

Sustainability Initiatives

To Create Harmony with Nature Environment

Suntory Group business is supported by precious global resources such as water and agricultural products. It is our responsibility to engage in sustainable business practices through the promotion of environmental management in accordance with our mission — To Create Harmony with People and Nature — so that we may pass down a rich global environment to future generations. We have established our Environmental Vision toward 2050 and set Environmental Targets toward 2030 based on corporate tagline "*Mizu To Ikiru*." Suntory Group commits to the promotion of environmental management based on two axes: preservation and regeneration of natural environment and reduction of environmental impact. That is the reason why the entire Group promotes environmental management.



Environmental
Management
Promotion



Preserving and
Regenerating
the Natural Environment



Reducing
Environmental
Impact



Environmental
Communication

環境ビジョン2050

自然環境
持続可能な社会
持続可能な社会

Environmental Management

We promote environmental management in the entire Group to pass down natural environment, our important source of business, to the next generation.

Water Sustainability

Committed to biodiversity preservation, we are engaging in various activities to preserve and regenerate the natural environment based on the corporate mission To Create Harmony with People and Nature.

Initiatives toward a zero carbon society

We are committed to promoting various initiatives to reduce environmental impact through the entire value chain.

Contribution to a recycling-oriented society

To build a recycling-oriented society, we will promote problem-solving efforts together with various stakeholders.

Environmental Communication

Suntory Group values communication with the stakeholders and communicates information related to Suntory's spirit of "Coexisting with Nature" to the society.

To Create Harmony with Nature: Environment

Environmental Management

We promote environmental management in the entire Group to pass down natural environment, our important source of business, to the next generation.

Environmental Vision



Business Activities and
Environmental Impact



Environmental Management



Environmental Education for
Employees



Environmental Management

Environmental Vision

The natural environment is an essential foundation for our business. Suntory Group promotes environmental management and actively engages in activities to pass down a sustainable society to the next generation.

Basic Stance on Group's Environmental Activity

The circular system consisting from plants and forests nurtured by water, rivers, oceans, atmosphere, and the ecosystem made by living things are the basis of all life.

As a company that delivers the blessings of water and nature to our customers, we believe that protecting beautiful and clean water with healthy ecosystems, using them appropriately, and replenishing to nature is a great responsibility.

Ingraining this concept in every part of the Group, Suntory strives to build a prosperous and sustainable society by preserving and regenerating the natural environment and reducing environmental impact.

■Suntory Group's Environmental Principles

Suntory Group sets principles that clearly indicate our prioritized environmental initiatives such as achieving water security, conserving and regenerating biodiverse ecosystems, promoting a circular economy and transitioning to a net zero carbon society (established 1997, revised 2022.) To achieve a vibrant global environment, we are championing the transformation to a sustainable society by collaborating with our stakeholders, deepening dialogues with local communities, and transparently disclosing our progress.

Suntory Group's Environmental Principles

At Suntory Group, environmental management is at the core of our business strategy.

In our commitment to cultivating a sustainable and vibrant society now and in the future, these environmental principles inform the actions we take each day across our entire value chain.

1. Achieving water security

Water is the most vital resource for our business. At Suntory, we aim to become net water positive by using water carefully and localizing water stewardship to contribute to nature's healthy water cycle.

2. Conserving and regenerating biodiverse ecosystems

Thriving water and agricultural systems are crucial to our business. We strive to protect and regenerate biodiversity through local water source conservation and sustainable agricultural practices.

3. Promoting a circular economy

To effectively reduce waste and efficiently utilize limited resources, we imbed sustainable principles throughout the lifecycle of our products, promote the 3Rs (reduce, reuse, recycle) for all raw materials, use renewable resources when available, and collaborate with stakeholders to build a fundamentally circular system.

4. Transitioning to a net zero-carbon society

In the face of climate change, we are doing our part to achieve a net-zero carbon society by reducing greenhouse gas emissions across our value chain.

5. Engaging with society

To achieve a vibrant global environment, we are championing the transformation to a sustainable society by collaborating with our stakeholders, deepening dialogues with local communities, and transparently disclosing our progress.

■ Environmental Vision toward 2050 and Environmental Targets toward 2030

The Suntory Group established the Environmental Vision toward 2050 and Environmental Targets toward 2030 to provide clear direction to our environmental management. As we engage in greater efforts to address global issues and work toward the realization of a sustainable society, In April 2021 we revised the greenhouse gas (GHG) reduction targets in the Environmental Targets toward 2030, and in December 2021, we revised our water targets.

Environmental Vision toward 2050

The Suntory Group has formulated the vision below toward 2050 for the purpose of passing down a sustainable global environment to the next generation around the pillars of water sustainability and climate change measures as a company in harmony with people and nature.

1. Water Sustainability

- Reduce the water intensity*¹ of production at our owned plants*² by 50%*³ globally.
- Replenish more than 100% of water used at all of our owned plants*² globally through conservation of the surrounding ecosystem.
- Achieve sustainable water use for all key ingredients.
- Share the Sustainable Water Philosophy to the communities where our business operates

2. Climate Change Measures

- Aim for net zero greenhouse gas emissions across the whole value chain by 2050
- Continue to promote energy conservation, proactively implement renewable energy solutions, utilize next-generation infrastructure options and work together with stakeholders across the value chain in order to contribute to realizing a decarbonized society

*1 Water intensity is the amount of water withdrawn per unit of production, which is 1 kiloliter of production

*2 Owned plants that manufactures finished products and excludes plants for packaging and ingredients

*3 Reduction of water intensity of production based on 2015 baseline

Environmental Targets toward 2030

We have set the following Environmental Targets toward 2030 to achieve the Environmental Vision toward 2050.

1. Water

Reduction of water used in direct operation

Reduce the water intensity*¹ of production at our owned plants*² by 35%*³ globally. In addition, explore reduction of absolute amount of water withdrawn in highly water stressed areas

Water replenishment

Replenish more than 100% of water used in at least 50% of our owned plants*² globally, including all those in highly water stressed areas, through local water source conservation efforts.

Sustainable water use in raw ingredients

Collaborate with suppliers to improve water-use efficiency in the production of water-intensive key ingredients*⁴ in highly water stressed areas.

Water education and access to safe water

Expand water education programs and initiatives to provide safe water access for more than 1 million people.

2. Greenhouse gas (GHG)

- Reduce GHG emissions from our direct operations by 50%*⁵
- Reduce GHG emissions across our entire value chain by 30%*⁵

*1 Water intensity is the amount of water withdrawn per unit of production, which is 1 kiloliter of production

*2 Owned plants that manufactures finished products and excludes plants for packaging and ingredients

*3 Reduction of water intensity of production based on 2015 baseline year

*4 Coffee, barley, grapes

*5 Based on emissions in 2019

■Accelerating Efforts to Reduce GHG Emissions by 50% by 2030

Suntory group will aim to achieve 100% renewable electricity in the group's 63 directly-owned manufacturing sites and R&D facilities in Japan, the Americas and Europe by 2022*¹.

From April 2022, the company have purchase 100% renewable electricity for all 30 directly owned manufacturing sites and R&D facilities in Japan.

This will amount to a reduction equivalent to approximately 150,000 metric tons of greenhouse gas (GHG) emissions per year*², which will greatly contribute to meeting the company's 2030 goal of halving GHG emissions in its direct operations*³. In addition, the company have started introducing internal carbon pricing to its group companies in 2021 and plans to invest a total of approximately 100 billion JPY (equivalent to approximately 900 million USD*⁴) by 2030 to shift to low-carbon alternatives.

The company estimates that these actions together will amount to a reduction of approximately 1 million tons of greenhouse gas (GHG) emissions in its direct operations compared to a business-as-usual projection for 2030.

*1 For its alcohol and non-alcohol beverage business

*2 Based on 2020 emissions level

*3 Total reduction versus 2019 baseline in scopes 1 and 2

*4 Exchange rate 1 USD = 110 JPY as of June 2021

■SBT Initiative Certification

The Suntory Group has signed the "Business Ambition for 1.5°C", a campaign led by the Science Based Targets initiative*¹ in partnership with the UN Global Compact and the We Mean Business*² coalition to hold global temperature increases to 1.5°C above pre-industrial levels.

The Suntory Group has had its emissions reduction targets approved by the Science Based Targets initiative as consistent with levels required to meet the goals of the Paris Agreement.

The targets covering greenhouse gas emissions from Suntory group's operations (scopes 1 and 2) are consistent with reductions required to keep warming to 1.5°C, the most ambitious goal of the Paris Agreement. Suntory Group's target for the emissions from its value chain (scope 3) meet the SBTi's criteria for ambitious value chain goals, meaning they are in line with current best practice.



*1 The SBTi is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). It drives ambitious climate action in the private sector by enabling companies to set science-based emissions reduction targets.

*2 We Mean Business is a global nonprofit coalition working with the world's most influential businesses to take action on climate change. Together they catalyze business leadership to drive policy ambition and accelerate the transition to a zero-carbon economy.

■Declaration of Approval of Task Force on Climate-related Financial Disclosures (TCFD) Recommendations

The Suntory Group has declared its approval of Task Force on Climate-related Financial Disclosures (TCFD) recommendations. The TCFD was established by the Financial Stability Board (FSB).



In addition, we conducted scenario analysis for climate change according to the recommendations of the TCFD and learned about the possibility that climate change will have a significant impact on the crops that are ingredients important to the Suntory Group. From here on, we will further advance scenario analysis and expand disclosure of information related to the risks and opportunities that climate change poses to business.

Environmental Management

Business Activities and Environmental Impact

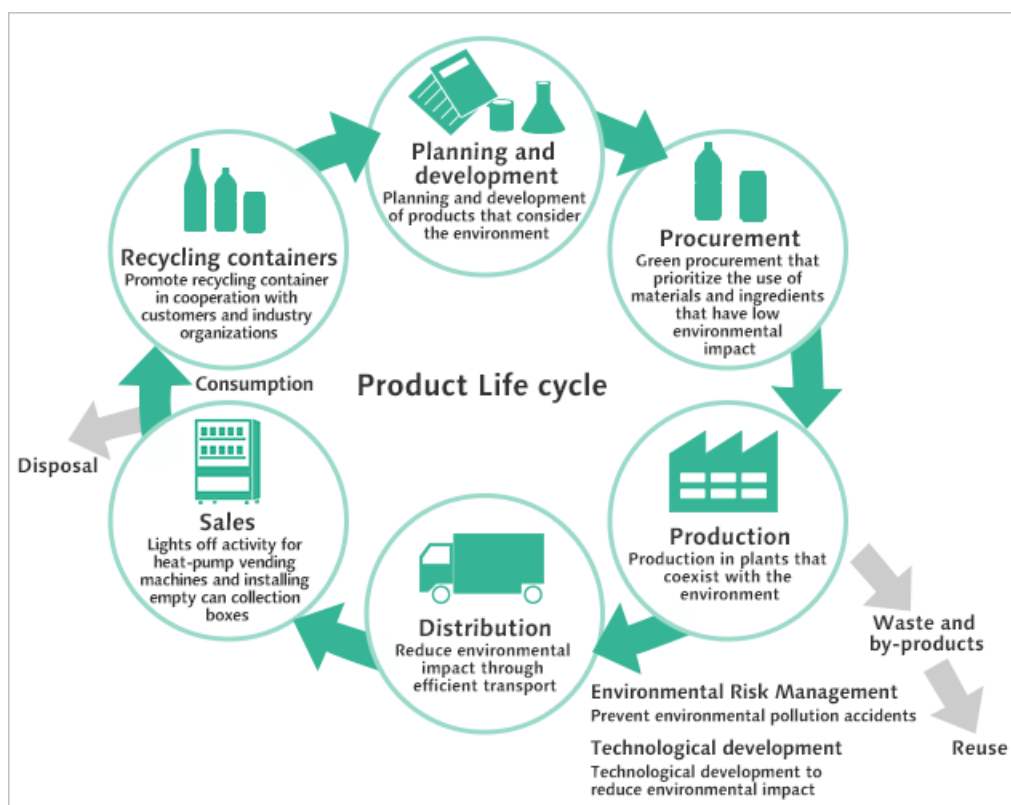
We are engaging in activities to reduce environmental impact in the entire product life cycle.

Reducing Environmental Impact in the Entire Product Life Cycle

Suntory Group generates various by-products and waste from a wide range of business activities. We are committed to reducing environmental impact by quantitatively understanding our impact on the environment throughout a product's life cycle - from planning to development to disposal and recycling.

In addition, following the expansion of business overseas, we assess the environmental impact of overseas production sites to determine the environmental impact on a global scale. Suntory actively communicates with the suppliers throughout the entire supply chain.

■ Product Life cycle



■Assessing Water Risk

The Suntory Group commits to water sustainability as a priority initiatives in the Basic Principles of Suntory Group's Environmental Policy. Suntory conducts various water assessments at the Institute for Water Science. To carry out business in a sustainable way, we conduct water risk assessment and promote environmental management. We also conduct water risk assessment when entering new businesses.

WRI Aqueduct Water Risk Assessment by Suntory Group's Plants

For the risk assessment, we used the Baseline Water Stress country score, developed as part of World Resources Institute's Aqueduct Water Risk Atlas, as an index that can evaluate sites around the world in common at the global level, to identify countries with high water stress from the countries where our plants are located.

(*Covered 26 production plants in Japan and 64 production plants overseas owned by companies that collectively account for more than 90% of the Suntory Group's sales.)

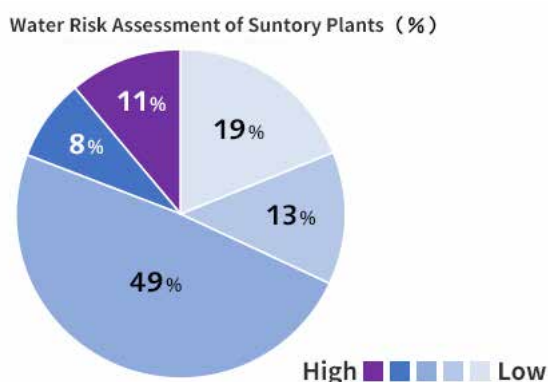
Baseline Water Stress	
Extremely high	India
High	Mexico and Spain
Medium-high	France, Thailand, Indonesia, and Australia
Low-medium	Japan, America, England, the Philippines, and Nigeria
Low	Canada, Ireland, Taiwan, Vietnam, Malaysia, and New Zealand

Created based on the Baseline Water Stress score for each country adopted in the Aqueduct Risk Atlas by the World Resources Institute.
<https://www.wri.org/applications/aqueduct/country-rankings/>
 Hofste, R., S. Kuzma, S. Walker, E.H. Sutanudjaja, et. al. 2019. "Aqueduct 3.0: Updated Decision-Relevant Global Water Risk Indicators." Technical Note. Washington, DC: World Resources Institute. Available online at: <https://www.wri.org/publication/aqueduct-30>.

In addition to Baseline Water Stress, we have adopted 2040 Water Stress, which evaluates water stress in 2040 based on future scenarios such as climate change. Plants with either Baseline Water Stress or 2040 Water Stress scores of "Extremely High" or "High" are defined as plants with high water risk in the Suntory Group. The percentage of water withdrawals at plants with high water risk is 19% of all of our plants.

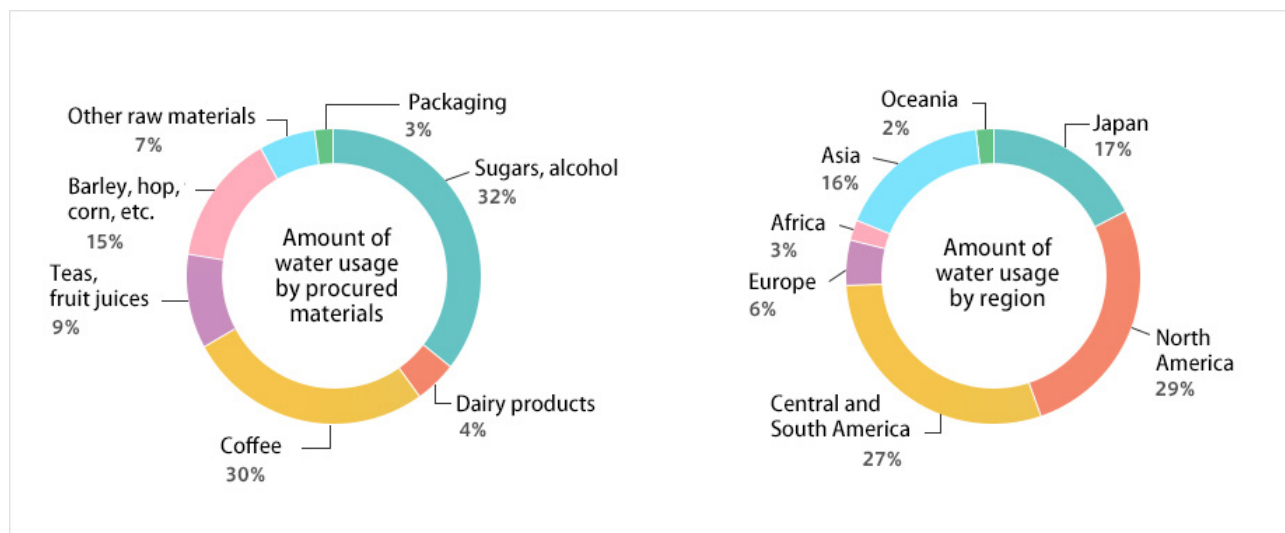
The Suntory Group conducted local surveys and assessments that focused on plants with high water risk. We have also consistently conducted water assessment surveys of our major suppliers since 2016.

*Plants located in a country with a Baseline Water Stress score of "extremely high" or "high" in the Aqueduct by the World Resources Institute.



■ Quantitative Evaluation Through Natural Capital

It is said that food and beverage companies that use agricultural goods as ingredients, use much more water in its agricultural supply chains than in own operations. The Suntory Group has calculate the water usage and GHG (greenhouse gases) emissions in its upstream supply chain.

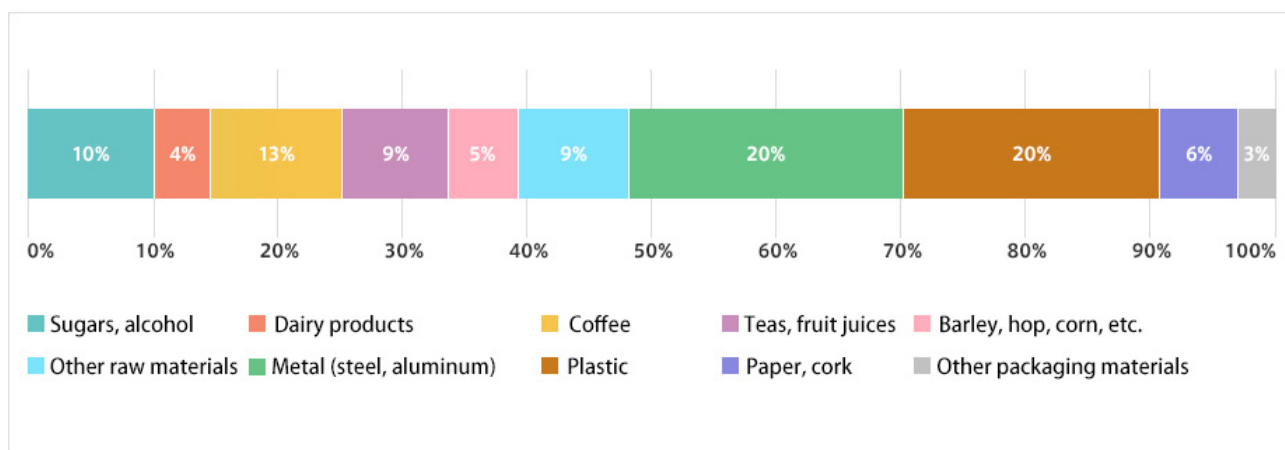


Ratio of Water Use by Raw Material and by Region in the Upstream Supply Chain (2015)

*The ratio is for raw materials used by production sites in Japan

*The calculation is based on data from the Water Footprint Network (WFN)

*Total of green water (rain water, etc.) and blue water (irrigation water, etc.)



Ratio of GHG Emissions by Procurement Item in the Upstream Supply Chain (2015)

*The ratio is for procurement items used by production sites in Japan

*The calculation is based on the Eora MRIO multi-region input-output table database

Environmental Management

Environmental Management

Promotion of ISO14001 Certification Acquisition Throughout the Group

We have actively advanced the acquisition of the international ISO14001 certification standard at each Group company as one method to continually evolve by integrating business and environmental activities. With the completion in acquiring the integrated certification and the start of operations at Group companies* in Japan, we are working to enhance management to abide by laws at sites with a low environmental burden and conduct even more efficient environmental management with these sites as targets from 2017. We are in the process of obtaining certifications at overseas Group companies with focus on our production sites. We are approximately 70% complete in certifying overseas Group company production sites as of 2021.

We are enhancing the links between each department involved with the value change of businesses at each Suntory Group company to promote business activities from an environmental perspective in all stages from the procurement of ingredients to disposal.

*Group companies complying to the Japanese SOX Act

Introducing Environmental Accounting

We use and disclose the content of environmental accounting that conforms to the 2005 Environmental Accounting Guidelines of the Ministry of the Environment. Environment accounting serves as an important tool for periodic quantitative evaluations of our environmental conservation initiatives in our business activities.

■Suntory Group's Environmental Accounting (total of business in Japan)

(Period: January 1 to December 31, 2021)

(million yen)

Item			FY2019		FY2020		FY2021	
			Environmental investment	Environmental costs	Environmental investment	Environmental costs	Environmental investment	Environmental costs
Business area cost	Pollution prevention cost	・ Preventing water pollution ・ Air pollution prevention cost, etc.	348	2,151	735	2,082	530	2,070
	Global environmental preservation cost	・ GHG reduction ・ Energy conservation ・ Cogeneration ・ Air treatment, etc.	668	3,090	428	2,730	651	2,843
	Resource circulation cost	・ Conserving water through recirculation ・ Reducing sludge ・ Reusing waste ・ Wastewater treatment cost, etc.	331	3,246	153	3,413	66	4,027
	Total		1,347	8,486	1,315	8,225	1,247	8,940
	Upstream and downstream cost	・ Commission for resource recycling containers and packaging ・ Environmentally-friendly containers and packaging measures	0	1,238	0	1,187	0	1,387
Management activities costs	・ Building and maintaining Environmental Management System ・ Sustainability Reports, Exhibits ・ Factory <i>greenification</i> , etc.		0	927	0	714	0	921
Research and development costs	・ Research and development activities to reduce environmental impact		28	300	9	324	3	317
Social activities costs	・ Suntory Natural Water Sanctuary ・ Bird Conservation Activities ・ Suntory <i>Mizuiku</i> - Natural Water Education Program, etc.		79	530	70	503	47	514
Environmental damage response cost			0	0	0	0	0	0
Total			1,454	11,480	1,394	10,953	1,298	12,080

*Amount of investment: Reason for investment was 50% or more for preserving the environment, all amount is considered as environmental investment (inspection basis)

*Amortization expense: Expenses for investment from 2003 and afterwards which 50% or more is intended for environmental preservation are calculated.

*In general, all cost for management and research activities are directly confirmed. Costs that are difficult to confirm directly are prorated and allocated based on a past survey of each procedure.

■Environmental Preservation Effect of Suntory Group (production sites in Japan)

(Period: January 1 to December 31, 2021)

Item				Unit	2019	2020	2021	Reduction against previous fiscal year per unit production basis
In business area costs	Pollution prevention	Reduction of pollutant emissions	SOx	Total (t)	16.8	10.4	3.4	7.3t/year
				Per Unit (g/kℓ)	3.5	2.2	0.7	
		NOx		Total (t)	152	152.3	141.8	14.7t/year
				Per Unit (g/kℓ)	31.6	32.4	29.4	
	Preserving global environment	GHG emission reduction	GHG (Fuel + Electricity) Derivation	Total (thousand t)	350.5	343.7	347.4	5.1 thousand t/year
				Per Unit (kg/kℓ)	71.2	72.9	71.9	
		Reduction of energy consumption	Fuel	Crude oil conversion (thousand kℓ)	103	104	102	4,114 kℓ/year
				Per Unit (ℓ/kℓ)	21.5	22.1	21.2	
			Electricity	Total amount (million kWh)	341	340	352	-3,016 thousand kWh/year
				Per Unit (kWh/kℓ)	70.9	72.3	72.9	
	Resource circulation	Reduction of water resource use	Water use	Total amount (thousand m ³)	21,310	20,752	20,461	863 thousand m ³ /year
				Per Unit (m ³ /kℓ)	4.4	4.4	4.2	
		Reduction of waste emissions	By-products and waste emissions	Total (t)	251,454	228,355	209,683	24,945t/year
				Per Unit (kg/kℓ)	52.3	48.6	43.4	
			Resource recycling rate	(%)	100	100	100	

*Electricity based GHG emissions are the adjusted emission factors for each electric power company as specified by the Act on Promotion of Global Warming Countermeasures.

■Economic effect of Suntory Group (production sites in Japan)

(million yen)

Item	FY2019	FY2020	FY2021
Income from recycling (sales of byproducts)* ¹	359	305	326
Cost saved by conserving energy* ²	-321	-242	150

*¹ The calculation method is the same as the costs saved for waste disposal
 < Previous Year's Capital Gains × Ratio Compared to Previous Year's Production Volume - Current Year's Capital Gains >

*² The calculation method is the same as the costs saved for waste disposal
 < Yearly Costs Before Utility × Ratio Compared to Previous Year's Production Volume - Current Year's Costs >

Environmental Management

Suntory Group ISO 14001 Certification List (as of July 1st 2022)

Japan

- Suntory Holdings Limited
- Suntory Business Systems Limited

■Non-alcoholic Beverages and Food

- Suntory Beverage & Food Limited
- Suntory Products Limited
- Suntory Products Ltd. Haruna Plant
- Suntory Products Ltd. Hanyu Plant
- Suntory Products Ltd. Tamagawa Plant
- Suntory Products Ltd. Kanagawa Ayase Plant
- Suntory Products Ltd. Suntory Tennensui Minami Alps Hakushu Plant
- Suntory Products Ltd. Kisogawa Plant
- Suntory Products Ltd. Ujigawa Plant
- Suntory Products Ltd. Takasago Plant
- Suntory Products Ltd. Suntory Okudaisen Bunanomori Water Plant
- Suntory Wellness Limited
- Suntory Coffee Roastery LTD. Oyama Atsugi Plant
- Suntory Coffee Roastery LTD. Ebina Plant

■Alcohol Beverages

- Suntory Spirits Limited
- Suntory Spirits Ltd. Hakushu Distillery
- Suntory Spirits Ltd. Yamazaki Distillery
- Suntory Spirits Ltd. Ohmi Aging Cellar
- Suntory Spirits Ltd. Azusanomori Plant
- Suntory Spirits Ltd. Osaka Plant
- Suntory Spirits Ltd. Gunma Brewery
- Suntory Spirits Ltd. Tokyo Musashino Brewery
- Suntory Spirits Ltd. Kyoto Brewery
- Suntory Spirits Ltd. Kumamoto Aso Brewery
- Suntory Spirits Ltd. Tominooka Winery
- Suntory Spirits Ltd. Shiojiri Winery
- SUNTORY CHITA DISTILLERY LIMITED
- Iwanohara Vineyard Co., Ltd.
- Suntory Malting LTD.
- OSUMISYUZO LIMITED

■Sales and Marketing

- OKINAWA SUNTORY LIMITED
- Suntory Foods Ltd.
- Suntory Beverage Solution Ltd.
- ORIENTAL COMPANY LIMITED
- Suntory Foods Okinawa Ltd.
- Japan Beverage Ecology Inc.
- SUNLIVE COMPANY LIMITED
- Sunvend Co., Ltd.

■Research and Development Center

- Suntory World Research Center
- Suntory Products Development Center

■Food Service

- DYNAC HOLDINGS CORPORATION
- PRONTO CORPORATION

Overseas

■Non-alcoholic Beverages and Food

Suntory Beverage & Food Europe

- Suntory Beverage & Food France Meyzieu (France)
- Suntory Beverage & Food France La courneuve (France)
- Suntory Beverage & Food France Gadagne (France)
- Suntory Beverage & Food France Donnery (France)
- Suntory Beverage & Food Spain Tordera (Spain)
- Suntory Beverage & Food Spain Carcagente (Spain)
- Suntory Beverage & Food Spain Toledo (Spain)
- Suntory Beverage & Food Spain Sevilla (Spain)
- Suntory Beverage & Food Great Britain and Ireland Coleford (U.K)

Suntory Beverage & Food Asia Pacific

- Brand's Suntory International Leam Chabang (Thailand)
- Brand's Suntory International Pin Thong (Thailand)
- Brand's Suntory International Taichung (Taiwan)
- Brand's Suntory International Shah Alam (Malaysia)
- Suntory PepsiCo Vietnam Beverage Bac Ninh (Vietnam)
- Suntory PepsiCo Vietnam Beverage Quang Nam (Vietnam)
- Suntory PepsiCo Vietnam Beverage Dong Nai (Vietnam)
- Suntory PepsiCo Vietnam Beverage Hoc Mon (Vietnam)
- Suntory PepsiCo Vietnam Beverage Can Tho (Vietnam)
- Suntory PepsiCo Beverage Thailand Rayong (Thailand)
- Suntory PepsiCo Beverage Thailand Saraburi (Thailand)
- Frucor Suntory New Zealand Wiri (New Zealand)

■ Alcohol Beverages

Beam Suntory Inc.

- Frankfort (USA)
- Clermont (USA)
- Booker Noe (USA)
- Maker's Mark (USA)
- Calgary (Canada)
- Sauza (Mexico)
- Behror (India)
- Courvoisier-D (France)
- Courvoisier-F (France)
- Cooley (Ireland)
- Kilbeggan (Ireland)
- Palazuelos (Spain)
- Valverde (Spain)
- Ardmore (U.K.)
- Auchentoshan (U.K.)
- Bowmore (U.K.)
- Glen Garioch (U.K.)
- Laphroaig (U.K.)
- Springburn (U.K.)
- Cruzan (Virgin Islands,U.S.)

Suntory Wine International Limited

- Chateau Lagrange (France)

Environmental Management

Environmental Education for Employees

We are making efforts to raise environmental awareness and improve communication through disseminating information to the employees in timely manner and holding regular environmental trainings.

Promoting Environmental Education in the Group

We promote environmental education to raise employees' environmental awareness strategically. We implemented various environmental education initiatives including e-learning for all Group employees in Japan and dissemination of information on the Intranet. In addition, we regularly hold workshops and seminars to learn specific skills that are required in each operation. In addition, from 2020, we have started a program on "Sustainability Management" through an online course that can be taken by all Group employees worldwide.



Seminar on managing Wastes Disposal and Public Cleansing Act

FY2021 Environmental Training

Name	Target	Number of participating employees
Onboarding training (environmental management class)	New employees	All
ISO14001 awareness and special education	Plant employees	All
Sustainability management training (e-learning, etc.)	Group employees in Japan	20,129
Training for newly appointed employees in charge of ISO14001	Employees in charge of ISO14001	18
Internal ISO14001 auditor training	Internal ISO14001 auditor	55
Eco-products seminar	Employees in charge of product development	24
Environmental Law Training	Employees from relevant departments	54
Wastes Disposal and Public Cleansing Act seminar	Employees from relevant departments	327

■Raising Awareness among Employees on First Hand Experience with Forestry

We are advancing employee participation in the First Hand Experience with Forestry at Suntory Natural Water Sanctuaries where Group employees and their families have participated in volunteer activities since 2013.

We have been engaged in an activity for approximately 7,600 employees in alcoholic and nonalcoholic businesses that encourage employees to participate in first-hand experience with forestry to make each employee experience and understand Suntory's value of coexisting with nature since 2014. It is still being implemented in new employee training programs.



Forestry Maintenance Training
for Employees

■Promoting Environmental Action on the Intranet and Internal Magazine

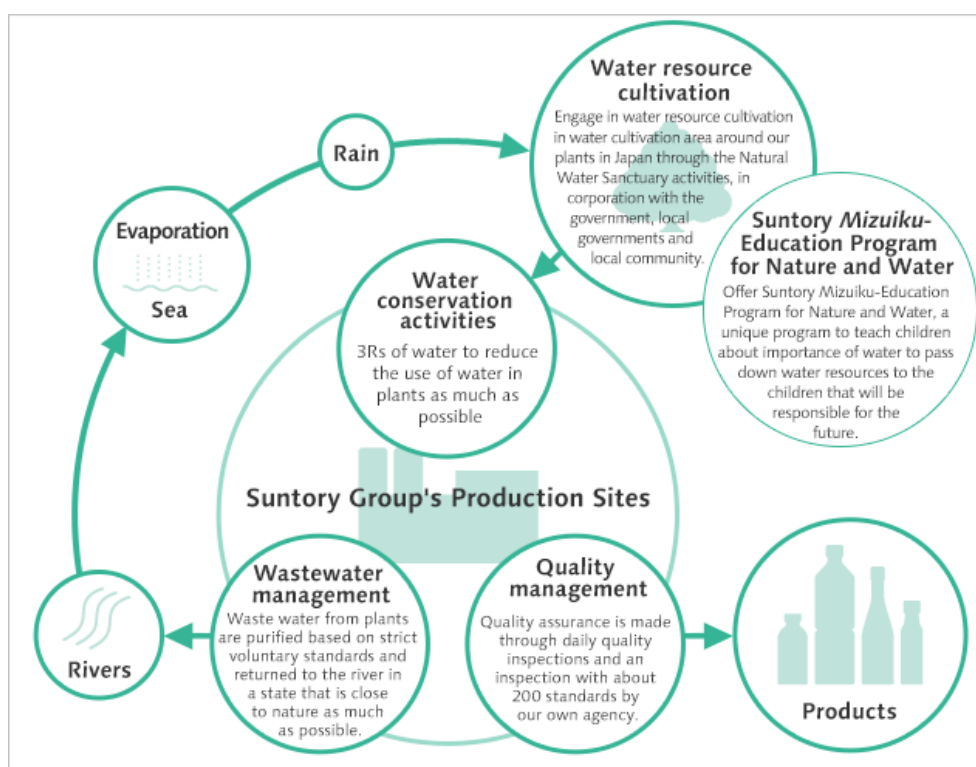
We are sharing basic environmental information, environmental laws and ordinances pertinent to our business, internal guidelines and other materials on the intranet. We are also raising awareness in our employees and encouraging action by including e-Learning as well as lending out DVDs related to environmental activities.

The MADO internal magazine and the e-MADO published on our intranet play a role in introducing the latest environmental activities and information of the Suntory Group to not only enlighten employees but also their families.

To Create Harmony with Nature: Environment

Water Sustainability

Only about 0.01% of the entire fresh water on Earth can be used by mankind. Suntory Group business is supported by precious global resources such as water and agricultural products. Suntory Group uses water carefully and not only returns clean water to nature, but protects forests that nurture groundwater and contribute to healthy circulation of water in nature. In other words, we recognize that water sustainability is the most important issue in our business activity.



Realizing Preservation and Regeneration of Natural Environment

The Suntory Group businesses are supported and realized by precious global resources such as water. We are reducing the environmental burden in our business activities to pass down a global environment rich with water and abundant nature to the future generations. We are also promoting activities that contribute to the preservation and revitalization of the natural environment such as the preservation of the natural environment in Natural Water Sanctuaries, Save the Birds activities to share the importance of protecting the wild birds that symbolize a rich ecosystem with society, and the Suntory *Mizuiku* - Education Program for Nature and Water that communicates the importance of water to children. Within our Environmental Vision 2050, we declare an ambition to take on the challenge of actively engaging in environmental preservation and restoration activities in the main countries of operation, while also setting various targets for them in the Environmental Targets toward 2030.

Sustainable Water Philosophy



Achieving the AWS Certification for Water Stewardship



Water Risk Assessment



Effective Use of Water Resources



Natural Water Sanctuaries (Water Resource Cultivation/ Preserving Biodiversity)



Bird Conservation Activities



Suntory Mizuiku - Education Program for Nature and Water



Water Initiatives Worldwide

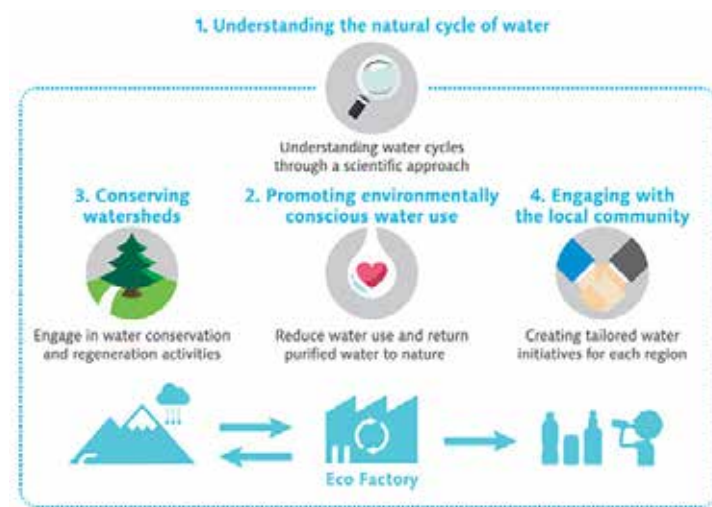


Water Sustainability

Sustainable Water Philosophy

Our craftsmanship is only possible through nature's gifts. It is our duty to nurture and protect water as an invaluable natural resource. Everything we create is grounded in respect and appreciation for water and we are committed to our efforts to keep water in its purest and most abundant form for future generations.

Sustainable Water Philosophy Overview



Establishing Our Sustainable Water Philosophy

The Suntory Group Sustainable Water Philosophy was established to address relevant water issues in each of our regions of operation. As we grow internationally, we are expanding our work on water sustainability across the globe.

Suntory Group's Sustainable Water Philosophy

(Established 2017)

Water is the most important ingredient of our products, as well as a precious shared resource. In order to achieve "water sustainability", the first pillar of Suntory Group's Environmental Policy, we want to share these values with all Suntory Group members and apply them where we operate in order to answer to our stakeholders' expectations.

1. Understanding the natural cycle of water

We investigate watersheds around our sites to understand the local hydrological cycle, using a scientific approach when needed.

2. Promoting environmentally conscious water use

We reduce the environmental impacts of water use on the natural water cycle by implementing 3R activities and returning water to nature after adequate treatment.

3. Conserving watersheds

We conserve our watersheds and endeavor to improve local water quality and quantity in cooperation with stakeholders for a sustainable future.

4. Engaging with the local community

We endeavor to support our community by fostering collective actions to solve water issues and enrich society.

Water Sustainability

Achieving the AWS Certification for Water Stewardship

First in Japan to earn International Certification for Water Stewardship, the Alliance for Water Stewardship (AWS)

Suntory has achieved the first AWS International Certification in Japan for the Suntory Okudaisen Bunanomori Water Plant (Tottori Prefecture) in 2018 and then for Kyushu Kumamoto Plant (Kumamoto Prefecture) in 2019, followed by The Minami Alps Hakushu Water Plant (Yamanashi Prefecture) in 2021. This page introduces its significance.

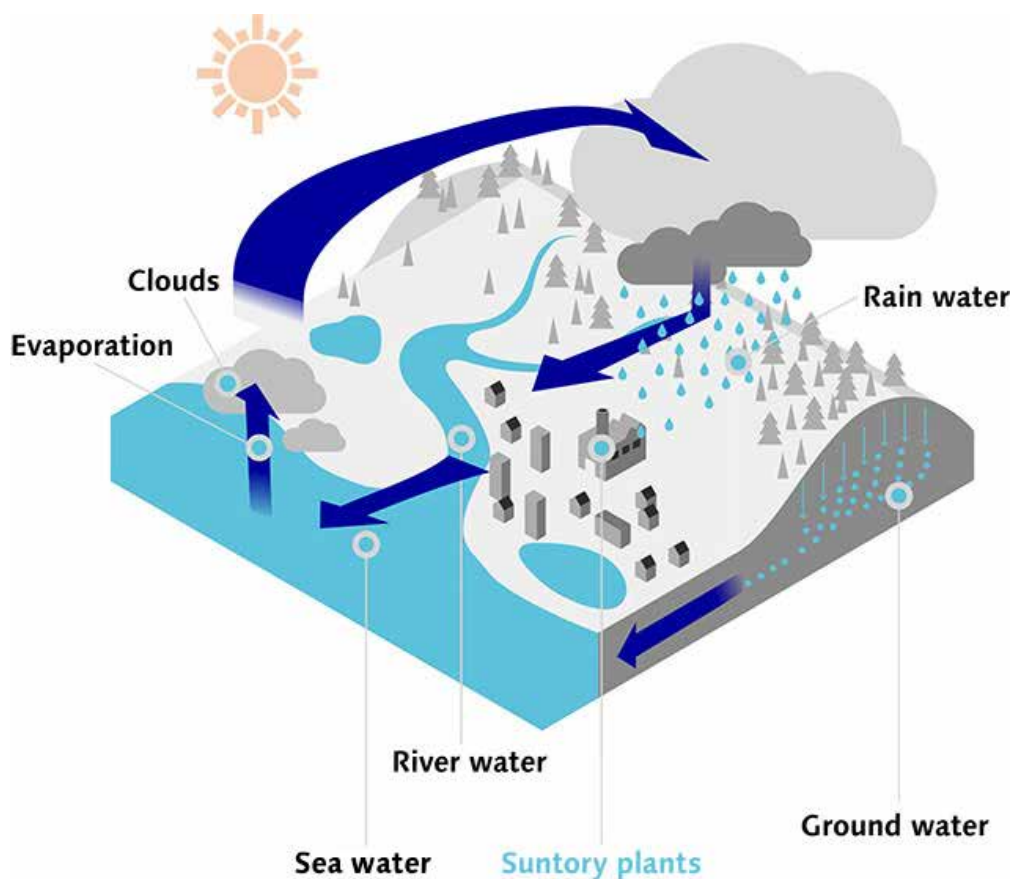


Suntory Holdings Limited
General Manager, Sustainability
Management Division
Harumichi Seta

■ Why Suntory is promoting the AWS

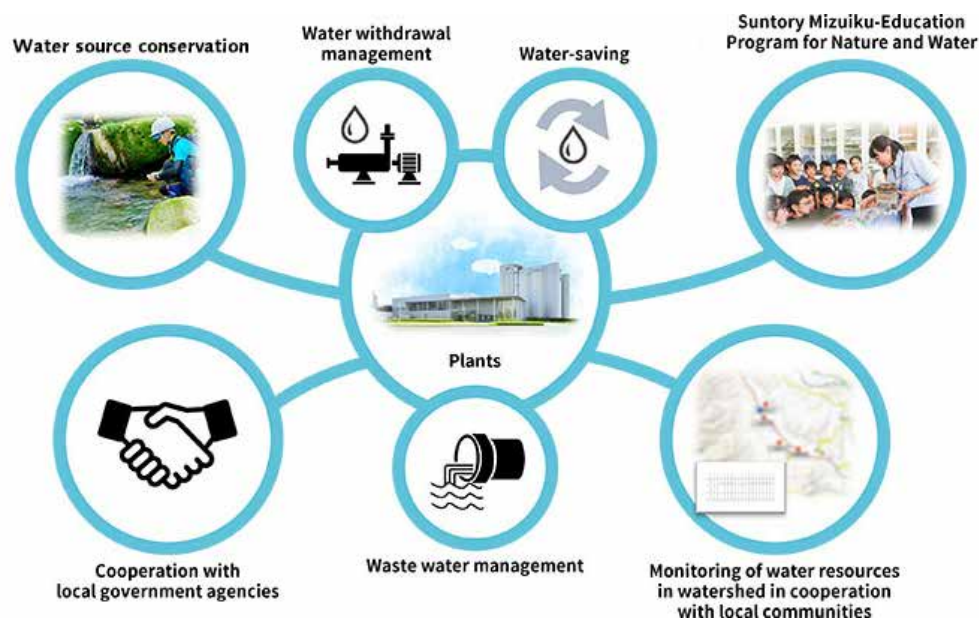
Suntory has been providing new values to people through its products and services to enrich their lives, which is the core of our business. Water is the most critical resource required for us to continue offering value to the customers and the essential resource for local communities and the ecosystem. Furthermore, water is a local resource that circulates depending on the local climate and geographical conditions. Evaporated sea water becomes clouds, rain down to become part of a river or groundwater, and then join larger rivers and back to the sea. This geographical zone is called a catchment. The water we withdraw to produce our products is part of the water cycle, connected to the more significant flow of the catchment like rivers or underground aquifers. Suntory regards itself as a part of the natural water cycle and promotes water stewardship activities in catchments around its plants to preserve the healthy water cycle.

Water Cycle in a Catchment



Water stewardship indicates the responsible management and planning of water resources at the catchment level in collaboration with key stakeholders such as governmental agencies and the local community, in addition to managing water within our own plants. The initiative aims to promote the use of water that is socially and culturally equitable, environmentally sustainable, and economically beneficial throughout the entire catchment. Suntory conduct initiatives to contribute to a healthy water cycle in the watersheds based on the Suntory Group's "Sustainable Water Philosophy," which has four pillars – understanding the natural water cycle, promoting environmentally conscious water use, conserving watersheds, and engaging with the local community. In addition to using water carefully through continuous water-saving activities and wastewater management at plants, Suntory established Institute for Water Science in 2003 to conduct hydrologic studies and scientifically understand the water cycle in watersheds around our plants. In the same year, the Natural Water Sanctuary Initiative began in Kyushu Kumamoto Plant to conserve the water source have expanded the area to 21 locations totaling about 12,000 ha in Japan and achieved the target of cultivating more than twice the amount of water used by our plants. We continue to realize our vision for the next 50 and 100 years with the support of experts in various fields and residents and to create a forest that nurture groundwater for the watersheds. Moreover, we conduct the Suntory *Mizuiku*-Education Program for Nature and Water at the Natural Water Sanctuaries and local elementary schools near Tennensui Water Plants and cooperate with local government agencies and the community to monitor the catchments' groundwater level and water resources. Furthermore, we implement forest maintenance and paddy impounding to recharge groundwater and disseminate attractiveness to vitalize local communities under signed partnership agreements with local government agencies. Suntory became the first company to earn the internationally respected standard for water stewardship in Japan, the AWS Certification, to continuously deepen such integrated water resource management itself along the "Sustainable Water Philosophy."

Integrated Water Resource Management



■About AWS

The Alliance for Water Stewardship (AWS) is an organization globally promoting water sustainability established by NGOs, such as the World Wildlife Fund (WWF), The Nature Conservancy (TNC), and companies. The AWS Certification is an international certificate for sustainable water use targeting plants globally and aims to promote water stewardship.

For the certificate audit of Okudaisen Bunanomori Water Plant, Suntory Kyushu Kumamoto Plant, and The Minami Alps Hakushu Water Plant, the assessment body were highly evaluated our integrated water resource management; understanding of the water balance in the catchment around the plants, in line with the Suntory Group's "Sustainable Water Philosophy," water source conservation based on scientific data, water saving and water quality management initiatives at plants, our work with stakeholders, and appropriate disclosure.



■About the Partnership Agreement

Suntory Holdings received the request from the AWS to take leadership as a company that leads the promotion of water sustainability in Japan. Endorsing its purpose, we signed a partnership agreement with AWS Asia Pacific in February 2021. We also became the first company with AWS membership in Japan.

As the initiatives under the partnership agreement, we supervised the Japanese edition of the AWS International Standards issued in August 2021. We also introduced the certification of the AWS for Suntory Kyushu Kumamoto Plant through a case study etc., of water source conservation activities by winter paddy impounding at the 4th Asia Pacific Summit held in April 2022, in cooperation with the Water Stewardship Asia Pacific. Suntory will advocate the importance of water resource management by the private sector.

Achieving the AWS Certification by Suntory

2018

<First in Japan>

Suntory Okudaisen Bunanomori Water Plant

Achieved the AWS Certification



2019

Suntory Kyushu Kumamoto Plant

Achieved the AWS Certification



2021

<First in Japan>

Signed partnership agreement with AWS Asia Pacific

<First in Japan>

Member of the AWS Supporting Companies

Suntory Minami Alps Hakushu Water Plant

Achieved the AWS Certification



We will continue to further engage in AWS activities

Water Sustainability

Water Risk Assessment

The Suntory Group, which has made the pursuit of water sustainability a vital issue in the Basic Principles of Suntory Group's Environmental Policy, continues to conduct various water-related assessments at the Institute for Water Science established in 2003. We conduct water-related risk assessments for sustainable business activities and use these assessments to promote environmental management. We also consider water risk assessment when developing new businesses.

Water Risk Assessment of Suntory Group's Own Plants

We identified the water stress situation in the country where our plants* are located by using Baseline Water Stress, an indicator in the Aqueduct Country Ranking developed by World Resources Institute. The Aqueduct Country Ranking is the global assessment tool for uniformly assessing water risk in a specific country.

*Owned plants that manufactures finished products and excludes plants for packaging and ingredients

Baseline Water Stress	
Extremely high	India
High	Mexico, Spain
Medium-high	France, Thailand, Indonesia, Germany
Low-medium	apan, USA, UK, Nigeria
Low	Canada, Ireland, Taiwan, Vietnam, Malaysia, New Zealand

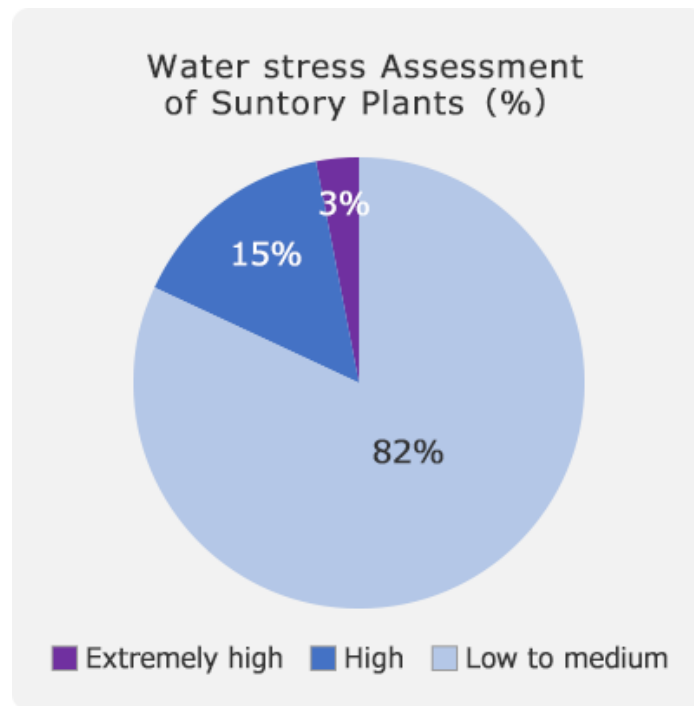
Based on country scores for Baseline Water Stress as used in Aqueduct by World Resources Institute.

In addition, using the methodology we developed in the pilot study* of Science-Based Targets (SBT) for water, in which we participated in 2021, we assessed the water risk of the sites where our plants are located.

For our plants' continual operation, the water availability to the plants, the surrounding natural environment, and the local community must be in a sustainable state. For this reason, we identified the water availability in the watershed to which our plants belong as materiality. We then prioritized the plants that needed to implement risk management initiatives.

To assess, in addition to the Water Risk Filter developed by the World Wide Fund for Nature (WWF), the world's largest nature conservation organization, we adopted a total of four indicators, including the Aqueduct mentioned above indicator. These indicators are used to evaluate the water availability based on the ratio between the amount of water supplied to the watershed by precipitation and the amount of water demand in the watershed, estimated based on population statistics. Three of these indicators evaluate the water availability in the present, while the remaining indicator predicts the water availability in 2040, based on future scenarios such as climate change. Both indicators use a five-point scale to evaluate the degree of risk. We averaged the scores of the three indicators for each site to assess the current status of water availability and defined locations with an average score of "5: Extremely high" or "4: High" as sites with "Extremely high water-stressed." In addition, sites with a score of 4 or higher on Aqueduct's 2040 Water Stress, an indicator of the state of the water availability in 2040, were positioned as sites with "Highly water-stressed." As a result, of the total water withdrawal by all our plants in 2021, 3% were by sites with "Extremely high water-stressed," and 15% were by sites with "Highly water-stressed."

*Pilot study to verify methodology related to SBT settings for water by Science Based Targets Network



Based on the results of this assessment, we are promoting local initiatives on a priority basis, starting with plants with high water risk. At the Behror plant in India, we have assessed the water balance of the entire watershed to which the plant belongs based on a local hydrological survey and implement activities to recharge the water source by utilizing reservoirs where rainwater can infiltrate. In addition, at the Toledo plant in Spain, we collaborate with a local NGO to improve the water quality of the Tajo River basin through a project called "Guardians of Tajo." We are currently conducting a more detailed field survey of the city water reservoir used by the plant to identify the recharge area to make a plan for conservation activities. Furthermore, at the Bogor plant in Indonesia, we have been working with experts from a local university to conduct a hydrological survey of the watershed to formulate a plan for groundwater conservation. We have surveyed river flow rates and water quality, considering the rainy and dry seasons.

In this way, the Suntory Group has been conducting on-site surveys, and working with stakeholders in the watershed to implement initiatives at prioritized plants in highly water-stressed areas. In addition, we have been conducting water-related surveys of our significant suppliers on an ongoing basis since 2016.

Water Sustainability

Effective Use of Water Resources

We are conserving water in our plants and returning waste water to nature after purifying it to avoid impact on the natural circulation of water.

Enhanced 3Rs for Water to Reduce Water Use

The Suntory Group's plants use a large amount of water, for example, in cleaning production equipment and cooling, in addition to using it as an ingredient in our products. In order to conserve limited water resources, we intensify our activities to achieve targets toward 2030 of "Reduce water consumption at the Suntory Group plants worldwide by 35%*1" through enforcement of 3Rs for water, ensuring that the minimum amount of water is required (Reduce), water can be used repeatedly (Reuse), and water can be processed and used elsewhere (Recycle).

*1 Reduction per unit production based on the business fields in 2015

■ Water Use Performance

Area	Water use (thousand m ³)			
	2015 (base year)	2019	2020	2021
Japan	21,816	21,310	20,752	20,461
Americas	8,132	8,081	6,737	6,253
Europe	6,473	6,245	5,454	5,985
Asia	4,492	7,154	6,364	6,212
Oceania	562	438	444	424
Africa	216	129	89	84
Total	41,692	43,357	39,840	39,419★

* 2015 (base year): Data covers 25 production plants in Japan and 59 production plants overseas *2021 : Data covers 27 production plants in Japan and 64 production plants overseas

* Therein, the water use by Suntory Beverage & Food Group companies in Japan and overseas was 21,776 thousand m³★

* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The assured numerical values are indicated with ★.



* Per unit production is the amount of usage per kiloliter produced

* Data covers 27 production plants in Japan and 64 production plants overseas

■Applying 3Rs in Water Usage

When selecting equipment and devices in our plants, we follow the "3Rs of Water": Reduce the amount of water as much as possible, Reuse water, and Recycle water through treatment.

A variety of activities related to the 3Rs are being implemented at the Minami Alps Hakushu Water Plant of Suntory Products Ltd. In particular, thanks to our use of a sophisticated "water cascade" recycling process, we are an industry leader in terms of per unit production in relation to the volume of water used.



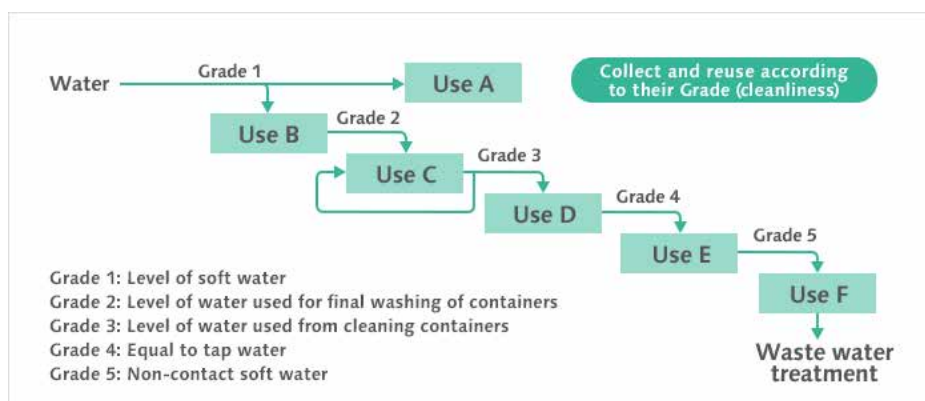
The Minami Alps Hakushu Water Plant of Suntory Products Ltd.



Reuse of water recycled at each stage of cleaning stored in 200 ton tanks

Using Cascades of Water

Water used in the manufacturing process is classified into five grades, including coolant water, cleaning water, etc., based on quality. This technology allows plants to recycle water to be used in subsequent processes, for example, using the highest grade water in the most demanding process, and recycling it for use in a process with less stringent requirements.



■Amount of water usage by water source

Intake source	Amount of water (thousand m ³)		
	2019	2020	2021
Groundwater	18,687	17,698	17,129
Rivers/lakes	12,873	10,858	10,468
Rain water	0	0	0
City water	11,797	11,284	11,822
Water supplied from external sources (recycled water)	0	0	0
Total	43,357	39,840	39,419

* Data covers 27 production plants in Japan and 64 production plants overseas

■Effective Use of Rainwater

Japan is fortunate to have plentiful rainfall, and rainwater is one of our important resources. The Suntory Group accumulates rainwater in tanks for use in watering plants.



Suntory Products Ltd. Kanagawa Ayase Plant uses rainwater to water plants

Comprehensive Waste Water Management

The Suntory Group established voluntary standards for waste water that are equally or stricter than the legal regulations and manages quality so that we may release waste water in a state as close to nature as possible. Waste water from our plants is first purified using anaerobic waste water treatment facilities* and other equipment before it is released into sewers and rivers. Inspectors use measuring equipment to take daily readings of things like water quality under a constant monitoring regime.

To further stabilize waste treatment facilities in plant in Japan, we are holding regular meeting attended by person in charge of waste water from every plant to improve the level of operation management and system to prevent troubles from 2014.

*A treatment method that decomposes pollutants using microbes (anaerobic bacteria)

■Water discharge

Destination	Waste Water (thousand m ³)		
	2019	2020	2021
Rivers/lakes	14,481	13,611	13,961
Sea	1,061	967	1,088
Sewers	8,707	8,283	8,651
Others (for watering plants, etc.)	61	55	35
Total	24,310	22,917	23,736

*Data covers 27 production plants in Japan and 64 production plants overseas



24-hour waste water management system



Meeting of persons in charge of waste water

Water Sustainability

Natural Water Sanctuaries (Water Resource Cultivation/ Preserving Biodiversity)

Natural Water Sanctuary Initiative -- For the future of water and life

Suntory is a "water" company.

Without quality water, we are unable to produce any beer, soft drinks, or whisky.

This is because water, especially groundwater, serves as Suntory's lifeline.

This precious groundwater is nurtured in the forest.

In order to maintain safety and reliability of groundwater as well as sustainability, we are cultivating water resources in forests which is more than twice the amount of water used by our plants. Therefore, plant water source recharge areas are specified, with a focus on our Institute for Water Science, and mid-to-long-term agreements are established with local government and forest owners to maintain forests, leading to the establishment of Natural Water Sanctuaries.

In addition to the first sanctuary location established in Aso City, Kumamoto Prefecture in 2003 and the newest sanctuary called "Natural Water Sanctuary Northern Alps" (located in Omachi City, Nagano Prefecture) in March 2019, there are 21 Suntory Natural Water Sanctuaries in 15 prefectures which comprise a total area of approximately 12,000ha.

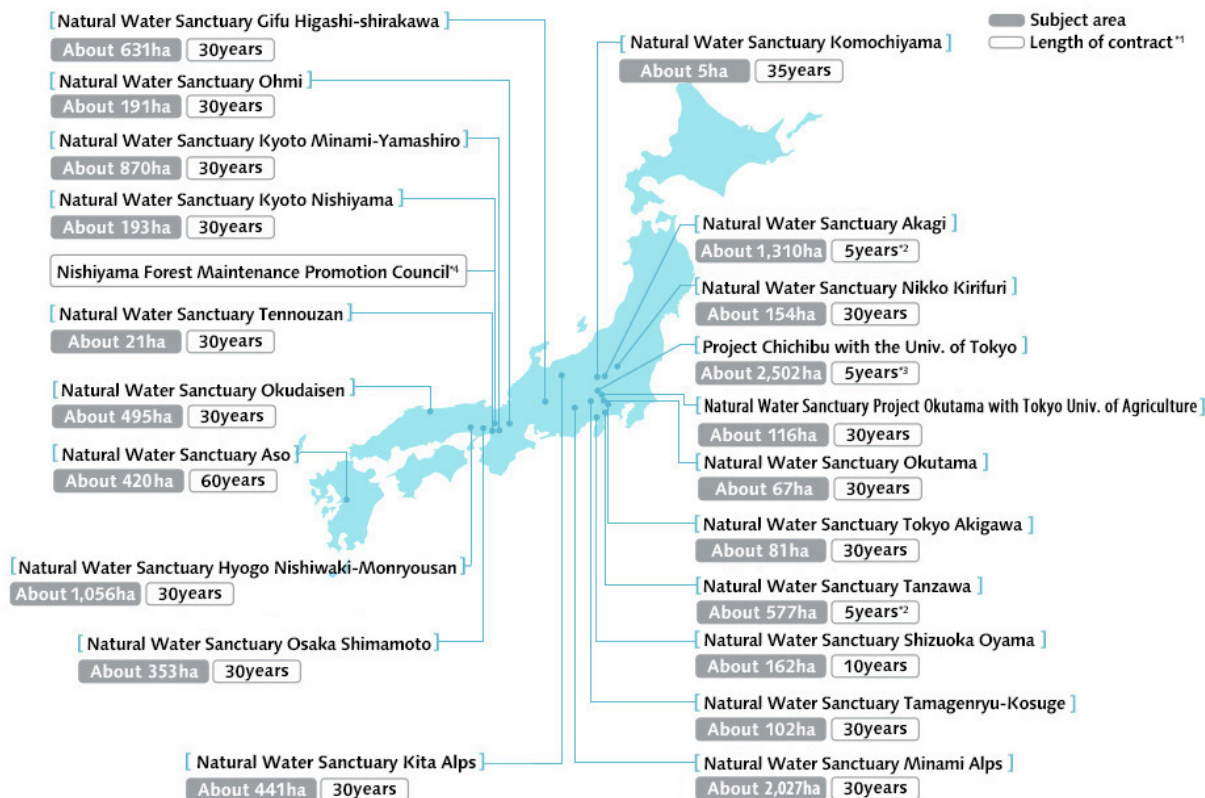


■<Natural Water Sanctuary> Development Targets

- (1)Forests with a great capacity for cultivating water resources
- (2)Forests rich in biodiversity
- (3)Forests able to withstand flooding and landslides
- (4)Forests with great CO2 absorption capabilities
- (5)Beautiful forests where visitors can encounter nature in all its abundance
(used for education programs, etc.)

21 areas nationwide Around **12,000ha**

As of April 2022



*1 When there contracts and agreements with different durations, the longest duration is given.

*2 Planned to conserve for a century.

*3 Planned to conserve for several decades.

*4 In Nagaokakyo, Kyoto, we are a member of the Nishiyama forestry development promotion committee and we are cooperating in local forest preservation activities with people in the community. The area of the forests subject to this activity is not counted as part of our total Natural Water Sanctuary area.

Looking at Groundwater -- Comparing simulation models with results from field surveys

One of the main purposes of our Natural Water Sanctuary Initiative to improve the function of forests for recharging water resources.

As a way to evaluate the results, Suntory has been trying to quantitatively evaluate the amount of groundwater recharge using a groundwater flow simulation model since 2006 and is finally approaching a level of accuracy which would allow the model to be used. Through the simulation of groundwater flow, we attempt to simulate where groundwater passes and how long it takes to reach the factory, and combine it with field survey information to deepen understanding of the underground which we normally cannot see. We would like to incorporate these results into the maintenance plan which will lead to more effective cultivation of water source recharge areas.



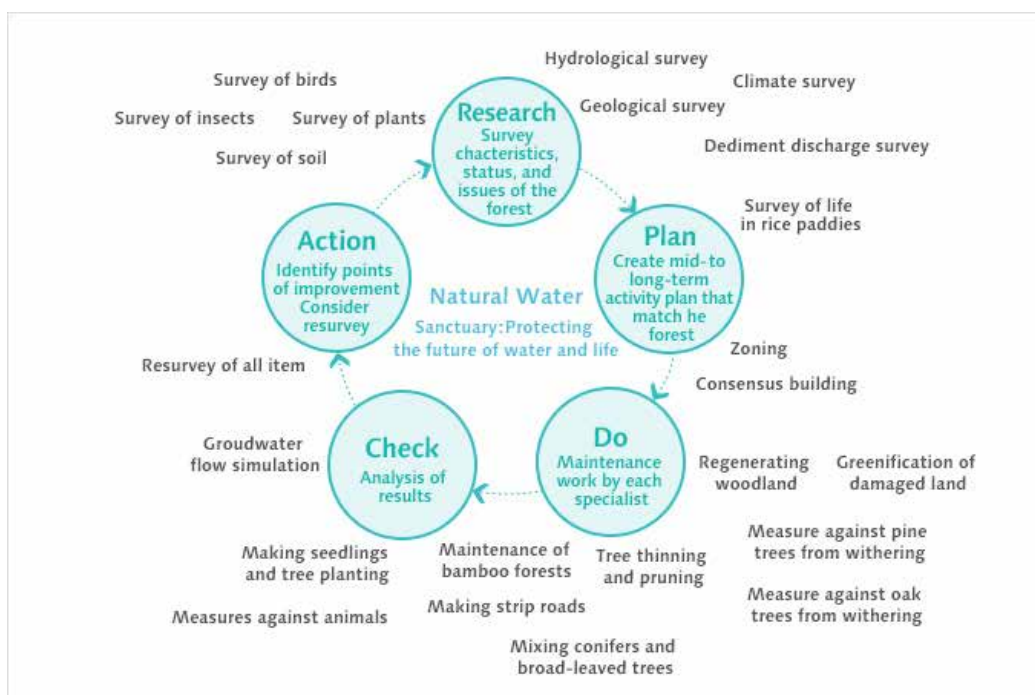
In addition to simulation results, it is also important to combine these results with results based on information gathered in the field during hydrologic surveys, etc. for verification.

Forest Cultivation Which Looks 50 years and 100 Years Into the Future

All forests are different. So what are the special characteristics of each Natural Water Sanctuary as well as the issues that they face?

At first, we engage in activities that follow the RPDCA cycle which includes scientifically-based survey and research (Research), which serves as the foundation, creation of a vision (development plan) suited to each forest (Plan), maintenance work conducted by professionals (Do), verification of results (Check), and consideration of measures for improvement/conducting re-examination (Action).

The areas and fields of investigation and research targeted by Natural Water Sanctuary Initiative are diverse and linked organically. In doing so, cooperation based on the knowledge and skills of experts in various fields and of people in local communities is indispensable. We also use Natural Water Sanctuaries to conduct activities including human resource development support for passing on knowledge and skills (road creation, preventing damage from harmful animals, etc.), Suntory *Mizuiku* - Education Program for Nature and Water, which allows children to experience the importance of forests since they cultivate water, and The training program of First Hand Experience with Forestry by Suntory employees. Suntory continues implementation of Natural Water Sanctuary Initiative in order to provide the blessing of nature, something that cannot be replaced, to our children, grandchildren, and future generations to come by first humbly listening to various related issues and work together with local communities to gain knowledge.



A Healthy Forest is One Full of Life -- Protecting Biodiversity

If there are many different types of plants in a forest, there will be an increase in the types of small animals that eat them, resulting in attracting animals that eat those small animals. In a healthy environment like this, a pyramid formed by various organisms is completed.

In addition to conducting systematic management through continuous ecosystem monitoring of animals, including birds, plants, and insects at Natural Water Sanctuaries, in January 2011 we participated in Biodiversity Declaration Promotion Partners initiated by Keidanren (Japan Business Federation) and are taking the initiative to create a society rich in biodiversity.



Biodiversity Pyramid of a Forest:
Protecting the soil and vegetation
leads to the protection of the entire ecosystem.

■ Biodiversity in a Natural Water Sanctuary from a Bird's Perspective

The plant and animal life living in the forest will change if the typical functions of the forest can be revitalized. Focusing on wild birds, which are said to serve as a barometer of a given environment, we conduct wild bird surveys by specialists in the Natural Water Sanctuaries every year based on the idea that it is possible to comprehensively grasp the changes in the entire ecosystem that supports them.

In addition, We have been promoting the project of nest building and rearing of chicks by eagles and hawks at all the Natural Water Sanctuaries in Japan with the purpose of advancing the development of a forest rich with biodiversity by taking the perspective of natural wild birds in the Natural Water Sanctuaries.

Becoming More Familiar with Natural Water Sanctuaries

■ Ikurinzai - Timber From Cultivated Forests Project

It is necessary to cut down trees in order to keep a forest healthy. The Suntory Group calls wood material made from Natural Water Sanctuary Initiative to nurture sustainable water and forests "Ikurinzai - Timber from cultivated forests, carefully using all the conifer and broad-leaved trees removed during tree cutting, road creation, and other activities.

Case Examples of Timber Utilization Inside and Outside of the Company



Research Location: Timber used
to create the entrance (flooring, etc.)
of Suntory World Research Center



All table tops at PRONTO mbs
Tamachi shop.

■ Natural Water Sanctuary Forum

Based on the goal of "Creating Forests Which Nurture Water and Life," specialists in a variety of fields who provide coaching and collaborate in Natural Water Sanctuary Initiative are invited the form which serves as an opportunity to share the newest expertise and policies for future activities. The forum was held nine times from 2011 to 2019.



A poster session where guests can ask lecturers questions and exchange opinions

■ Training Program for Employees

Many group employees and their families have volunteered for the forest stewardship program in Natural Water Sanctuaries up to 2013. Since 2014, so that each employee experiences and understands the values of our corporate philosophy "To Create Harmony with People and Nature," a total of about 7,400 people (including about 800 volunteers) participated in the First Hand Experience with Forestry as a training program for Suntory Group company employees, mainly current employees of Suntory Holdings Ltd. and Suntory Beverage & Food Ltd.



Employees cutting undergrowth at a Natural Water Sanctuary



Employees pruning trees at a Natural Water Sanctuary

■ Participate in "30by30 Alliance for Biodiversity" in Japan

The Suntory Group joined the "30by30 Alliance for Biodiversity" in Japan, which targets to halt and reverse biodiversity loss by 2030. As a coalition of governments, companies, and non-profit organizations, the "30by30 Alliance for Biodiversity" has been established in Japan to achieve the "30by30" targets to conserve or protect at least 30 percent of the country's land and ocean by 2030.

The objective of this alliance is to promote and actively publicize initiatives that aim to expand national parks and register socio-ecological production landscapes (Satochi-satoyama) and company-owned forests to the World Database as OECM*. The Suntory Group aims to contribute to achieving the global "30by30" goal by having its Natural Water Sanctuaries certified as OECM through participating in this alliance. The company will continue to promote sustainability management in order to preserve biodiversity and to realize a sustainable society.



*OECM is an acronym for "Other Effective area-based Conservation Measures." OECM is an area conserved by initiatives of private organizations or an area where conservation is achieved mainly as a by-product of other management.

■University of Tokyo "The Wisdom of Water" (Suntory) Corporate Sponsored Research Program

Suntory Holdings Ltd. established the University of Tokyo "The Wisdom of Water" (Suntory) Corporate Sponsored Research Program in April 2008, and it has held this research program for five years. By cultivating more social interest in water, we are engaging in the various activities below with the aim of contributing to the education of research in academic fields while promoting solutions of water issues as well as developing a rich water environment.

Activity Case Examples



"Water Map of Japan"



"Water Drill" educational contents
for elementary students



The Wisdom of Water and Scientific
Study of Forests and Water websites

■Official Partnership for National Parks

The Suntory Group has concluded the "Official Partnership for National Parks" with the Ministry of the Environment. Through this program, we aim to deepen people's understanding of the conservation of the natural environment and to revitalize the areas where the national parks are located. We will continue to promote the wonders of the national park along with our Natural Water Sanctuary Initiative.



Water Sustainability

Bird Conservation Activities

Wild birds are said to be an indicator of natural environment. Understanding that the wild bird protection is linked to the protection of humans and the natural environment, we began our involvement in bird conservation activities in 1973.

History of Suntory Bird Conservation Activities

Year of activity	Content
1973	<ul style="list-style-type: none"> - Start of Save the Birds! Campaign (May) - The first publication of a newspaper ad with an illustration of wild birds (received Asahi Advertising Award) - Established a bird sanctuary in the Hakushu Distillery (Yamanashi prefecture)
1989	- Foundation of the Suntory Fund for Bird Conservation
1990	- The 1st Fund Granting Ceremony of the public trust, Suntory Fund for Bird Conservation
1993	- Start of the Save 1000 Albatrosses! Campaign
2006	- Newly established Grant for Community Bird Activities to the Suntory Fund for Bird Conservation
2014	- Newly established Grant for Riparian Large Bird Conservation to the Suntory Fund for Bird Conservation
2016	- Received the Wood Pencil at the D&AD Awards 2016, the ADC Award at the 2016 ADC Awards and the monetary prize at the Design for Asia Awards (DFAA) for the Line of Life Project to build kites of birds with children in the hopes of returning storks to a habitat where they can live normally
2018	- Relevant businesses certified under Japan Committee for the United Nations Decade on Biodiversity (UNDB-J)
2021	- Supported 「eBird Japan」, the Japanese version of 「eBird」, the world's largest bird observation database.
2022	- The 33st Fund Granting Ceremony of the public trust, Suntory Fund for Bird Conservation (Total of ¥622.51 million from the 1st to 33st fund granting have been made to 472 organizations)



1st Save the Birds! Campaign newspaper ad



■The Suntory Fund for Bird Conservation

As one of the activities commemorating the 90th anniversary of our founding, we enhanced bird conservation activities with the establishment of the Suntory Fund for Bird Conservation in 1989. As this initiative is designated to promote global environmental conservation through the protection of wild birds, funds are granted for bird protection activities both in Japan and overseas.

Over the 33 years since becoming a charitable trust in 1990, the Foundation has granted total of ¥623 million to 472 organizations up to 2022, making great achievements. 2020 presentation ceremony has been canceled to avoid risk of covid-19. In 2021 and 2022, the presentation ceremony was held online.



The 30th Fund Granting Ceremony of Public Trust Suntory Fund for Bird Conservation



The 33th Fund Granting Online Ceremony of Public Trust Suntory Fund for Bird Conservation



Presentation of activities of foreign grantees who participated online in the presentation ceremony

The Hakushu Distillery Bird Sanctuary

We started bird conservation activities in 1973, and in the same year, as the first private company, we opened a wild bird sanctuary in the Hakushu Distillery in Yamanashi Prefecture.

Surrounded by rich forests and many clear streams, the Hakushu Distillery is a relay point of migration for wild birds. In the bird sanctuary, Suntory periodically conducts bird research and, together with the local people, engages in forest preservation activities to maintain an environment by various activities including nest box hanging and other activities.



Blue-and-white flycatcher



Ural Owl



Red-flanked bluetail



Narcissus Flycatcher



Hanging boxes in the Bird Sanctuary

Communication

We are putting out a broad range of information through our websites and other tools to familiarize more people with these wild birds. On the Japanese Bird Encyclopedia website, anyone can enjoy learning about over 200 species of wild birds through illustrations with explanations, bird calls, and pictures.

The Bird Watching that Starts Today website recommends bird watching spots nearby while introducing hints and points of caution when observing wild birds. These websites can even be enjoyed while out and about on a smartphone.

We are also creating leaflets on how to easily distinguish the birds around you to help in bird watching and leaflets about how to easily make feeders, birdbaths and nest to encourage birds into your area.



Japanese Bird Encyclopedia website



The Bird Watching that Starts Today website



Save the Birds Activity leaflets

Preserving and Regenerating the Natural Environment

Suntory *Mizuiku* - Education Program for Nature and Water

We are implementing Suntory *Mizuiku*-Education Program for Nature and Water to pass down precious natural environment to the next generation.

Suntory *Mizuiku*-Education Program for Nature and Water

Suntory *Mizuiku*-Education Program for Nature and Water celebrates its 19th year in 2022. Suntory *Mizuiku*-Education Program for Nature and Water is a program unique to Suntory designed for the next generation to realize the beauty of nature and importance of water and the forests that nurture the groundwater and to think about what they can do to ensure there is water in the future. The program centers on two activities: Outdoor School of Forest and Water and Teaching Program at Schools. It started online in 2020.

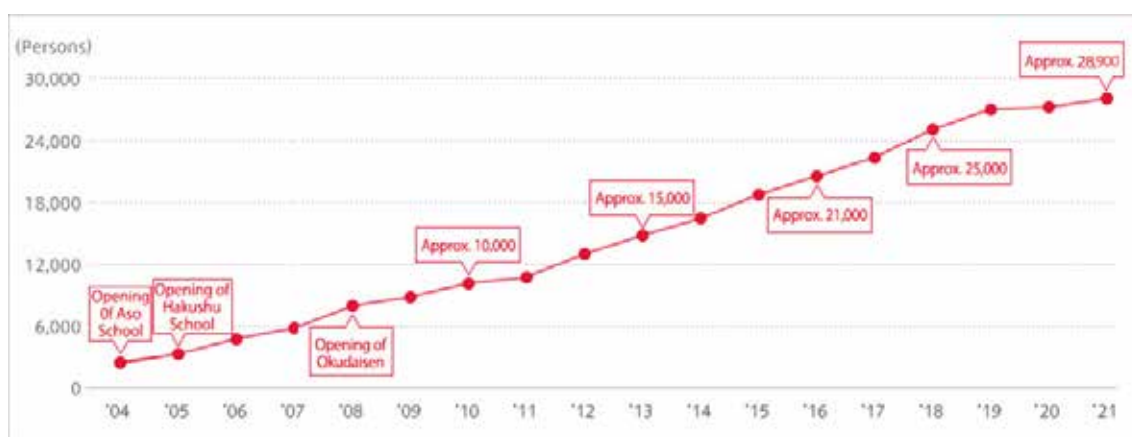
*Sponsor: Ministry of the Environment, Ministry of Education, Culture, Sports, Science and Technology, etc.

■ Outdoor School of Forest and Water

This hands-on nature program geared to elementary school students from grades three through six and their parents or guardians is held in the home regions of (Mineral Water) Suntory Tennensui. Participants experience for themselves the importance of water and of the forests that produce it amid the great outdoors at Hakushu (Yamanashi prefecture), Okudaisen (Tottori prefecture), and Aso (Kumamoto prefecture). Around 28,900 students and their parents took part in the program since it began in 2004 through 2021. We opened a remote school in 2020.

The Outdoor School of Forest and Water staff conduct the program together with expert instructors that play active role locally in environmental education.

Total number of participants at the Suntory *Mizuiku* - Natural Water Education Program Outdoor School of Forest and Water

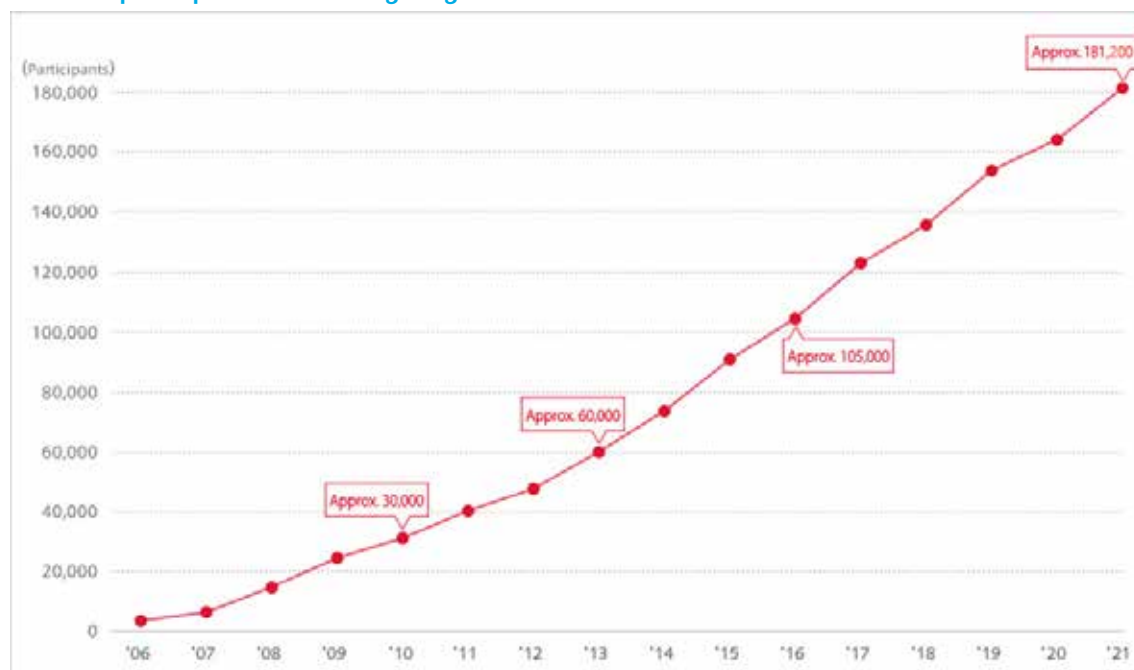


Outdoor School of Forest and Water

■Teaching Program at Schools

We offer study programs for students in grades 4 and 5 in elementary schools together with their teachers. We believe we can make a difference by teaching the cycle and importance of nature through videos and experiments so that together we can pass down water to future generations. The number of students participating in these programs are roughly 181,200 at approximately 2,364 schools as of 2021. Online classes have also started in 2020, which enable any schools to take part in all over Japan.

Total number of participants for Teaching Program at Schools



Teaching about Water at Schools

■Suntory *Mizuiku* - Natural Water Education Program Website

The Suntory *Mizuiku*-Natural Water Education Program website is a place to have fun and learn about water. The website includes detailed information about the Outdoor School of Forest and Water and the Teaching Program at Schools programs in addition to kids pages such as the encyclopedia that brings together independent water research and comprehensive knowledge about water.



Suntory *Mizuiku* - Natural Water Education Program Website

Expanding Suntory *Mizuiku* - Education Program for Nature and Water on a Global Level

With the expansion of Suntory Group's business activities internationally, we have also expanded Suntory *Mizuiku* - Education Program for Nature and Water overseas with the hope of promoting environmental activities globally.

■ Vietnam

We started the Vietnam Version of Suntory *Mizuiku*-Education Program for Nature and Water from March 2015, marking our first Suntory *Mizuiku* effort overseas.

We developed original education materials in collaboration with international NGOs such as Live and Learn, started collaboration with the Central Council of Ho Minh Young Pioneer Organization as well as the Vietnam National Union of Students from 2017, and have been conducting classes for third and fourth grade children to learn about the importance of water, sanitary management, and the importance of preserving water resources. We are also expanding teaching classes in each region by dispatching qualified *Mizuiku* instructors as part of a summer program. Starting in Hanoi City, classes are also taught in Ho Chi Min City and Bac Ninh, Ben Tre, Quang Nam, Lang Son, Ha Giang, Dong Nai, Thai Nguyen, Da Nang, Tra Vinh, Binh Thuan, Cao Bang, Thai Binh Provinces and Hai Phong City. As of the end of 2021, approximately 81,000 children have participated in the program since its inception.

In addition, we are contributing to the installation of toilets and washrooms at elementary schools to improve sanitary environment of children.

This activity was created to contribute to Target 6.B of Sustainable Development Goal 6 "Ensure access to water and sanitation for all."



Suntory *Mizuiku*-Education Program for Nature and Water in Vietnam

■ Thailand

From July 2019, we started Suntory *Mizuiku*-Education Program for Nature and Water in Thailand, the second foreign country in addition to Vietnam to serve as a program target location.

Through the collaboration of our group company Suntory PepsiCo Beverage Thailand and a local NGO, we implemented an educational program for fourth, fifth, and sixth grade children from Saraburi Province and Rayong Province, where Suntory PepsiCo Beverage Thailand plants are located, and Chiang Mai Province, which possesses the most water resources in Thailand. In 2021, the water education project at elementary schools in Ayutthaya, Pathumthani, Nakornpathom Provinces and Bangkok has been launched. Approximately 11,000 persons have participated in the program as of the end of 2021. It is an original program which teaches children about the importance of water, the importance of protecting water resources, and similar matters.

We also began a project to prevent sediment based erosion by slowing the currents of streams in northern Chiang Mai Province, installed small weirs to support permeation of underground water, planted trees to prevent soil from flowing into the streams.



Suntory *Mizuiku*-Education Program for Nature and Water in Thailand

■Indonesia

We started the Indonesia Version of Suntory *Mizuiku*-Education Program for Nature and Water in July 2019.

Collaborating with our group company Suntory Garuda, a local foundation, and a local NGO, we implemented an educational program for elementary school children in Gowa (South Sulawesi Province), Banjarbaru (South Kalimantan Province), Sidoarjo (East Java Province), Tangerang (Banten Province), Jakarta (the capital city) and Bogor (West Java Province) . Approximately 14,000 persons have participated in the program as of the end of 2021.

As in Vietnam, we teach about the importance of water, healthy water cycle, and the importance of preserving water resources through an original learning program. The program provides basic knowledge about water, addresses water pollution and how to eliminate it, and explores water preservation efforts that children can contribute to on an individual level. This contributes to improving children's awareness about environment in Indonesia.



Suntory *Mizuiku*-Education Program for Nature and Water in Indonesia

■France

In July 2020, Suntory Beverage & Food France established a workshop-based water education program for elementary school students in partnership with Grand Parc Miribel Jonage, a nature park located near its Meyzieu Plant. The program includes content on the role forests have in cultivating water, experiments to show how rainwater becomes underground water, and more. It was developed as part of the partnership Suntory Beverage & Food France began with Grand Parc Miribel Jonage in 2017 for water conservancy.



Workshop-based water education program in France

■China

In China, Suntory China Holdings started *Mizuiku* program in September 2021, with a total of approximately 4,000 participants at Shanghai in 2021. This program teaches elementary school students the basic knowledge about water and the habit of saving water, through experiments and videos about how nature works with contents tailored to the local situation such as by questioning “where does city water come from and end up in?”



Suntory *Mizuiku* - Education Program for Nature and Water in China

■Spain

From May 2022, we started Suntory *Mizuiku*-Education Program for Nature and Water in Spain.

Through the collaboration of our group company Suntory Beverage & Food Spain, a local NPO, and local experts, we implemented an educational program for primary school students in the province of Toledo. The field activities are carried out in the natural environment of the Guajaraz reservoir in the vicinity of Toledo, where the main factory of Suntory Beverage & Food Spain is based and source their water from. The program teaches students the importance of water such as by deepening their understanding on the natural water cycle and how it relates to their daily lives, how to use water responsibly, and the relationship between water and biodiversity, as well as provide training and ideas on how to preserve and improve the quality and quantity of water in the future.

Preserving and Regenerating the Natural Environment

Water Initiatives Worldwide

The Suntory Group businesses are supported and realized by precious global resources such as water. The global environment which holds the blessings of water and nature is a vital foundation of our businesses. We actively strive to coexist with the natural environment worldwide as we expand these businesses to pass down a sustainable society to the next generation. The Suntory Group will continue to engage in various initiatives in the future with the goal of becoming a global pioneer of environmental conservation.

Environmental Conservation Activities to Cultivate Water

■ Beam Suntory

Beam Suntory has worked to preserve the natural environment, such as water conservation activities around its distilleries and the improvement of biodiversity in forests, to protect the precious natural resource of water. The Maker's Mark Water Sanctuary Project that began in 2016 planted American white oak trees on 33-acres of distillery land (approx. 13 hectares) as an effort in water resource cultivation. In 2018, new environmental conservation activities also began with the setup of a Natural Water Sanctuary on 15,625 acres of land (approx. 6,300 hectares) in the Bernheim Arboretum and Research Forest, a water resource of the Jim Beam distillery.



In Mexico, Casa Sauza has been participating in a collaborative watershed Initiative with other beverage manufacturing companies, to restore and protect the Santiago River Basin in the buffer zone of the natural protected area of Cerro Viejo through restoration against the loss of connectivity between forest and the lagoon due to the construction of a highway.

In Scotland, the Peatland Water Sanctuary, a large-scale series of peatland restoration and conservation and watershed conservation projects, has launched in 2021. We plan to invest more than \$4 million in the restoration and conservation of 1,300 hectares of peatlands by 2030, enough to produce the same amount of peat that Beam Suntory harvests every year in making its Scotch whiskies on an ongoing basis. Once restored and conserved, peatland naturally accumulates by 1mm per year, and that 1mm growth spread across 1,300 hectares will equate to Beam Suntory's annual use.



■Suntory Beverage & Food Europe

In France, Suntory Beverage & Food Europe entered into a 20-year partnership for the conservation of water resources in 2017 with Grand Parc Miribel Jonage, a nature park located next to the Meyzieu Plant. This partnership conducts conservation activities in the forest spanning the Grand Parc Miribel Jonage and supports educational programs for children, in addition to protecting water resources and the natural environment near the plant as well as promoting cultivation activities with the local community.

In Spain, Suntory Beverage & Food Europe engaged in ecosystem conservation activities with the cooperation of the local community in the hope of revitalizing the ecosystem in and around the Júcar river near its plant in Carcagente.



Access to Safe Water

■Suntory Beverage & Food Asia

In Vietnam, Suntory Beverage & Food Asia has been contributing to repairs and installations of toilets and washrooms mainly at schools taking part in the Suntory *Mizuiku* since 2015 to improve the sanitary environment for children.

In 2019, sediment based erosion was prevented by slowing the currents of streams in northern Chiang Mai Province, small weirs to support permeation of groundwater were installed, trees were planted to prevent soil from flowing into the streams, and other water resource preservation activities were carried out.

In Nairobi, Kenya, Suntory engages in activities to supply clean and safe drinking water to schools through the Kangemi Resource Centre, which supports the education of the local community and addresses water shortages.

To Create Harmony with Nature: Environment

Initiatives toward a zero carbon society

We are committed to promoting various initiatives to reduce environmental impact through the entire value chain.

Continuing activities to reduce environmental impact

Suntory Group promotes the reduction of package weight, the use of recycled materials, and the installation of energy-saving vending machines to countermeasure global warming, effective use of resources, preventing pollution and managing chemical substances through the value chain, from ingredient procurement, manufacture to distribution, sales, and recycling.



Preventing Global Warming



Disclosures Based on Task Force on
Climate-related Financial
Disclosures (TCFD)
Recommendations



Initiatives toward a zero carbon society

Preventing Global Warming

An ongoing stable supply of products will be difficult if the effects of global warming more drastically change the climate patterns as well as greatly impact water resources, which are crucial for soft drink manufacturers. The Suntory Group recognizes global warming as one of the major challenges in business continuity due to the potential risk for great increases in production costs caused by a depletion of resources. Therefore, we need to unify as a Group to prevent global warming with the goal of reducing the environmental impact throughout the entire value chain by joining the environmental efforts of governments and local municipalities and by supporting public policy and regulations aimed to mitigate global warming.

Initiatives to combat global warming are debated at Global Sustainability Committee under the guidance of the executives in charge. These initiatives are discussed periodically and are overseen by the Board of Directors.

Reducing GHG Emissions throughout the Value Chain



Initiatives in Production and R&D



Initiatives in Distribution



Energy Conservation in Vending Machines



Initiatives in Sales, R&D, Offices, etc.



Green Procurement and Purchase



Preventing Global Warming

Initiatives in Production and R&D

Reducing GHG through Use of Renewable Energy and Energy Conservation

Plants and research facilities of the Suntory Group are actively using renewable energy as well as implementing energy conservation measures to reduce GHG emissions. In addition, number of plants that have achieved net-zero CO₂ emissions are growing, including through utilization of carbon offsetting.

■ 1. Use of Renewable Energy

Suntory Group aims to transition the electricity used at all its production and R&D sites*¹ involved with beverage, food, and liquor business in Japan, the Americas, and Europe to those generated by renewable sources.

In April 2022, we switched the electricity purchased by all our 30 production and R&D sites in Japan to those generated by renewable sources. This amounts annual GHG reduction of approximately 150,000 tons*². Through this, over 90% the electricity purchased by our production and R&D sites in Japan, the Americas, and Europe became generated by renewable sources. Furthermore, Suntory Hall and Suntory Museum of Art also uses electricity generated by renewable sources.

*1 Sites involved with beverage, food, and liquor business

*2 Based on amount of emissions in 2020

In addition to purchased electricity, we are also installing solar panels and biomass boilers at our plants to generate renewable energy on our own.



Suntory Minami Alps Hakushu
Water Plant



Suntory Kita Alps Shinano-no-Mori
Water Plant



Carcaixent Plant (Spain)



Biomass boiler
(Chita Distillery)



Biomass boiler
(Suntory Kita Alps Shinano-no-Mori
Water Plant)

■2. Promoting Energy Conservation

Suntory Spirits Ltd. Gunma Brewery has undergone a construction to increase its production capability of beer in 2013. At the same time, latest cauldron was introduced in the preparation stage for efficient use of energy, along with renewing boilers and cooling facility to optimize the energy supply facility. As a result, the energy efficiency improved by about 20% in the plant.



Suntory Spirits Ltd.
Gunma Brewery

We have been conducting initiatives to improve the heat recovery rate at distilleries since 2016 and installed a new type of once-through boiler in 2017 at Sauza Plant in Mexico where large amount of fuel is used. Furthermore, these activities have also adopted the 2016 Joint Crediting Mechanism Financial Support Business that contributes to reducing GHG emissions in developing countries.



Newly installed boiler
at the Beam Suntory
Sauza Plant in Mexico

Suntory World Research Center introduced equipment to reduce the environmental impact such as an arrangement of LED lighting through the entire facility, automated control of lighting and airflow through image sensors, temperature difference water supply, and the application of hybrid heat source equipment to concurrently use natural gas and electricity while eagerly using natural energy such as the application of top lights*¹ that actively let in natural light. The same center has acquired Class S, which is the highest class of the Comprehensive Assessment System for Built Environment Efficiency (CASBEE)*².



Suntory World Research Center

*1 Top light: Windows installed on roofs for natural light and ventilation

*2 CASBEE: Environmental performance assessment for building overall developed by the Institute for Building Environment and Energy Conservation with the support of Ministry of Land, Infrastructure, Transport and Tourism in 2001.

Iwanohara Vineyard Co., Ltd. takes benefit being located in region of heavy snowfall and installed snow room in 1898 to store snow during winter. The thermal energy of snow is used to control the temperature for fermenting wine and storage. Following the tradition, snow room was rebuilt in 2005 and is being used to cool wine-aging warehouse.



Snow room at Okudaisen Bunanomori
Water Plant of Suntory Products Ltd.

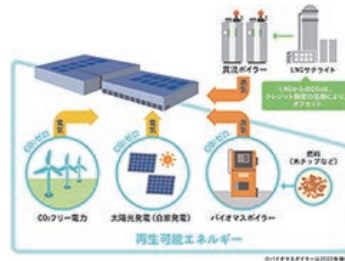
In Okudaisen Bunanomori Water Plant of Suntory Products Ltd., which also is located in region of heavy snowfall, also implements snow room and used as part of thermal control during spring.

■3. Net-zero CO₂ Emissions Plant

The Kita Alps Shinano-no-Mori Water Plant (Omachi City, Nagano Prefecture) which started operation in May 2021 as a fourth water resource for Suntory Tennensui Mineral Water, become the Suntory Group's first zero CO₂ Emissions plant in Japan through adoption of solar power generation facility and boilers which use biomass fuel, electric power procurement derived from renewable energy as well as offsetting. Fred B. Noe Craft Distillery in North America which started operations in 2021 uses only renewable energy.



Suntory Kita Alps Shinano-no-Mori
Water Plant



System for Achieving Zero CO₂
Emissions at Suntory Kita Alps
Shinano-no-Mori
Water Plant



Fred B. Noe Craft Distillery
(Beam Suntory, North America)

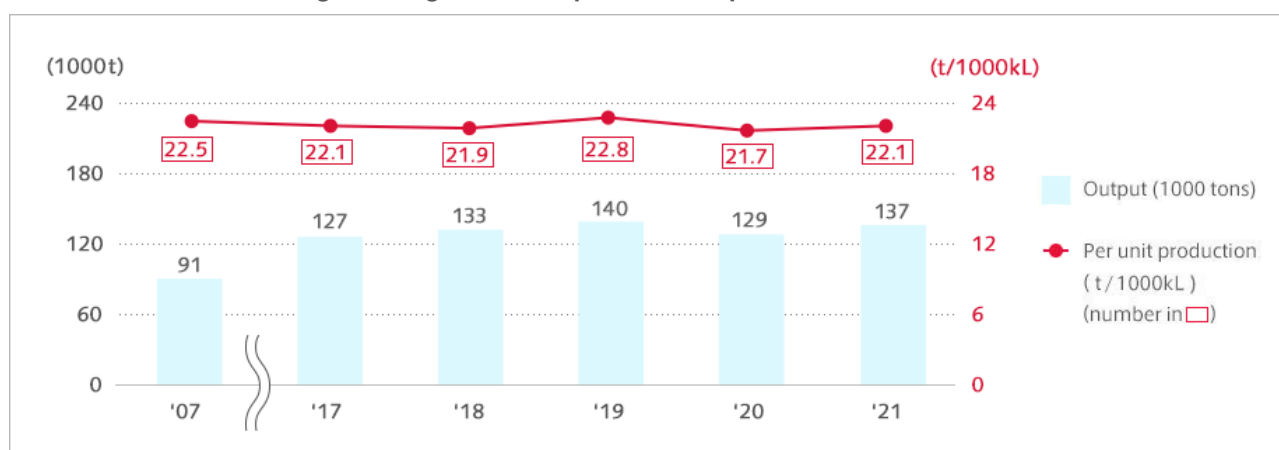
Preventing Global Warming

Initiatives in Distribution

Promotion of environment-friendly logistics

We are also striving to reduce environmental burden in the logistics transportation and delivery operations which transfix the supply chain flow of material supply, production, and delivery. We carry out highly efficient truck transport utilizing our original allocation system, along with the heavy promotion of modal shifts and utilizing larger sized vehicles. In 2021, while sales (kℓ) increased by 4% versus previous year, Green House Gas (GHG) emissions increased by 6% (≒137,000 tons), with a basic unit of 22.1 (GHG emissions/sales 1,000 kℓ).

■ GHG emissions resulting from logistics transportation (Japan)



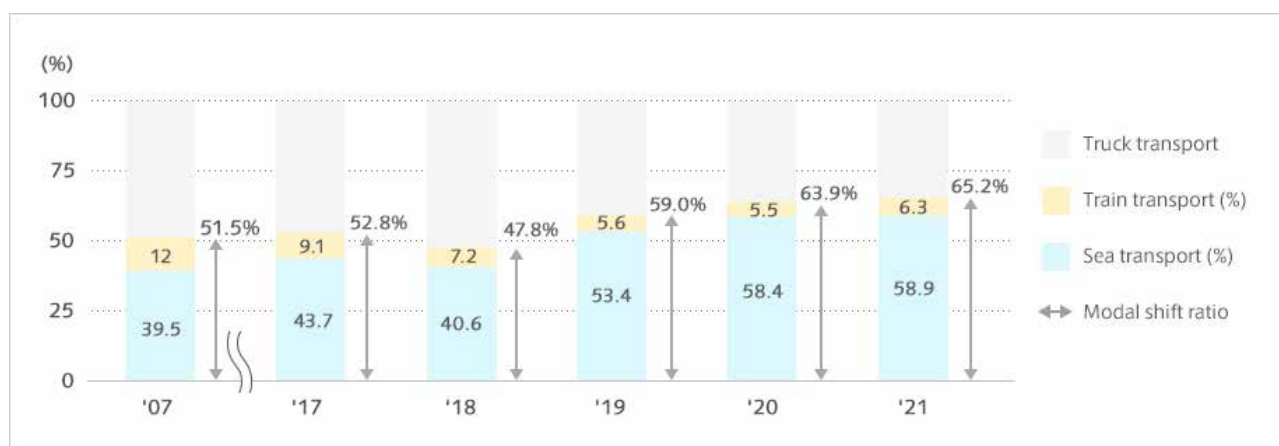
Promoting the Use of Larger Vehicles

The Suntory Group is promoting shipping with large-scale vehicles to lower the number of trucks on the road. In particular, large-size trucks that use a trailer are being promoted in conjunction with efficient allocation of vehicles for shipments to each product vendors from production sites by truck.

Promoting Modal Shift

We are promoting a modal shift to rail and sea transport which produces fewer GHG emissions than trucks when transporting over medium to long distances. In 2021, the modal shift rate was 65.2%, 58.9% of which was sea transport and 6.3% of which was rail transport. In the future, we will also promote modal shifts especially for medium-haul routes.

■ Changes in modal shift ratio



* Changes in the modal shift ratio are calculated based on long-haul (500km or more) trips

Suntory Liquors Ltd.*¹ has been certified as 1st Eco Ship Mark*² certified company in 2009. In addition, Suntory Liquors Ltd. received an Eco-Rail Mark certification from the Ministry of Land, Infrastructure, Transport and Tourism in 2011.

*¹ Currently Suntory Spirits Ltd.

*² Eco-ship Mark system certifies cargo owners and logistic operators that use more than set amount of sea cargo that is friendly to the environment.

Screened by Businesses with Excellent Eco Ship and Modal Shift Selection Committee



エコシップマーク

Eco Ship mark



エコレールマーク

Eco-Rail mark

Shipping Through Various Cargo and Shipper Integration

The Suntory Group has introduced the Integrated Transportation® Arrangement that calculates the optimal combination of vehicles and routes for various cargo and shipping locations. This reduces the distance and time with the number of trucks to use and the remaining capacity. In addition, we are reducing the environmental burden even further by limiting the loss when transporting goods with efforts such as sharing distribution information with other companies to combining cargo of multiple companies in one truck. We also ask our distribution partners to drive comprehensively in a way that reduces the environmental burden such as using idling stop systems and attaching digital tachometer that enable accurate monitoring and management of vehicle operation status.

Promoting Initiatives by Cooperating with Distribution Affiliates

201 of our distribution affiliates (as of FY2021) have acquired certifications, such as the ISO14001 (52 sites) and Eco Stage (23 sites) as well as Green Management advocated by the Ministry of Land, Infrastructure, Transport and Tourism, with the aim to further reduce the environmental impact. In addition, in response to amendments to the Rationalization in Energy Use Law, the Suntory Group collected GHG emissions data such as the monthly distance driven by vehicles, the amount of fuel consumed, and the useful load of distribution affiliates.

Promoting Collaborative Efforts with Other Companies

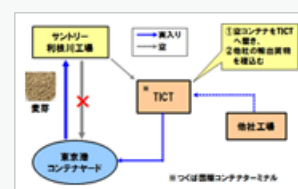
We are promoting distribution through cooperation with other companies such as joint distribution and joint use of containers as transportation measures that will lower the environmental impact.

Participating Companies	Coordination	Description	Starting from	Results
Suntory Group	Kirin Group	Joint distribution of soft-drink beverages within Chiba prefecture	July 2009	Reduced GHG emissions approx. 46 tons/year
Suntory Logistics Ltd.	Toyobo Logistics Co., Ltd.	Each company packs cargo on return trips in vehicles that only have one-way cargo	January 2010	Reduced GHG emissions approx. 100 tons/year
Suntory Logistics Ltd.	Toshiba Lighting & Technology Corporation	Joint use of railway containers	January 2011	Reduced GHG emissions approx. 140 tons/year
Suntory Group	Four major beer companies in Japan	Joint distribution in some areas of Hokkaido (Kushiro/Nemuro)	September 2017	Reduction of approximately 330 tons of GHG emissions per year (*Figures apply to all four beer companies)
Suntory Group	Four major beer companies in Japan	Joint distribution for transport between Kansai/Chugoku area and Kyushu area	April 2018	Reduction of approximately 1,500 tons of GHG emissions per year (*Figures apply to all four beer companies)
Suntory Group	Four major beer companies in Japan	Joint collection of beer pallets	November 2018	Reduction of approximately 4778 tons of GHG emissions per year (*Figures apply to all four beer companies)
Suntory Logistics Ltd.	Unicharm Corporation	Joint use of railway containers between Shizuoka area and Fukuoka area	February 2021	Reduction of approximately 2 tons of GHG emissions per year (*Total figures for both companies)

Round-trip use of containers transported by sea (joint use with other companies)

One of our social responsibilities is to engage in reduction of the environmental impact caused by transporting import goods. Since February 2011, we have been working to divert used containers to export cargo by sharing them with other companies in Japan. Up until now, we have been able to realize efficient transport reducing our GHG emissions through the round-trip use of containers that would have flown back empty.

This initiative was presented the Minister Prize of Economy, Trade and Industry at the Green Logistics Partner Awards announced in December 2013.



Round-trip Use of Containers

Preventing Global Warming

Energy Conservation in Vending Machines

Energy Conservation in Vending Machines

We are implementing various initiatives to save energy in vending machines in Japan as one of priority initiatives to reduce Green House Gas(GHG) in the entire value chain.

■Key Features of Suntory Vending Machines



■Reducing Energy Consumption of Vending Machines

Since we introduced a peak-cut feature in 1995, we have been striving to introduce vending machines with lower consumption of electricity. Since 2007, we have been promoting installation of heat-pump vending machines that facilitate even more efficient energy usage compared to conventional vending machines as main energy-saving machine. Nearly all of the vending machines put into use in 2010 and all new vending machine (excluding some special-function machines) from 2011 were heat-pump models and also LED lighting were installed to them.

From 2012, we started introducing Hybrid Heat-pump Vending Machines which can reduce electricity consumption by additional 30% compared to normal Heat-pump Vending Machines.

In addition, by fitting refurbished machines*¹ with heat-pump equipment, the ratio of heat-pump vending machines against all Suntory vending machines was 87% in the end of 2021

In 2013, "Mahou VIN Vending Machines"*² which has a capability of suspending cooling for extended time by to having high refrigerant effect from using vacuum heat insulation materials, etc., in addition to energy saving heat-pump function. This vending machine enables the reduction of both environmental impact and electricity load during the peak hours in summer.

*1 Vending machines that have been removed from service, refurbished, and reinstalled for retail use

*2 Vending machine that is capable of suspending cooling for extended time due to high refrigerant effect by using vacuum heat insulation materials, etc. Refrigeration is suspended for 8 to 14 hours each day.

What is a heat-pump vending machine?

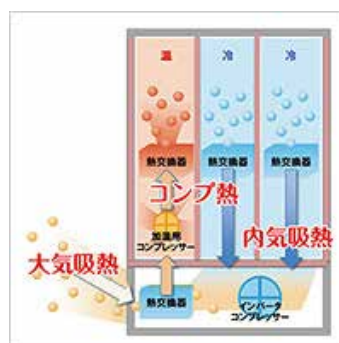
A heat-pump vending machine in Japan is a vending machine with a built in system to collect heat generated by the cooling chamber for the heating chamber. These vending machines largely contribute to energy saving through function to effectively use heat inside the vending machine and latest machine can even exchange heat with the atmosphere.

■Introducing Ultra-Energy-Saving Vending Machines

In April 2014, we began adopting "Ultra-Energy-Saving Vending Machines" (Eco Active Machines) that operate on approximately half the energy consumption (420kWh/year) compared to conventional heat-pump vending machines with the cooperation of machinery manufacturers the use of to further aim to contribute to reducing environmental impact. It stores two compressors, one dedicated to heating and other cooling and uses various latest technologies such as inverter control, vacuum heat insulation materials, electronic expansion valve and LED lighting to control energy consumption to an optimum condition to realize reducing electricity consumption.



© Sanden Holdings Corporation



■Promoting a 24-hour Lights Out

To promote reductions in GHG emission and combat global warming, vending machine manufacturers have promoted energy-saving measures since 1991, prior to establishment of the Kyoto Protocol. As a result, during the 15 years leading up to 2005, we achieved an approximate 50% reduction in energy consumption per vending machine. The industry also agreed to aim for a further 37% reduction by 2012, in comparison to 2005 figures, with indoor vending machines having a 24-hour "Lights Out" rule and outdoor machines having no lighting during daytime hours*. The industry met its goal in 2011.

* Reduces about 10% of power usage by turning off the lights during the day time, about 20% by 24 hours



■Measures Against Chlorofluorocarbon

Controlled chlorofluorocarbons that destroy the ozone layer are not used for refrigerants in our vending machines today. New vending machines that are introduced also use no chlorofluorocarbons substitutes that have a large impact on global warming. All of our machines are assumed to be R-1234yf, which has a low global warming potential.

■Initiatives to Reuse Vending Machine Parts

We are actively conducting initiatives to realize effective use of resources even in vending machines. We are advancing development of technology toward the reuse of parts as well as management systems for the reuse of parts in order to use vending machine parts that are collected in vending machines again. In 2021, the reuse rate of parts that required repair or maintenance was 58%. We are striving to effectively use resources by expanding the components to reuse parts even further in the future.

■Ensuring Reasonable Waste Disposal of Vending Machines

We are leading the industry in building a Vending Machine Waste Disposal System that collects and recycles vending machines to throw away, which we have expanded nationally since January 1997. We are strictly managing disposal from the initial selection of vending machines to discard to the final disposal in compliance with the revisions to the Wastes Disposal and Public Cleansing Act in April 2001. We are properly processing broken machines by understanding the amount of machines to collect based on the Act for Rationalized Use and Proper Management of Fluorocarbons even in regards to the fluorocarbons that are used as a refrigerant in vending machines.

■Installation of Vending Machines to Provide Beverages in Emergencies

We are developing and advancing the installation of vending machines to provide beverages in emergencies to contribute to building cities able to combat disasters. Normally, it sells beverages just like a regular vending machine, but in the event of a disaster or other emergency, it provides beverages free of charge. Beverages can be easily accessed even if the power goes out. Many people used this system after the Great East Japan Earthquake that struck in March of 2011. We are progressing with the installation of these vending machines centered upon public institutions, hospitals, and companies with roughly 25,000 units put in place through the end of 2021 by implementing wire type vending machines that have the benefit of not requiring maintenance in addition to battery-type vending machines. In Japan, we plan to actively introduce these types of vending machines in the future.



Emergency beverage vending machine

Preventing Global Warming

Initiatives in Sales, R&D, Offices, etc.

Environmental Activities in Sales Divisions

■ Reducing Environmental Impact of Sales Vehicles and Vehicle Accidents

We are proactively saving energy by replacing most of the vehicles used in our sales activities with hybrid vehicles. In addition, by introducing vehicle operation management systems and drive recorders that can acquire driving data such as distance traveled, driving behavior, and fuel efficiency in sales vehicles. We promote safe driving and eco-driving by feeding back the result of the analysis of collected data.

■ More efficient Vending Machine Operations

Suntory Beverage Solution Ltd., which provides daily vending machine operations including product replenishment to beverage vending machines, has installed wireless systems in vending machines throughout Japan since 2013. We are able to analyze information such as the type and amount of products for refilling, the timing for refilling, and the most efficient route for refilling of each vending machine while allowing us to instantaneously obtain the sales trends of each and every vending machine. In addition, by switching to smartphones as operation terminals in 2020, we were able to improve data accuracy and usability. By utilizing these systems, we are reducing the number of visits to vending machines, reducing power loss caused by opening and shutting vending machines when refilling, reducing waste by refilling machines based on sales volume changes, and improving fuel efficiency by visualizing and optimizing daily product usage and product loading.

Environmental Activities in R&D Sites

Since acquiring ISO14001 certification in 2007, the R&D sites (World Research Center/product development center) where about 700 employees work has been promoting environmental activities incorporated in daily work in the entire division. In 2013, in order to further strengthen cooperation with other departments as an R&D department deeply involved in the entire value chain of the Group, we incorporated ISO14001 operation, which had been conducted solely by the R&D department, into Group-wide operation and obtained integrated certification. It also promotes activities to reduce environmental impact in cooperation with plants and sales divisions while incorporating environmental considerations into daily operations.

■ Latest Environmentally-friendly Equipment

Suntory World Research Center introduced equipment to reduce the environmental impact such as an arrangement of LED lighting through the entire facility, automated control of lighting and airflow through image sensors, temperature difference water supply, and the application of hybrid heat source equipment to concurrently use natural gas and electricity while eagerly using natural energy such as the application of top lights*¹ that actively let in natural light. The same center has acquired Class S, which is the highest class of the Comprehensive Assessment System for Built Environment Efficiency (CASBEE)*². The furniture and construction materials also utilize Ikurinzaï - timber from cultivated forests*³ of the Suntory Tennensui (Mineral Water) Natural Water Sanctuaries.



Suntory World Research Center

*1 Top light: Windows installed on roofs for natural light and ventilation

*2 CASBEE: Environmental performance assessment for building overall developed by the Institute for Building Environment and Energy Conservation with the support of Ministry of Land, Infrastructure, Transport and Tourism in 2001.

*3 Ikurinzaï - Timber from cultivated forests: Suntory Group calls wood material made from activities to nurture sustainable water and forests "Ikurinzaï - timber from cultivated forests"

Environmental activities in the restaurant business

Pronto Corporation has been promoting "P LOVE GREEN" activities since 2010 with the theme of "More Green in Japan," and donates a portion of the sales of its "P LOVE GREEN Menu," which uses ingredients carefully selected according to their origin and production method. Donations are used for forestation activities to "plant, nurture, and use" to protect forest circulation, with the aim of being carbon neutral.

Pronto Corporation also promote sustainability through various environmental activities such as food loss reduction and introduction of energy-saving equipment and facilities. In 2017, the restaurant was certified as one of the Eco Mark restaurants (chains), meeting the Eco Mark restaurant certification criteria, the first such certification system for restaurants in Japan established by the Eco Mark Office of the Japan Environment Association.

Environmental Activity in the Office

■ Installing Energy-saving Equipment and Reduction of GHG and Water Consumption by Employee Action

Various initiatives are carried out by all employees daily with higher awareness on saving energy in each office. The Odaiba Office in Tokyo installs use of reused water, automatic lighting control system, and human detection sensors for lights in toilets and escalators. Reduction of Green House Gas(GHG) emission are being promoted in each office by implementing cool biz and warm biz and actively using web conference system.

Preventing Global Warming

Green Procurement and Purchase

We promote procurement of ingredients, materials and equipment that have low environmental impact through cooperating with each business partner.

Promoting Green Procurement

Green procurement is selecting items and services that consider the environment, such as by not including hazardous substances or efficient use of resources, when selecting ingredients, materials and equipment to purchase.

Suntory Group has established Suntory Group Green Procurement Standard (revised 2011) based on the Suntory Group's Basic Policy on Supply Chain Sustainability and promotes procurement activities to lower environmental impact in corporation with each business partner.

Suntory Group Green Procurement Standard (revised 2011)

1. Basic policy

Suntory Group strives to purchase ingredients, materials and services that have the lowest environmental impact as possible for items and services used in the Group to build a sustainable society.

2. Prioritized items

- a) Consider not to use environmentally polluting substances, etc.
- b) Consider resource- and energy-saving through use of renewable resources, miniaturization, etc.
- c) Consider resources collection that does not damage the ecosystem
- d) Long-term use is possible through repair, parts replacement, etc.
- e) Whether if it is reusable
- f) Whether if it is design to be recyclable
- g) Whether if it is easy to dispose or treat
- h) Whether if it is environmental information about the item is disclosed
- i) Consider the items is manufactured or sold by business operator that actively engages in environmental preservation such as acquiring ISO14001

Promoting Green Purchase

In purchasing goods, we are promoting green purchasing based on the "Green Purchasing Goods Guideline," which defines the criteria for green purchasing efforts, with the goal of achieving a higher purchasing ratio than in the previous year. We have also introduced an online purchasing system in which "green compliant products" are registered as standard items, and are expanding this system to the group companies.

Preventing Global Warming

Reducing GHG Emissions throughout the Value Chain

Reducing GHG Emissions throughout the Value Chain

We have set challenges for each division to reduce Green House Gas(GHG) emissions throughout the value chain related to our domestic operations, from raw material procurement, manufacture, distribution, sales to recycling. We are striving to meet the Environmental Targets toward 2030 for reducing GHG emissions from our direct operations by 50% and reduce GHG emissions across our entire value chain by 30% throughout the entire Suntory Group worldwide.

Emissions Results

With the globalization of business, we are advancing to identify the results in each area.

■ Scope 1 and 2 emissions by area in 2021

Area	GHG emissions (thousand tons)				
	2019 Scope 1+2 (base year)	2020 Scope 1+2	2021		
			Scope 1	Scope 2	Scope 1+2
Japan	433	417	246	172	418
Americas	225	168	179	13	192
Europe	125	98	107	1	108
Asia	204	176	50	155	205
Oceania	19	13	9	4	13
Africa	8	6	8	0	8
Total	1,014	879	599	345	944

* Data covers GHG emissions for the entire Suntory Group are calculated. (GHG emissions from small offices in countries other than Japan are excluded). Among the 944 thousand tons listed above, Scope 1 and 2 emissions from 27 production plants in Japan and 64 production plants overseas, and non-production sites in Japan (offices such as main office, training sites, R&D facilities, sales sites, restaurants and development sites) are 918 thousand tons ★ (Scope 1: 575 thousand tons ★, Scope 2: 343 thousand tons ★).

* Among the 944 thousand tons listed above, GHG emissions from the Suntory Beverage & Food Group are 515 thousand tons. Among the 515 thousand tons, Scope 1 and 2 emissions from 10 production plants in Japan and 41 production plants overseas, and non-production sites in Japan (offices such as training sites, R&D facilities, sales sites) are 489 thousand tons★ (Scope 1 : 228 thousand tons★ ; Scope 2 : 262 thousand tons★).

* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The assured numerical values are indicated with ★.

* Emission factors for GHG calculation are as follows:

Fuel:

For Japan: Factors specified by the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

For overseas: Factors obtained from fuel suppliers or factors specified by the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

GHG from Electricity consumption:

For Japan: The adjusted emission factors for each electric power company specified by the Act on Promotion of Global Warming Countermeasures.

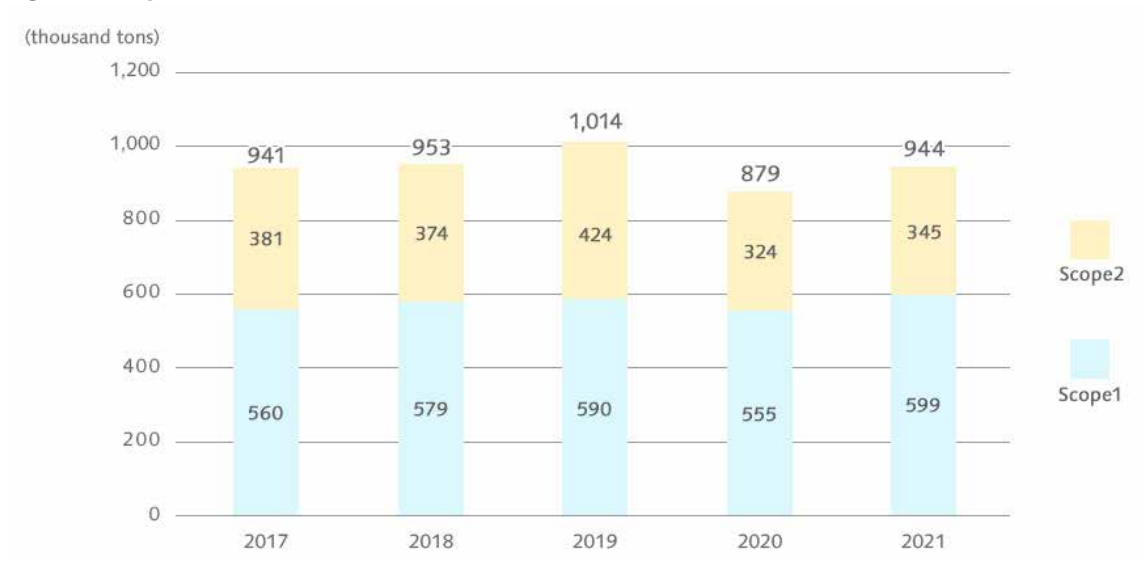
For overseas: Factors obtained from individual power suppliers or IEA emission factors by country.

GHG other than CO₂:

For 27 plants in Japan: Factors specified by the Act on Promotion of Global Warming Countermeasures

* The total may not match the sum of each figure due to rounding.

■ Changes in Scope 1 and 2 emissions



■ Scope 3 Emissions

Suntory Group

Category	Emissions (thousand tons)	Calculation Method
1. Purchased goods and services	4,669★	[Raw Materials and Packages] Calculated by multiplying the weight of raw materials and packaging materials purchased for products manufactured and sold by the beverage and food business, alcoholic beverage business, and health food business of the Suntory Group (in Japan and overseas) by the emission factors. 41% of Category 1 GHG emissions are calculated using emission factors calculated from the GHG emissions of suppliers of raw materials and packaging materials. [Contract manufacturers] Calculated by multiplying the volume of the products that Suntory Group (in Japan) , Suntory Beverage & Food Europe, and Frucor Suntory Group have outsourced to contract manufacturers by the emission factors.
2. Capital Goods	532★	Calculated by multiplying the amount of capital expenditure excluding land expenditure of Suntory Group by emission factors.
3. Fuel and energy-related activities not included in Scope 1 or 2	165	Calculated by multiplying the amount of energy consumed by Suntory Group by emission factors.
4. Upstream transportation and distribution	359	Calculated by multiplying the transportation volume in tons-km of goods owned by Suntory Group by emission factors.
5. Waste generated in operations	19	Calculated by multiplying the weight of waste disposed by Suntory Group by emission factors.
6. Business travel	3	Calculated by multiplying the amount of business travel expenses of Suntory Group by emission factors.
7. Employee commuting	21	Calculated by multiplying the amount of commuting expenses of Suntory Group by emission factors.
8. Upstream leased assets	40	Calculated by multiplying the floor area of distribution centers rented by Suntory Group by emission factors.
9. Downstream transportation and distribution	152	Calculated by multiplying the transportation volume and sales volume of goods of Suntory Group by emission factors.
10. Processing of sold products	—	None
11. Use of sold products	56	Calculated by multiplying the sales volume of goods of Suntory Group by emission factors.
12. End-of-life treatment of sold products	384	Calculated by multiplying the weight of packaging materials for products sold by Suntory Group by emission factors.
13. Downstream leased assets	403	Calculated by multiplying the amount of electricity used by vending machines leased by Suntory Group by emission factors.
14. Franchises	—	None
15. Investments	—	None
Total	6,803	

* Data for the beverage and food business, alcoholic beverage business, and health food business of Suntory Group (in Japan and overseas). For some overseas group companies, values were estimated by using Japan-based emission factors and emission per unit production.

* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The assured value is indicated with ★.

Suntory Beverage & Food Ltd.

Category	Emissions (thousand tons)	Calculation Method
1. Purchased goods and services	3,475★	[Raw Materials and Packages] Calculated by multiplying the weight of raw materials and packaging materials purchased for products manufactured and sold by the Suntory Beverage & Food Group (in Japan and overseas) by the emission factors. 35% of Category 1 GHG emissions are calculated using emission factors calculated from the GHG emissions of suppliers of raw materials and packaging materials. [Contract manufacturers] Calculated by multiplying the volume of the products that Suntory Beverage & Food Group (in Japan) , Suntory Beverage & Food Europe, and Frucor Suntory Group have outsourced to contract manufacturers by the emission factors.
2. Capital Goods	237★	Calculated by multiplying the amount of capital expenditure excluding land expenditure of Suntory Beverage & Food by emission factors.
3. Fuel and energy-related activities not included in Scope 1 or 2	105	Calculated by multiplying the amount of energy consumed by Suntory Beverage & Food by corresponding emission factors.
4. Upstream transportation and distribution	259	Calculated by multiplying the transportation volume in tons-km of goods owned by Suntory Beverage & Food by corresponding emission factors.
5. Waste generated in operations	6	Calculated by multiplying the weight of waste disposed by Suntory Beverage & Food by corresponding emission factors.
6. Business travel	2	Calculated by multiplying the amount of business travel expenses of Suntory Beverage & Food by corresponding emission factors.
7. Employee commuting	15	Calculated by multiplying the amount of commuting expenses of Suntory Beverage & Food by corresponding emission factors.
8. Upstream leased assets	25	Calculated by multiplying the floor area of distribution centers rented by Suntory Beverage & Food by corresponding emission factors.
9. Downstream transportation and distribution	120	Calculated by multiplying the transportation volume and sales volume of goods of Suntory Beverage & Food by corresponding emission factors.
10. Processing of sold products	—	None
11. Use of sold products	43	Calculated by multiplying the sales volume of goods of Suntory Beverage & Food by corresponding emission factors.
12. End-of-life treatment of sold products	356	Calculated by multiplying the weight of packaging materials for products sold by of goods of Suntory Beverage & Food by corresponding emission factors.
13. Downstream leased assets	368	Calculated by multiplying the amount of electricity used by vending machines leased by of goods of Suntory Beverage & Food by corresponding emission factors.
14. Franchises	—	None
15. Investments	—	None
Total	5,012	

* Data for the businesses of Suntory Beverage & Food (in Japan and overseas). For some overseas group companies, values were estimated by using Japan-based emission factors and emission per unit production.

* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The assured value is indicated with ★.

■ Measures Against Global Warming

The Suntory Group is also working to combat the effects of global warming. The Suntory Group strives to raise awareness about ways to prevent heat stroke with the rising temperatures at elementary schools and companies. This initiative include the free provision of posters and leaflets (total of 14.1million copies distributed as of June 2022) to raise awareness about preventing heat stroke created together with The Education Newspaper to elementary schools throughout Japan and the support of heat stroke measures at each school. We are also linking to other activities to raise awareness about heat stroke by manufacturing and selling GREEN DAKARA which is recommended as a countermeasure to heat exhaustion*¹.

*¹ The Ministry of Health, Labour, and Welfare recommends 40-80mg of sodium per 100mℓ as a countermeasure to heat exhaustion.

Initiatives toward a zero carbon society

Disclosures Based on Task Force on Climate-related Financial Disclosures (TCFD) Recommendations

In order to sustain business and continue to create value, the Suntory Group thinks it is necessary to identify risks due to climate change as well as their potential impact on business and respond appropriately.

The Suntory Group has expressed its support for the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations in May 2019. The TCFD was established by the Financial Stability Board (FSB).



In July 2019, Suntory also established seven important sustainability themes for the group and the reduction of Green House Gas (GHG) emissions is one of the key theme.

As part of our "*Mizu to Ikiru*" (literally meaning living with water) promise to society, we are working with our stakeholders to promote water sustainability initiatives by assessing the risks of water supply due to climate change, as well as water conservation and drainage under appropriate water management, and assessing the entire watershed. From here on, we will assess the risks and opportunities that climate change poses to society and businesses, as well as the resilience of strategies against these risks, and expand disclosure of related information.

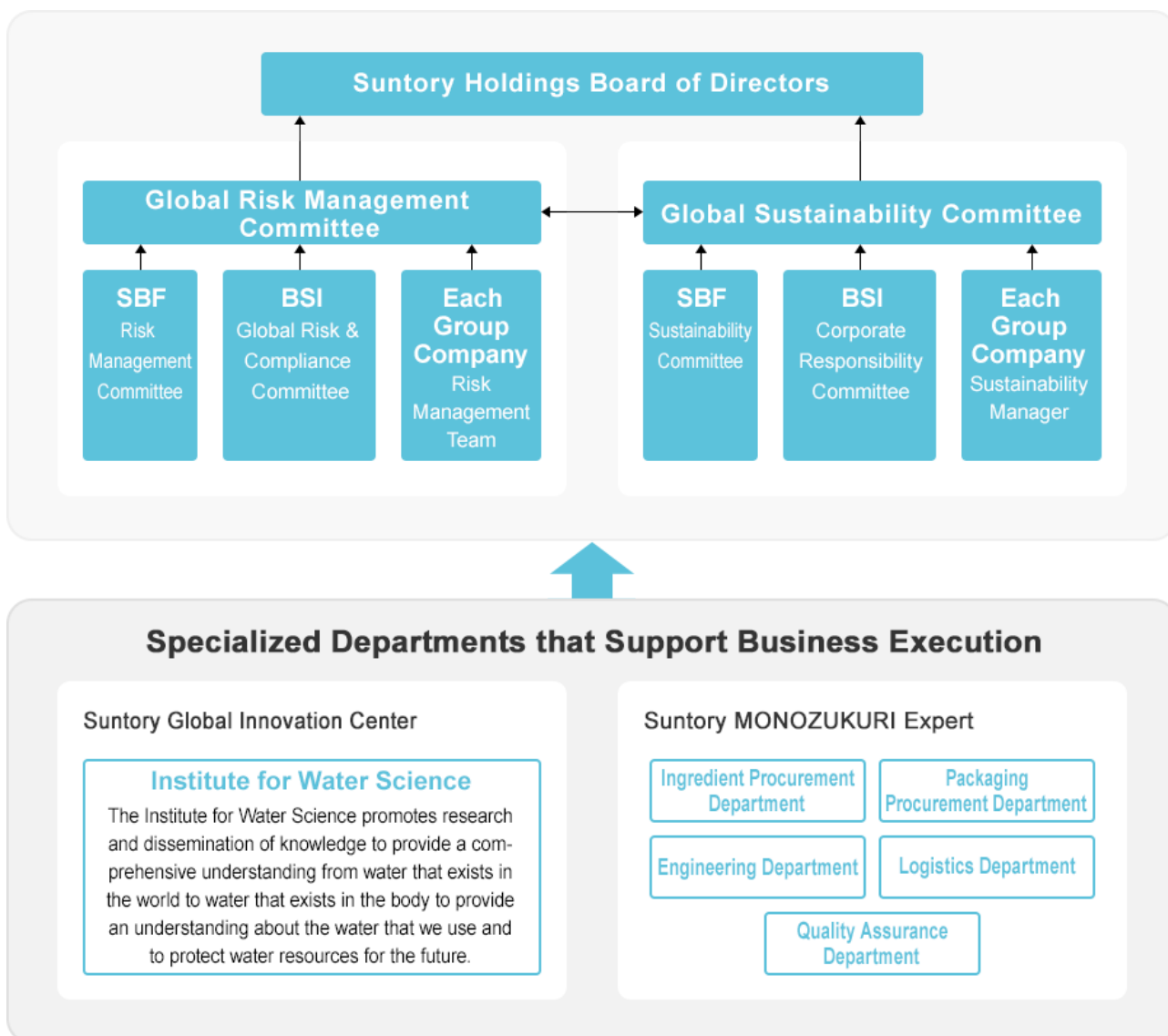
1. Governance

The Global Risk Management Committee (GRMC) was established in April 2015 in order to carry out risk management throughout the entire Group. We have established a risk management committee and risk management team based on this GRMC (e.g. installation of a Risk Management Committee at Suntory Beverage & Foods Ltd., the Global Risk & Compliance Committee at Beam Suntory, and the Risk Management Team at Suntory Beer Ltd.). Meeting four times a year, the GRMC identifies our risks, executes countermeasures, and engages in activities related to the establishment of crisis management systems. Climate related risks, one of the most serious risk categories, are discussed by the GRMC and the responses to those risks are then monitored.

Regarding opportunities and sustainability strategies related to climate change, the Global Sustainability Committee (GSC) discusses medium- to long-term strategies relating to the seven themes defined by the Sustainability Vision, and also discusses initiatives designed to reduce GHG emissions. In addition, we have established committees at each business in order to hold discussions about more specific strategies and initiatives (e.g., the Sustainability Committee was established at Suntory Beverage & Foods Ltd. and the Corporate Responsibility Committee was established at Beam Suntory).

The GRMC and GSC are in constant cooperation, and important matters to be discussed are further deliberated and resolved by the Board of Directors. Progress in implementing strategies related to environmental and social issues, and business risks and growth opportunities are reported to the Board of Directors on a quarterly basis. In addition, the Board of Directors provides opportunities to receive advice on climate change and sustainability management, such as by regularly holding study sessions led by invited external experts.

■Organizational Chart



Institute for Water Science

Making the promise of "*Mizu To Ikiru*" to society, Suntory has established the Institute for Water Science as a specialized institution that promotes research and technological development in order to deepen understanding about the water that we use and promote water-related initiatives across our businesses. Mineral water and quality water is essential for producing Suntory products. This has led us to search for quality water since our founding. We believe that protecting water, using it carefully, and returning it to nature is our corporate social responsibility and important for realizing a sustainable society.

Based on hydrology, the Institute for Water Science conducts research on forests and water that nurture water sources, as well as on water resources in Japan and overseas. Furthermore, as a multi-faceted food and beverage company, we promote research and dissemination of knowledge for comprehensive understanding of water from "water in nature" to "water in living organisms," including research on health and taste in water.

■ Research Content

Forest hydrology

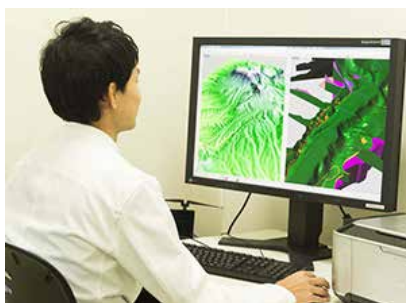
Suntory is broadening its Natural Water Sanctuary activities with the objective of cultivating more groundwater that is used by our plants by expanding forest areas. However, the types of management methods that will lead to healthy forests with high groundwater recharge have not yet been scientifically clarified. In cooperation with researchers in various fields such as hydrology, soil science, and vegetation science, the Institute for Water Science is establishing and scientifically verifying optimal forest management methods in forests in different environments, one by one, through trial and error. For example, in order to understand the relationship between forest management methods and water dynamics, we conducted an experiment in which forest areas comprised of planted Japanese cypress trees were intensively thinned (50% to 60% on a numeric basis). We clarified that intensive thinning increases the amount of rainfall in the forest, and that the flow rate of rivers increases stably, not only immediately after it rains. In addition, we measured the flow rate of spring water and river water in the forest and analyzed the water quality to find out when and where rain takes on the form of those water types and use it in forest management. In addition to information on topography and geology, we created a simulation model to visualize water dynamics based on the findings obtained from field surveys conducted in collaboration with a third-party organization and conducted research to estimate the amount of groundwater recharge.

Sustainable groundwater use

We must have a detailed understanding of natural water cycles in each area if we want to use groundwater in sustainable and environmentally friendly ways. As previously mentioned, the Institute for Water Science carries out on-site investigations in collaboration with third-party organizations to assess water quality and quantity of natural spring and surface water and conduct monitoring operations in order to develop a detailed understanding of groundwater conditions.

Global water resources

Communities around the world suffer from water scarcity, unsafe drinking water, and a host of other water-related challenges. Climate change can be a threat to agricultural production and growing regions, which in turn has an impact on people's lives and livelihoods. Suntory owes so much to water and believes that global water issues are by no means irrelevant. The Institute for Water Science has developed indicators capable of objectively evaluating the environmental impact of water use, taking into consideration water scarcity. These indicators are also being used by government ministries, companies, and other entities for environmental impact assessment. Furthermore, we are developing methods for assessing global water resource risks and promote the dissemination of related information to society.



2. Strategy

Recognizing that the risks and opportunities associated with climate change will have a significant impact on its business strategy, the Suntory Group works on scenario analysis, understanding the risks and opportunities that climate change poses to its business, and countermeasure implementation.

In response to risks, we have promoted efforts for water sustainability, such as understanding water supply risks, implementing appropriate water management, and evaluating all the watersheds that surround our sites.

As for opportunities, we are expanding our portfolio of beverages designed to prevent heat stroke that contain ingredients recommended by the Ministry of the Environment as products that conform with climate change countermeasures.

In product development, we use heat stroke prevention posters and leaflets in our heat stroke prevention education activities that are provided free of charge to elementary school students nationwide.

■Evaluating Risks and Opportunities Due to Climate Change

Among the physical and transition risks due to climate change, we have been working on physical risks since fiscal 2019. We have begun to examine water supply risks and stable procurement of raw materials, which are said to have a significant impact on the food sector.

Water Supply Risks

Water is the Suntory Group's most important raw material and a precious shared resource. Therefore, Understanding the impact on the Group's business activities, local communities, and ecosystems based on water-related risk assessments is essential for sustainable business growth.

Based on this, the Suntory Group conducted a risk assessment of sustainability of water supply at its own plants*.

(*23 production plants in Japan and 56 production plants overseas that produce products in the Suntory Group)

Water Supply Risk Assessment Process

■Primary Assessment — Screening of plants to prioritize based on Science Based Targets (SBT) for Water

We revised the primary assessment conducted in FY2019 using a methodology developed in the SBT for Water pilot study* in which we participated in 2021.

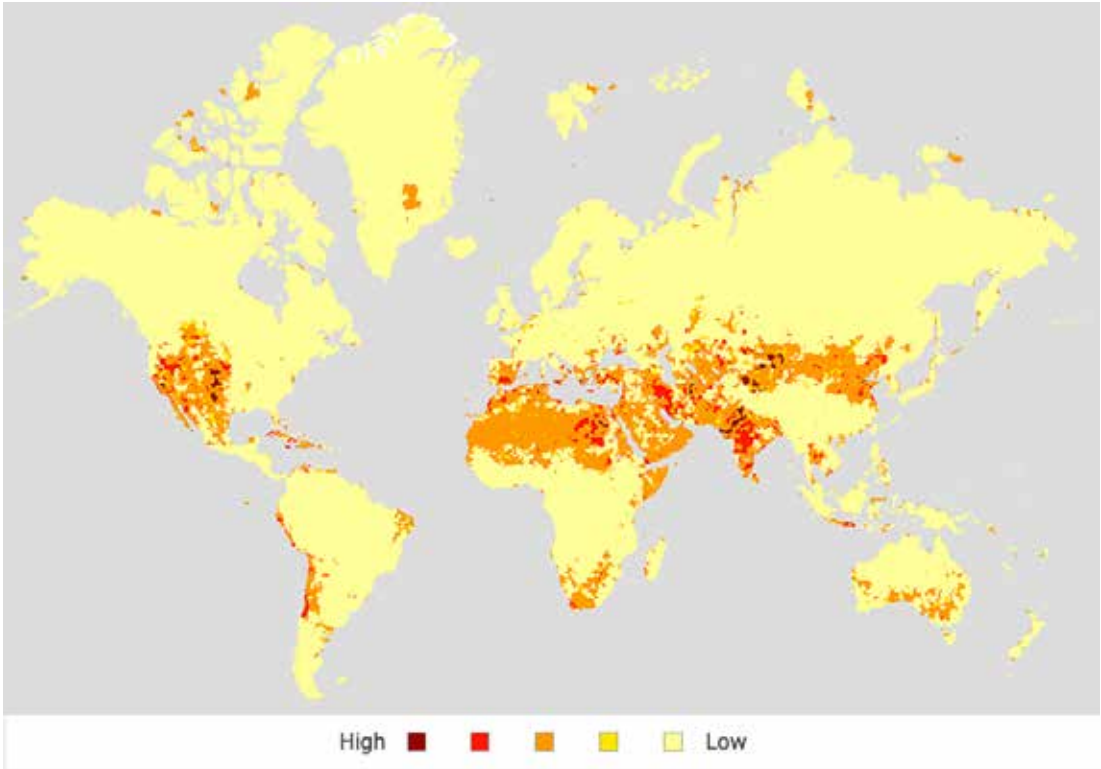
As a first step, we identified materialities related to water in our direct operations based on industry characteristics. Through this, we found that the most critical materiality is the water availability in watersheds where our plants are located. In terms of the ecosystem services on which the plant's operations depend, we found that the plant is highly dependent on groundwater and surface water.

Next, we assessed water availability at all our plants to narrow down plants that need risk management as a priority. We used Aqueduct developed by the World Resources Institute, an international non-profit research organization for global environment and development issues, and Water Risk Filter developed by World Wide Fund for Nature (WWF), one of the world's largest environmental protection organizations. Specifically, we used four Aqueduct and Water Risk Filter indicators to assess water availability that is our materiality. We used these indicators to assess the water demand against the water supply in nature. To determine the current water stress situation, we used three indicators, such as "Water depletion" of Water Risk Filter, that show the current water resource status. Furthermore, we used the "2040 Water Stress" of Aqueduct, which estimate the state in 2040, to assess the risks related to water availability based on future scenarios such as climate change. Each indicator assesses the scale of risks in five levels, and we have calculated the average score of the three indicators to evaluate the current state of each plant. We categorized sites located in areas with an average score of "5: Extremely High" or "4: High" as sites with "Extremely high water-stressed." Also, the sites with a score of "2040 Water Stress" over four were categorized as sites with "Highly water-stressed."

As a result, of the total water withdrawal by all our plants in 2021, 3% were by sites with "Extremely high water-stressed." and 15% were by sites with "Highly water-stressed."

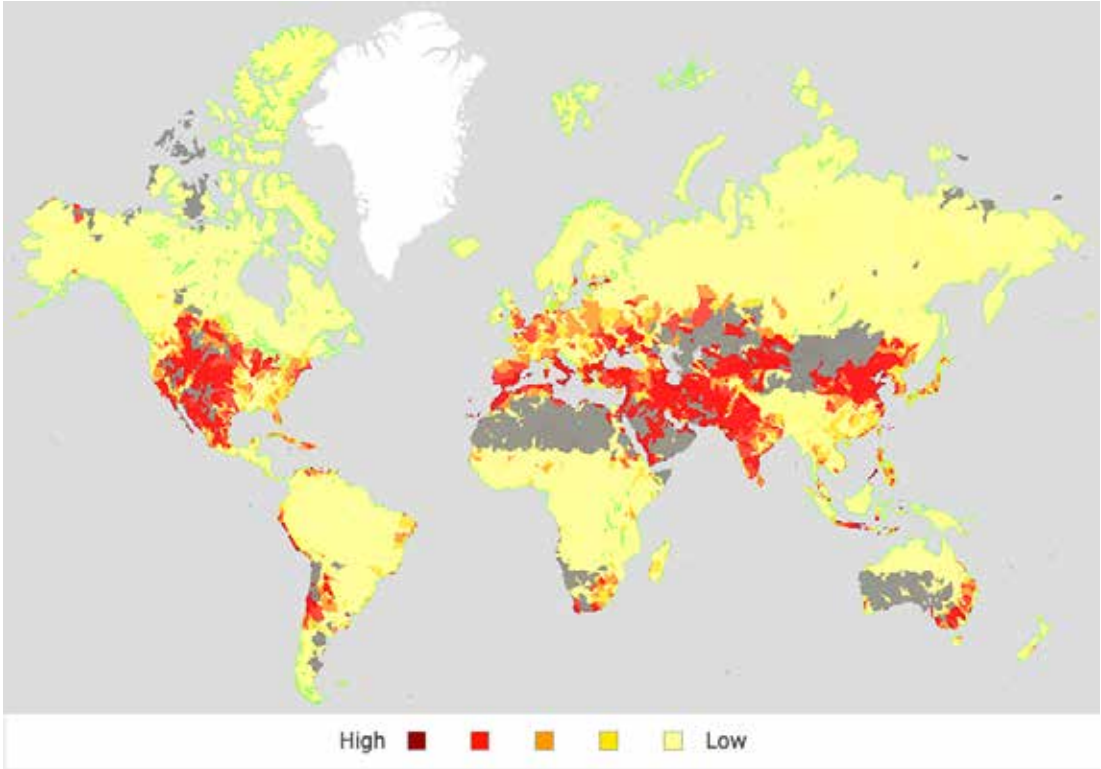
(*Pilot study to verify methodology related to SBT settings for water by Science Based Targets Network)

Water Depletion of Water Risk Filter (Five Levels)

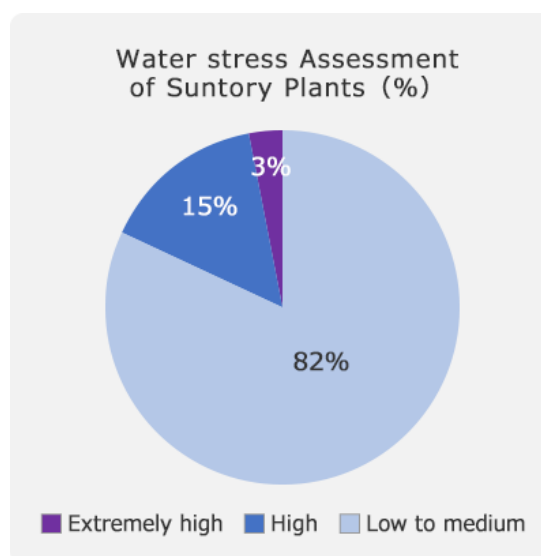


Source : Created based on Water Risk Filter of World Wide Fund for Nature (WWF)

2040 Water Stress of Aqueduct (Five Levels)



Source : Created based on Aqueduct Project of World Resources Institute



■ Secondary Assessment — Individual site assessment

Those sites narrowed down in the Primary Assessment were assessed individually on the progress of their measures to reduce risks from perspectives of water management (water withdrawal and water-saving) and co-existence with the community. Since each plant faces different water-related conditions in its respective area, we conduct measures to reduce risks that correspond with local conditions.

Water Management

The water resource is a precious shared resource that needs to be used appropriately, and it is important to conduct water management at plant for responsible use.

First, we categorized water used in our plants as natural water (surface water or groundwater) or municipal water. Municipal water is supplied through the local water authority, which charges a fee for its use and generally shares its water resources with a larger number of users due to its wider range of sources. As the water authority manages it, the work needs to be in close cooperation with the local water department to coexist with the local community. When using natural water (surface water or groundwater) as a source, it is sourced from smaller areas than municipal water, and the impact from climate change and other environmental changes is more significant. Furthermore, it is primarily managed by Suntory and as such, we prioritize the initiatives at factories that use natural water (surface water and groundwater).

We evaluate the following two points.

① Management for water withdrawal

Promotion of activities to use water properly (not to draw too much water)

Note: The local waterworks bureau manages all water withdrawal management for plants that use municipal water. Therefore, those plants are not evaluated.

② Management for water-saving

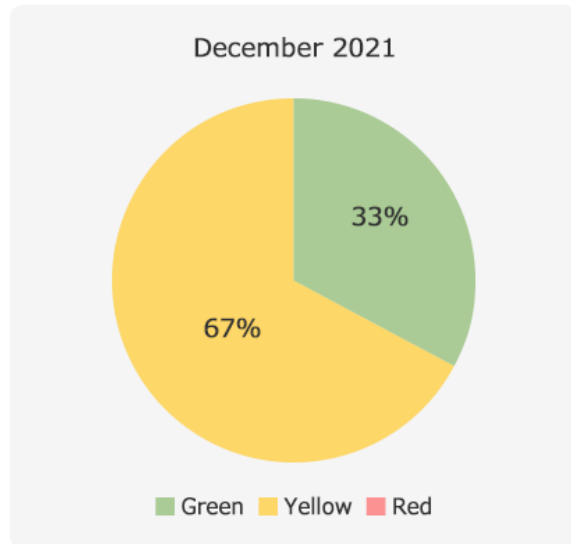
The ability to prove that water is being used properly (that water is not being wasted)

Water Management (water withdrawal) - Avoid taking in too much water -		Water Management (water saving) - Avoid using excessive water -	
<ul style="list-style-type: none"> • The ability to provide data that water withdrawal has no impact on the local environment. • Required data compiled for proof. 		<ul style="list-style-type: none"> • The target was established to use water efficiently. • Conduct activities to achieve the target. • The target are achieved 	
Water withdrawal data is not being managed	→ Red	No medium-term target for water use per unit of production was established	→ Red
Management of water withdrawal data is insufficient	→ Yellow	No short-term target for water use per unit of production was established/achieved	→ Yellow
Water withdrawal data is being managed, and water withdrawal is being handled properly	→ Green	The target for water use per unit of production achieved	→ Green

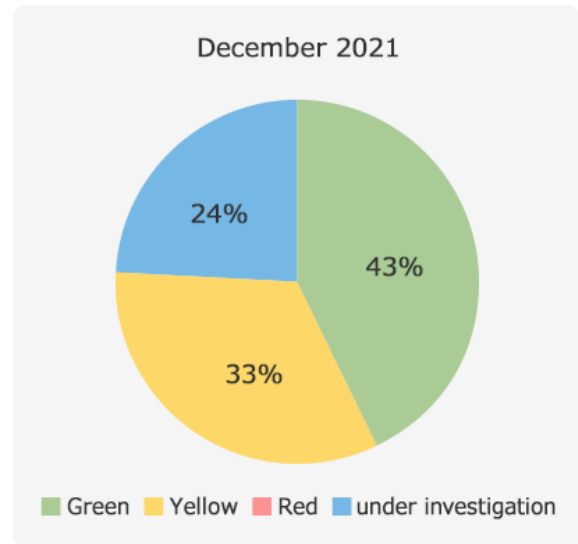
Results of the Secondary Assessment

We implemented an action plan designed to reduce risks through visualizing risks and suggesting solutions. As of December 2021, 33% of the plants were evaluated as "Green," and 67% were evaluated as "Yellow" for water withdrawal management. For water-saving management, 43% of the plants evaluated were rated "Green," 33% were rated "Yellow," and 24% are currently under investigation.

Water management for water withdrawal



Water management for water-saving



Using the same process, we will continue improvement efforts prioritizing to high-risk areas.

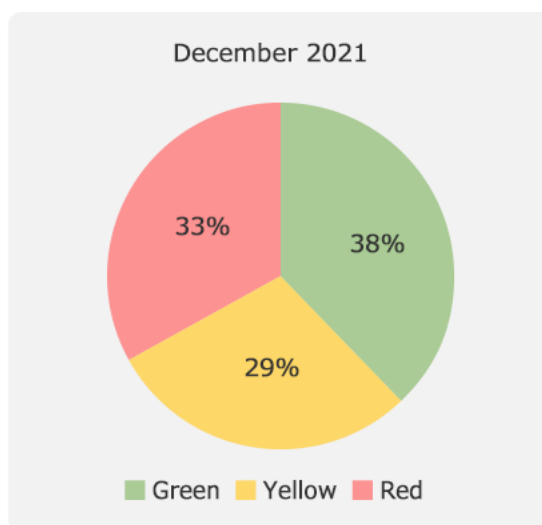
Co-existence with the Community

Recognizing that we are users of water resources and are one member of many stakeholders in the watershed, we aim to work hand-in-hand with other stakeholders to conserve the water resources in the watershed and to contribute to society's development.

Co-existence with the Community	
Assessment criteria for the progress of measures to reduce risks are as the following:	
<ul style="list-style-type: none">• Water-related issues are identified.• Working with the community to solve issues.	
Insufficient "identification of water issues"	→ Red
Conducts "identification of water issues"	→ Yellow
Conducts "identification of water issues" and "initiatives with the community"	→ Green

Results of the Secondary Assessment

We identify water-related issues and conduct water resource conservation initiatives with universities and experts in each area. As of December 2021, 38% of the plants were evaluated as "Green," 29% were evaluated as "Yellow," and 33% were rated "Red."



As we advance, we will coordinate with "*Mizuiku*" - Education Program for Nature and Water as part of the activities to raise awareness about the importance of water in areas where we promote water resource conservation activities.

Initiatives related to water resource conservation

<Japan-based Initiatives>

- Suntory Natural Water Sanctuary Activities
- "*Mizu To Ikiru*" - Education Program for Nature and Water
- AWS Certification

<Overseas-based Initiatives>

- Natural Water SanctuarySuntory
- Suntory *Mizuiku* - Education Program for Nature and Water

Stable Procurement of raw materials

Activities for stable procurement of raw materials

With regard to agricultural products and other raw ingredients that are essential to our products, we cooperate with business partners across the supply chain, identify social and environmental issues, and promote sustainability initiatives that enable us to grow together, thereby enriching our communities.

It is predicted that extreme weather, such as drought and flooding, occurring due to the rise in the Earth's average temperature due to climate change will have a major impact on production activities, including causing fluctuations in production volumes and creating the need to move to other locations which offer suitable cultivation. Furthermore, behind production and procurement activities lie social issues that negatively affect the human rights of people working in the supply chain. To offer our customers high-quality products and services, at the Suntory Group we believe it is crucial to promote sustainability throughout our entire supply chain. This means we need to give due consideration to environment and society, as well as to safety and reliability.

Based on this belief, Suntory Group established the Procurement Center of Excellence in April 2021 to promote long-term raw material strategy of the Suntory Group, optimum procurement globally and deliver sustainable procurement throughout the Group.

■ Overview of long-term strategy

The TCFD framework is used to formulate the strategy, and it also utilizes open scenario such as RCP2.6 (scenarios below 2°C), RCP 8.5 (4°C scenario) from the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) scenarios, to draw up the future world and understand risks and opportunities.

Furthermore, by focusing on our own policies such as Environmental Vision toward 2050 or The Suntory Group's Basic Policy on Supply Chain Sustainability and long-term trends specific to raw materials, we aim to create a vision of what we would like raw material procurement to be in the future world, and to find countermeasures based on the gaps between the current situation, so that we can respond to a wider range of social and environmental sustainability issues.

■ Activity Overview

The strategy development is based on the following steps:



1. Selection of important raw ingredients

- Identify materials that are particularly important for our business activities.
- Conduct risk assessment of materials handled in our business.
- Based on the results of the assessments, the materials for which long-term strategies are to be formulated are selected through consultations with related parties.

2. Creation of focused teams

- A team consisting of experts within the group from various departments such as research, development, procurement, and quality assurance is formed to work on the selected materials.

3. Building strategy

- Analysis of market, company, and trends by team of experts
- Analysis of future world scenarios and description of the ideal state within those scenarios
- Design of activities by backcasting from the future world back to the present to set issues

4. Strategy monitoring

- Monitoring of signs of scenario change and strategy revision based on prior assumption of change
- Revise road map of strategy building by reevaluating materials risk

■ Strategy Execution

The long-term strategy formulated by the team of experts is discussed with each operating company to promote its activities. The Global Sustainability Committee, which is an advisory body to the Board of Directors, also discusses the strategy on a regular basis.

2021 Progress of Activity

Based on the aforementioned approach to strategy formulation, we have implemented the following activities in steps 1 to 3 in 2021, which are described in detail below.

■Step.1 Selection of important raw materials

In 2021, we conducted a risk assessment of the sustainability of raw materials used in our alcoholic beverages and non-alcoholic beverages businesses to determine raw material items for which to develop long-term strategies.

<Risk assessment process>

①Extraction of important raw materials

The impact is defined as the loss of product sales that the business would suffer if there were a problem with the supply of raw materials, and raw materials with a high impact were extracted as priority raw materials, including agricultural materials such as barley and corn, the material that undergo a certain processing such as sugar, vitamin C, and oak wood.

②Risk Assessment

To evaluate the possibility of problems in the supply of the extracted key raw materials - the effects of climate change on yield and suitable areas for cultivation, which are considered to have the greatest impact on future supply, were studied and evaluated from the research and statistical perspectives. One of the results is shown in Figure 2. For raw materials that undergo a certain amount of processing, the risk assessment considers the impact of climate change on the production area of the base material and the ratio of raw materials used in the process. (Example: for sugar, see the results of climate change impact assessment for sugar cane and sugar beet)

Based on the above approach, we found that the yields of agricultural raw materials such as barley, sugar cane and corn used in both alcoholic beverages and non-alcoholic beverages, oak and hops used in the alcoholic beverage business, coffee beans used in non-alcoholic beverages, will be significantly impacted in several production areas.

Figure 2: Yield Impact Survey Results

Scenario of a 4°C temperature increase: Study of the effects of yield and suitable land on major raw materials and production area

-/+ Impact Below 10% ↓/↑
 More than 10% ~ below 50% ↓↓/↑↑
 More than 50% ↓↓↓/↑↑↑

Business Sector	Material	North America	Latin America	Asia	Europe/Africa	Oceania
Alcoholic and non-alcoholic beverage*	Barley	Canada Yield : ↑↑			UK Yield : ↑↑↑ France Yield : ↓↓	
Alcoholic and non-alcoholic beverage*	Corn	USA Yield : ↓↓	Brazil Yield : ↓↓	China Yield : ↓↓		
Alcoholic and non-alcoholic beverage*	Sugarcane		Brazil Yield : ↑↑	Thailand Yield : ↓↓		Australia Yield : ↑
Alcoholic beverage	Oak	USA Wood quantity : ↑↑		Japan Suitable land : ↓↓↓	Spain Suitable land : ↓↓↓	
Alcoholic beverage	Hop	USA Yield : ↓↓			Germany Yield : ↓ Czech Yield : ↓	
Non-alcoholic beverage	Coffee beans		Brazil Suitable land : ↓↓ Colombia Suitable land : ↓↓ Guatemala Suitable land : ↓↓			

*Include origin of processed material

③Formulation of activity plan

Based on the results of the survey, we consulted with the relevant departments and selected the following raw material commodities for which we will formulate a long-term strategy based on our overall judgment. In the future, we plan to increase the number of raw material items for which we will formulate long-term strategies on an annual basis based on this activity plan.

2021 : Ethanol, Coffee, Oak, Oolong Tea and Corn

2022 : Barley, Sugar, High Fructose Corn Syrup (HFCS), Vitamin C and Citric Acid

2023 : Lemon, Orange, Grapefruit, and Black Tea

2024 : Dairy, Wheat and Rye

Note) Coffee refer to the results of a climate change impact study on coffee beans. Similarly, fructose dextrose, vitamin C, and citric acid refer to the results of a climate change impact study on corn.

Prior to the above activities, we are working to mitigate the impact of climate change on our business with regard to hops, a raw material for alcoholic beverages, and blackcurrant, a raw material for beverages, as follows.

Hop

We have been working with the Czech Hop Research Institute to analyze the hop genome and develop cultivation techniques using materials to secure the necessary quantities on a permanent basis.



Blackcurrant

Suntory Beverage & Food Great Britain and Ireland has been conducting research on a new species of blackcurrant that is resistant to climate change. In July 2020, a new variety of blackcurrant that is more resilient to climate change named Ben Lawers blackcurrant was harvested. This was a result of a long-term joint research with the James Hutton Institute, a research institute for agriculture.



■Step.2 Creation of focused teams

Following the activity plan of Step 1, team of experts are being formed for Ethanol, coffee, oak, oolong tea, and corn in 2021.

■Step.3 Building strategy

We look ahead 30 years to the year 2050 for the raw material items for the task force was formed While referring to publicly available scenarios from the IPCC, IEA, and other organizations, we envisions changes in the future world at that time from an environmental perspective, including climate change impacts as well as from a social perspective, including financial impacts on human rights. Then, based on the trend analysis and the company's own goals, the ideal state of raw material procurement in the future world is drawn, and the way to reach this goal is examined.

■Next Step

We consider three-year cycle upon developing the long-term strategy, and activities will be carried out on an annual basis while incorporating new information on the market environment and the impact of climate change. In Step 4, Strategy Monitoring, which will be conducted after the strategy is formulated, we will periodically check for the occurrence of events such as the junctures of multiple possible scenarios and the success of technological innovations necessary to achieve the desired goals. This will enable us to capture important changes as much as possible in advance and revise the strategy to incorporate them.

3. Risk

Suntory defines "risk" as a potential event that affects the achievement of the Group's strategies and goals. Through the Global Risk Management Committee (GRMC) and the risk management committees and risk management teams established at each group company, we identify and evaluate important risks for the entire group and identify risks that should be prioritized for our company, consider countermeasures, and reviewing them on an annual basis.

■ Risk Management System



■ Approach to Identifying and Evaluating Risks

For the risks identified, we create a heat map based on the two axes of "Risk Exposure" and "Degree of Response", evaluate the importance especially for group-wide material risks on a three-point scale, and identify the risks to be prioritized. "Risk Exposure" is calculated by probability of occurrence (probability) x magnitude of impact (impact), and "Degree of Response" is calculated by the degree of preparation for countermeasures. As a result of the evaluation, climate-related risks are positioned as one of the most important risk types.

Assessment Criteria for Risk Occurrence (for reference)

Score	Level	Probability of Occurrence	Frequency/Speed of Occurrence
1	Extremely low probability of occurrence	5% or less	Once every 10 years
2	Low probability of occurrence	Around 25%	Once every 6 to 9 years
3	50-50	Around 50%	Once every 3 to 5 years
4	High probability of occurrence	Around 75%	Once every 1 to 2 years
5	Almost certain probability of occurrence	75% or more	Annually



Assessment Criteria for Level of Impact (for reference)

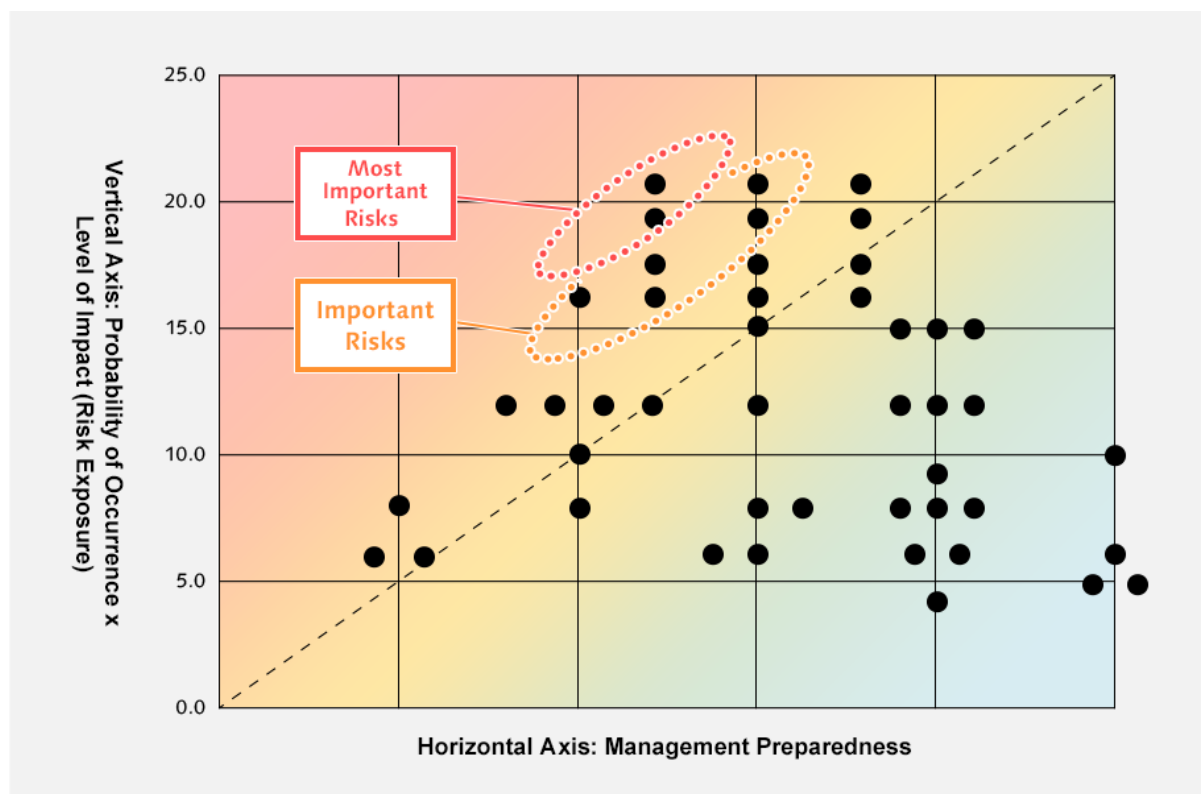
		Quantitative Criteria	Qualitative Criteria*			
Score	Level	Impact amount	Business (including human resources and technology)	Compliance (Legal/regulatory impact)	Reputation	Strategy (Impact on customers/ brand/ market)
1	Minimal Impact	Less than 1% of sales	Examples of Factors to Consider <ul style="list-style-type: none"> Disruption of each operating unit Response to customers Disruption of operations on a company level 	Examples of Factors to Consider <ul style="list-style-type: none"> Prosecution or investigation Fine or investigation legal liability 	Examples of Factors to Consider <ul style="list-style-type: none"> Media reports Trust from stakeholders 	Examples of Factors to Consider <ul style="list-style-type: none"> Delay in achieving strategic goals Impact on customer base and time required to restore it Impact on brand and market
2	Some Level of Impact	1% to less than 2% of sales				
3	Large Impact	2% to less than 4% of sales				
4	Very Large Impact	4% to less than 8% of sales				
5	Definite Impact	8% of sales or higher				

*Impact amount: For companies that control multiple companies, the amount of impact on the group as a whole

*Qualitative Criteria: If the evaluation does not fit the quantitative criteria, evaluate with reference to qualitative criteria

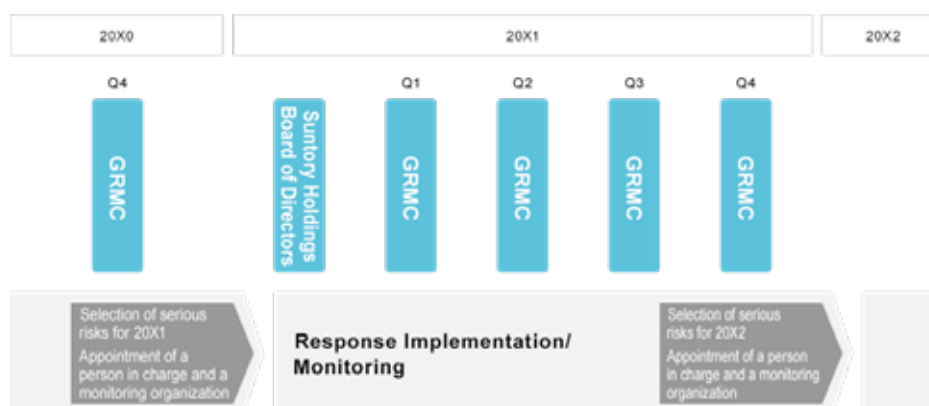
Response Level Assessment Criteria (for reference)

Score	Level	Response Status	Response Status
1	Poor	There are definitely points to be improved	Either no control or supervision or does not work as intended due to major flaws even if control or supervision exists.
2	Low	There are important points to be improved	Risk is still present because proper control/supervision is limited.
3	Medium	There is room for improvement	Control/supervision exists, but there is room for important improvements to be made.
4	High	There is still small room for improvement	Although proper control/supervision is being conducted, there is still small room for improvement in operations.
5	Excellent	Effective measures are already being implemented	Proper control/supervision is being conducted and operations run as intended.



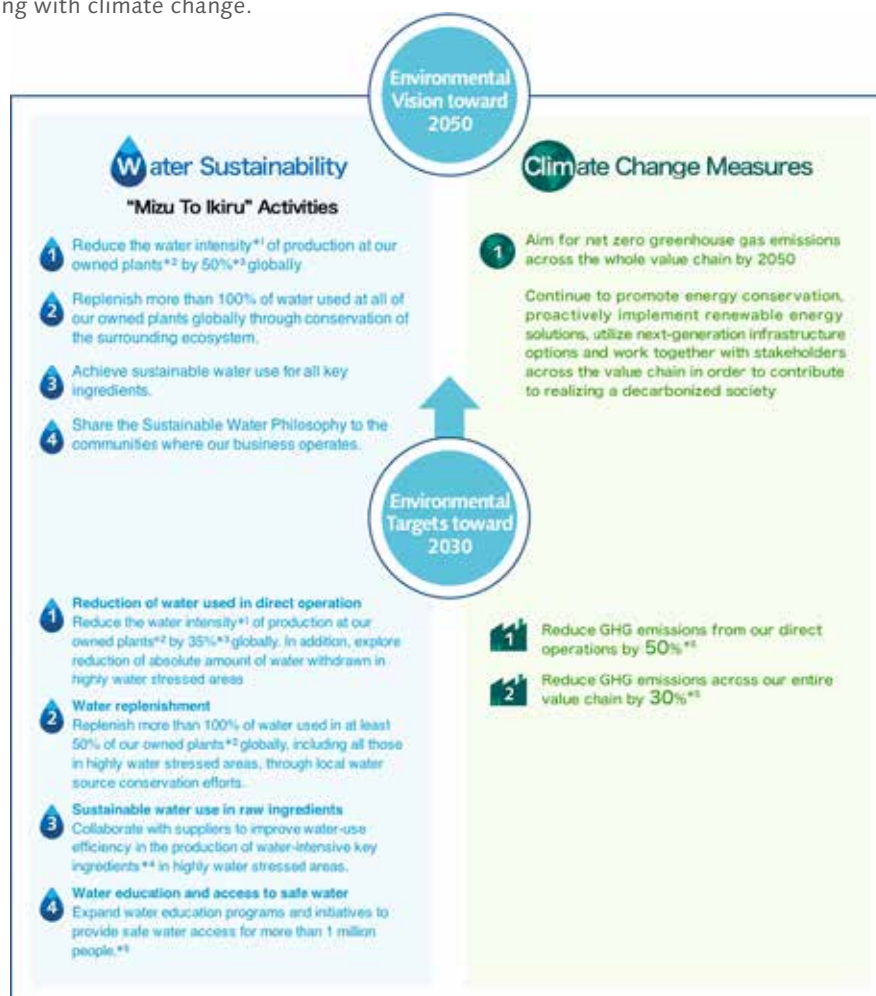
■ Approach to Managing Identified Risks

For the identified risks that should be prioritized, a person in charge and a monitoring organization will be appointed to implement the risk countermeasures. The response status is reported and discussed by the Global Risk Management Committee (GRMC), and the PDCA cycle of extraction, evaluation, countermeasures, and monitoring is carried out by selecting important risks for the next fiscal year based on the response results.



4. Indicators and Targets

Regarding climate change and water, which are expected to have a large impact on business, the Suntory Group has established "Environmental Targets toward 2030" as the medium-term targets with 2030 as the target year and "Environmental Vision toward 2050" as the long-term vision with 2050 as the target year, and are moving ahead with initiatives for dealing with climate change.



*1 Water intensity is the amount of water withdrawn per unit of production, which is 1 kiloliter of production

*2 Owned plants that manufactures finished products and excludes plants for packaging and ingredients

*3 Reduction of water intensity of production based on 2015 baseline year

*4 Coffee, barley, grapes

*5 Based on emissions in 2019

■ Initiatives

To achieve the 2030 target, we are globally promoting various water-related initiatives such as activities to conserve and restore the natural environment. We started the Natural Water Sanctuary Initiative to cultivate water resources in forests in 2003. Now we have 21 Suntory Natural Water Sanctuaries in 15 prefectures which cover a total area of approximately 12,000 ha and supply more than twice the amount of water used by our plants in Japan. In 2021, we signed a partnership agreement with the Alliance for Water Stewardship (AWS), an internationally prestigious organization that promotes water conservation and stewardship (responsible management of water resources) globally, to take a leadership role in promoting water stewardship in Japan.

As part of our GHG reduction efforts, we will aim to achieve 100% renewable electricity in the group's 63 directly-owned manufacturing sites and R&D facilities in Japan, the Americas and Europe by 2022. In addition, the company introduced internal carbon pricing to its group companies from 2021 and plans to invest a total of approximately 100 billion JPY (equivalent to approximately 900 million USD) by 2030 to shift to low-carbon alternatives. The company estimates that these actions together will amount to a reduction of approximately 1 million tons of greenhouse gas (GHG) emissions in its direct operations compared to a business-as-usual projection for 2030.



To Create Harmony with Nature: Environment

Contribution to a recycling-oriented society

To build a recycling-oriented society, Suntory group will promote problem-solving efforts together with various stakeholders. Each employee of Suntory will work on taking responsible action to solve problems and take the initiative in bringing about a sustainable society.

Suntory Group Plastic Policy

SUNTORY

3Rs in Containers and Packaging



Promoting the Reduction and
Recycling of Waste



Preventing Pollution and
Management of Chemical
Substances



Contribution to a recycling-oriented society

Suntory Group Plastic Policy

Based on this Plastic Policy, Suntory will aim for fully sustainable plastic bottles in all the PET bottles used globally by 2030.

The Suntory Group has formulated the Plastic Policy to provide strong leadership for transforming our current society into a recycling-oriented and zero carbon society, aiming toward the realization of a sustainable society. Our group is promoting sustainability management globally with the aim of realizing our mission "To Create Harmony with People and Nature" as stated in our corporate philosophy. In the field of containers and packaging, we have developed the world's first F-to-P direct recycling technology (see news release No. 13428) which eliminates some PET bottle recycling processes and simultaneously reduces environmental impact and increases recycling efficiency.

In addition, actions such as introducing for the first time to the world a PET bottle cap* that uses 100% plant-derived raw materials and working toward developing a 100% plant-derived PET bottle are among efforts to develop PET bottles that have a low environmental impact and build a recycling system. Our medium-term goal is to use recycled PET materials for more than half of the total plastic bottle weight in our Japan-based soft drink business by 2025.

Based on this Plastic Policy, in addition to expanding our F-to-P production line, we aim for 100% sustainability by using only recycled or plant-derived materials for all PET bottles used globally by 2030 and achieving zero use of virgin petroleum-based materials.

* Polyethylene caps made from 100 percent plant-derived raw materials in place ethylene, the main raw material. However, except for traces of oil-derived components and coloring components when the manufacturing line is switched

Suntory Group Plastic Policy

Expressing gratitude toward the Blessings of Nature that are the source of Suntory's products, the Suntory Group will provide strong leadership for transforming into a recycling-oriented and zero carbon society to bring about a world where diverse animal and plant life shines and resonates. With its diversity in usage and convenience, plastic has made our lives easier.

The plastic containers and packaging we use serve a useful function, but to prevent them from having a negative impact on the global environment, we will promote problem-solving efforts together with various stakeholders. Each employee of Suntory will work on taking responsible action to solve problems and take the initiative in bringing about a sustainable society.

1. Recycle & Renewable:

- (1) Aim to switch all the PET bottles used globally for Suntory products to be made of recycled or plant-based material by 2030, achieving zero use of virgin petroleum-based materials.
- (2) Actively work and collaborate with government agencies, industry, environmental non-governmental and non-profit organizations for the measures necessary to develop an efficient recycling system based on the situation of each country where we do business.

2. Reduce & Replacement:

Reduce the amount of plastic used by changing the design of containers and packaging and look for the introduction of alternative containers that do not negatively impact the environment in order to effectively utilize resources.

3. Innovation:

Actively invest in innovation for materials and processes that improve the recycling rate and minimize environmental impact.

4. New Behavior:

Promote activities that drive change in consumer behavior. Each Suntory employee will work to change their lifestyle, promote sorting and collection, and actively participate in social contribution activities such as cleaning up rivers and beaches.

Participation in alliances to the issue of plastics

■ Clean Ocean Material Alliance (CLOMA)

The Suntory Group has been participating in CLOMA, a public-private alliance established in January 2019 at the request of the Ministry of Economy, Trade and Industry since the alliance was established. Through this alliance, we aim to build an efficient recycling system that responds to country specific conditions by working closely with government agencies and the industry to develop and promote the use of plastic substitute materials and through information dissemination to overseas countries and technical consulting.

■ Global Plastic Action Partnership

In November 2019, Suntory Group joined the Global Plastic Action Partnership (GPAP), a global alliance co-founded by a coalition of public and private allies, harnesses the convening power of the World Economic Forum to bring together governments, businesses and civil society in the transition toward a circular economy for plastics. Its diverse network of members includes the governments of the United Kingdom and Canada, influential companies and investors, expert researchers and civil society organizations. In addition to fostering exchange, collaboration and scaling of solutions at the global and regional levels, GPAP is initiating pilot partnerships with the governments of Indonesia, Ghana and Vietnam to address projects at the national level.

■WWF Japan's "Plastic Circular Challenge 2025"

In February 2022, Suntory Group participated in WWF Japan's (World Wide Fund for Nature Japan) "Plastic Circular Challenge 2025". Under this Japanese domestic framework led by WWF Japan, participating companies will aim to solve various issues related to plastics by committing to a milestone set for 2025 regarding containers and packaging/single-use plastic and enhancing their activities under a "sustainable circular economy" approach.

Establishment of A New Company R Plus Japan to Work on the Recycling of Used Plastics

Suntory Group and Anellotech, Inc., a biochemical venture firm in the United States, have worked in a collaborative development of a plastic bottle that uses 100% plant-derived raw materials. Through this development, we were able to discover new possibilities for developing an efficient recycling technology for used plastics with low environmental impact. This technology is one of the most unique, ground-breaking technologies in the world, which can be expected to recycle plastics with less CO₂ emissions and energy consumption than ever before. Aiming for the actual utilization of this technology, 12 companies* (including Suntory) within the plastics supply chain established R Plus Japan Ltd., a joint venture company focused on the recycling of used plastics. 40 companies (as of the end of June 2022), including overseas partners and companies across industries, are collaborating to take on the challenge of realizing a recycling-oriented society together.

*TOYOBO Co. Ltd., Rengo Co. Ltd., Toyo Seikan Group Holdings Ltd., J&T Recycling Corporation, Asahi Group Holdings Ltd., Iwatani Corporation, Dai Nippon Printing Co. Ltd., Toppan Printing Co. Ltd., Fuji Seal International Inc., Hokkaican Co. Ltd., and Yoshino Kogyosho Co. Ltd.

Contribution to a recycling-oriented society

3Rs in Containers and Packaging

We consider the environment in the entire product life cycle from planning and product design to transport and post-consumption recycling.

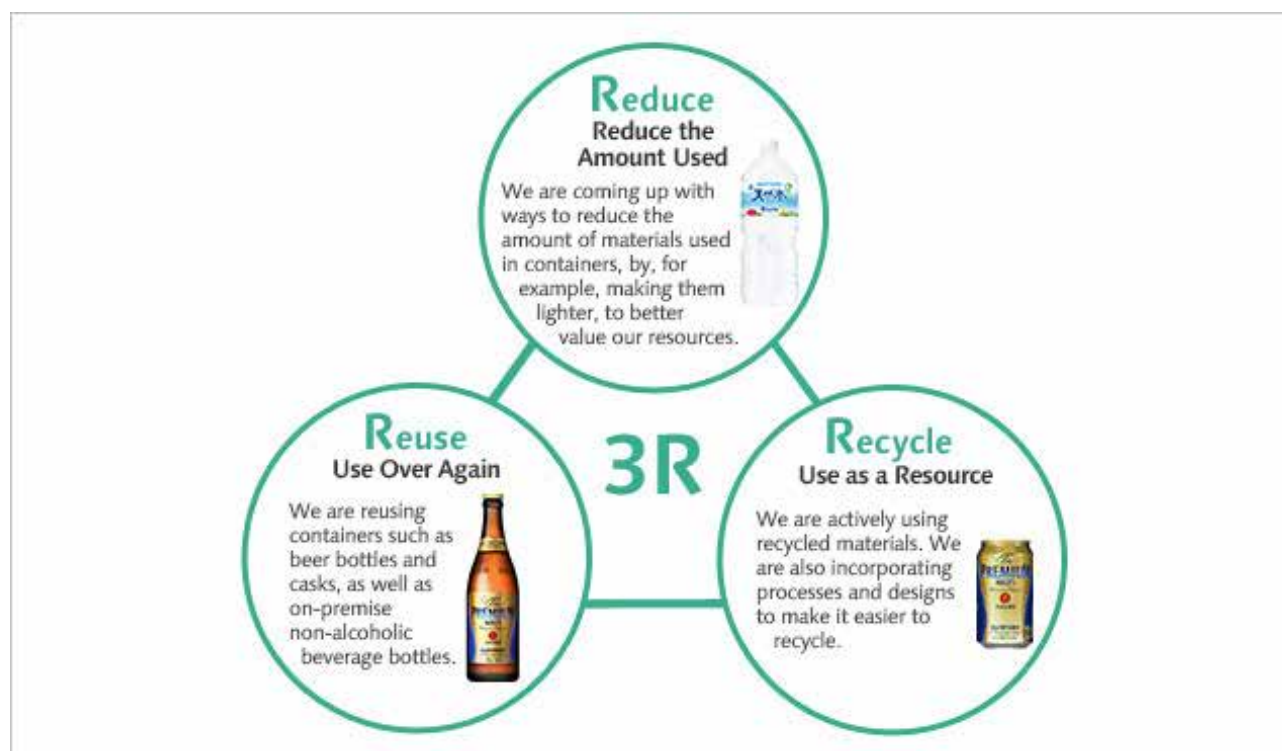
Setting Environmental Standards for Containers and Packaging

Containers and packaging protect and preserve the quality of products until reaching the customers. However, most of them become waste after the content is consumed by the customer. Suntory Group recognizes the social and environmental impacts that containers and packaging cause and established voluntary "Guidelines for the Environmental Design of Containers and Packaging" in 1997. Designs are made following the Guideline such as selecting material for labels and color of glass bottles that consider recycling. In addition, we are engaging in initiatives from the stand point of Life Cycle Assessment (LCA) to reduce environmental impact of containers and packaging.

3Rs of Containers and Packaging

The Suntory Group works to develop containers and packaging that give consideration to the environment, based on the 3Rs of "Reduce, Reuse, and Recycle". We work on reducing the weight, using materials with less environmental impact, and designing packaging that is easy to recycle, while taking into consideration usability from the time customers drink the product to the time it is recycled. We also work in collaboration with various recycling organizations and local governments to promote recycling.

■ 3Rs of Containers and Packaging

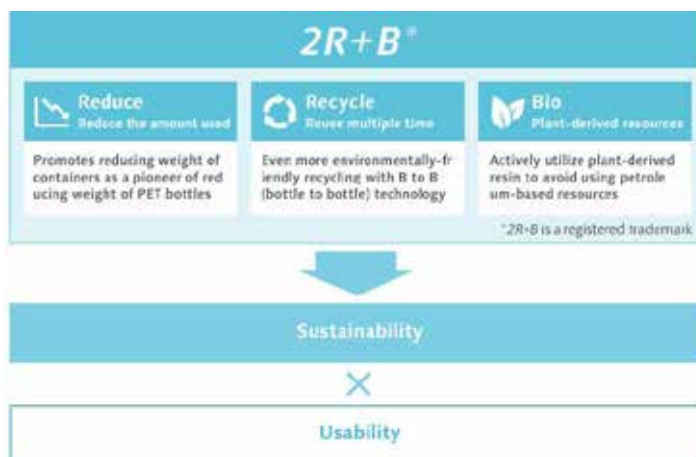


Plastic Bottles

As a measure to minimize environmental impact, we design and develop our products by minimizing the amount of resources used and actively introducing renewable resources, while taking into consideration ease of use for our customers.

■2R+B strategy

In regards to plastic bottle containers, we are striving forward according to our 2R+B strategy that is unique to Suntory. The concept is to replace petroleum-derived raw materials with renewable raw materials to the extent possible, while reducing the amount of resin used and using recycled materials in development to achieve thorough and effective use of resources.



■Reduce: Lightweighting

Environmentally-friendly Green Eco Bottle*¹

The 550mℓ Suntory Tennensui natural mineral water is packaged in the most lightweight PET bottle in Japan*² (11.9g).

The bottle design was developed using Suntory's own technology, and it allows us to reduce the use of petroleum-derived ingredients by approximately 40% per bottle. By bringing the weight to 29.8g, we were the first in Japan to achieve the weight of less than 30g for 2ℓ bottles.

*¹ An original name we give to PET bottles that have reduced environmental impact by using methods such as ground breaking weight saving such as realizing lightest weight bottle in Japan or using plant based materials.

*² Plastic bottles for mineral water (500mℓ to 600mℓ) in Japan. As of November 2020



Green eco bottle

Introducing Record Breaking Thinnest Roll Label*¹ for Plastic Bottle Beverages in Japan

We are reducing the weight of product labels on plastic bottles to reduce environmental impact. We were able to realize the thinnest plastic bottle roll label in Japan at 16μm (micrometer*²) in 2012. An even thinner label at 12μm has been introduced to the 2ℓ plastic bottles and 550mℓ plastic bottles of our Suntory Tennensui mineral water in April 2014. Thereafter, we have been advancing the expansion to all of our products that use roll labels. This has allowed us to reduce CO₂ emissions by 25%*³ compared to conventional labels.

*¹ Labels that peel off from the glued area instead of peeling off at the perforations

*² 1/1,000mm

*³ Reduction rate in the film (label) manufacturing process



12μm thick roll label, thinnest in Japan

Adoption of bottle cap that uses 100% bio-based PET materials*1.

We are also reducing our environmental impact in the bottle caps on plastic bottles. Since September 2016, we have adopted 1.85g bottle caps, which are the lightest in Japan*2 that use 30% bio-based PET materials for Suntory Minami-Alps Tennensui mineral water. This innovation reduces the use of petroleum-derived raw materials by 35%*3 and decreases CO2 emissions by 27% compared to conventional PET bottle caps.

In addition, we have further evolved our environmental efforts by using bio-based materials and in March 2019, we began introducing polyethylene caps with 100% plant-derived ethylene for 550mℓ Suntory Aso Tennensui mineral water which is manufactured at our Kyushu Kumamoto Plant (Kamimashiki District, Kumamoto Prefecture). This innovation reduces the use of petroleum-derived raw materials by 90%*2 and decreases CO2 emissions by 56% compared to current PET bottle caps.

*1 Polyethylene caps with 100% plant-derived ethylene as the main raw material. Excluding trace amounts of petroleum-derived components and colorant components at the time of production line changeover.

*2 As of April 2020

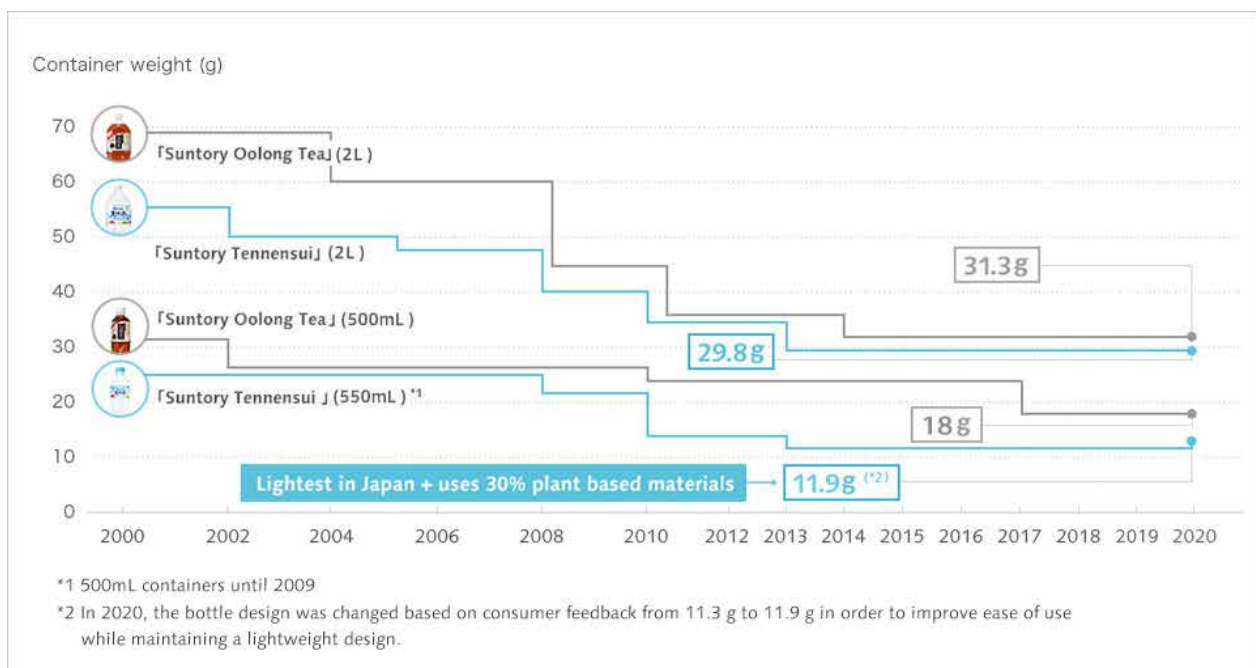
*3 One bottle of Suntory Tennensui Mineral Water (550mℓ)

*4 One bottle cap of Suntory Tennensui Mineral Water (550mℓ)

Evaluation from Society

Suntory Foods International Ltd. received the 2016 Minister of the Environment Award for Promoters of the Development of a Recycling-Oriented Society in recognition of its environmental impact reduction activities, including the world's first introduction of beverage PET bottle caps made from 30% bio-based materials.

Primary lightweight plastic bottle products



In-house Blow Molding PET Bottles

The Suntory Group is promoting in-house molding to produce PET preforms from PET resin and blow then into PET bottles. This enables integrated design and management from bottle molding to filling, reducing the amount of resin used and also making it easier to reduce the weight of the bottle.

In addition, fuel and CO₂ emissions during transportation are reduced compared to when purchasing finished PET bottles. Furthermore, by recovering and reusing the high-pressure air used in PET bottle molding, we use energy efficiently and reduce CO₂ emissions.



PET resin

CO₂ emissions can be reduced 50% or more.



Preform made from resin



Shaped PET bottle

Plastic Bottle Development in the Spirits Business

We are taking great advantage of the technology cultivated in our soft drink business in our spirits business. Suntory Spirits Ltd. has launched the 4ℓ 110g plastic bottle, which is the lightest in Japan, to whisky products such as Kakubin, Torys and other alcoholic products starting from June 2016. By making it up to 18% lighter than the conventional 134g or 120g, the use of PET resin is reduced, resulting in an annual CO₂ emissions reduction of approximately 460 tons (17%)*. We have also removed the grip used on conventional PET bottles and adopted a new deep grip section in the center of the bottle for ease of use in collaboration with the PET bottle manufacturer.

* Based on our calculations



Old 4ℓ plastic bottle and new lightweight 4ℓ plastic bottle

Development of World's Lightest* Heat-resistant Plastic Bottles Leveraging Japanese Technological Capabilities

The Japanese manufacturing technology and design capabilities for reducing weight of plastic bottles have been used in Group companies in Europe.

In 2017, we have successfully developed a heat-resistant PET bottle for Suntory PepsiCo Vietnam in Vietnam that is the lightest in the world (18g). Creating the lightest heat-resistant bottle project was a technological challenge in this region, but we have succeeded in the project through mutual cooperation with Suntory MONOZUKURI Expert, Ltd. and Suntory PepsiCo Vietnam Beverage Co., Ltd.



Lightest heat-resistant bottle in South East Asia

As an initiative to further reduce the weight of PET bottles, we utilized a technology to prevent bottles from deforming by injecting nitrogen and pressurizing the bottle. In 2020, we successfully developed world's lightest 15g PET bottle in the heat-resistant filling container category that also pursued functionality, versatility and design and introduced it to Suntory PepsiCo Beverage (Thailand) and Suntory Garuda Beverage in Indonesia. We plan to introduce it to Suntory PepsiCo Vietnam in Vietnam in the future.

* In the 500mℓ class of heat-resistant PET bottles (as of April 2020, according to our research)



Lightest (15g) nitrogen instilled heat-resistant bottle in the world

PET Bottle Self-Manufacturing Technology at Beam Suntory

Beam Suntory has been introducing its first bottle self-brewing technology for 1.75 ℓ spirits since 2017. This self-manufacturing process has enabled weight reduction of bottles by 14%. In addition, reduction in weight and transporting preforms instead of bottles have greatly improved efficiency in transport, contributing to the reduction of environmental impact.



Products adopting self-manufacturing technology

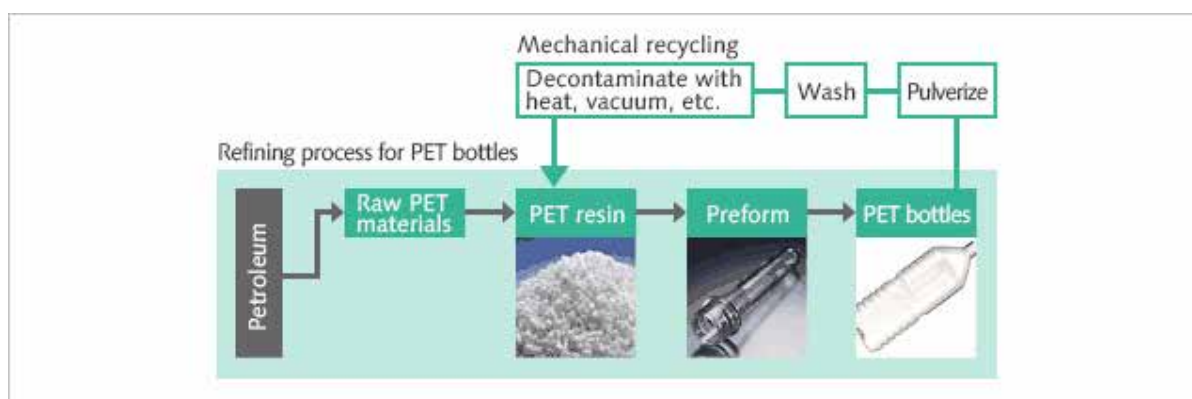
■Recycle: Recycling Plastic Bottles

PET Resin Horizontal Recycling through PET Bottle Recycle in Japan

In 2011, Suntory Beverage & Food Ltd. partnered with Kyoei Sangyo Co., Ltd. to develop the Japanese beverage industry's first B-to-B^{*1} mechanical recycling system^{*2} for PET bottles.

Reused PET resin was 50% at the time of introduction but after confirming that stable supply was possible after about a year of operation, we increased the percentage of reused PET resin to 100%. This PET bottle using 100% reused PET resin is used for many products including 2 ℓ Suntory Oolong Tea and Iyemon.

This system received Commendation for Contributors to the Development of a Recycling-oriented Society in 2011 and 2012, and Commendation for Global Warming Prevention (Technological Development and Commercialization Category) in 2011 both from the Minister of the Environment, and Nikkei Global Environmental Technology Excellence Award in 2011 for the first time in the food industry. We also received the 21st Global Environment Award in 2012 and Environmental Excellence Award hosted by the Hitachi Environment Foundation and Nikkan Kogyo Shimbun, Ltd. in 2013.



The recycled PET bottles produced by mechanical recycling take on a color during the process but they have no quality issues and safety issues. The mechanical recycling system have highest cost efficiency and lowest environmental impact^{*3} (CO₂ emissions from raw material procurement to preform manufacturing) among PET bottle recycling systems adopted in Japan as of 2022.

^{*1} B-to-B: "Bottle to bottle," signifying the creation of a new PET bottle from a recycled one.

^{*2} Mechanical recycling: A method in which recycled resin obtained by material recycling (used products are processed by crushing, washing, and made into raw materials for products again) is further processed under high temperature and reduced pressure for a certain period of time to remove impurities in the recycled material and make PET resin of suitable quality for beverage containers.

^{*3} Based on our research

Adoption of F-to-P direct recycling technology

In 2017, as part of our recycling efforts, we collaborated with Kyoei Sangyo Co., Ltd. and overseas machinery manufacturers (EREMA in Austria and SIPA in Italy) to develop F-to-P direct recycling technology which is expected to further reduce environmental impact. We began production in the fall of 2018. F-to-P direct recycling technology is a technology that can directly manufacture preforms after melting and filtering flakes made from collected PET bottles that have been crushed and washed at high temperatures. The F-to-P direct recycling technology can reduce CO₂ emissions by 70%* compared to virgin PET bottles. (Current mechanical recycle can reduce CO₂ emissions by 60%*.)



F-to-P direct recycling equipment



Products that use F-to-P direct recycling technology

* Processes from used PET bottles to the preform production.

Active Implementation of Recycled PET Bottles within the Group

To achieve the 2030 fully sustainable PET bottle goal, Suntory Beverage & Food Europe aims to achieve 50% recycled contents in its PET bottles by 2025 or sooner. Suntory Beverage & Food Europe brand Ribena was the first soft drinks brand in the UK to use a 100% PET bottle made from recycled plastic in 2007. The company has been increasing its use of recycled plastic - in 2021 this included the introduction of 100% recycled PET in May Tea and Pulco in France. In 2022, Suntory Beverage & Food Europe has started 100% recycled PET bottles in its Lucozade Sport brand in the UK and Ireland.

Suntory Beverage & Food Asia Pacific, with its main operations in Vietnam, Thailand and Indonesia, is also strengthening its efforts on recycling and has introduced the company's first 100% recycled PET bottles in Vietnam in 2022.



Development of The World's First PET Bottle Chemically Recycled with Enzyme Technology

Suntory Beverage & Food Europe is investing in a French green biotech company Carbios' enzymatic PET recycling technology through a consortium with L'Oréal, Nestlé Waters and PepsiCo. Carbios' optimized enzyme breaks down any kind of PET plastic (regardless of color or complexity) into its building blocks, which can then be turned back into like-new, virgin-quality plastic. In June 2021, Carbios produced the world's first food-grade PET plastic bottle prototypes made entirely from enzymatically recycled plastic which was showcased in the company's Orangina brand. In September 2021, Carbios successfully launched a demonstration plant and aims to build an industrial facility by 2025.

Product Labels Made with Recycled PET Bottles

Suntory Beverage & Food Ltd. introduced product label made with recycled PET bottles in part of 2ℓ bottles for major non-alcoholic beverages such as (Mineral Water) Suntory Tennensui, Iyemon and Suntory Oolong Tea in November 2010 and currently uses role label* method for all its products.

This label is the first role label in the industry to use recycled PET bottles and the percentage of recycle PET used has been increased from 60% to 80% in March 2012.

*Labels that peel off from the glued area instead of peeling off at the perforations



Roll label made with recycled PET bottles

■ Bio: Active Use of Plant-based Resin

Aiming for 100% plant-based plastic

The Suntory Group aims to replace petroleum-derived raw materials with renewable raw materials as much as possible in the development of plastic bottles. We implemented plastic bottles that use 30% bio-based PET materials for the Suntory Tennensui mineral water 550mℓ in 2013.

Suntory Holdings Ltd. and Anellotech, Inc., a green innovation and technology company in the United States, have worked in a collaborative development of a plastic bottle that uses 100% plant-derived raw materials, and construction has begun in 2016 on a development and testing plant to produce plastic bottle materials in the state of Texas. In the future, we are planning to introduce PET bottles made from 100% plant-based materials for Suntory Tennensui mineral water brand of Suntory Beverage & Foods Ltd. In the development process, we aim to produce "paraxylene," a precursor of terephthalic acid which constitutes 70% of PET bottle materials, exclusively from inedible plant-based materials (woodchips) so as not to affect the supply chain of materials for food use.

We have successfully created a prototype PET bottle made from 100% plant-based materials in 2021. This marks a breakthrough after a nearly decade-long partnership with the US-based sustainable technology company Anellotech.



Development and testing plant

Cans, Glass Bottles, and Barrels

■ Reduce: Lightweighting

Lightweighting in Cans

We are furthering the lightweighting in cans such as those used for beer and coffee by aiming to dramatically reduce the amount of resources that are used while maintaining the usability for customers.

We have conducted initiatives for aluminum cans that include shrinking the diameter of the lid of beer cans in 2008 and the bodies of aluminum cans containing low-alcohol beverages such as beer and Chu-Hi in 2014. In addition, the promotion of even more lightweighting is underway with the introduction of thinner bodies even in steel cans for coffee.



Boss Rainbow Mountain Blend
The Premium Malt's
-196°C Chu-Hi Strong Zero <Double Lemon>

Lightweighting in Glass Bottles

The medium-sized glass bottle for The Premium Malt's has achieved weight savings of roughly 10g to 460g in 2014. The thickness of the body section that the label is adhered has been designed 0.2 to 0.3 millimeters thinner to prevent damage by bumping into other bottles. We are also improving the shape of the bottle so it does not get damaged when opening the bottle with cap opener and other improvements in the quality of the bottle.



The Premium Malt's medium glass bottle

■Reuse: Promoting Collection and Reuse of Containers

Reusing Glass Bottles and Barrels

Returnable containers (bottles, barrels) for beers and non-alcoholic beverages for restaurants are used often and we collect them via our own route and wash them for repeated use. Furthermore, we support the collection of glass bottles that are disposed of by liquor stores and restaurants through building collection routes in the distribution channel by specialized business operators since 1974.

One-way bottles are collected through effective sorting and collection routes by municipalities and other organizations.

Pilot Implementation of The "Loop", A Circular Shopping Platform

Beam Suntory' Sipsmith has partnered with Loop and Tesco to pilot a closed loop system in 10 stores. This initiative allows consumers to purchase a Sipsmith bottle in store, sip it responsibly at home, and the return it to a participating Tesco store. Sipsmith estimates that its Loop bottle will result in 15% less carbon emissions compared to its standard bottle, in addition to glass materials diverted from landfill or recycling.

Beam Suntory is also piloting a cloud-based life cycle assessment (LCA) solution, tailored for packaging design evaluations. The software's environmental performance criteria and data will be leveraged to analyze our existing packaging and help inform future packaging decisions across our portfolio, taking into consideration packaging attributes, consumption and emissions metrics, and life cycle phases.

Paper Packs and Cardboard

■Reduce: Lightweighting

Reducing Weight of Cardboard

As part of the initiative, short flap cardboard cartons for beverages of small size plastic bottles started from spring of 2012 based on the philosophy of reducing environmental impact in cooperation with the industry. Through this, we reduced the use of paper by about 20% compared to conventional cardboards. Short flap cardboards have been introduced for beer and RTD products since 2019.



Short flap cardboard cartons that reduce cardboard usage on its sides

■Recycle: Easier-to-Collect Containers

Shifting to Recycled Paper Containers

Paper containers were introduced for shochu and spirits in April 2010 and for wines in February 2014. Approximately 90% of the containers for alcoholic beverages have been changed to more recyclable paper containers.*¹

We have been using containers with evaporated aluminum on its inside for preserving quality but it was difficult to separate paper and aluminum when recycling. The new paper container implements vapor deposition of non-aluminum transparent material to improve ease of recycling.

*1 As of May 2020



"Wheat Shochu Muginoka" "Suntory Umeshu" "Delica Maison"

Achieved 100% Use of FSC®-certified Cardboard

The Suntory Group is gradually adopting paper packaging materials that have acquired the FSC certification*¹ that ensures proper management of international forests for products made in Japan. Suntory Beverage & Food Ltd. introduced FSC-certified cardboard packaging to Suntory Tennensui mineral water for products manufactured from August 2017. Since the end of February 2018, we have achieved 100% use of FSC-certified cardboard used for packaging all our Suntory Tennensui brand products. We are promoting the use of FSC-certified paper packaging materials throughout the Group with the sequential adoption of these materials for Suntory Spirits Ltd. products and as packaging for six packs.



*1 Forest Stewardship Council (FSC) is an international organization that certifies timber produced from forests globally as well as the distribution and manufacturing processes of the cut timber. This certification considers the environmental conservation of these forests and recognizes timber produced in an economical and sustainable manner which generates revenue for the local community. This certification considers the environmental conservation of these forests and recognizes timber produced in an economical and sustainable manner which generates revenue for the local community.

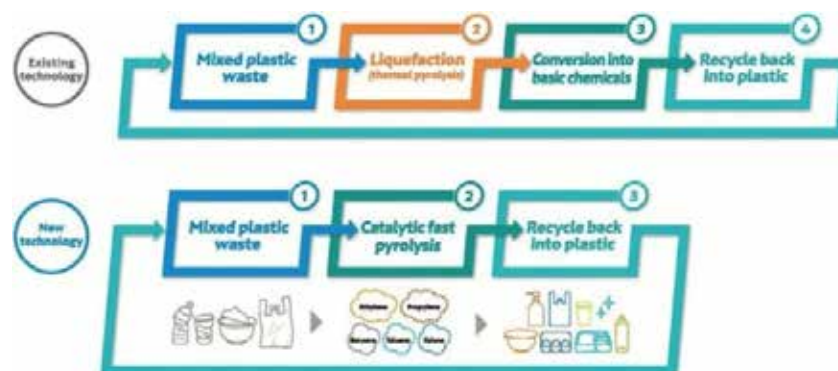
Collaboration with Industry and Local Governments for Packaging Recycling

Establishment of R Plus Japan to Work on the Recycling of Used Plastics

12 companies(including Suntory) within the plastics supply chain established R Plus Japan Ltd., a joint venture company focused on the recycling of used plastics.

It is said that many of the plastics that are not PET bottles are being currently incinerated in Japan. This technology enables plastics including PET bottles to be chemically recycled by directly returning such plastics to benzene, toluene, xylene, ethylene, propylene and other materials. It requires less treatment process compared to other chemical recycling that require liquefaction and is hoped to reduce CO₂ emissions and energy use. If this technology is established, we believe more used plastic can be recycled efficiently.

R Plus Japan will cooperate with Anellotech to develop technology for recycling used plastics that is efficient and has lower environmental impact. We will strive to achieve practical use of technology to contribute to solving the global issue of plastics through cross-industry cooperation with companies engaging in separation of collected plastics, monomer manufacturing, polymer manufacturing, package and container manufacturing as well as trading companies and beverage manufacturers.



Conventional technology and new technology

Promoting Horizontal Recycling with Local Governments

Suntory Beverage & Food Ltd. has signed an agreement on bottle-to-bottle recycling operation to recycle used PET bottles to new PET bottles jointly with the residents, local government and businesses with two cities and two towns (Takasago City, Kakogawa City and Inami and Harima in Kako District in Hyogo Prefecture) of Higashiharima in 2021, with the aim of creating a recycling-oriented society.

With this agreement, the two cities and two towns of Higashiharima and Suntory will collect and recycle used PET bottles separated by the residents as new PET bottles at a plant in the region to deliver and return them to the Higashiharima area. Cooperation of multiple local governments and a company in bottle-to-bottle recycling as well as manufacturing, delivering and returning the recycled PET bottles all within the region under the scheme are both first attempts in Japan. This agreement will promote bottle-to-bottle direct recycling and further strengthen environmental protection activities aimed to realize a recycling-oriented society.

Efforts to Prevent Scattering of Empty Containers

To beautify the environment and promote effective use of resources, we are engaged in activities to prevent the scattering of empty containers. We place one empty container collection box at every vending machine. We are also making efforts to raise awareness about recycling by affixing a Beautification Mark on vending machines as a way to prevent littering.



Installation of an industry-unified recycling box with new function next to vending machine

From the autumn of 2022, we will start deploying recycling boxes with industry-standard specifications for outdoor areas where there is a lot of contamination.

The industry-unified recycling box with new function has been verified to be effective in reducing contamination through measures such as the downward facing insertion slot.

In order to promote the horizontal recycling of PET bottles, we are focusing on collecting used PET bottles from vending machines.

It increases operational efficiency and contributes to resource recycling of PET bottles.

Suntory Group will continue to use the recycling box next to the vending machine as the gateway to resource recycling, and will continue to raise awareness of the message that "it is not a trash can, but a recycling box."



Marine Pollution Problem of Plastic Bottles

The problem of marine pollution caused by plastic containers, including plastic bottles, is becoming increasingly serious and is discussed as a global environmental issue. As a beverage company that handles many containers, we are committed to proactively addressing this issue and working with the government, local communities, and industry to resolve it. We have always been promoting 2R+B while expanding activities to raise consumer awareness about recycling.

In the future, we aim to improve the recycling rate even further in each country and region around the world and will encourage activities to promote improvements together with our various stakeholders.

In addition, as part of employee volunteer activities, employees in Japan participate in beach cleanup activity organized by a non-profit organization, while overseas, Beam Suntory employees participate in cleanup activities along the Chicago River basin, in an effort to raise awareness so that each and every employee will see this issue as his or her own and take action.

The Suntory Group formulated the Plastic Policy in June 2019 and aims for 100% sustainability by using only recycled or plant-derived materials for all PET bottles used globally by 2030 and achieving zero use of virgin petroleum-based materials.



Beach Cleanup Activity



Activity with Friends of the Chicago River

Contribution to a recycling-oriented society

Promoting the Reduction and Recycling of Waste

As part of our efforts toward establishing a recycling-oriented society, Suntory is working to reduce emissions of by-products and waste and to achieve 100% recycling.

By-products and Waste Generation Performance

Area	Amount of discharge (thousand tons)		
	2019	2020	2021
Japan	251	228	218
Americas	193	156	410
Europe	113	95	119
Asia	32	32	30
Oceania	5	7	7
Africa	0	0	0
Total	594	518	783★

* Data covers 27 production plants in Japan and 64 production plants overseas

* The increase in emissions in the Americas is due to the addition of waste and by-products to be included from FY2021. The amount of the waste and by-products increased by 238 thousand tons due to the addition.

* Therein, the byproducts and waste generated by Suntory Beverage & Food Group companies in Japan and overseas amount to 148 thousand tons★

* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The assured numerical values are indicated with ★.

Promoting the Recycling of Waste

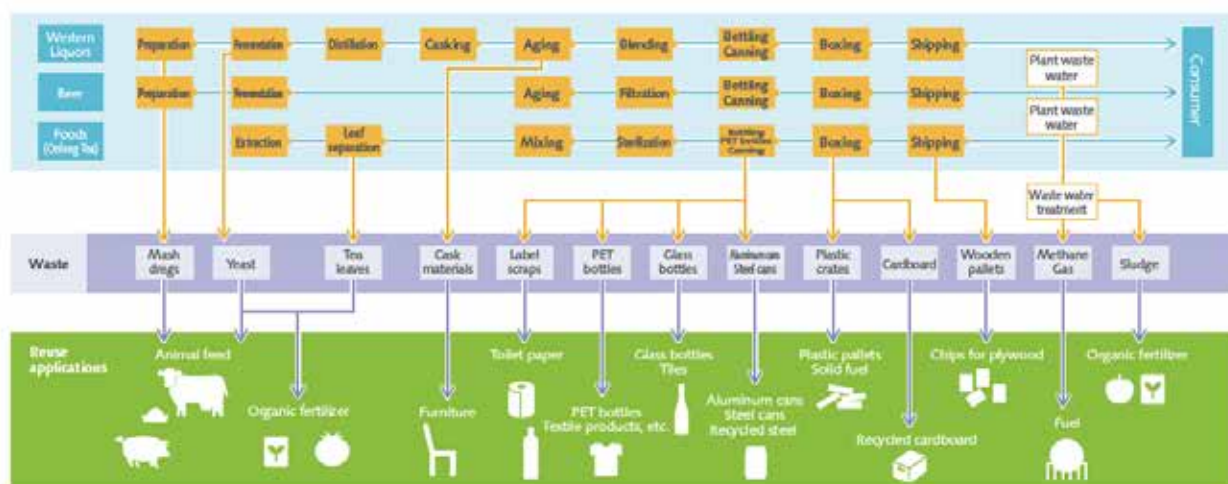
We are committed to reducing the by-products and waste generated in the manufacturing processes at Suntory Group plants in Japan, and to recycling 100% of resources.

In 2021, our plants in Japan (including Group companies) generated 217,925 tons of byproducts and waste. This means total waste generated is the same and by-products and waste amount per unit of production decreased by 7.5% compared to 2021.

Suntory Beverage & Food Europe is working to reduce and recycle waste with the goal of achieving zero waste from its plants. We have also set a goal of reducing food waste from our products by 50%. As part of our efforts to achieve this goal, we donate surplus products to charitable organizations to help those suffering from poverty.

Recycling Rate of Japanese Plants and Flow for reuse of by-products and waste generated in each production process

	2017	2018	2019	2020	2021
Amount of discharge (thousand ton)	258	258	251	228	218
Amount recycled (thousand ton)	258	258	251	228	217
recycling rate (%)	100.0	100.0	99.9	100.0	99.7



By-products and Waste generation, recycling rate and the purpose of use for recycled products

Type of waste	Main Purpose of Use	2017		2018		2019		2020		2021	
		Generation (t)	Recycling Rate(%)	Generation (t)	Recycling Rate(%)	Generation (t)	Recycling Rate(%)	Generation (t)	Recycling Rate(%)	Generation (t)	Recycling Rate(%)
Vegetable (glycation, tea, coffee dregs, etc.)	- Animal feed - Fertilizer	195,334	100	187,818	100	181,524	100	164,185	100	159,273	100
Sludge (excess sludge, etc.)	- Fertilizer	30,351	100	30,472	100	31,245	100	30,275	100	27,337	100
Wood waste (cask, palette)	- Animal feed - Fertilizer	1,314	100	4,435	100	2,458	100	5,186	100	5,267	100
Glass and ceramic scrap	- Glass materials - Base course material	3,508	100	3,216	100	2,825	100	2,285	100	1,337	100
Paper scraps (cardboards, paper labels, etc.)	- Recycled paper - Cardboard materials	6,349	100	6,228	100	6,429	100	5,520	100	5,508	100
Plastic	- Palette - Solid fuel - Supplementary fuel	5,918	100	6,138	100	6,338	100	6,033	100	5,796	100
Metal scraps (aluminum, steel)	- Aluminum - Steel ingredients	2,958	100	3,240	100	3,270	100	3,314	100	3,506	100
Other		12,632	100	16,405	100	17,365	100	11,558	100	9,903	93
Total		258,365	100	257,951	100	251,454	100	228,355	100	217,925	99.7

* Data covers 27 production plants in Japan

■Applications of recycled materials

We are furthering resource recycling for the by-products and waste produced by the Suntory Group in various applications.



Barrel cabinet



Dining Set "TARURU"



Drink sampling tray made from barrel

Building a Recycling Circulation Cycle for Food Waste -- Izutsu Maisen Co., Ltd.

Izutsu Maisen Co., Ltd. is actively working to reduce and reuse food waste so as not to waste the precious gifts of nature. One predominate initiative is the setup of a recycling circulation cycle for the crusts of bread.

Izutsu Maisen cuts off the crusts of the bread when they make their popular fried pork cutlet sandwiches. These bread crusts are generally given to business operators who are able to recycle them as feed, but Izutsu Maisen launched their original Amai-Yuwaku pork brand that raises pigs on this feed in 2012 because the crusts are perfect as feed. This is an initiative that uses the bread crusts once again in a cycle as a raw material such as in the pork cutlets once.



Original Amai-Yuwaku
pork brand

Contribution to a recycling-oriented society

Preventing Pollution and Management of Chemical Substances

Although the majority of our raw materials are of natural origin, environmental impact will occur, so we assume environmental risks and take the necessary measures.

Environmental Risk Management Strategies

The products provided by the Suntory Group mainly use agricultural products and water, so the environmental risk from raw materials is lower than in other industries. Nevertheless, chemicals are used in the manufacturing process to clean and sterilize equipment and can contaminate the surrounding environment. Therefore, we consider all possible abnormalities and emergencies, evaluate risks, and implement countermeasures.

Preventing Air Pollution

The Suntory Group strives to reduce SOx and NOx emissions by switching to gas fuel that does not contain sulfur and adopting low NOx burners. We have set voluntary standards that are stricter than legal limits and control air pollutants in exhaust gas from boilers.

■SOx emissions

	2019	2020	2021
Emissions (t)	16.8	10.4	3.4
Per Unit (g/kℓ)	3.5	2.2	0.7

* 27 production plants in Japan

■NOx emissions

	2019	2020	2021
Emissions (t)	152.0	151.6	141.8
Per Unit (g/kℓ)	31.6	32.2	29.4

* 27 production plants in Japan

Preventing water pollution

Wastewater management is conducted at each factory by setting voluntary standards that are stricter than legal limits.

Preventing Soil Pollution

Suntory Group plants use chemical substances to clean equipment. These are strictly controlled, and efforts are made to prevent them from leaking. However, even if a cleaning agent or chemical leaks out, liquid control dam surrounding chemical tanks will prevent to pollute soil. We carry out periodical inspections to prevent pollution.

Measures for Alcohol Evaporation

Some amount of alcohol vaporizes from the cask during the storage of whisky. We place collection equipment to prevent any evaporated alcohol from escaping the plant. In addition, regular monitoring (concentration measurement, etc.) is done to confirm if alcohol evaporation is being reduced.

Chemical Substance Management

Suntory Group manages chemical substances in accordance with Pollutant Release and Transfer Register (PRTR) Law, Poisonous and Deleterious Substances Control Act, Fire Service Act and other related laws. Furthermore, we make a guideline on chemical substance management based on PRTR Law (established 2003).

Management of Waste

We promote to introduce an electronic manifest system for compliance with waste law and enhance information control of waste. In addition, we continue to implement training programs for production sites, sales offices, cultural sites, head office functions, and group companies to improve their knowledge and skills in waste management through methods such as group training, on-site visits, and role-playing to ensure the proper disposal of waste. We call such a lecture as "Waste management seminar" and "Surveillance seminar at waste treatment facility" to skill them up the knowledge and the audit ability on waste management. We continue initiatives for compliance with waste law.

Management of PCB Disposal

We store PCB wastes appropriately and report their storage status to the local government based on "Law Concerning Special Measures Against PCB Waste". We have registered to Japan Environmental Storage & Safety Corporation (JESCO) as a subcontractor for the disposal of PCB and began disposal of equipment that includes PCB from 2007. Status of the use and storage of equipment that includes PCB is as follows.

■Quantity of equipment that uses PCB (as of January 2022)

	Stored	Used	Total owned
Capacitor	2	0	2
Transformer	5	0	5
Stabilizer for lighting device	1	0	1

Claims, Accidents and Lawsuits

There were no claims, accidents or lawsuits related to environment in 2021.

To Create Harmony with Nature: Environment

Environmental Communication

Suntory Group values communication with the stakeholders and communicates information related to Suntory's spirit of "Coexisting with Nature" to the society.

Appropriate and Timely Disclosure of Information and Communication

Feedback and requests from stakeholders regarding environmental activities gathered through dialogue and customer center are utilized to improve target and activities. In addition to responding to feedback, we also communicate environmental information through issuing sustainability report, website and environmental events.

■ Website Communicating Detailed Information

The "Environmental Activities" website introduces detailed information regarding environmental activities. It regularly adds and updates information in effort to offer the latest information.



Environmental Activity website

■ Environmental Communication at Plants

Suntory Group welcomes approximately 700,000 visitors to tour its beer, whisky, mineral water and other plants. These tours include a section on the environment to introduce related activities. We also hold special events where parents and children can enjoy and learn about the environment and its importance. For the Corona disaster, we offer online tours and virtual factory tours.



Event for parents and children



Environment section in the plant

■Corporate Ad to Share the Tagline "Follow Your Nature" with the Society

Under the corporate mission "To Create Harmony with People and Nature", Suntory Group is engaging in environmental activities to pass down sustainable global environment to the next generation; and various cultural and social contribution activities such as community contribution through social welfare, education, and support for disaster relief; promotion of arts, academia and local culture; support for sports, and development of next generation.

To communicate our wish to be a company that enriches society like water through these activities and products, we established "*Mizu To Ikiru*", literally "living with water", as our promise to society. In 2013, we placed environmental ads in newspapers and on television with the theme of water resource cultivation activities in Natural Water Sanctuaries. The Television commercial "Suntory Natural Water Sanctuary (Soil Cultivation)" received the Grand Prize in the Environmental TV Commercial category at the 17th Environmental Communication Awards hosted by the Ministry of the Environment and Global Environmental Forum.



Newspaper ad
"Suntory Natural Water Sanctuary"



Television commercial
"Suntory Natural Water Sanctuary"
(Soil Cultivation)

To reach more customers and communicate Suntory's environmental activities, we placed newspaper ads and television commercials "Researching Suntory by Alien Jones" from 2014 to 2016 (television commercial ended on March 2016).



First television commercial
"Joining the Company"
(from Jy 2014)



Second television commercial
"Natural Water Sanctuary: Lecture"
(from October 2014)

From 2018, we have been placing new ads in newspapers with the message of "To Create Harmony with People and Nature", the promise which Suntory Group make with our customers, community and natural environment, to broadly communicate the importance of water to society.



Newspaper ad
"To Create Harmony with People and Nature"