



Environment



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

[Read more >](#)

[Read more >](#)








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Our latest CDP submission can be found [here](#)

In setting specific goals and initiatives for '[the JT Group Sustainability Targets](#) [🔗](#)', 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'.

Materiality		Target topics	Targets
		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.
		Emissions reduction	<p>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.</p> <ul style="list-style-type: none"> • 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 non-tobacco 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
		Renewable energy	<p>By 2050, the JT Group will transition all of our energy use to zero carbon energy by 2050.</p> <ul style="list-style-type: none"> • 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	<p>The JT Group will engage in responsible water management and will pursue the following:</p> <ul style="list-style-type: none"> • 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. 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
		Enhancing biodiversity - No deforestation, no conversion	<p>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:</p> <ul style="list-style-type: none"> • 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

		Waste reduction	<p>The JT Group will further reduce the environmental impacts of waste associated with its processes and products.</p> <ul style="list-style-type: none"> • 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)
		Designing for circularity - packaging, product and device	<p>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.</p> <ul style="list-style-type: none"> • 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 • 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
		Sustainable agriculture	<p>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.</p>
		Internal and external collaboration*	<p>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.</p>
		Community investment*	<p>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.</p>
			

Read more on [Environment and our operations.](#)

* Read more on [Improving our social impact.](#)

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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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 to 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 2023 A List and Supplier Engagement Leader 2023

We achieved a place on CDP's prestigious "A List" for both tackling climate change and water security in the 2023 CDP environmental disclosure program. This is the fifth consecutive year to be listed in the Climate Change A list. In addition, CDP recognized us as Supplier Engagement Leader 2023 in addressing climate change for the fifth consecutive year.



We are honored that the JT Group has been recognized on CDP's A List and for the fifth consecutive year. This inclusion reflects our continued efforts to reduce our environmental footprint and expand our transparency in disclosing information.

In February 2024, we have set the JT Group Sustainability Targets with specific goals and initiatives. In setting the targets, we placed importance on the relationships and ties with the JT Group Materiality.

'Living with the Planet' is one of the five material issues and a key aspect in the JT Group Materiality. We have set

targets such as 'Emission reduction' or 'Protecting water' for this material issue.

We aim to achieve the sustainable relationship between nature, people, and businesses through efforts to improve the impact of our activities on the environment.

These targets will support our goals of contributing to the sustainable development of society by further fulfilling our responsibilities and maintaining the trust of our stakeholders.

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Hisato Imokawa

Chief Sustainability Officer
(As of January 31, 2024)





CLIMATE WATER

Our latest submission to the CDP can be found [here](#).

A greener approach to procurement

Green procurement is critical to improving environmental performance. We established a 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 communications campaigns across the business. In 2022, we concluded work listing the key Non-tobacco materials suppliers that contribute significantly to our carbon footprint. In 2023 we will focus on suppliers' climate change programs together and support them to build climate change management programs where necessary.

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 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.

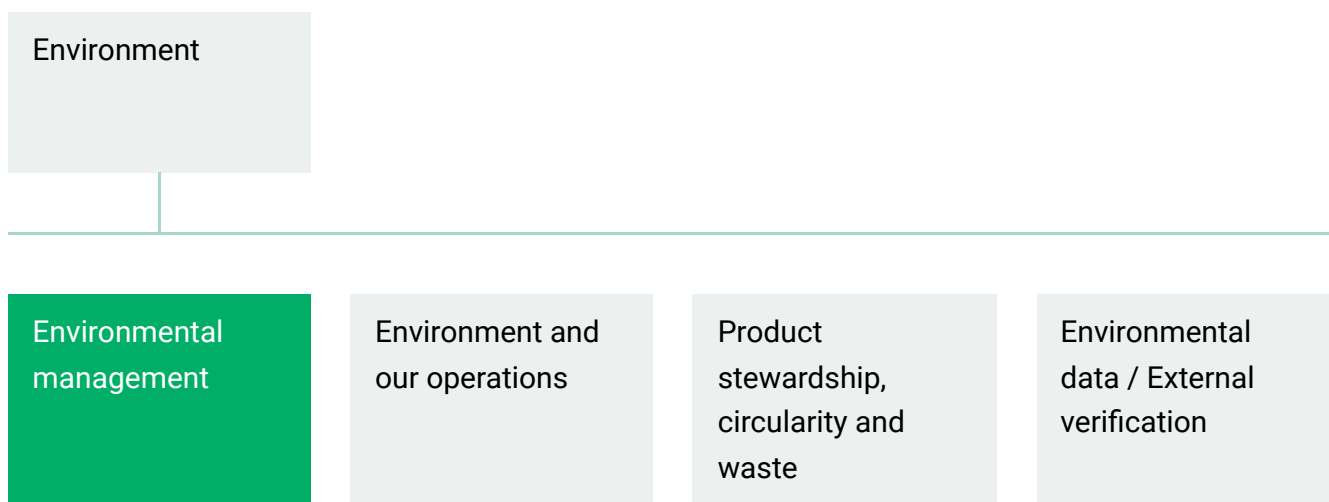
In addition, our internal auditors go through a certification process to ensure that we apply a consistent approach across the JT Group.

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 matter.

Related links





Environment and our operations

Tackling climate change

Emissions reduction/Renewable energy

Protecting Water

Biodiversity

Enhancing biodiversity - No deforestation, no conversion

Waste reduction

Designing for circularity - Packaging, product and device

Sustainable agriculture

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 we are reducing Greenhouse Gas (GHG) emissions across our entire value chain to support global action on global 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 degrees Celsius. Our statement on the Paris Agreement can be found [here](#). 

Task Force on Climate-related Financial Disclosures (TCFD)

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. With this in mind, we conducted climate scenario analysis. Our analysis was based on several scenarios: a global temperature increase of 1.5°C, 2°C and 4°C. This approach is in line with the expectations of the TCFD.

Six main risk factors were selected for analysis. As the outcome we identified two main climate-related risks: “potential cost increases due to governments raising carbon taxes to further reduce Greenhouse Gas (GHG) emissions” and “the impact on leaf tobacco growing due to changes in environmental conditions”.

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 leaf tobacco 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 [JT website](#) 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 analysis. 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 reviewed various risk factors with the potential to have a substantive financial or strategic impact on our business. This process identified two main risks:

- 1 Potential cost increases due to the raising of carbon taxes by governments to further reduce GHG emissions
- 2 The impact on leaf tobacco growing due to changes in environmental conditions

Our conclusion was that we could mitigate both risks by continuing to implement climate-related initiatives and programs across our value chain. This would mean that our business operations would not be materially disrupted by financial impacts.

Transitional Risks

Category	Risk name	Parameter	Time horizon	Magnitude of impact
Policy	Emerging regulation Carbon pricing	Carbon tax	Long-term	Medium-low

Explanation of impact / Impact (100 million yen) /Description of responses



Physical Risks

Category	Risk name	Parameter	Time horizon	Magnitude of impact
Chronic	Change in growing environment of tobacco leaf	Change in yield of tobacco leaves by climate change	Long-term	Medium

Explanation of impact / Impact (100 million yen) /Description of responses



Country-based Climate Scenario Analysis

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 analysis in our tobacco business.

In the initial phase, from 2020 to 2022, we completed climate scenario analyses for eleven countries. We prioritized countries where we have a combination of leaf sourcing, manufacturing and markets. We used consistent risk modelling and global warming scenarios across all three years.

We assessed potential exposure and vulnerability to climate-related issues for 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 modelling 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

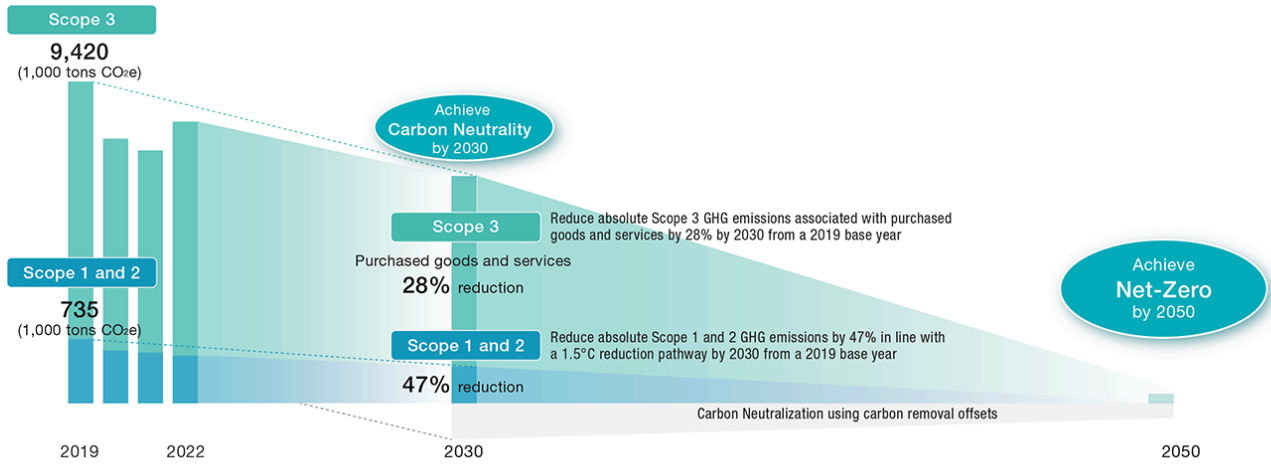
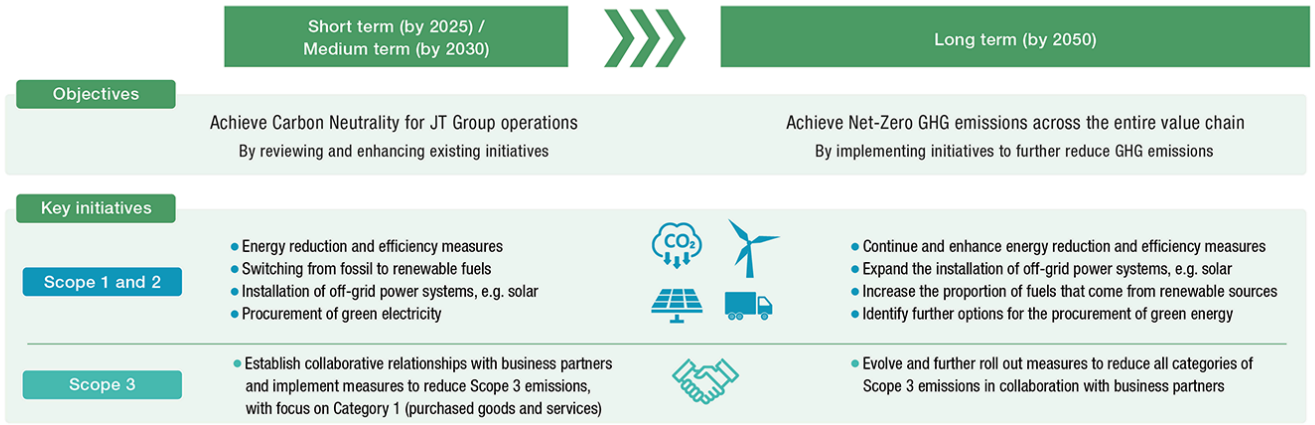
We are expanding our sustainability ambitions across the entire value chain and accelerating our efforts to reduce GHG emissions. To date, this has been through a combination of energy and emissions reduction initiatives, increasing the proportion of the energy we use that comes from renewable sources and production impacts. Going forward, the main programs 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 that we use to 50% by 2030, in support of our goal of reaching 100% by 2050. In our tobacco business, 50% 2025 and 100% by 2040.

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

We are continually working to identify renewable energy opportunities. Where possible, and where it makes business sense, we have invested in renewable energy generation opportunities and will continue to invest in opportunities that increase our use of renewable resources. Renewable energy opportunities are included in our business planning and in our feasibility study for achieving Carbon Neutrality in own operations by 2030 and Net-Zero GHG emissions across the entire value chain by 2050. In a drive to accelerate the reduction in our GHG emissions, we are taking advantage of zero- or low-carbon energy tariffs and green energy certificates, and we have entered into a power purchase agreement for renewable energy. See our road map to achieving Net-Zero GHG emissions.

How the JT Group plans to achieve Net-Zero



Progress toward quantitative target

By the end of 2022, 31% of the electricity used in our tobacco business came from renewable sources (either purchased or generated on-site), and 24% of the electricity we used in the JT Group in 2022 came from renewable sources. Moving forward, we have plans in place which will further increase the proportion of renewable electricity we use.

RENEWABLE ENERGY



Through our Environment Opportunities Scheme, our factories have identified 269 projects between 2015 and 2022. These avoid over 7,000 tons of GHG emissions and represent a cost saving of over US\$2 million, with an average payback of 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 style of employees' driving and commuting etc. Within our tobacco business, we have launched our Green Mobility Program, designed to reduce emissions associated with our fleet.

Greenhouse Gas emissions in our supply chain

As part of the JT Group Sustainability Targets, we are committed to reducing Greenhouse Gas (GHG) emissions associated with our supply chain. We recently updated our absolute Scope 3 GHG emissions target: to reduce our GHG emissions associated with purchased goods and services by 28% between 2019 and 2030 and to achieve 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 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 2022, our leaf growers were using a total of 828 of these drying machines across Japan. We plan to

expand the program by implementing a new curing system to make the process even more sustainable.

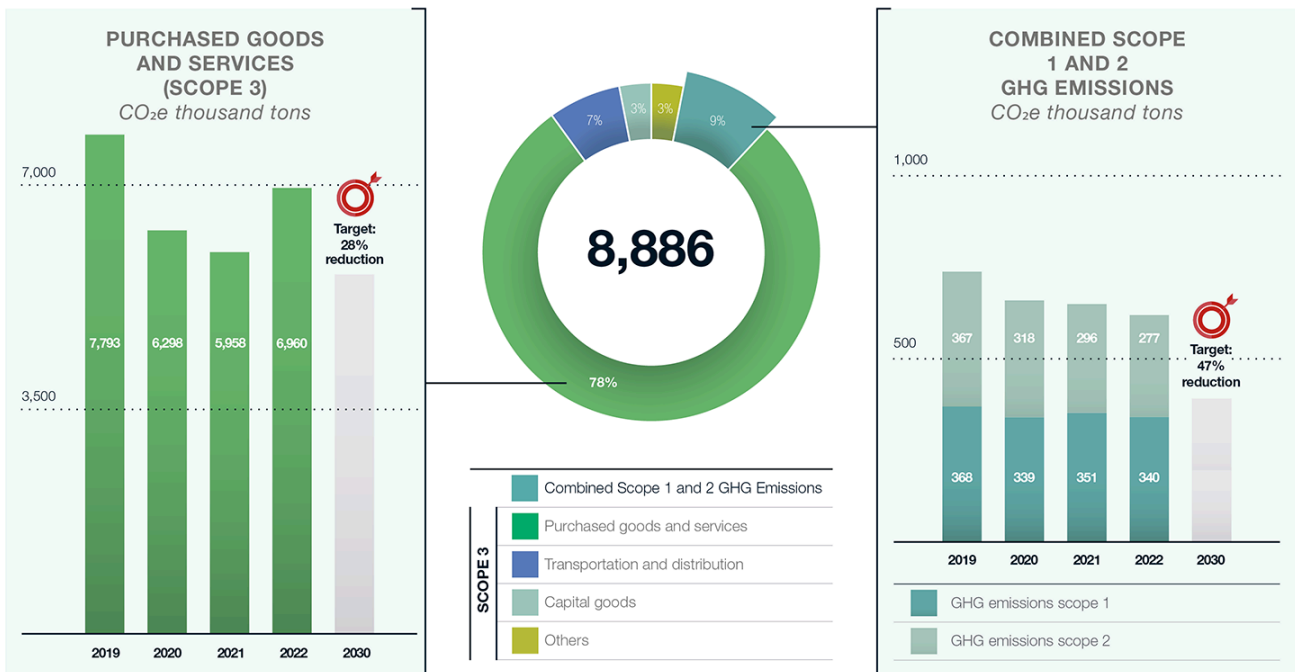
We continue focusing our efforts on improving curing efficiency, through barn furnace upgrades and new heat exchange designs. These not only optimize tobacco leaf quality, but also reduce wood fuel consumption. In addition, we are addressing the production of wood resources required for tobacco curing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

Please see other detailed efforts on [JT International sustainability website](#). 

Progress toward quantitative target

In 2022 GHG emissions related to purchased goods and services decreased by 11% comparing to 2019. This is driven mainly by lower emissions associated with tobacco leaf and non tobacco materials. This is the result of initiatives including curing efficiency improvement, renewable wood production and packaging weight reduction.

GHG EMISSIONS IN OUR VALUE CHAIN IN 2022
CO₂e thousand tons





Science Based Targets

Greenhouse Gas (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°C global warming scenario.

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 withdrawal by 33% 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 our program of reassessments. Our water risk assessments consider water availability and quality, changing legislation, natural disasters such as flood and drought, and future water stress. From the assessments, we develop action plans to reduce risk and improve overall water management and security. We have been recognized by CDP as an A List company, the leadership level for Water Security in 2023.

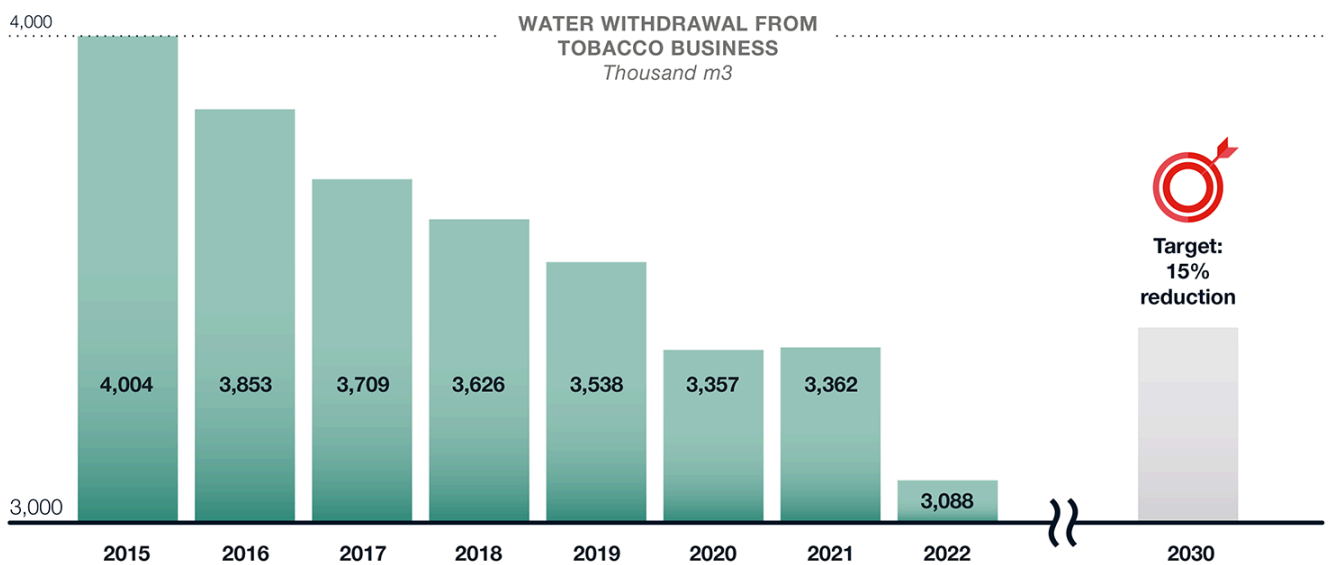
We will continually support global water stewardship by reducing our water withdrawal and by encouraging water risk management in our supply chain.

Please see other detailed efforts for water stewardship on


[JT International sustainability website.](#) 

Progress toward quantitative target

Based on 2022 results, we successfully achieved our water withdrawal target ahead of our schedule. The Original target was set for 2023. From 2015 to 2022, we reduced the water withdrawal associated with our tobacco business by 23% - well ahead of our target of 15% by 2030. We achieved this by implementing water efficiency improvement programs. We have set even more ambitious goals in the JT Group Sustainability Targets.



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 Leaf Tobacco 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 Leaf Sustainability Framework. We endorsed [the Declaration of Biodiversity by Keidanren](#) , which is an ambitious action guideline that summarizes specific biodiversity-related activities in Japan.

Please see the [JT Group Biodiversity Statement](#)  for more of our commitment and ambitions.

Biodiversity risk assessment



In 2022, we have 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 2021 (IUCN 2021)'s 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 to raw material sourcing, manufacturing, and disposal and evaluated the impact of each activity. On top of that, since biodiversity is closely related to locations and specific countries' natural resources, we analyzed our main countries with operational activities with scope and severity and calculated the qualitative impact score accordingly. This has helped us to identify the top geographical locations where we possibly have the highest impact. During the assessment, we referred to data from ENCORE*, National Biodiversity Index (NBI), and Environmental Performance Index (EPI).

Regarding dependency, we have used the same methodology as we assessed our impact and have identified the areas and geographical locations with the highest level of dependency.

Through the impact and dependency analysis, we have identified that we do have risks of biodiversity. Possible impacts on terrestrial ecosystem use, water pollutants and soil pollutants were identified 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 assessment 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 phase 2 risk assessment covering the whole group is to be 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: <https://encore.naturalcapital.finance>.  DOI: <https://doi.org/10.34892/dz3x-y059>. 

Biodiversity conservation actions

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

Avoid

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

In January 2022, we updated our internal standards for Crop Protection Agent (CPA) residue. The HHP limits are now 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 to our suppliers that we expect them to avoid environmental contamination and, also 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 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 the environmental impact of our products and packaging through:

- Design solutions
- Facilitating responsible collection and disposal
- Consumer awareness and education

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. In total, recycled content will account for 20% of our tobacco business packaging by 2025.

Regenerate

In Zambia, we are taking proactive approaches to of biodiversity regeneration and forest conservation. The Shishamba Forest Livelihoods Project in Zambia is an initiative for the sustainable management of Miombo woodland. 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 Socio-Economic Development to restore over 300 hectares of permanent-protection 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.

More than 195 hectares have been restored on 200 small farms in Permanent Preservation Areas, by planting some 140,000 seedlings of native species and installing 200,000 meters of fences to

protect them. Only six hectares remain to meet our restoration target.


We are also restoring 75 hectares of the Meia Lua Natural Reserve, in the municipality of Ponta Grossa. The Project was audited and approved by funding partner, the National Bank of Socio-economic Development (BNDES), in November 2022 and is scheduled to be completed in May 2023.

Transform

We have formed 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 allows investment decisions to be based on evidence, so that investments bring greater environmental benefits and lower risks to the company.

Our partnership with the LIFE Institute, together with other companies, led to the launch of 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 [Supply Chain](#) and see other detailed efforts for biodiversity on [JT International sustainability website](#). 

Each of the JT Group business will perform assessment to evaluate impact on its 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 by 2025 for the pharmaceuticals and processed foods businesses.

Forestry

Ensuring a sustainable wood supply and contributing to conserving and rehabilitating forests are key objectives set out in [the JT Group Sustainability Targets](#). One of our targets is to achieve Zero net deforestation of managed natural forests in 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 the whole society, we are currently reviewing our environment plan to update our targets.


Progress toward quantitative target

Improvements in tree planting and wood production

Based on our 2022 tree planting activities in Tanzania, Zambia, and Brazil, we estimate 98% renewable wood supply in crop year (CY) 2029, based on actual tree planting captured with Agroforestry App in CY2022 (Nov 2021 – Feb 2022).

Improvements in tree seedling production

An 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 a successful woodlot establishment and optimized tree growth potential.

Please see other detailed efforts for forestry on [JT International sustainability website](#). 

Waste Reduction

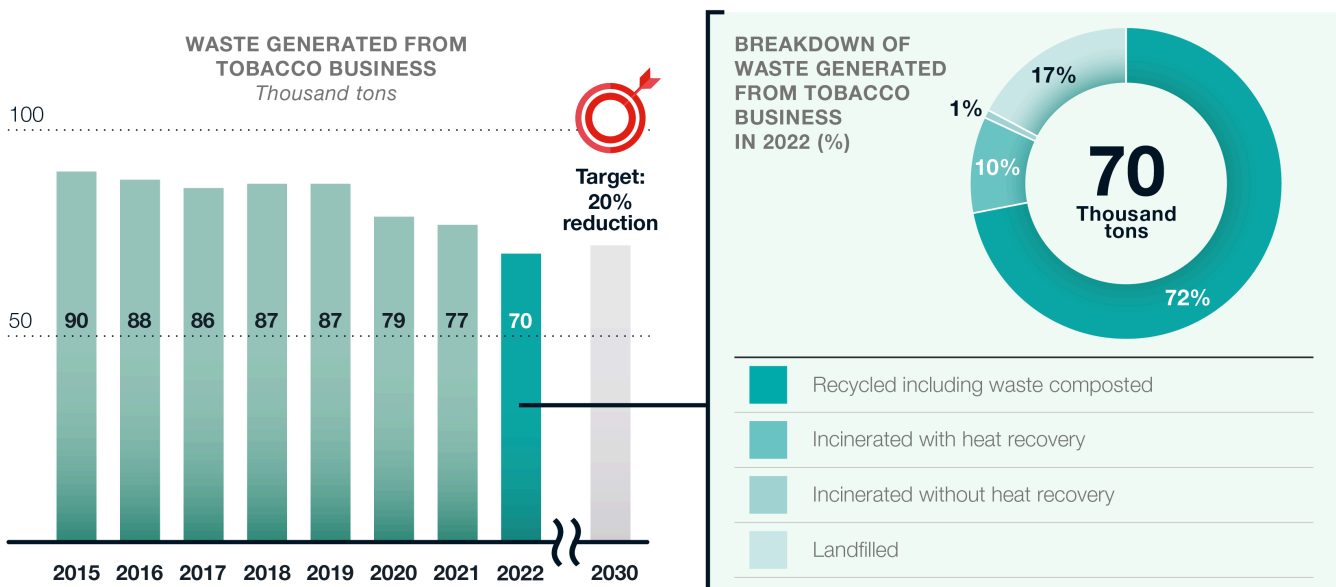
From a societal and stakeholder perspective, waste, and particularly plastic waste, is of increasing concern. From a business perspective, all waste has a direct cost (handling and disposal) and an indirect cost (e.g. resource and processing costs).

We consider waste impacts on each stage of our operations from receiving materials and services to post-consumer waste of our product 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. We have also set targets for waste reduction as reducing waste helps to conserve resources, which in turn helps to minimize our environmental impact and cut business costs.

Progress toward quantitative target

Based on 2022 results, we have reduced waste associated with our tobacco business by 22% since 2015. We successfully achieved our waste reduction target ahead of our schedule. The Original target was set for 2023. This was driven predominantly by waste reduction initiatives (e.g. production yield improvement) and waste reuse programs (e.g. tobacco cases reused). 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, product and device

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 [JT International sustainability website](#). 


Sustainable agriculture

As set in the JT Group Sustainability Targets, JT Group's direct contract leaf tobacco farmers will eliminate the use of HHPs (High Hazardous Pesticides) classified as Class 1 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 [JT International sustainability website](#). 

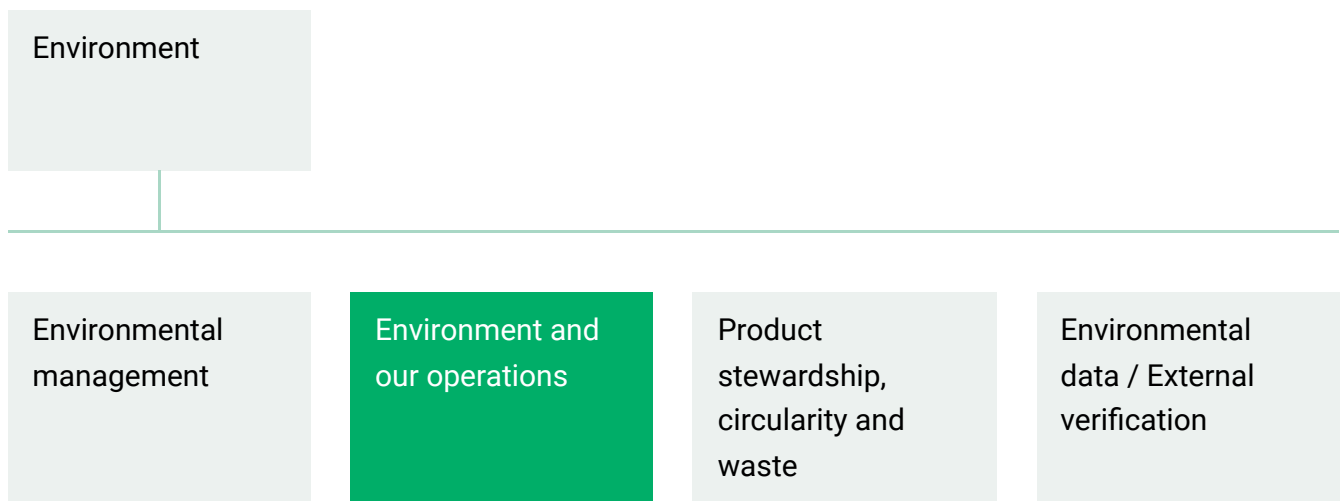
Case studies

Sustainability is deeply embedded within our operations. We work hard to minimize our environmental impact by focusing on energy efficiency, Greenhouse Gas (GHG) emissions 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

[JT International sustainability website.](#) 

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.



* RiceResin[®] is a registered trademark of Biomass Resin Minamiuonuma Co., Ltd. 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 [Product stewardship, circularity and waste \(Environment\)](#).

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

[Read more >](#)

Related links

Environment

Environmental management

Environment and our operations

Product stewardship, circularity and waste

Environmental data / External verification

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Environmental data / External verification

Energy



GHG



Water



Waste



ISO 14001



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 [Basis of Reporting](#).

Energy

Energy Consumption (Terajoules)	2019	2020	2021	2022
Fossil fuels purchased and consumed	5,957	5,525	5,789	5,662
Electricity (non-renewable) purchased	2,741	2,500	2,389	2,236
Steam / heating / cooling and other energy (non-renewable) purchased	72	64	47	36
Total renewable energy purchased or generated	1,380	1,561	1,686	1,765
- Total renewable electricity purchased or generated	518	722	841	853
- Total renewable energy purchased or generated excluding electricity	862	840	846	912
Total energy sold	-0.005	-0.004	-0.007	-1.080
Total	10,151	9,650	9,912	9,697

Energy Consumption Breakdown (Terajoules)	2019	2020	2021	2022
Non-renewable fuel consumed	5,950	5,525	5,789	5,662
Renewable fuel consumed	860	838	844	910
Electricity, heating, cooling and steam purchased for consumption	3,321	3,271	3,248	3,063
Self-generated electricity, heating, cooling and steam	19	16	31	64
Electricity, heating, cooling and steam sold	-0.005	-0.004	-0.007	-1.080
Total	10,151	9,650	9,912	9,697

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

GHG

GHG emissions (1,000 tons CO ₂ e)	2019	2020	2021	2022
CO ₂	344	314	328	317
HFCs	25	25	24	23
Total (Scope 1)	368	339	351	340
Scope 2	367	318	296	277
Total (Scope 1 + 2)	735	657	647	617
Purchased goods and services	7,793	6,298	5,958	6,960
Direct leaf supply	1,854	1,530	1,776	1,702
Third-party tobacco materials	3,970	2,823	2,318	3,319
- Others	1,970	1,945	1,864	1,940
Capital goods	393	322	311	265
Fuel-and-energy-related activities (not included in Scope 1 or 2)	153	149	156	145
Upstream transportation and distribution	398	375	382	385
Waste generated in operations	18	15	14	11
Business travel	223	65	51	63
Employee commuting	54	50	45	57

GHG emissions (1,000 tons CO ₂ e)	2019	2020	2021	2022
Upstream leased assets	1	0	0	1
Downstream transportation and distribution	289	302	294	252
Processing of sold products	1	1	1	1
Use of sold products	13	16	24	25
End of life treatment of sold products	78	90	87	95
Downstream leased assets	1	1	0	0
Franchises	5	5	6	7
Total (Scope 3)	9,420	7,690	7,331	8,269

Out of scope emissions (1,000 tons CO ₂ e)	2019	2020	2021	2022
Direct CO ₂ emissions from the combustion of biomass	100	100	101	111
Indirect CO ₂ emissions from the combustion of biomass	0.2	0.1	0.2	0.2
Biogenic CO ₂ emissions generated elsewhere in the value chain	484	468	483	489
Total (biogenic)	584	569	584	600

Water

Water withdrawal by source (1,000 m³)	2015	2016	2017	2018	2019	2020	2021	2022
Fresh surface water	1,398	1,575	1,466	1,570	1,631	1,712	1,783	1,937
Brackish surface water/seawater	0	0	0	0	0	0	0	0
Rainwater	59	60	66	58	41	31	29	1
Groundwater	5,535	5,653	5,493	5,610	5,652	5,485	5,112	4,718
Produced/process water	0	0	0	0	0	0	0	0
Municipal supply	3,574	3,289	3,272	3,246	2,881	2,791	2,780	2,632
Wastewater from another organization	0	0	0	0	0	0	0	0
Total	10,567	10,576	10,297	10,485	10,206	10,019	9,705	9,289

Water discharge by destination (1,000 m³)	2015	2016	2017	2018	2019	2020	2021	2022
Fresh surface water	2,425	2,414	2,599	2,744	2,907	2,842	2,692	2,566
Brackish surface water/seawater	0	0	3	18	19	6	6	0
Groundwater	1	2	1	0	8	12	12	6
Municipal/industrial treatment plant	3,504	3,259	3,111	3,112	2,772	2,767	2,765	2,682
Wastewater from another organization	0	0	0	0	0	0	0	0
Total	5,930	5,675	5,715	5,875	5,707	5,626	5,475	5,253

Waste

Waste generation (1,000 tons)	2015	2016	2017	2018	2019	2020	2021	2022
Recycled including waste composted	91	94	93	93	96	93	94	90
Incinerated with heat recovery	16	15	14	14	14	11	9	8
Incinerated without heat recovery	6	6	6	7	5	5	6	6
Landfilled	18	18	18	19	16	17	15	12
Total	131	132	131	133	131	126	123	116

Packaging

Reusable & Recyclable Packaging Weight breakdown (1,000 tons)	2021	2022
Reusable & Recyclable Packaging Weight	209	202
Non Reusable & Recyclable Packaging Weight	31	35
Total	240	238

[tobacco business] Packaging Recycled Content breakdown (1,000 tons)	2021	2022
Recycled Materials Weight	31	36
Non Recycled Materials Weight	166	162
Total	197	197

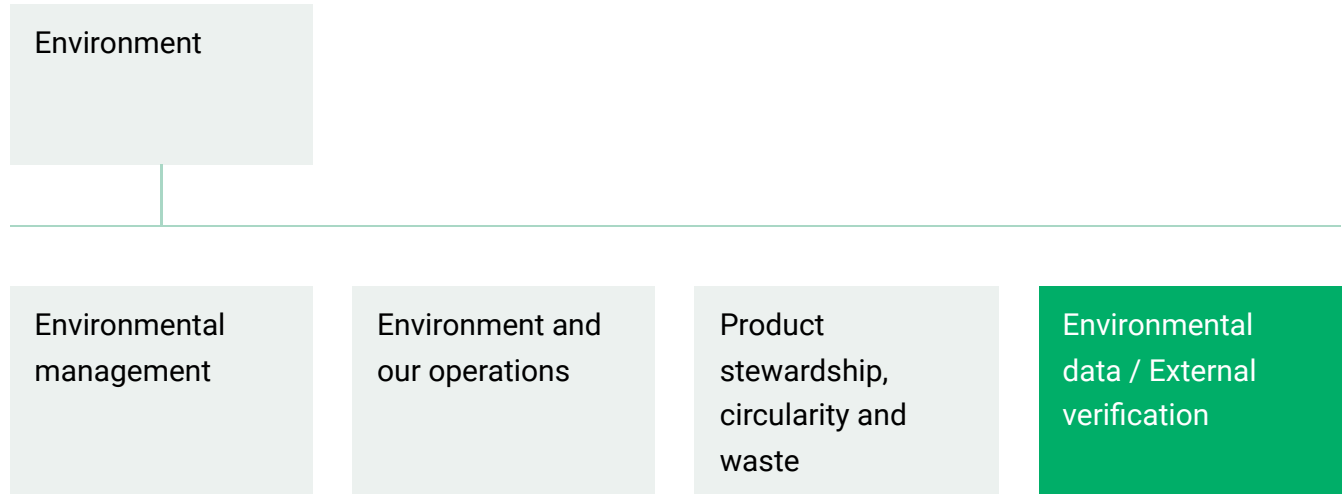
Packaging composition	2021	2022
Reusable or Recyclable Packaging (%)	87%	85%
Recycled Content (%) [tobacco business]	16%	18%

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

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

Related links

Environment



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graph TD; A[Environment] --- B[Environmental management]; A --- C[Environment and our operations]; A --- D[Product stewardship, circularity and waste]; A --- E[Environmental data / External verification];
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Environmental
management

Environment and
our operations

Product
stewardship,
circularity and
waste

Environmental
data / External
verification

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