,101	5,734	6,466
Direct leaf supply	1,615	1,602	1,634	1,520	1,747
Third-party tobacco materials	2,859	2,583	1,769	2,373	2,777
- Others	1,819	1,833	1,698	1,841	1,942
Capital goods	307	272	260	233	299
Fuel-and-energy-related activities (not included in Scope 1 or 2)	195	187	196	182	175
Upstream transportation and distribution	397	367	381	459	414
Waste generated in operations	14	11	10	8	9
Business travel	146	32	14	47	159

GHG emissions (1,000 tons CO2e)	2019	2020	2021	2022	2023
Employee commuting	43	40	36	39	28
Upstream leased assets	1	1	0	1	1
Downstream transportation and distribution	262	271	264	268	277
Processing of sold products	1	2	2	3	2
Use of sold products	27	21	18	25	42
End of life treatment of sold products	69	80	82	96	113
Downstream leased assets	1	1	0	0	0
Franchises	4	5	5	7	11
Total (Scope 3)	7,761	7,307	6,369	7,103	7,997

Out of scope emissions (1,000 tons CO2e)	2019	2020	2021	2022	2023
Direct CO2 emissions from the combustion of biomass	110	110	112	121	109
Indirect CO2 emissions from the combustion of biomass	0.2	0.1	0.2	0.2	0.2
Biogenic CO2 emissions generated elsewhere in the value chain	484	468	483	489	501
Total (biogenic)	594	578	595	610	610

Water

Water withdrawal by source (1,000 m³)	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fresh surface water	1,398	1,575	1,466	1,570	1,631	1,712	1,783	1,937	1,675
Brackish surface water/seawater	0	0	0	0	0	0	0	0	0
Rainwater	59	60	66	58	41	31	29	1	0
Groundwater	5,410	5,521	5,381	5,500	5,529	5,351	4,990	4,625	4,273
Produced/proces s water	0	0	0	0	0	0	0	0	0
Municipal supply	3,573	3,288	3,271	3,245	2,904	2,809	2,803	2,658	2,576
Wastewater from another organization	0	0	0	0	0	0	0	0	0
Total	10,440	10,443	10,183	10,373	10,105	9,904	9,605	9,221	8,523

Water discharge by destination (1,000 m³)	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fresh surface water	2,310	2,293	2,497	2,644	2,795	2,720	2,581	2,481	2,386
Brackish surface water/seawater	0	0	3	18	19	6	6	0	16
Groundwater	1	2	1	0	8	12	12	6	5
Municipal/indust rial treatment plant	3,504	3,259	3,111	3,112	2,794	2,783	2,789	2,708	2,409
Wastewater from another organization	0	0	0	0	0	0	0	0	0
Total	5,815	5,554	5,612	5,774	5,616	5,520	5,387	5,194	4,816

Waste

Waste generation breakdown (1,000 tons)	2015	2016	2017	2018	2019	2020	2021	2022	2023
Recycled including waste composted	91	94	93	93	95	92	93	91	91
Incinerated with heat recovery	16	15	14	14	14	11	9	8	9
Incinerated without heat recovery	6	6	6	7	6	6	6	6	5
Landfilled	18	18	18	18	17	17	15	13	11
Total	131	132	131	133	132	126	124	118	116

Packaging

Reusable & Recycable packaging weight breakdown (1,000 tons)	2021	2022	2023	
Reusable & Recycable Packaging Weight	194	190	183	
Non Reusable & Recycable Packaging Weight	31	35	22	
Total	225	225	205	
Reusable or Recyclable Packaging (%)	86%	84%	89%	

Tobacco business Packaging recycled content breakdown (1,000 tons)	2021	2022	2023	
Recycled Materials Weight	31	36	34	
Non Recycled Materials Weight	166	162	146	
Total	197	197	180	
Recycled Content (%)	16%	18%	19%	

Plastic packaging weight breakdown (1,000 tons)	2021	2022	2023	
Recyclable plastic packaging	12	13	21	
Compostable plastic packaging	0	0	0	
Recycled content within plastic packaging	0	0	0	
Total Plastic Packaging Weight	27	26	31	
Recyclable plastic packaging (%)	46%	48%	66%	
Compostable plastic packaging (%)	0%	0%	0%	
Recycled content within plastic packaging (%)	0%	0%	0%	

Purchased packaging m (1,000	aterials by material type tons)	2021	2022	2023
Glass packaging	Recycled and/or Certified Material	0	0	0
	Total Weight	0	0	0
	Recycled Content (%)	0%	0%	0%
Metal (e.g. aluminium or steal) packaging	Recycled and/or Certified Material	0	0	0
	Total Weight	0	1	2
	Recycled Content (%)	0%	0%	0%
Wood/Paper fiber packaging	Recycled and/or Certified Material	25	36	34
	Total Weight	164	168	200
	Recycled Content (%)	15%	21%	17%

ISO 14001 certified (Scope: Cigarette and tobacco-related factories (including Group factories))

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total factories	41	40	43	43	46	47	47	44	43
Certified factories	34	32	33	34	36	36	36	33	34
Certified (%)	83%	80%	77%	79%	78%	77%	77%	75%	79%

Related links



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