Integrated Disclosure Based on the TCFD and TNFD Recommendations

July 2024
ITO EN, LTD.

Contents

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[Approach]

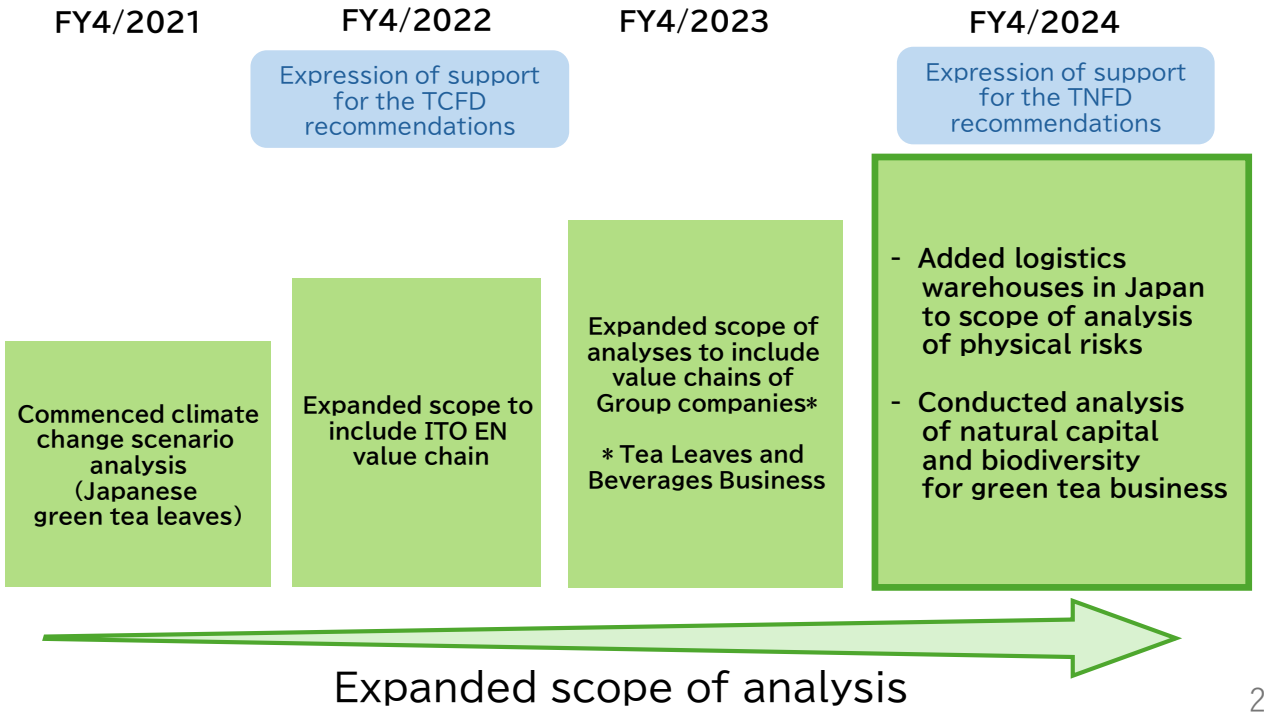
The ITO EN Group believes that, as a company whose operations are centered on naturally derived products, protecting the global environment shared by all humans and passing it on to the next generation is one of its most important tasks. In 2023, it was said from global warming to global boiling. In 2023, it was said that the world shifted from global warming to global boiling. The temperature is increasing and extreme weather is occurring around the world. Natural disasters such as heat waves, droughts and floods occur and biodiversity is being lost at an unprecedented speed.We believe that it is essential to work to address climate change and conserve and restore natural capital and biodiversity to ensure that we can continue to enjoy the blessings of nature in the future.

[Expansion of Scope of Analyses]

In FY2020, we began analyzing the impact of climate change on Japanese green tea leaves, our main raw ingredient, and we expanded the scope of these scenario-based analyses to include the entire ITO EN value chain in FY2021, Group companies involved in tea leaves and beverages business in FY2022, and our logistics warehouses and those of outsourcing partners in Japan in FY2023.
In addition, we understand that an integrated approach is necessary, given that climate change and issues regarding natural capital and biodiversity are closely interlinked. Meanwhile, since measures to address climate change may conflict with measures regarding natural capital or biodiversity, we will make comprehensive decisions to implement appropriate actions. In its first efforts to disclose nature-related information for FY2024, the Group referenced the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations version 1.0, set priorities in consideration of importance of the Group's business and carried out analyses regarding its green tea business from the perspective of natural capital and biodiversity.

We will continue to analyze risks and opportunities from the perspective of the relationships between climate change and natural capital or biodiversity and work on integrated measures to increase the sustainability of the ITO EN Group's business and society. The ITO EN Group stated its support for the Task Force on Climate-related Finanand for the TNFD recommendations cial Disclosures (TCFD) recommendations in April 2022 in April 2024. It also participates in the TNFD Forum.*
In accordance with both the TCFD and TNFD recommendations, we will continue to expand the scope of the information we disclose and enhance our analyses.

* TNFD Forum : A group of stakeholders who support the TNFD's discussions.
The group is composed of companies, institutions and organizations aligned with the philosophy of the TNFD.



Integrated Disclosure Based on the TCFD and TNFD Recommendations

The ITO EN Group is analyzing the risks and opportunities related to climate change and to natural capital and biodiversity based on the following approach and is also working on integrated measures with a view to increasing the sustainability of its business activities and creating a more sustainable society.

Scope of analyses

The analyses focus on the ITO EN Group's tea leaves and beverages business, which accounts for more than 90% of consolidated net sales.
(Food and drink-related business is not included in the scope of the analyses.)

Identify and define range of scenarios

To prepare for a wide range of climate change scenarios, we established two scenarios: the 1.5/2°C scenario in which society as a whole transforms, shifting toward decarbonization, and succeeds in curbing the rise in temperature and the 4°C scenario in which society prioritizes economic growth, temperatures continue to rise and impacts continue to worsen. We referred to IPCC RCP2.6 and IEA NZE/SDS for the 1.5/2°C scenario and IPCC RCP8.5 and IEA STEPS for the 4°C scenario.
* For some analyses, we referred to IPCC RCP 4.5 and RCP 6.0.
Since there are currently almost no globally agreed-upon scenarios for natural capital and biodiversity, we identified dependencies and impacts using the LEAP approach.

Identification of key risks and opportunities

Based on the categories for risks and opportunities identified in the TCFD recommendations, we broadly listed risks and opportunities associated with climate change for the entire value chain, based on various assumptions regarding the society surrounding the Group's business environment.

We also conducted an assessment of the importance of risks and opportunities with consideration for the likelihood of occurrence, the level of impact, and the structure of the Group's business.

Evaluation of financial effects

We evaluated risks and opportunities extracted across the entire value chain based on the evaluation criteria "time horizons " i.e. when the risk or opportunity is likely to materialize and "magnitude" i.e. impact on our business, assuming the 1.5/2°C scenario and the 4°C scenario respectively.

Time horizons

For the time horizons i.e. when the risk or opportunity is likely to materialize, TCFD uses the following time horizons: short-term: the present day to FY2024; medium-term: FY2025–FY2030; and long-term: FY2031 to FY2050.When conducting more in-depth analyses for TNFD in the future, we will consider using the same time horizons for TNFD as for TCFD.

Magnitude

The level of impact on our business in the event of materialization of the risk or opportunity is rated on a three-point scale of major, medium and minor.

Major: Has a significant impact on business operations and requires a response to issues that are already apparent, or in readiness for issues that may become apparent in the future.

Medium: Does not have a significant impact on business operations, but requires a response to issues that are already apparent, or in readiness for issues that may become apparent in the future.

Minor: Has no impact or a limited impact on business operations and a response to issues that are already apparent or in readiness for issues that may become apparent in the future is not required or low priority.

In implementing these scenario analyses, subcommittees linked to the Sustainability Promotion Committee and other related departments within the company also participated in considering the impacts, and the analysis results were reported to and discussed by the Sustainability Promotion Committee, Executive Board and Board of Directors, and reflected in the Group's medium-term management plan and management strategies.

Governance

[Board's oversight and management role]

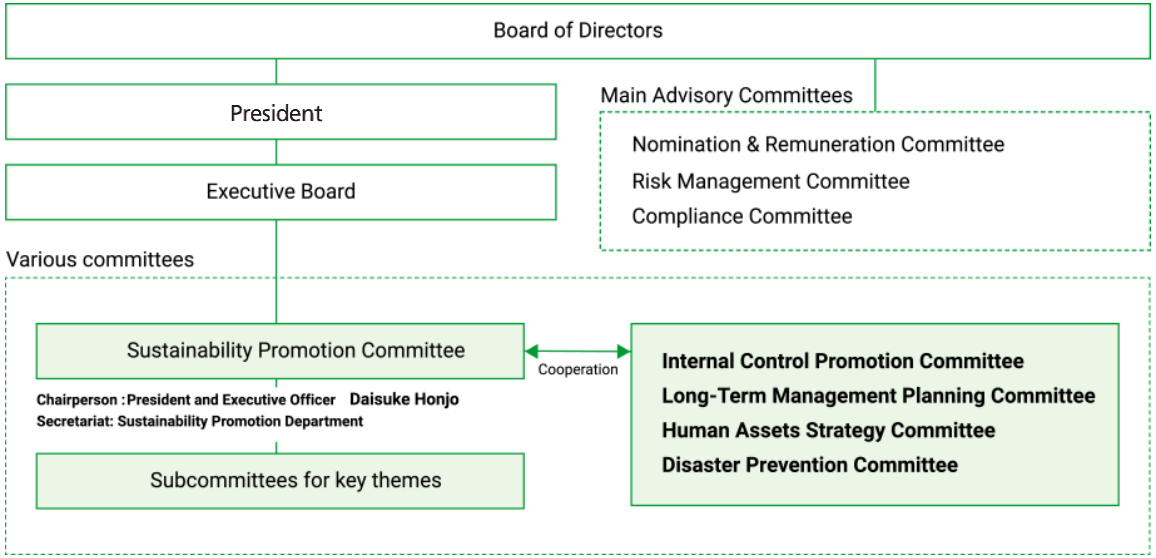
The ITO EN Group recognizes that sustainability issues are important management issues that lead to risk mitigation and revenue opportunities from the perspective of improving corporate value over the medium and long term, and has established the Sustainability Promotion Committee to promote and strengthen sustainability management. The committee meets four times a year.
Chaired by the President and Executive Officer, the committee consists of the Chief Sustainability Officer (CSO), the Chief Human Resource Officer (CHRO), officers responsible for production and logistics, marketing, sales, global business and corporate administration, the general managers of key departments, and the Representative Directors of Group companies. The committee has established and operates a sustainability promotion structure, identifies and reviews material sustainability issues, and considers measures, policies and other matters related to social and environmental issues.

Additionally, the committee establishes subcommittees to consider important themes in more detail. Climate change is one such issue. The CSO, who is responsible for sustainability issues, especially environmental issues such as climate change, plays a central role in the Environmental Subcommittee, established as a subcommittee dedicated to a specific theme. The Environmental Subcommittee considers countermeasures and medium-to-long-term measures and reports its findings to the Sustainability Promotion Committee. It also checks the status of implementation and monitoring of climate-related targets and other KPIs (short-term and medium-to-long-term targets) and the ISO 14001 PDCA cycle, and holds discussions on the identification and evaluation of risks and opportunities that help formulate policies and targets.

Important matters considered at the Sustainability Promotion Committee are reported to and deliberated at meetings of the Executive Board and the Board of Directors attended by the President and Executive Officer as a member. They are also shared with the Long-term Management Plan Committee, which formulates and revises medium- and long-term management plans, and are reflected in business strategies in the medium-term management plan, etc.

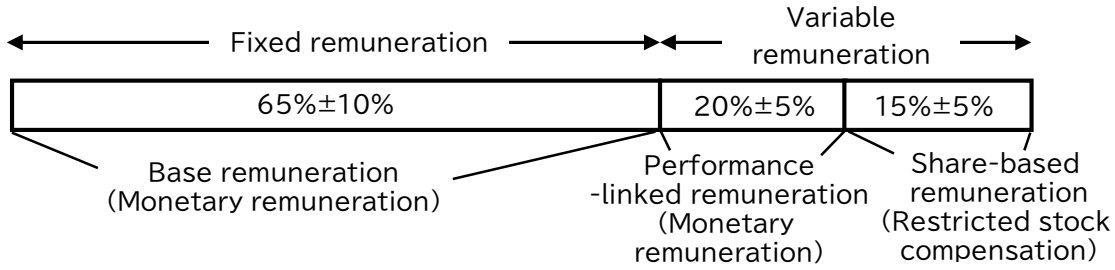
Since important environmental issues such as these are also closely connected with human rights issues, the Chief Human Resource Officer (CHRO) has assumed responsibility for establishing a structure for human rights initiatives. In particular, we carry out human rights due diligence activities for indigenous peoples, local communities and other vulnerable stakeholders and suppliers in accordance with the ITO EN Group Human Rights Policy and the ITO EN Group Fundamental Supplier Policy.
Human rights issues are discussed at meetings of the Risk Management Committee (chaired by the President and Executive Officer), which is an advisory body to the Board of Directors, and reported to and deliberated by the Board of Directors.

■Board's oversight and management role



[Directors' Remuneration]

The remuneration for Directors (excluding Outside Directors and Directors who are Audit and Supervisory Committee members) consists of fixed remuneration and variable remuneration. The performance-linked remuneration part is determined based on a consideration of ratings by ESG rating agencies of our policies, targets and strategies related to climate change and other matters and their achievement.
The inclusion of ratings by ESG rating agencies as a criterion for the evaluation of Directors' remuneration is expected to increase the commitment of the Board of Directors and other managers to sustainability management, including ESG, and to improve our corporate value and make our business more sustainable.



Risk and Impact Management

[Risk Management Structure]

The ITO EN Group defines risks as events that may affect the purpose of corporate management. We work to maintain business continuity and safeguard assets, earn the trust of stakeholders, ensure the safety of officers, employees and their families, and maintain and improve corporate value by comprehensively and strategically managing and appropriately handling risks that impede the achievement of objectives from a holistic perspective based on the ITO EN Group Risk Management Policy.

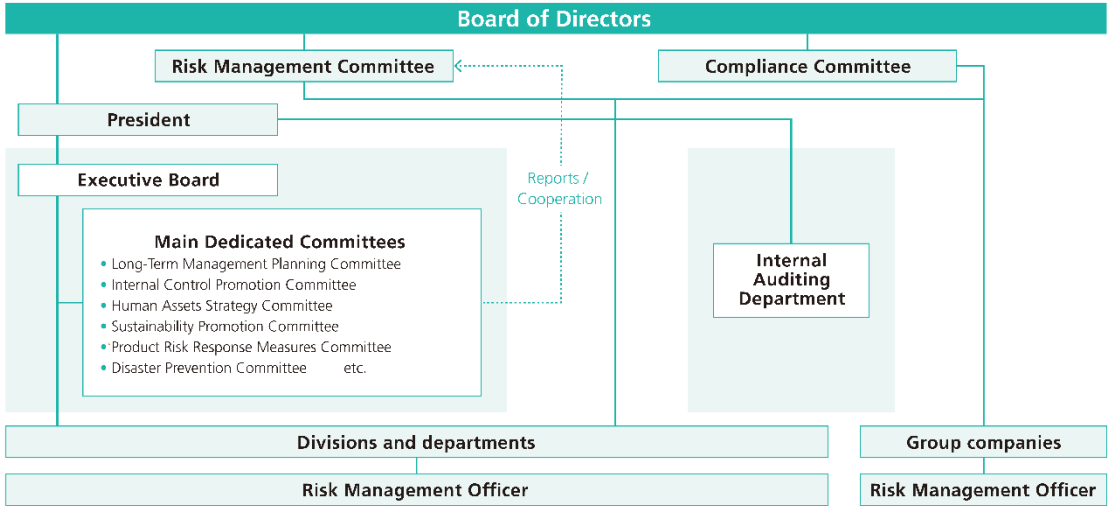
We have established a Risk Management Committee, chaired by the President and Executive Officer, as an advisory body to the Board of Directors. In cooperation with departments and committees, the Risk Management Committee identifies and evaluates risks and builds organisation's overall risk management structure for taking appropriate countermeasures.

In addition, the committees by area of risk, including compliance, sustainability, quality management and disaster control, collaborate with each other by addressing risks based on their individual roles and functions and by sharing risk information and the status of the handling of risks with the Risk Management Committee. Moreover, the Risk Management Committee also discusses the handling of human rights risks in the supply chain.

We also recognize climate change risks and natural capital and biodiversity risks as important issues and manage them by integrating them organisation's overall risk management structure. Risks within the context of climate change scenario analysis and natural capital and biodiversity risks are considered by the Sustainability Promotion Committee (which meets four times a year) and reported to the Executive Board and the Board of Directors. Material risks from the viewpoint of the level of their impact and frequency of occurrence are also reported to the Risk Management Committee.

The Risk Management Committee confirms the progress and effectiveness of measures to address key risks, and works to enhance organisation's overall risk management by continual verification and improvement every fiscal year.

Risk management system chart



[Risk Assessment]

We assess the importance of risks by producing a risk map with "magnitude" and "time horizons" as the two axes.

"Magnitude" and "time horizons" are each classified into 5 levels; for example, a risk with an estimated frequency of "less than once in 10 years" is given the lowest score of "1" (very unlikely); one with an estimated frequency of "approximately once in 10 years" is given a "2" (unlikely); one with an estimated frequency of "approximately once in 3 years" is given a "3" (possible); one with an estimated frequency of "approximately once a year" is given a "4" (likely); and one with an estimated frequency of approximately 4 times a year" is given the highest score of "5" (very likely).

For level of financial impact, impact amounting to 1% of net sales or more is used as a guide. However, in the case of risks that cannot be understood in terms of financial impact alone, for example, the number of employees exposed to the physical risks of climate change, the level of impact is judged based on the number of employees and the number of business sites impacted.

Strategy

The ITO EN Group has conducted scenario analysis based on the TCFD recommendations, with an ever-increasing scope, every year since FY2020. Through this, we have identified key climate risks and opportunities that will impact our business activities, considered countermeasures and stepped up initiatives. The scope and methods of analysis are described in Integrated Disclosure Based on the TCFD and TNFD Recommendations (P3).

We began conducting scenario analysis for the cultivation of green tea, our main raw material, in FY2020, and confirmed impacts such as changes in tea leaf harvest volume and areas suitable for cultivation as chronic physical risks under the 4℃ scenario (P9).

In terms of acute physical risks, analysis using the Aqueduct tools (*1) confirmed that, in several tea production areas, there is the risk of soil erosion and other damage due to flooding and the risk of water scarcity (P11).

Starting from FY2023, we conducted a LEAP analysis of tea leaf cultivation, based on the abovementioned climate change scenario analysis results and with reference to TNFD v1.0. Using the LEAP approach, we selected key production areas and conducted an environmental analysis of tea plantations and the surrounding areas using the IBAT (*2) and water risk analysis of tea plantations using the Aqueduct tools (P14). As result, areas of importance for the conservation of biodiversity were identified near some tea plantations.

We also identified dependencies on and potential impacts on natural capital and biodiversity in tea leaf cultivation (P15). It is generally held that excessive use of chemical fertilizers and chemical pesticides could lead to soil degradation due to leaching and also to increased GHG emissions. Natural capital and biodiversity are closely linked to action to adapt to and mitigate climate change in tea leaf cultivation, and we recognize that an integrated approach is required.

Going forward, we will gather information and hold discussions with experts with a view to further integration. We will seek to increase the scope of analysis both in breadth and depth, and consider establishing risk management methods, KPIs, etc.

Expansion in the scope of analysis

		FY2020	FY2021	FY2022	FY2023
TCFD (Climate Change Scenario Analysis)	(Transition risks)	Identification of transition risks for entire value chain, cost impact in the event of introduction of carbon tax			
	(Physical risks) Impacts on harvest volume and quality, determination of financial impact	Green tea*3	Green tea, barley, coffee*3		
	(Physical risks) Impacts of water scarcity and flooding, determination of financial impact		Our own factories and those of our main outsourcing partner companies	Factories of Group companies and factories of main outsourcing partner companies	Our own warehouses and those of our outsourcing partner companies
				Green tea, barley, coffee	
TNFD	Identification of dependencies and impacts on nature				Green tea cultivation process

*1 Aqueduct tools:
A world map and information on water risks provided by the World Resources Institute (WRI). Water risk indicators include physical water stress, water quality, legal and regulatory risks relating to water resources, and reputation risks.

*2 IBAT:
Integrated Biodiversity Assessment Tool developed by The UN Environment Programme World Conservation Monitoring Centre(UNEP-WCMC)

*3 Green tea:
In FY2020, we went ahead with an analysis of the impacts on the harvest volumes and quality of green tea, our main raw material. Next, in FY2021, we expanded the scope to include barley and coffee, which are our main raw materials after green tea, and determined the financial impact for green tea, barley and coffee.

Climate Change Scenario Analysis and Analysis Relating to Natural Capital and Biodiversity

For the 1.5/2°C scenario in which society as a whole transforms and succeeds in curbing the rise in temperature, we analyzed transition risks and opportunities assuming completion of a shift toward a decarbonized society. On the other hand, our analysis for the 4°C scenario, in which society prioritizes economic growth, temperatures continue to rise and impacts continue to worsen, focused on physical risks and opportunities.

In addition, given that there are currently almost no internationally agreed-upon scenarios for natural capital and biodiversity, we positioned previously disclosed impacts of physical risks on crops and flooding and water scarcity as risks related to both climate change and natural capital.

Identify and define range of scenarios		Identification of key risks and opportunities		Evaluation of financial effects				Countermeasures	Reference pages
Scenario	Assumed scenario	Risk/ Opportunity	Details	Impact on us		Time horizons	Magnitude	Countermeasures	Reference pages
1.5°C/2°C scenarios	Scenario in which society as a whole transforms, shifting toward decarbonization, and succeeds in curbing the rise in temperatures - The tightening of decarbonization regulation including the introduction of carbon tax accelerates, and in the long term, both temperature increases and damage to the natural environment are kept under control. - However, a shift towards decarbonization-based management across the entire value chain is required, and higher energy costs, production costs and other costs are expected. - Ethical consumption will become more widespread amid increased consumer environmental awareness. By taking appropriate action, we could earn consumer support and tap into opportunities to create new sources of revenue.	Transition risks / Policies and regulations	Introduction of a carbon tax	Imposition of taxes on Scope 1 and 2 emissions from our own factories and business vehicles		Medium Long	Major	- Reduction of CO2 emissions based on Medium- to Long-term Environmental Goals [① 50% reduction in Scope 1+2 emissions that are subject to carbon tax by FY2030 (compared to FY2018) ② Fully carbon-neutral value chains by FY2050]	P8
			Stricter regulations on GHG emissions	Increased costs due to the introduction of recycled PET bottles, renewable electricity, and electric vehicles	Recycled PET bottles	Short Medium	Major	- Reduction of costs through shift to lightweight, label-free products, etc. - Stabilization of prices through expansion of bottle-to-bottle market	P21-23
					Renewable energy electricity			- Reduction of costs through promotion of renewable energy and introduction of own power generation facilities such as solar panels	
					Electric vehicles			- Reduction of costs through optimization of fleet size, implementation of eco-driving, etc.	
		Transition risks / Reputation	Change in consumers' behavior	Decline in sales due to customer attrition if the Group's response to ethical consumption, etc., is insufficient		Medium Long	Medium	- Development of environmentally friendly products and certified products - Promotion of decarbonization initiatives across the entire value chain	—
			Damage to reputation among investors, etc.	Decline in share prices and difficulty in raising funds due to a deterioration in reputation among investors as a result of inadequate response to climate change		Medium Long	Medium	- Promotion of decarbonization initiatives and increased dissemination of information (disclosure) across the entire value chain	—
		Opportunities / Products and services	Increasing demand for environmentally friendly products	Increase in sales through the creation of products and initiatives associated with a rise in consumer awareness of consideration for the environment		Medium	Medium	- Increased initiatives and strengthening and expansion of sales and marketing for environmentally friendly products and certified products	—
4°C scenario	Scenario in which society prioritizes economic growth, temperatures continue to rise and impacts continue to worsen - There is a much greater possibility of price increases due to low harvest volume or poor quality as a consequence of extreme weather events, etc., suspension of operations due to water scarcity, and business suspension or holdups as a result of more severe and more frequent natural disasters that affect sales bases or factories. - However, initiatives such as the development and use of climate change-resistant varieties, enhancement of BCP, and strengthening of beverages to prevent and combat heatstroke could also serve as opportunities to increase our competitiveness.	Physical risks / Chronic	Impact on crops	Increase in procurement costs due to decline in harvest volume and quality, as a result of rising temperatures	Green tea, barley, coffee	Medium	Major	- Development of new production areas, procurement from multiple production areas, sharing of risks with suppliers, and joint consideration and implementation of countermeasures	P9 P10
		Physical risks / Acute	Impact on crops	Increase in procurement costs due to decline in harvest volume and quality, as a result of water scarcity and flooding	Green tea, barley, coffee	Short Medium	Major	- Procurement from multiple production areas, sharing of risks with suppliers, and joint consideration and implementation of countermeasures	P11
			Changes in precipitation and weather patterns	Loss of sales opportunities as a result of factory shutdowns / suspension of operations due to drought		Medium	Medium	- Promotion of initiatives for water resources based on Medium- to Long-term Environmental Goals 16% reduction in water use intensity* by FY2030 *Usage per 1 kL of product produced(compared with FY2018) - Monitoring and management of water volume through periodic water level measurement - Securing of alternative water sources - Promotion of water source conservation activities	P16
			Intensification of storm and flood damage	Lost production, loss of assets, and incurrence of recovery costs as a result of factory shutdowns / suspension of operations at factories, offices and warehouses due to storm and flood damage	Lost production due to suspension of operations	Short Medium	Major	- Monitoring of water risks, sharing risks with suppliers, and joint consideration and implementation of countermeasures - Implementation of heavy rainfall countermeasures and water proofing (provision of waterproof equipment and waterproof walls, raising of buildings and facilities, etc.) - Sharing of BCP countermeasures, hazard maps and areas at risk of flooding, and implementation of disaster drills(Focus on strengthening high risk bases)	
					Loss of own products, increased recovery costs				
		Opportunities / Products and services	Increased demand due to environmental changes	Increase in sales opportunities for beverages to prevent heat stroke and products with functional claims, due to extreme heat and rising average temperatures		Medium	Medium	- Expansion of sales of products to combat heatstroke and products with functional claims	—
Analysis based on LEAP approach * Non-scenario analysis		Physical risks (chronic)	Impact on crops	Understanding of dependencies and impacts on natural capital and biodiversity	Green tea cultivation	Medium Long	Major	- Promotion of environmentally friendly farming (regenerative agriculture) - Use of commercial farming management tools for more sophisticated and efficient management of fertilizer application and pest control - Use of system for more sophisticated and efficient determination of compliance with pesticide regulatory requirements	P12-P15 P24-P27

Strategy ➪ Transition Risks

Cost impact of introduction of carbon tax

We calculated the impact based on the assumption of the introduction of carbon tax and the incurrence of costs due to taxes paid according to Scope 1 and Scope 2 GHG emissions.

Assuming the carbon tax price is 140 dollars per ton of CO2 in 2030 and 250 dollars per ton of CO2 in 2050 (*) and assuming no countermeasures are taken against base year (FY2018) emissions, carbon tax is expected to amount to 1.42 billion yen in FY2030 and 2.54 billion yen in FY2050.

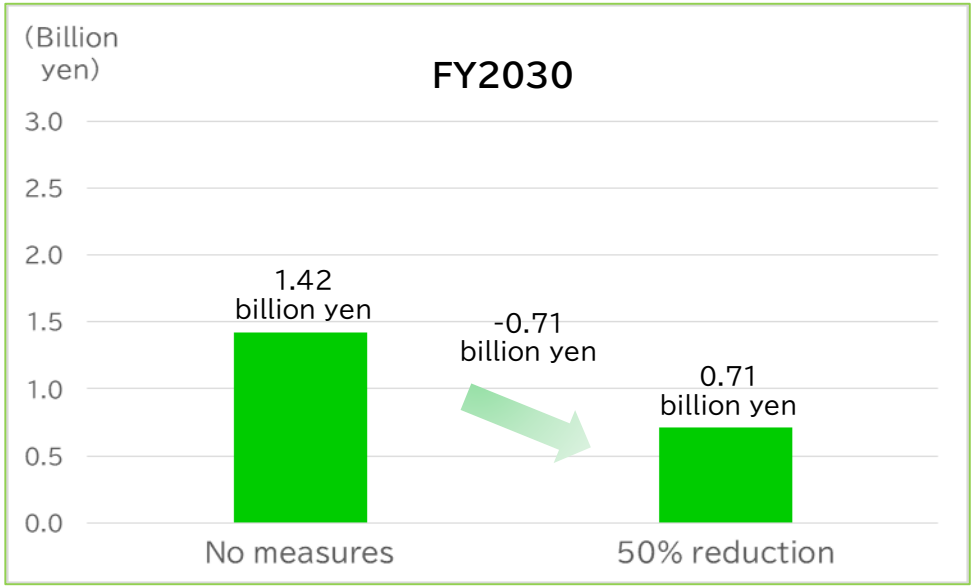
The ITO EN Group aims to achieve a 50% reduction in its Scope 1 and Scope 2 emissions by FY2030 and to achieve carbon neutrality by FY2050. We are implementing a range of initiatives to achieve these goals, including introducing renewable energy, introducing energy-saving equipment, and switching our commercial fleet over to electric vehicles. If these measures achieve these goals, we expect to see tax savings of approximately 0.71 billion yen in FY2030 and approximately 2.54 billion yen in FY2050.

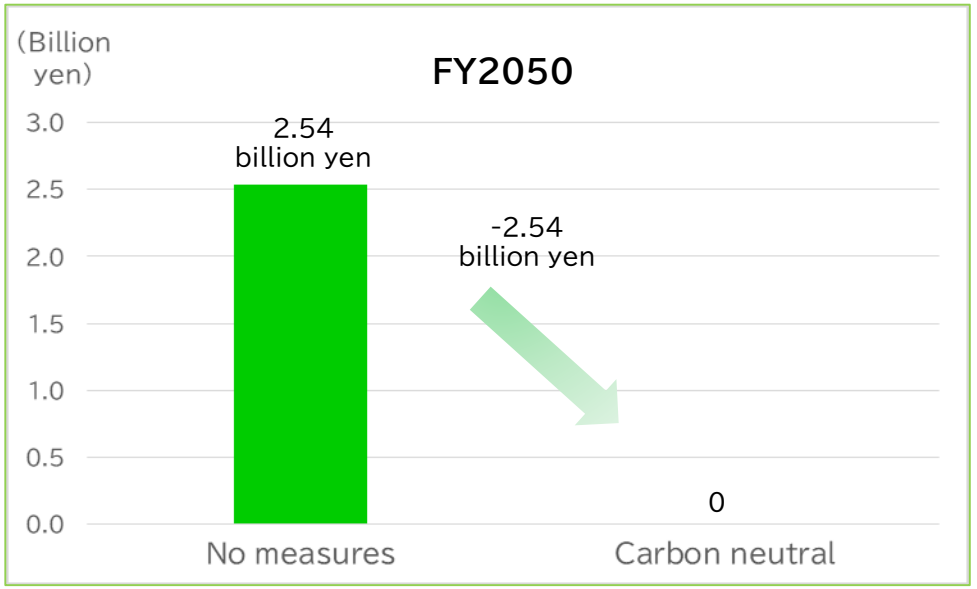
* Carbon tax price (price per t-CO2): Estimated from the unit price forecast of developed countries in the IEA World Energy Outlook 2022 NZE scenario.
* Scope of estimation of carbon tax: Estimated impact of carbon taxes based on Scope 1 and Scope 2 emissions of ITO EN, Ltd. and its consolidated subsidiaries ITO EN SANGYO, LTD., Tully's Coffee Japan Co., Ltd., and Chichiyasu Company.

Estimated financial impact of carbon tax in FY2023

Scope 1 & 2	FY2030			FY2050		
	GHG emissions (thousand t-CO2)	Carbon tax (Thousand yen/t-CO2)	Impact (Billion yen)	GHG emissions (thousand t-CO2)	Carbon tax (Thousand yen/t-CO2)	Impact (Billion yen)
When no measures are taken to reduce GHG (FY2018 emissions)	72.5	19.6	1.42	72.5	35	2.54
When GHG reduction targets are achieved	36.3	19.6	0.71	-	35	-
Difference if goal is achieved	-	-	-0.71	-	-	-2.54

Carbon tax impact with and without response measures





Strategy ➪ Physical Risks (Chronic): Impact on Crops

1. Impact of climate change on green tea

(1) Impact on tea leaf harvest volume

ITO EN uses approximately one quarter of Japan's crude tea production, and we recognize the impact that climate change is having on harvest volume in tea leaf production areas.

Accordingly, in FY2020, we used the Aqua Crop model*1 to conduct quantitative and qualitative analyses of impact on tea leaf harvest volume and quality under the conditions of each scenario in some domestic tea-producing regions (Kyushu region and Shizuoka Prefecture) by tea tree variety and tea picking season.

The results varied according to the production area but confirmed that, under both the RCP4.5 and RCP8.5 scenarios, tea leaf harvest volume would increase significantly. However, qualitative analysis based on research papers and other literature also confirmed that various diseases and pests could move north and adversely impact the growth and quality of tea plants.

RCP scenario*2		【RCP 2.6】	【RCP 4.5】	【RCP 6.0】	【RCP 8.5】
Maximum temperature increase value*3		+1.7℃	+2.6℃	+3.1℃	+4.8℃
Change in average harvest volume (%)	Soo District of Kagoshima Prefecture	+7.4%	+23.3%	+36.4%	+54.4%
	Fukuroi District of Shizuoka Prefecture	+4.2%	+14.5%	+29.7%	+41.2%
	Fuji District of Shizuoka Prefecture	+7.2%	+22.8%	+35.4%	+51.7%

*1 A produce growth model developed by the Food and Agriculture Organization of the United Nations (FAO) to evaluate the impact of climate, soil and other environmental conditions and cultivation management conditions on productivity for agricultural produce.
*2 Representative Concentration Pathway scenarios from the Fifth Report (AR5) by the Intergovernmental Panel on Climate Change (IPCC). The scenarios predict climatic conditions and their impact at the end of the century based on greenhouse gas concentrations.
RCP 8.5: high-level reference scenario. Scenario in which greenhouse gas emissions are at their maximum level in 2100.
(Temperature levels rise by a maximum of 4.8°C by 2100 with respect to average temperatures between 1986 and 2005.)
RCP 6.0: high-level stabilization scenario. Radiative forcing of 6.0W/m3 by the end of the century.
(Temperature levels rise by a maximum of 3.1°C by 2100.)
RCP 4.5: intermediate stabilization scenario. Radiative forcing of 4.5W/m3 by the end of the century.
(Temperature levels rise by a maximum of 2.6°C by 2100.)
RCP 2.6: low-level stabilization scenario. Scenario in which greenhouse gas emissions are at their minimum level in the future.
(Temperature levels rise by a maximum of 1.7°C by 2100.)
*3 Reference period: 1986–2005

* Reference literature
・Project 'Technology development for circulatory food production systems responsive to climate change' published by Agriculture, Forestry and Fisheries Research Council Secretariat of the Ministry of Agriculture, Forestry and Fisheries, Japan (2016)
・FY2019 Regional Adaptation Consortium Kanto Regional Project Commissioned Business Report published by Pacific Consultants Co., Ltd. (2020)

(2) Impact on areas suitable for cultivation

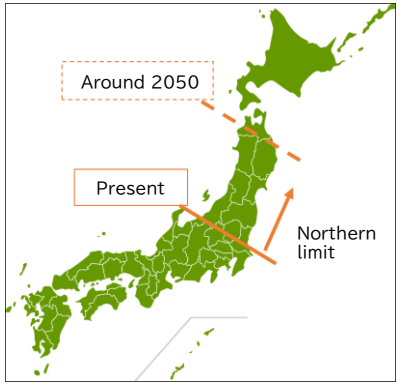
In FY2021, we further deepened the level of our qualitative analysis of the impact of climate change on tea growth based on research papers and other literature.

As a result, it is considered possible that a shortage of the number of cold days required for breaking dormancy may occur in the Kyushu and Okinawa regions, and that the harvest volume of the first flush tea may decrease in those areas. In addition, in the Shizuoka and Kanto regions, the first tea picking season is predicted to begin earlier, and if this change is not handled appropriately it may lead to a decrease in harvest volume.

Although the impact of high temperature and little rain in summer on tea trees needs to be investigated in detail in the future, there have been cases in the past where defoliation and leaf blight caused by drought has led to a poor harvest of the first flush tea the following year and future climate change may have a similar impact.

Under the 4°C scenario, we consider that the northern limit of suitable areas for green tea cultivation may rise to some parts of the Tohoku region by around 2050.

Rise in the northern limit of areas suitable for tea cultivation



Reference: Created by ITO EN based on information from the Climate Change Adaptation Information Platform (A-PLAT)

We will stabilize the procurement of raw materials through countermeasures such as the Tea-Producing Region Development Project (new tea farms business), which expands production areas by turning abandoned farmland into tea plantations. (For details of the Tea-Producing Region Development Project, see P13.) We will also focus on measures to combat climate change such as testing the effects of spraying Biochar, with the aim of reducing GHG emissions from tea plantations.

* Reference literature
・High precision classification of tea cultivation areas and simulation of effects of global warming
・Naomi Mizuno, NARO Institute of Vegetable and Tea Science (2002)

Strategy ➪ Physical Risks (Chronic): Impact on Crops

2. Impacts on barley and coffee beans

We conducted a risk analysis of the yield forecast, impact amount, and impact on quality of coffee beans and barley, which are some of the Group's other main raw ingredient crops.

As a result, forecasts of coffee bean harvest volumes for 2030 and 2050 in the main coffee bean production areas in Brazil under the RCP4.5 and RCP8.5 scenarios showed that there is a possibility of a significant decrease in yield, especially under the 4°C scenario.

Forecasts for barley showed that, while there will likely be no impact in 2030, harvest volumes in 2050 may be significantly lower, especially under the 4°C scenario.

In response to such recognized risks, we have diversified risk through procurement from multiple production areas, shared risks with suppliers, and also collaborated with them to consider and implement countermeasures.

Forecasts of changes in harvest volumes of coffee beans and barley

	2030		2050	
	1.5/2℃	4℃	1.5/2℃	4℃
Coffee beans	-0.4%	-5%	-4.7%	-9.5%
Barley	-	-	-2.6%	-13.5%

＊Reference literature for coffee beans
Tavares, P.d.S., Giarolla, A., Chou, S.C. et al. Climate change impact on the potential yield of Arabica coffee in southeast Brazil. Reg Environ Change 18, 873–883 (2018).:Rate of decrease in harvest volume

＊Reference literature for barley
・FAO STAT (database of the Food and Agriculture Organization of the United Nations): Average yield by country over the past 15 years
・Xie, W., Cui, Q., Ali, T. The Economic Impacts of Climate Change on Grain Production and Policy Implications: A CGE Model Analysis. In: Okuyama, Y., Rose, A. (eds) Advances in Spatial and Economic Modeling of Disaster Impacts. Advances in Spatial Science. Springer, Cham., 359–373 (2019) : Forecast of changes in harvest volumes of barley

Strategy ➪ Physical Risks (Acute): Impact on Crops

3. Flood and drought impacts on green tea, barley and coffee beans

We used the World Resources Institute's Aqueduct tool to analyze the impacts of water risks (drought and flood risks) in areas that supply our main raw materials and crops (green tea, barley and coffee beans).

* Scenarios: SSP2 RCP4.5 and SSP3 RCP8.5

* Our assessment of overseas production areas for barley and coffee beans is based on the assumption of a given area as there is no clearly specified procurement site.

As a result of our analysis, we recognize risks as shown below.

<Drought risk>
Green tea: Risk is high in Shizuoka, Saitama and Australia
Barley: Risk exists in Canada and Australia, which are major production areas, with very high risk in certain regions

<Flood risk>
Coffee beans (arabica):In Brazil, which is the main production area, risk exists in certain regions. In Costa Rica (DLTC's coffee farms), no water risks were confirmed.

In response to such recognized risks, we have diversified risk through procurement from multiple production areas, shared risks with suppliers, and also collaborated with them to consider and implement countermeasures.

Drought risk

Water stress (ratio of water consumption to available water resources) of below 10% is considered low; 10-20% is considered low-to-medium; 20-40% is considered medium-to-high; 40-80% is considered high; and above 80% is considered extremely high.

	Asia	Oceania	America(North, Central, South)	Africa
Green tea	Japan (Shizuoka to Saitama) Generally high-to -extremely high Japan (central and northern Kyushu) Generally low-to-medium	Australia(Victoria) Generally high -to-especially high		
Barley		Western Australia Generally low-to-medium, high-to-extremely high in some areas South Australia Generally high-to -extremely high	Canada (Alberta/Saskatchewan) Generally low-to-medium, high-to-extremely high in some production areas	
Coffee beans (Arabica)			Brazil (Minas Gerais/ Sao Paulo) Generally low or low-to-medium Colombia (Huila District) Generally low Costa Rica (own plantation) Generally low, one part low-to-medium	Tanzania (Mt. Kilimanjaro area) Generally low, low-to-medium, medium-to-high
Coffee beans (Robusta)	Vietnam (Central Plateau/South) Generally low-to-medium, high in some areas			

Flood risk

Inundation depth between 0-0.5 meters is considered low, 0.5-1.0 meters is considered low-to-medium, 1.0-2.0 meters is considered medium-to-high, and 2.0-5.0 meters is considered high-to-extremely high risk.

	Asia	Oceania	America(North, Central, South)	Africa
Green tea	Japan (Shizuoka/Saitama/ Kyushu) Low	Australia (Victoria) Low		
Barley		Western Australia and South Australia Low Victoria Low	Canada (Alberta/Saskatchewan) Low	
Coffee beans (Arabica)			Brazil (Minas Gerais State / Sao Paulo State) Medium-to-high in some areas	Tanzania (Around Mt. Kilimanjaro) Low
			Colombia (Huila District) Low-to-medium in some areas Costa Rica (own plantation) Low	Ethiopia (Wollega/Borena region) Medium-to-high in some areas
Coffee beans (Robusta)	Vietnam (Central Plateau/South) Low-to-medium in some areas			

Strategy ➪ Response to TNFD Recommendations : LEAP Approach

TNFD (Natural capital and biodiversity)

In addition to analyzing the impacts of climate change on the raw materials of the ITO EN Group's main products, starting from FY2023, we used the LEAP approach, with reference to TNFD v1.0, to analyze the interfaces between the Group's business and natural capital and biodiversity.

1. Interfaces with natural capital and biodiversity

Scoping

The ITO EN Group uses around one quarter of Japan's crude tea production as raw material for its main products, and the sustainable production of green tea raw materials in Japan has a significant impact on business continuity.

In FY2023, in an analysis using the LEAP approach confined to the green tea business, which is important for the Group's business, we went as far as the LEAP E2 stage of identifying dependencies and impacts, completing the Locate stage of pinpointing regions where there are potential impacts on natural capital and biodiversity, and the Evaluate stage of evaluating interfaces with nature. We will continue with the LEAP approach, moving to the Assess stage assessing the identified dependencies and impact, the prioritization of them and the interfaces with nature and then to the Prepare stage of preparing response measures to continue the analysis. Furthermore, from FY2024 onwards, we will expand the scope of our analysis to include value chains for other important products besides green tea, and seek to expand disclosures based on the TNFD recommendations.

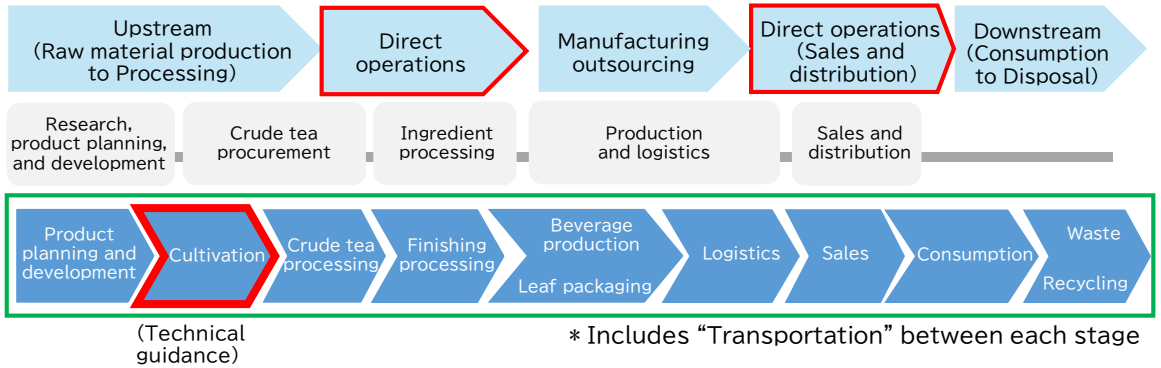
Locate: Interfaces with natural capital and biodiversity and screening

When performing screening of our interfaces with natural capital and biodiversity, we used the ENCORE* tool to confirm processes across the green tea business value chain in which nature-related dependencies and impacts are medium to high. This showed that the value chain process in which dependencies and impacts on natural capital and biodiversity are highest is the cultivation process.

Tea is grown mainly as a rain-fed crop, using some agricultural water during periods or in geographical areas where there is a limited amount of rain.

* ENCORE: A tool for the evaluation of dependencies and impacts in business processes highlighted in TNFD v1.0 guidance on the LEAP approach.

Value chain for the green tea business



In the value chain for the green tea business, ITO EN plans and develops green tea beverage products; tea farmers cultivate green tea and process crude tea, which is turned into a raw material through finishing processing at ITO EN's own factories; this raw material is then made into beverage products at the factories of outsourcing partners; the finished products are then made available to customers via distribution from ITO EN's own sales bases and distribution centers through sales channels such as vending machines, supermarkets and convenience stores. The value chain for green tea leaf products also includes the packaging of the tea leaf raw material following finishing processing before sale of the finished products to customers. We define the value chain for green tea as a value chain encompassing the disposal and recycling of empty containers and packaging after product consumption by customers.

The ITO EN Group's direct operations within this value chain are product planning and development, technical guidance to tea farmers and the finishing processing of the raw material, the sale of products (beverage and leaf products), and the collection of empty containers from collection boxes beside vending machines.

Results of analysis using ENCORE

	Cultivation	Transport -ation	Crude tea processing	Transport -ation	Finishing processing	Transport -ation	Product manufactu -ring	Transport -ation	Sales
Dependence	3.6	3.3	2.8	3.3	2.8	3.3	2.8	3.3	1.5
Impact	4.6	3.4	3.8	3.4	3.8	3.4	3.8	3.4	3.6
Total	8.2	6.8	6.6	6.8	6.6	6.8	6.6	6.8	5.1

* Average rating using rating scale of Very High: 5 points, High: 4 points, Medium: 3 points, Low: 2 points, and Very Low: 1 point
* ENCORE data as of September 2023 was used as a reference.

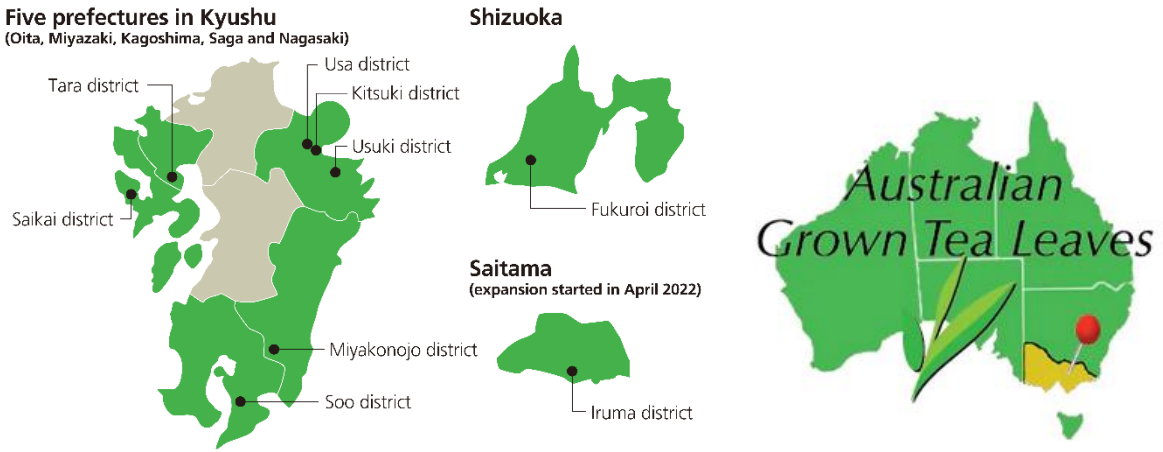
Strategy ➪ Response to TNFD Recommendations : LEAP Approach

Locate: Regions where interfaces with natural capital and biodiversity exist (1)

Based on the finding that green tea “cultivation” is the process where dependencies and impacts on natural capital and biodiversity are highest, we analyzed the status at our partner tea plantations.

The ITO EN Group procures green tea through (i) purchases from tea markets, and in the Tea-Producing Region Development Project, a unique tea production initiative, purchases from (ii) partner farmers and (iii) farmers in our new tea farms business. In the 9 areas in 7 prefectures marked on the map and in Australia, we are conducting (iii) the Tea-Producing Region Development Project (new tea farms business).

In our latest analysis, we decided to focus on (iii) tea plantations in the new tea farms business, in which we have the most interfaces with nature and are heavily involved. We also conducted analysis in the same way for a partner plantation in Australia, which is the only overseas plantation in the Tea-Producing Region Development Project.



Total of the Tea-Producing Region Development Project in FY4/2023: 2,437 ha (Of which, new tea farms: 500 ha or more)

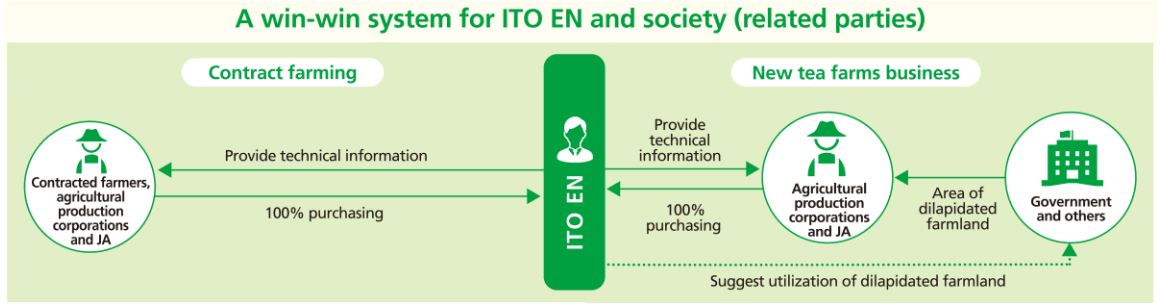
(Reference) The Tea-Producing Region Development Project

The Tea-Producing Region Development Project is a unique sustainable agricultural model. As a company deeply involved in agriculture, ITO EN launched the project in 1976 to achieve both the stable procurement of safe, secure and high-quality green tea raw materials and solutions to the issues facing Japanese agriculture.

This project consists of two different initiatives: contract farming, whereby we contract local tea farmers to produce the tea leaves used in our leaf products and beverage products and purchase all of the tea leaves produced; and the new tea farms business, which involves supporting the creation of large tea farms on previously abandoned farmland with initiatives taken by local business operators and in cooperation with local governments and comprehensively providing technology and knowhow about tea leaf production and buying all the tea leaves for beverages produced.

This project contributes to the stable procurement of safe, secure, high-quality green tea raw materials for the green tea that we use in our core products. It also helps resolve issues faced by local communities and Japan’s farming industry such as increased abandoned farmland and aging among tea producers, as well as laying the foundations for reduced use of pesticides, organic farming, and regenerative agriculture in response to requirements in overseas countries and climate change.

Prolonged abandonment of farmland could lead to lower plant species richness and increased forest cover, reducing overall biodiversity. As part of the Tea-Producing Region Development Project launched in 1976, we are turning abandoned farmland whose ecosystem is in decline into tea plantations.



Strategy ➪ Response to TNFD Recommendations : LEAP Approach

Locate: Regions where interfaces with natural capital and biodiversity exist (2)

Focusing on (iii) tea plantations in the new tea farms business, in which we have the most interfaces with nature and are heavily involved, we used the IBAT and Aqueduct tools to conduct an environmental analysis and water risk analysis of areas surrounding tea plantations. Since no major variance was observed in the results of analyses of main producers in Japan and Australia, we selected 5 tea farms in Kyushu, Shizuoka Prefecture, and Saitama Prefecture, and two tea farms in Australia as the subject of more in-depth analysis.

When selecting the tea farms, we took into consideration relationship with the Group, tea farm area, geographical characteristics, and regional bias.

As described on P11, we conducted water risk analysis for green tea production areas as part of climate change scenario analysis; however, this was a more detailed analysis which narrowed down the analyzed areas and tea farms from the viewpoint of protection and restoration of natural capital and biodiversity and which also included eutrophication as a criteria.

As a result of this analysis, we recognized interfaces with natural capital and biodiversity as follows.

<Environmental analysis of areas surrounding tea farms>
- The areas surrounding the analyzed tea farms include protected areas that are important for biodiversity.
- While most tea farms were not found to have direct geographical interfaces with protected areas, protected areas are located within 1 km of tea farm D in Japan and tea farms F and G in Australia.

<Water risk analysis>
- At tea farms in Japan, food and drought risks are medium to low.
- If fertilizer application is not properly managed, there is the risk that the geographical characteristics of the tea farms, for example, sloping land, could lead to nutrients being washed away, leading to eutrophication.

Environmental analysis of areas surrounding tea farms (areas within 1 km radius) using the IBAT tool

Farmers	Protected area	Area important for biodiversity	World Heritage	Zero Extinction area
① Tea farm A (Saitama Prefecture)	–	–	–	–
② Tea Farm B (Shizuoka Prefecture)	–	–	–	–
③ Tea Farm C (Oita Prefecture)	–	–	–	–
④ Tea Farm D (Kagoshima Prefecture)	4 areas	–	1 area	–
⑤ Tea farm E (Kagoshima Prefecture)	–	–	–	–
⑥ Tea farm F (AUS)	1 area	–	–	–
⑦ Tea farm G (AUS)	1 area	–	–	–

Water risk analysis of tea farms using Aqueduct tool

Farmers	Flood risk By FY2030	Drought risk By FY2030	Eutrophication risk (present)
① Tea farm A (Saitama Prefecture)	Low	Low	High
② Tea Farm B (Shizuoka Prefecture)	Low	Low	High
③ Tea Farm C (Oita Prefecture)	Medium	Low	Low
④ Tea Farm D (Kagoshima Prefecture)	Low	Low	Low
⑤ Team farm E (Kagoshima Prefecture)	Medium	Low	Low
⑥ Tea farm F (AUS)	Low	High	Low
⑦ Tea farm G (AUS)	Low	High	Medium

Strategy ➪ Response to TNFD Recommendations : LEAP Approach

2. Identification of dependencies and impacts

Evaluate: Identification of dependencies and impacts of business processes

In the Evaluate stage, we used ENCORE* to identify inputs and outputs in the ITO EN Group's cultivation process and to pinpoint what natural capital and biodiversity we depend on and impact.

As a result, GHG emissions and Soil degradation (Soil pollutants) are recognized as having a high or very high impact on the Group and on things the Group is dependent on.

Land that is well drained, well ventilated and moist is good for growing tea. Tea trees prefer an acidic soil, but since there is a limit to the amount of fertilizer tea plants can absorb, the application of more fertilizer than is necessary can lower the absorption rate, causing the soil to become more acidic and less productive and can also increase GHG emissions. In addition, the leaching of unabsorbed fertilizer outside of tea farms can cause river pollution.

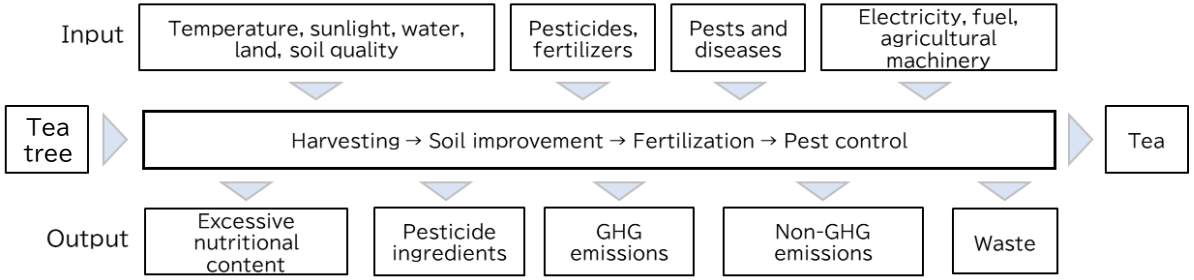
We are taking action to address such recognized potential environmental impacts based on the belief that it is important to properly manage fertilizer application and to manage soil so that it retains its physical, chemical and biological properties.

Through the maintenance of 100% GAP (Good Agricultural Practices) certification at contracted tea farms and technical guidance to producers in the Tea-Producing Region Development Project, we are working with producers to manage usage and types of fertilizers and pesticides, and we are also focusing on environmentally friendly agriculture, reducing the amounts of chemical pesticides and nitrogen fertilizers and replacing chemical fertilizers with organic materials.

Based on the results of such experiments, we will consider creating standards for fertilizer use and using reduction targets as performance metrics.

Since there is also a correlation between management of fertilizer use and the GHG emissions produced by tea farms, we will consider adopting an integrated approach combining both climate change and natural capital and biodiversity, and take action as appropriate.

(Reference) Inputs and outputs at green tea cultivation



Recognized dependencies and impacts

Dependence	Impact
Mass stabilisation and erosion control	GHG emissions
Soil quality	Soil pollutants
Water flow maintenance	Water pollutants
Buffering and attenuation of mass flows	Terrestrial ecosystem use
Climate change	
Disease control	
Pest control	

* Using ENCORE, we confirmed dependencies and impacts in the production process for "large-scale irrigated arable crops."
* While GHG emissions were not shown as part of ENCORE analysis results, we included GHG emissions in impacts because high GHG emissions are generally pointed out as a characteristic of tea cultivation.
* The ENCORE analysis results indicated dependency on floods and rainstorms; however, based on the characteristics of tea cultivation and detailed analysis using the Aqueduct tool, impact was judged to be low.

Strategy ➪ Physical Risks (Acute): Impacts on Factories, Offices and Warehouses

Focusing on drought and flood risks, we used the World Resources Institute's Aqueduct tool to conduct analyses and assess the impact of shutdowns / suspension of operations at our own factories and outsourced factories due to the decrease in precipitation and damage caused by storm and flood damage, and the impact of product loss and recovery due to the intensification and frequency of storm and flood damage.

In FY2022, we increased the scope of our analyses from ITO EN factories (ITO EN's own factories and outsourced factories) to the factories of ITO EN Group companies (their own factories and main outsourced factories). In FY2023, we further expanded the scope of our analyses to include our value chain, and analyzed the flood risk of logistics warehouses in Japan (our own warehouses and outsourced warehouses).

As a result of our analysis, we recognize risks as shown below.

(1) Risks associated with drought caused by a decrease in precipitation.
- We confirmed the possibility of shutdowns and suspension of operations at our own factories and outsourced factories and group companies' own factories and outsourced factories

(2) Risks associated with floods caused by the intensification of storm and flood damage
- We confirmed the possibility of shutdowns and suspension of operations and product loss and recovery costs occurring at our own factories, outsourced factories and business locations, group companies' own factories and outsourced factories, and our own warehouses and outsourced warehouses

To address such recognized risks, we will implement the following countermeasures.

- Reduction of water usage at factories (more efficient water usage and water recycling and reuse)
- Understanding of water withdrawal sources, implementation of water conservation activities, new factory construction drought and flood surveys
- Development of BCP measures at business locations with high water risk, confirmation of BCP measures at outsourced factories (development of BCP manual, confirmation of equipment and supplies, disaster drills, etc.)

Number of factories expected to incur drought risks

		2030		2050	
		1.5/2℃	4℃	1.5/2℃	4℃
ITO EN's own factories/outsourced factories	Japan (out of 23 factories)	3 factories	4 factories	3 factories	3 factories
Group companies' own factories/outsourced factories	Japan (out of 20 factories)	13 factories	13 factories	13 factories	13 factories
	Overseas (out of 16 factories)	4 factories	4 factories	4 factories	4 factories

* Analysis of water stress
Aqueduct Water Risk Atlas was used to analyze drought risks by selecting the target time periods (2030 / 2040) and scenarios (RCP4.5 / RCP8.5).
We identified which of our bases and factories and which of our outsourced factories fall under high drought risk.

Number of factories and warehouses expected to incur flood risks

		2030				2050			
		Riverine		Coastal		Riverine		Coastal	
		1.5/2℃	4℃	1.5/2℃	4℃	1.5/2℃	4℃	1.5/2℃	4℃
ITO EN's own factories/outsourced factories	Japan (out of 23 factories)	19 business locations, 7 factories	19 business locations, 7 factories	1 business location	1 business location	19 business locations, 7 factories	20 business locations, 7 factories	1 business location	1 business location
Group companies' own factories/outsourced factories	Japan (out of 20 factories)	9 factories	9 factories	-	-	9 factories	9 factories	-	-
	Overseas (out of 16 factories)	3 factories	3 factories	-	-	3 factories	3 factories	-	-
Logistics warehouses	ITO EN's own warehouses in Japan(out of 19 warehouses)	4 warehouses	4 warehouses	-	-	4 warehouses	4 warehouses	-	-
	Outsourced warehouses in Japan(out of 28 warehouses)	7 warehouses	7 warehouses	1 warehouse	1 warehouse	7 warehouses	7 warehouses	1 warehouse	1 warehouse

* Flood risk analysis
Aqueduct Floods was used to analyze flood risks by selecting the target time periods (2030 / 2050), scenarios (RCP4.5 / RCP8.5) and factors (river flooding / coastal storm surge).
We identified which of our bases and factories and which of our outsourced factories and our own and outsourced warehouses fall under high flood risk.

Strategy: Transition Plan

Approach to the achievement of carbon neutrality

Initiatives to reduce GHG emissions

The Group's medium- to long-term environmental goals include the achievement of carbon neutrality by FY2050, and include GHG emission targets for FY2030 of a 50% reduction in total Scope 1 and Scope 2 emissions and a 20% reduction in Scope 3 emissions, both compared with FY2018 levels. The Group is implementing initiatives for transition to a decarbonized society in line with these targets.

Regarding measures to reduce Scope 1 and 2 emissions, we have created a roadmap and determined KPIs with a focus on replacing the vehicles used in business with electric vehicles, efforts to conserve energy and transition to renewable sources of energy and we are accelerating these initiatives.

At the same time, we are working to reduce Scope 3 emissions by reducing the weights of containers and packaging, transitioning to sustainable materials and engaging and collaborating with suppliers.

■ Main initiatives to reduce GHG emissions

Scope 1, Scope 2	- Replacing the vehicles used in business with electric vehicles - Efforts to conserve energy - Transition to renewable sources of energy
Scope3	- Reducing the weights of containers and packaging - Transitioning to sustainable materials - Collaborating with suppliers (manufacturing and logistics)

Initiatives for sustainable containers and packaging

We are committed to realizing sustainable containers and packaging and Sound Material-cycle Society. In the ITO EN Group Policy on Plastics, we set out a roadmap, with the aim of increasing the ratio of recycled materials used as materials for producing PET bottles to 100% by FY2030, and we are promoting the horizontal recycling of PET bottles (bottle-to-bottle recycling).

* Compared to the manufacture of PET bottles using petroleum-derived resources, the bottle-to-bottle recycling initiative helps reduce CO2 emissions by around 60%.

Collaborating with suppliers

Since we outsource the manufacturing of almost all our beverage products to outsourced factories, we ask suppliers to produce GHG emission and water usage targets and to appoint environmental officers, and we perform calculations based on primary data from suppliers. We exchange quantitative and qualitative information through supplier engagement activities each year, and we reflect this information in future reduction measures.

In the area of logistics, we are promoting white logistics. To consistently deliver safe and secure products to our customers, ITO EN has established an efficient production and logistics system, divided into five regional blocks across the nation. We are working on improving the loading rate for delivery vehicles, expanding combined transportation of beverage and leaf products, and addressing the so-called 2024 problem in Japan's logistics industry through collaboration with other companies and efforts to improve delivery efficiency and long-distance transportation.

Strategy: Transition Plan

Approach to the achievement of carbon neutrality

Target areas		Countermeasures (policy)	Initiatives
Mitigation	GHG emission reductions	- Reduction of number of vehicles used in business and introduction off electric vehicles	Introduction of industry' s first "EV Bottle Car"
		- Introduction of renewable energy power	Installation of solar panels at own factories, and purchase of environmental value certificates
		- Expansion in use of recycled PET bottles	- Resource recycling initiatives in cooperation with external stakeholders - Rate of use of recycled materials in all PET bottle products: FY2023 result 36%
		- Promotion of energy conservation and supplier engagement	Sharing of problems and solutions with outsourcing manufacturing partners through environmental quality meetings
		- Improvement of logistics efficiency	Improvement of logistics efficiency through reduction in the number of items and pursuit of block production and logistics system
	Containers and packaging	- Horizontal recycling of PET bottles	- Resource recycling initiatives in cooperation with external stakeholders - Rate of use of recycled materials in all PET bottle products: FY2023 result 36%
Adaptation	Recycling of resources	- Promoting the recycling of used tea leaves	CO2 fixation through technology for recycling used tea leaves, and reuse of used tea leaves as alternative resources
	Water resources	- Reduction of water consumption in beverage production	Sharing of problems and solutions with outsourced manufacturing partners through environmental quality meetings
Opportunities	Increasing demand for environmentally friendly products	- Acquisition of certification, expansion of product lineup and strengthening of sales	Use of biodegradable plastic as materials, and use of recyclable carton products like milk cartons
	Increased demand due to environmental changes	- Expansion of sales of products to combat heatstroke and products with functional claims	Enhancement of sugar-free beverage products
	Recycling of resources	- Promoting the recycling of used tea leaves	Development of products made from recycled used tea leaves in collaboration with different industries

Strategy: Transition Plan

Roadmap for the reduction of GHG emissions

We are committed to reducing GHG emissions, which are the primary driver of climate change. To this end, the ITO EN Group's medium-to-long-term environmental goals include the achievement of carbon neutrality by FY2050.

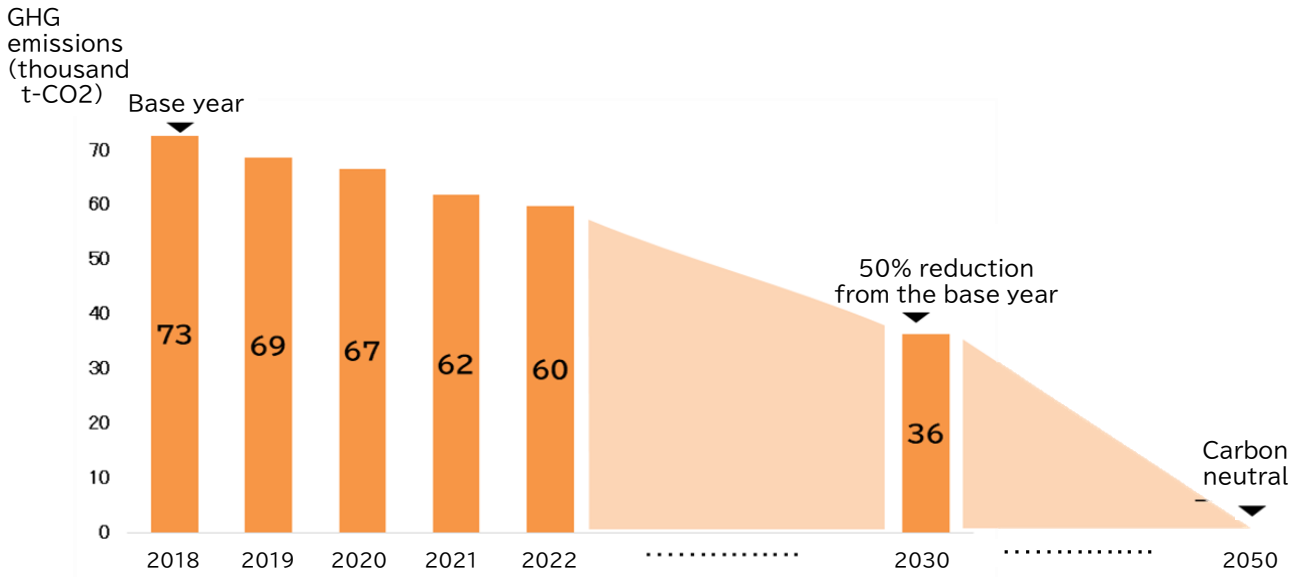
We have also set targets of a 50% reduction in total Scope 1 and Scope 2 emissions and a 20% reduction in Scope 3 emissions by FY2030, both compared with FY2018 levels, and we are implementing initiatives to transition towards a decarbonized society.

Measures to reduce Scope 1 and Scope 2 GHG emissions

Regarding measures to reduce Scope 1 and 2 emissions, we have created a roadmap and determined KPIs with a focus on replacing the vehicles used in business with electric vehicles, efforts to conserve energy and transition to renewable sources of energy and we are accelerating these initiatives.

Regarding vehicles used in business, we are seeking to reduce costs by reducing the size of our fleet through the use of more efficient routes and the reorganization of sales bases, while at the same time, aiming to replace 50% of the vehicles used in business with electric vehicles (hybrid and electric vehicles) by FY2030.

In terms of shifting to power derived from renewable energy sources, alongside the introduction of energy-saving equipment when upgrading or newly installing equipment, we are also installing solar panels, switching to power derived from renewable energy sources, and systematically purchasing environmental value certificates.



Note)
The scope of Scope 1 to 3 emission data includes ITO EN, LTD., ITO EN SANGYO, LTD., Tully's Coffee Japan Co., Ltd., and Chichiyasu Company.

■Medium- to long-term environmental goals and measures

Metrics	FY2030 targets	Details of measures
CO2 emissions Scope 1 + 2 (Compared with FY2018)	-50%	[Factories] Promotion of energy conservation [Vehicles] Promotion of eco-driving, optimization of sales routes [Power] Introduction of LED lighting, promotion of energy conservation
Ratio of power derived from renewable energy	100%	Introduction of solar panels, switch to CO2-free electricity, procurement of electrical value certificates, etc.
Ratio of electric vehicles used by the company	50%	Introduction of hybrid vehicles and electric vehicles

Strategy: Transition Plan

Measures to reduce Scope 3 GHG emissions

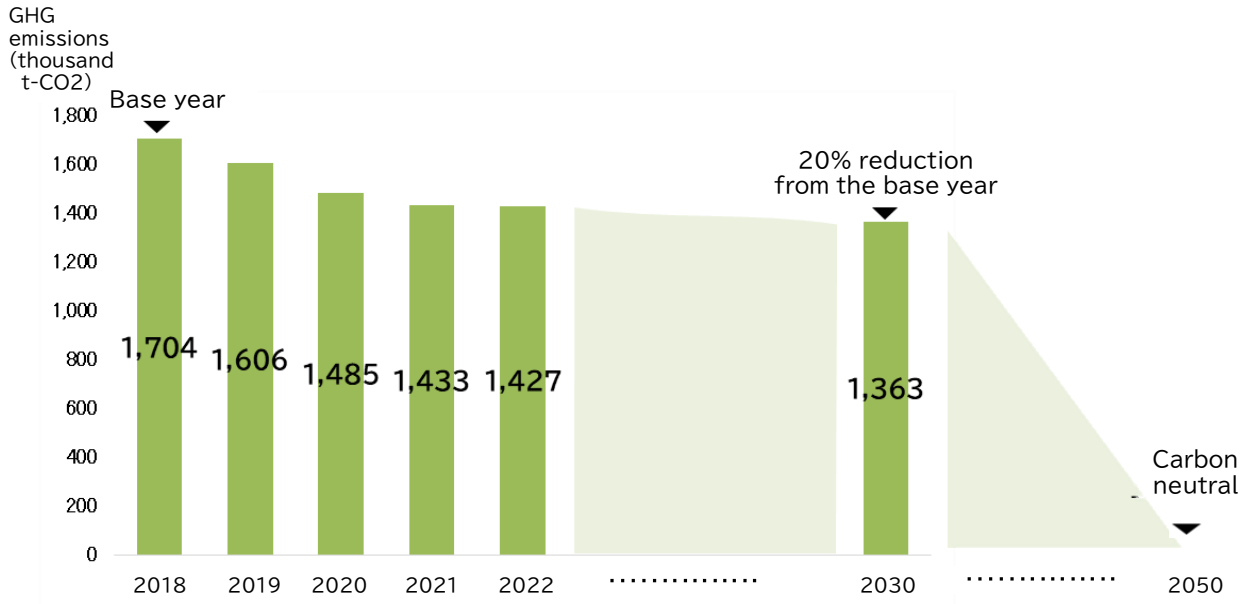
Given that Scope 3 emissions account for more than 95% of the Group's GHG emissions, with category 1 (includes procurement and manufacture of raw materials and materials) accounting for more than 80% of these Scope 3 emissions, we are implementing measures to reduce GHG emissions focused on category 1, as well as promoting reduction of water usage.

Regarding materials used in containers and packaging, we are focusing on the 3Rs (Recycle, Reduce, Replace & Reuse) + Clean (environmental conservation), including initiatives such as reducing the weight of PET bottles, caps, labels and other materials, expanding label-free products, and switching to environmentally friendly materials such as plant-derived, biodegradable materials, and reusable containers. We have created a roadmap for increasing the ratio of recycled material used as materials for producing PET bottles to 100% by FY2030, and are promoting resource recycling accordingly.

In our logistics activities, alongside efforts to increase efficiency through a block-based production and logistics system, we are also focusing on improving the loading ratio of delivery vehicles, expanding combined deliveries of beverage and leaf products, and collaborating with other companies. At the same time, we are working to discard fewer products by reducing the number of product items.

Since we outsource the manufacturing of almost all our beverage products to outsourced factories, we ask suppliers to produce GHG emission and water usage targets and to appoint environmental officers, and we perform calculations based on primary data from suppliers. We exchange quantitative and qualitative information through supplier engagement activities each year, and we reflect this information in future reduction measures.

Regarding the raw materials for our core green tea products, we are involved in environmentally friendly agriculture through the Tea-Producing Region Development Project, which we launched in 1976. We plan to consider an integrated approach, combining the perspective of climate change mitigation and adaptation measures taking into consideration risks and opportunities based on scenario analysis and the perspective of natural capital and biodiversity(P24).



Note)
The scope of Scope 1 to 3 emission data includes ITO EN, LTD., ITO EN SANGYO, LTD., Tully's Coffee Japan Co., Ltd., and Chichiyasu Company.

■ Medium- to long-term environmental goals and measures

Metrics	FY2030 targets	Details of measures
CO2 emissions Scope3 (Compared with FY2018)	-20%	[Materials] Use of energy-saving lightweight materials, label-free bottles, environmentally-friendly materials, etc. [Outsourced manufacturing factories] Reduction of environmental impacts in manufacturing [Logistics] Improvement of efficiency through block-based production and logistics system [Disposal] Disposal of fewer products
Ratio of recycled materials, etc. used in PET bottle products	100%	Switch from virgin resin to recycled materials, etc. (including bio-derived materials)
Completion of supplier assessments	Completed	Sharing of actions in response to social and environmental issues with outsourced manufacturing partners, raw material suppliers, material manufacturers, etc. and collaborative initiatives to resolve them

Examples of Main Initiatives(1)

Main initiatives to reduce GHG emissions

Scope 1 (GHG emissions from vehicles)

●Promotion of eco-driving, proactive shift towards electric vehicles

We are reducing fuel consumption by increasing sales route efficiency and encouraging eco-driving at all bases, and we are also switching to electric vehicles (hybrid vehicles and electric vehicles) which produce fewer GHG emissions.

In FY2022, the ratio of electric vehicles used by the company was 8.2%.
As part of efforts to increase the ratio of electric vehicles to 50% by FY2030, we introduced the industry's first EV Bottle Car (with tea leaf lightweight panels) in FY2023, and we are gradually rolling these cars out to sales bases in the Tokyo region.

(Image)

Industry-first EV Bottle Car (with tea leaf lightweight panels)
(Introduced in October 2023)

Scope 2 (GHG emissions from electricity)

●Reduction of power consumption and use of power from renewable energy sources

Since June 2022, we switched all electricity used at buildings owned by the company (three business locations), including the ITO EN head office building, to electricity derived from renewable energy.
In January 2023, we installed solar panels at ITO EN Kobe Factory. These panels generate approximately 10% of total power consumption in the factory.

Aiming to increase the ratio of power derived from renewable energy to 100% by FY2030, we plan to switch bases that introduce electric vehicles to green electricity plans in FY2023. In addition, we are making companywide efforts to conserve energy and reduce power consumption, including switching to LED lighting.

ITO EN Kobe Factory
(Installed in January 2023)

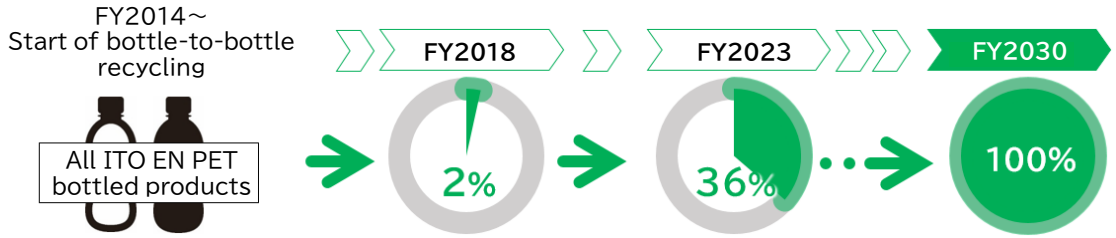
Examples of Main Initiatives(2)

Scope 3 (C1: GHG emissions from purchased products and services)

● Promotion of horizontal recycling of PET bottles (bottle-to-bottle recycling) initiative

In line with our commitment to realize sustainable containers and packaging and Sound Material-cycle Society, under the ITO EN Group Policy on Plastics, we aim to increase the ratio of recycled materials used in all PET bottle products to 100% by FY2030. Accordingly, we are accelerating resource recycling through the horizontal recycling of PET bottles (bottle-to-bottle recycling initiative).
In FY2023, the usage rate of recycled materials in all PET bottle products stood at 36%. Going forward, we will continue contributing to the realization of Sound Material-cycle Society by promoting consumer understanding of PET bottle sorting, and driving the bottle-to-bottle recycling initiative through partnerships with stakeholders.

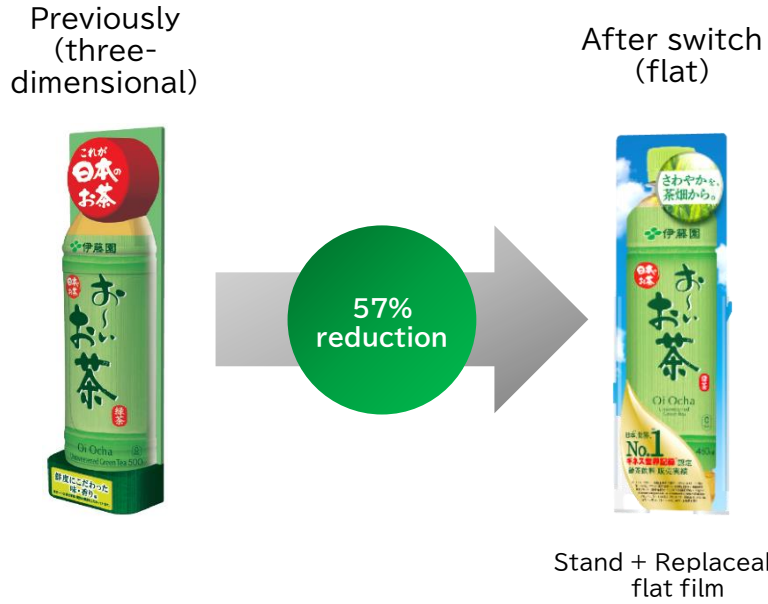
■Usage rate of recycled materials, etc. (including bio-derived materials) in all PET bottle products



Scope 3 (C5: Waste generated in operation)

● Introduction of flat dummy products in vending machines

In February 2024, we launched an initiative to switch the three-dimensional dummy products in vending machines with flat ones, with a view to reducing the use of plastic. This initiative makes it possible to reduce the amount of plastic used per dummy product by 57%.
Aiming to achieve the new KPI set in FY2023 of a 50% reduction in amount of plastic used in vending machine dummy products by FY2028* (compared with FY2018), we will work to reduce the total amount of plastic used.



Examples of Main Initiatives(3)

Collaborating with suppliers

● Reduction of environmental impacts during beverage manufacturing

ITO EN has adopted the Fabless Method, in which the manufacturing of beverage products is outsourced to local partner factories. Through collaborations with suppliers, we are committed to environmentally conscious practices during beverage manufacturing.

NS System* developed in collaboration with Toyo Seikan Co., Ltd
Manufacturing method which does not involve the use of sterilizing agents to sterilize bottles and therefore helps reduce water usage and lessen the impact of wastewater on the environment (as there is no need for water to remove sterilants).
* NS System: Non-Sterilant (i.e., not using any sterilizer)

● Promotion of white logistics

To consistently deliver safe and secure products to our customers, ITO EN has established an efficient production and logistics system, divided into five regional blocks across the nation. We are working on improving the loading rate for delivery vehicles, expanding combined transportation of beverage and leaf products, and addressing the so-called 2024 problem in Japan's logistics industry through collaboration with other companies and efforts to improve delivery efficiency and long-distance transportation.

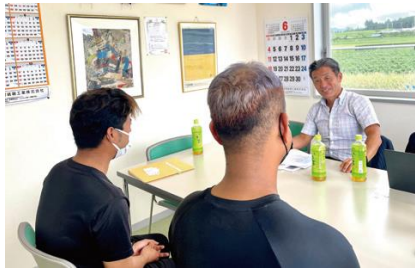
Efficient shipping through the combined delivery of beverage and leaf products

● Communication with suppliers (holding of regular quality meetings)

We regularly hold quality meetings with suppliers, and work with them to improve quality and ensure safe and secure products. We also manage progress towards achievement of the ITO EN Group medium- to long-term environmental goals and encourage initiatives to reduce environmental impacts.

Given also that important environmental issues are closely linked to human rights issues, in FY2023, we conducted human rights due diligence focusing on two farming corporations in the Tea-Producing Region Development Project and foreign workers at ITO EN Shizuoka Sagara Factory, taking into consideration high priority human rights themes we had identified.

Environmental quality meeting (held in March 2024)



Performance of human rights due diligence with tea farmers (June 2023)

* Provided by Caux Round Table (CRT) Japan

Strategy: Transition Plan in Tea Business

Approach to the protection of natural capital and biodiversity based on TNFD analysis

Promotion of sustainable farming

The ITO EN Group is working to expand sales of “Oi Ocha” and other green tea beverage products and leaf products both in Japan and overseas, in line with its long-term vision of becoming a “Global Tea Company.” These sale expansion efforts are underpinned by the production of raw material on farms through the Tea-Producing Region Development Project, launched in 1976.

In Japan, after peaking in 1961, agricultural land area is shrinking due to factors such as aging farmers and a lack of successors, and tea production area also remains in a downward trend. However, the increase in abandoned farmland has become a social issue. As a leading tea company that handles approximately one-quarter of Japan’s crude tea production, ITO EN has been championing the sustainability of the tea industry through its expansion of the new tea farms business, which, launched in 2001, proposes the redevelopment of abandoned farmland into tea plantations, and through its promotion of environmentally friendly agriculture. The area developed through the Tea-Producing Region Development Project exceeded 2,000 ha in FY2020 and reached 2,437 ha in FY2022. To continue contributing to sustainable agriculture in the future, we aim to expand the area developed to 2,650 ha in FY2026 and to 2,800 ha in FY2030.

Against a backdrop of rising health consciousness worldwide, overseas demand for high value added raw materials such as matcha and organically grown tea containing fewer pesticides is increasing more and more. To meet increasing overseas demand, and further accelerate overseas expansion of the “Oi Ocha” brand with an eye to becoming a “Global Tea Company,” the ITO EN Group is working on the development of raw materials that meet global requirements for pesticides, quality, etc. Since the development of organically grown green tea and matcha raw materials in compliance with each country’s requirements is an integral part of action on the environment, we will continue complying with such requirements as appropriate going forward.

Initiatives to promote DX in tea farming

We are working to promote DX in tea farming as part of efforts to realize sustainable tea farming. We aim to strike a balance between stepping up initiatives to manage commercial farming, including tea producers’ fertilizer application and pesticide usage, and meeting environmental requirements. To this end, we introduced agri-note, a cloud-based cultivation management system developed by WaterCell Inc. (“WaterCell”) in some areas of the Tea-Producing Region Development Project as a tool for supporting commercial farming within tea farming and, in January 2024, we introduced “Pesticide Suitability Assessment System”, jointly developed with WaterCell. We also signed a capital and business alliance agreement with WaterCell in February 2024.

We will respond to climate change, natural capital and biodiversity requirements in the tea business by supporting tea producers through more efficient farm management and commercial farming management and by conducting analysis through DX that will help us set future metrics and targets.

Furthermore, based on the results of trialing reduced use of pesticides and chemical fertilizers, we are also working on the development of our own regenerative farming standards.

Strategy: Transition Plan in Tea Business

Response to climate change, natural capital and biodiversity requirements in the tea business

We will bring about the sustainable growth of the ITO EN Group's business and a more sustainable society by conducting analyses of risks and opportunities from the perspective of the relationship between the tea business, which is crucial for the Group's business, and climate change and natural capital/biodiversity and by working on integrated countermeasures.

Countermeasures (policy)	Initiatives
- Fixation of CO2 through the spreading of biochar	- Testing of anti-global warming effects of spreading biochar in certain production areas of Kagoshima Prefecture (fixation of CO2 in soil) - Verification of soil improvement effect
- Selection and development of tea plant varieties	- Selection and development of tea plant varieties with disease and pest resistance, and high-quality, high-yield tea plant varieties that are more resilient to climate change - Cultivation of diverse tea plant varieties
- Expansion of the Tea-Producing Region Development Project	- Selection of new potential areas based on climate change scenario analysis results - Technical support to maintain 100% GAP certification for producers
- Reduction in usage of chemical fertilizers and chemical pesticides	- Composting some of the used tea leaves produced when manufacturing green tea beverage products and spreading this on tea plantations reduces the use of chemical fertilizers. At the same time, the use of organic fertilizer is expected to have the effect of improving soil health. - Promotion of practical application of soil steamers for disease and pest control without pesticides through continued use on a trial basis in production areas in Kagoshima Prefecture
- Promotion of organic cultivation	Expansion of production volume of organically grown tea FY2023 result: 273 t
- Promotion of DX in agriculture	Introduction of commercial farming support tool "agri-note" to manage use of fertilizers and pesticides and to meet GAP certification requirements more efficiently
- Enhancement of traceability through operation of system for determining compliance with pesticide regulatory requirements	- Increased opportunities to export domestically produced green tea due to compliance with overseas pesticide residue limits - Successful development of raw material tea leaves that meet German and EU requirements and start of local production and sale from April 2024
- Promotion of DX in agriculture	- Resolution of problems facing producers, specifically, lack of successors and labor shortages - Stable procurement of high-quality tea leaves through stronger farm management and commercial farming management
- Spreading of biochar	Effect of improving soil permeability and effect of improving soil through regulation of pH

Main Initiatives in Tea Farming(1)

Response to climate change, natural capital and biodiversity requirements in the tea business

● Initiative to reduce GHG emissions (anti-global warming initiative) and improve soil at tea plantations

Looking to decarbonize the agricultural sector, we are working with companies involved in biomass power generation and tea producers to evaluate the anti-global warming effect of biochar* by spreading it on a trial basis on tea plantations
Biochar is also expected to have the effect of improving soil, and we are also verifying its contribution toward increasing tea productivity.

* Carbonized wood, bamboo, etc.

● Initiative to reduce chemical pesticides and chemical fertilizers

Focusing on the nitrogen components contained in used tea leaves, we are implementing a recycling-based farming initiative that involves composting used tea leaves produced by outsourced factories in the process of manufacturing “Oi Ocha” and other beverage products and spreading this compost on tea plantations instead of the nitrogen fertilizers needed to grow tea.

● Initiative to reduce GHG emissions (anti-global warming measure) during raw material processing

Since raw tea leaves begin to ferment as soon as they are picked owing to the action of oxidizing enzymes, the freshly picked tea leaves need to undergo heat treatment - steaming and roasting - as soon as possible to turn them into crude tea that can withstand storage. This primary process is called “crude tea processing,” and the process is carried out at a “crude tea factory.”

At the ITO EN crude tea factory in Iruma area, Saitama Prefecture, the seventh factory in the new tea farms business producing mainly tea leaves for “Oi Ocha” products, we use city gas with low CO2 emissions and reuse waste heat in the production line. This is an environmentally friendly factory that reduces CO2 emissions per unit production volume by 57% compared with typical crude tea factories*.

* According to a survey by Terada Seisakusho Co., Ltd.

Main Initiatives in Tea Farming(2)

Response to climate change, natural capital and biodiversity requirements in the tea business

● Promotion of tea farming DX for the realization of sustainable tea farming

Within the tea farming industry, as in the wider farming industry, management must comply with a host of requirements, including GAP certification and organic certification requirements and agricultural decarbonization and biodiversity requirements. We are committed to promoting DX in tea farming with the aim of contributing to more efficient and sophisticated compliance and helping realize sustainable tea farming.
As part of such efforts, we introduced a cloud-based cultivation management system developed by WaterCell Inc. (“WaterCell”) in some areas of the Tea-Producing Region Development Project as a tool for supporting commercial farming within tea farming and, in January 2024, we introduced “Pesticide Suitability Assessment System”, jointly developed with WaterCell. We also signed a capital and business alliance agreement with WaterCell in February 2024.

[Commercial farming support tool “agri-note”]

Producers can access this commercial farming support tool on their computers or smartphones, to record, aggregate or download information about plantations, farm operations or other aspects of commercial farming. The tool increases efficiency in areas such as management of pesticide usage history and compliance with GAP certification requirements. We plan to expand introduction to contract farmers from 2024.

[Pesticide Suitability Assessment System]

This is a unique system we use when determining whether green tea raw material produced for overseas markets complies with the pesticide regulatory requirements of each country. All the data for determining compliance with pesticide regulatory requirements can be managed in a single system, allowing seamless integration and minimizing human error.

Metrics and Targets

The ITO EN Group has set Medium-to Long-term Environmental Goals and is now aiming to achieve carbon neutrality throughout the value chain by 2050.
Our medium-term targets for FY2030 are as follows.
We have set KPIs as climate-related environmental performance metrics and a roadmap and are implementing initiatives to achieve the targets.
Going forward, we will also continue reviewing performance metrics and targets for natural capital and biodiversity, including evaluating their effectiveness.

Category	Metrics	FY2022 results	FY2030 targets
Response to climate change	GHG emissions Scope 1, 2 (Direct emissions from the use of fuels within the company, and indirect emissions associated with the use of electricity purchased by the company)*1*2	-17.7%	-50%
	GHG emissions Scope 3 (Other emissions relating to business activities, aside from those covered by Scopes 1 and 2)*1*2	-16.3%	-20%
	Ratio of power derived from renewable energy	4.9%	100%
	Ratio of electric vehicles (electric and hybrid vehicles, etc.)	8.2%	50%
Water resources	Reduction in water usage intensity(Per 1 kl of production)*1	+10.8%	-16%
Promotion of resources recycling	Ratio of recycled materials, etc. used in PET bottle products	36% * FY2023	100%
Sustainable agriculture	Applying the Tea-Producing Region Development Project across a larger area	2,437ha	2,800ha
	Expansion of production volume of organically grown tea	253t	500t
	Percent of sites that maintain and implement operations in line with GAP certifications obtained through the Tea-Producing Region Development Project	100%	100%

ITO EN Group Medium- to Long-Term Environmental Goals
https://www.itoen-global.com/sustainability/materiality/environment.html

Seven Material Issues and Indicators (KPIs)
https://www.itoen-global.com/up_image/sustainability/report/Seven-Material-Issues-and-Indicators_p37-38.pdf

*1: Compared with reference year FY2018
*2: The FY2022 results for GHG emissions, ratio of power derived from renewable energy, and ratio of electric vehicles are figures based on total data for ITO EN, LTD., and ITO EN, LTD's core subsidiaries ITO EN SANGYO, LTD., Tully's Coffee Japan Co., Ltd., and Chichiyasu Company.

Reference

Six general requirements taken into consideration when making TNFD disclosures

The ITO EN Group's approach to the six general requirements of the TNFD recommendations is shown below.

1. The application of materiality

- In this report, we analyze and disclose the dependencies of our business on nature (including climate) and the impacts of our business on nature (including climate) on the basis that both are material.
  In our analyses and disclosures, we give priority to business areas having a high level of materiality for the Group.

2. Scope of disclosures

- The scope we consider for disclosures extends beyond our direct operations, with operations upstream and downstream in our value chain also included in the scope of our analyses.
  For disclosures based on the TCFD recommendations, we conducted analyses and assessments that focused on the green tea business but also included the raw materials of our coffee and barley businesses.
  In disclosures based on the TNFD recommendations, this fiscal year we analyzed the upstream operations of the green tea business given that our main products are green tea beverage and green tea leaf products and the level of materiality is high both strategically speaking and from a natural capital and biodiversity perspective.
  Going forward, we plan to carry out more in-depth analysis of the green tea business and also expand the scope of businesses analyzed.

3. Location of nature-related issues

- For the Group's core green tea business, we conducted an assessment of direct operations and operations upstream and downstream in the value chain using the ENCORE tool and the LEAP approach to better understand the relationship between these operations and natural capital. We also came to understand that the Group's nature-related issues depend heavily on the region.

  By conducting analyses of dependencies and impacts on natural capital and biodiversity, with reference to TNFD v1.0 and through the biodiversity assessment tool IBAT and the water risk mapping tool Aqueduct, we confirmed locations with high levels of materiality, locations with low ecosystem integrity, and locations with high levels of water-related risks.

4. Integration with other sustainability-related disclosures

- Given that the TNFD framework is compatible with the TCFD framework which preceded it and that climate change and natural capital/biodiversity are closely interlinked, with climate change identified as one of the drivers of natural capital/biodiversity loss, going forward, we will seek further integration of disclosures especially for the "strategy" and "metrics and targets" pillars.

5. The time horizons considered

- In our previous TCFD disclosures, we defined short term as the present to FY2024, medium term as FY2025 to FY2030, and long term as FY2031 to FY2050.
  When conducting more in-depth analyses for TNFD in the future, we will consider using the same time horizons for TNFD as for TCFD.

6. Engagement of Indigenous Peoples, Local Communities and affected stakeholders in identification and assessment of organisation's nature-related issues

- We have introduced an initiative that involves carrying out due diligence in relation to the suppliers of materials in Japan and overseas. Also as part of our latest analysis of the green tea business, we introduced activities to engage with local stakeholders with respect to nature-related initiatives at green tea cultivation sites.
  Recognizing the importance of engagement with indigenous peoples and local communities, we plan to expand the scope of engagement activities to include the supply of raw materials overseas in the future.