

# Environment

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# Environmental Management

## Policies and Our Approach

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 the 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

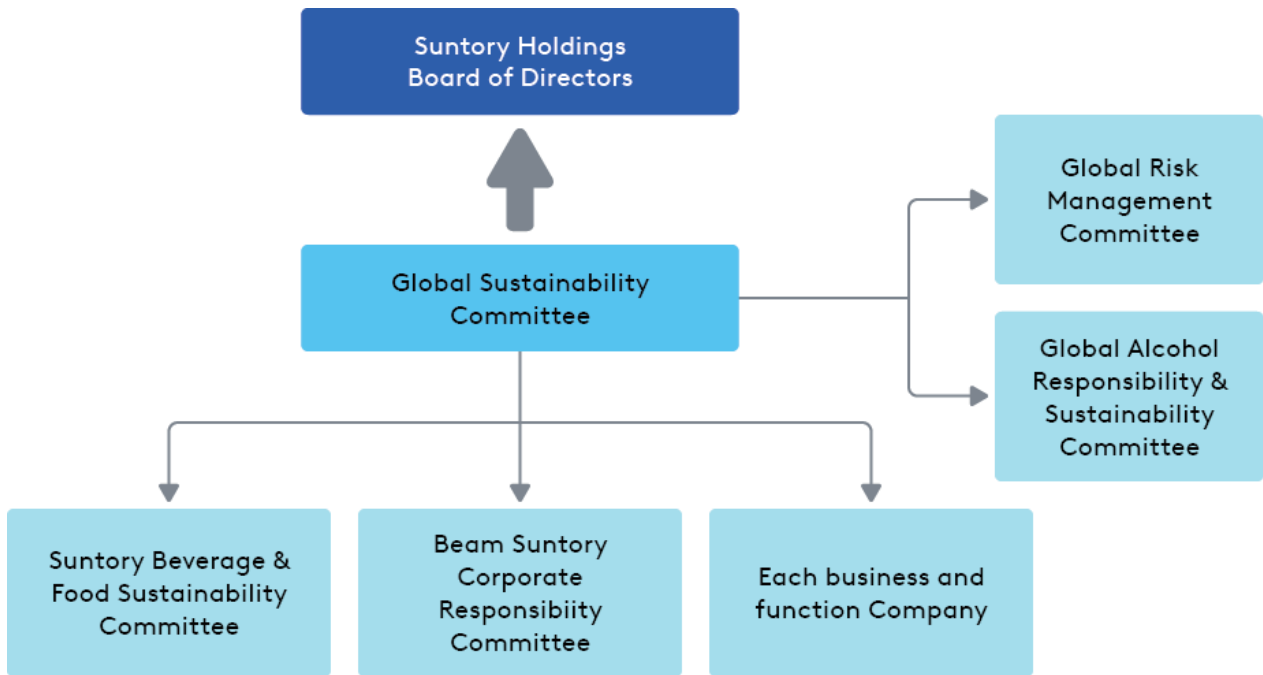
To achieve a vibrant global environment, we are championing the transformation to a sustainable society by collaborating with our stakeholders, deepening dialogues with local communities, and transparently disclosing our progress.

# Promoting Structure

## Global Sustainability Committee

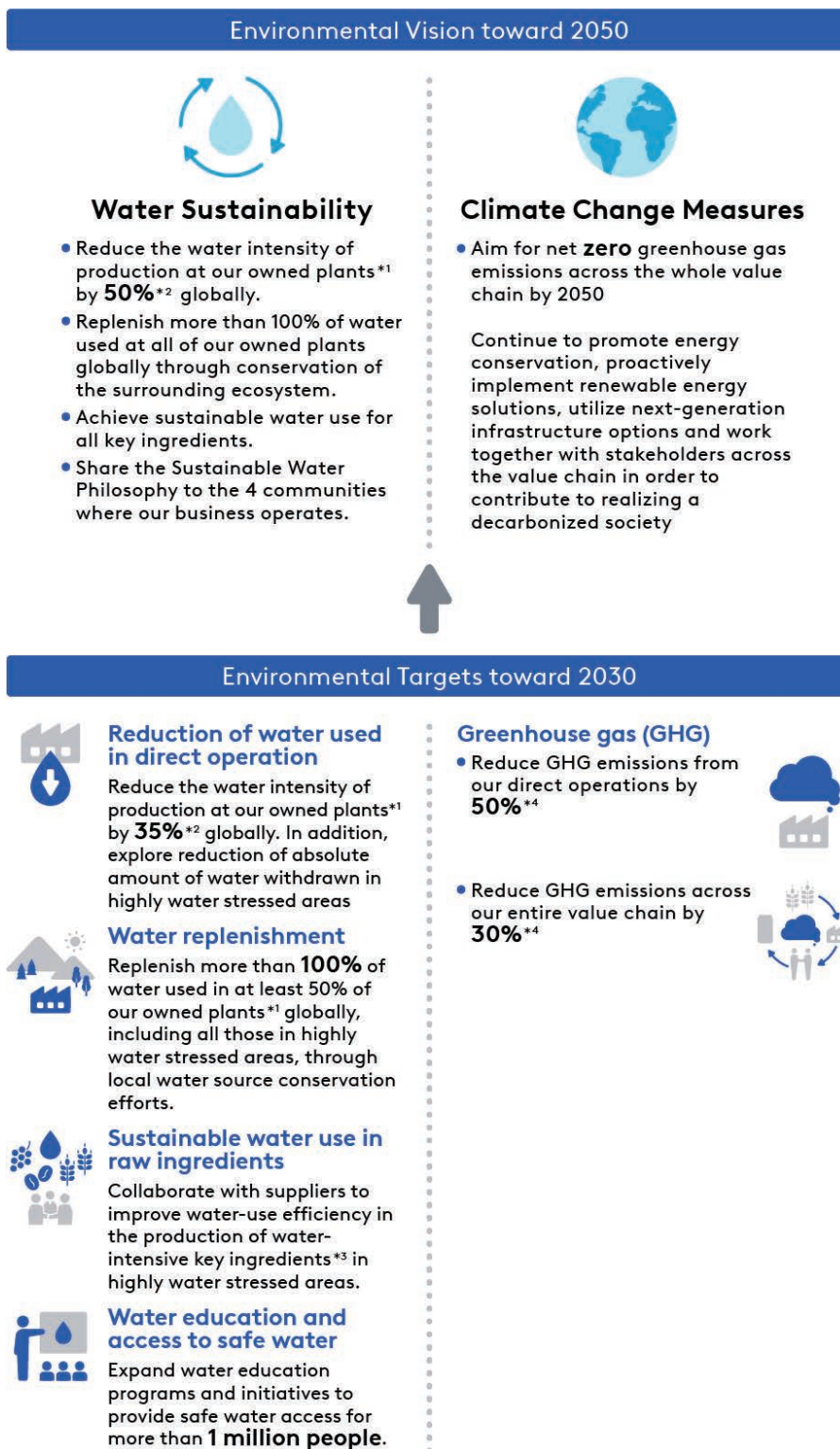
To promote sustainability management, the Global Sustainability Committee (GSC) acts as an advisory committee to the Board of Directors. The Group's sustainability strategies and the progress on priority themes (water, climate change, containers and packaging, raw ingredients, health, human rights and enriching life) are discussed in the GSC under the lead of the Chief Sustainability Officer. The progress of environmental and social activities as well as business risks and opportunities are reported to the Board of Directors on a quarterly basis. In addition, the Board of Directors are provided with the opportunities to hear advices from the third party experts on sustainability management.

## Suntory Group's Environmental Management Promoting Structure



## Targets and Progress

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, we revised the greenhouse gas (GHG) emissions reduction targets in the Environmental Targets toward 2030 in April 2021, and revised our water targets in December 2021.



\*1 Suntory Group plants that manufactures finished products

\*2 Reduction per unit production based on the business fields in 2015

\*3 Coffee, barley, grapes

\*4 Based on emissions in 2019



### Water Sustainability

#### Reduction of water used in direct operation

- Reduced the water intensity of production by **28.0%** compared to 2015.

#### Water replenishment

- Water resource cultivation activities implemented in **34%** of all owned plants globally.

#### Sustainable water use in raw ingredients

- As an initiative on barley production through regenerative agriculture, we began working with our malt suppliers to verify the improvement of water use efficiency by improving soil water retention.
- Started building a pilot program to assess and support water use through regenerative agriculture for coffee farmers in the Cerrado region of Brazil.

#### Water education and access to safe water

- Total **810,000** people  
Water education program: **510,000** people  
Provision of safe water: **300,000** people



### Climate Change Measures

#### Greenhouse gas (GHG)

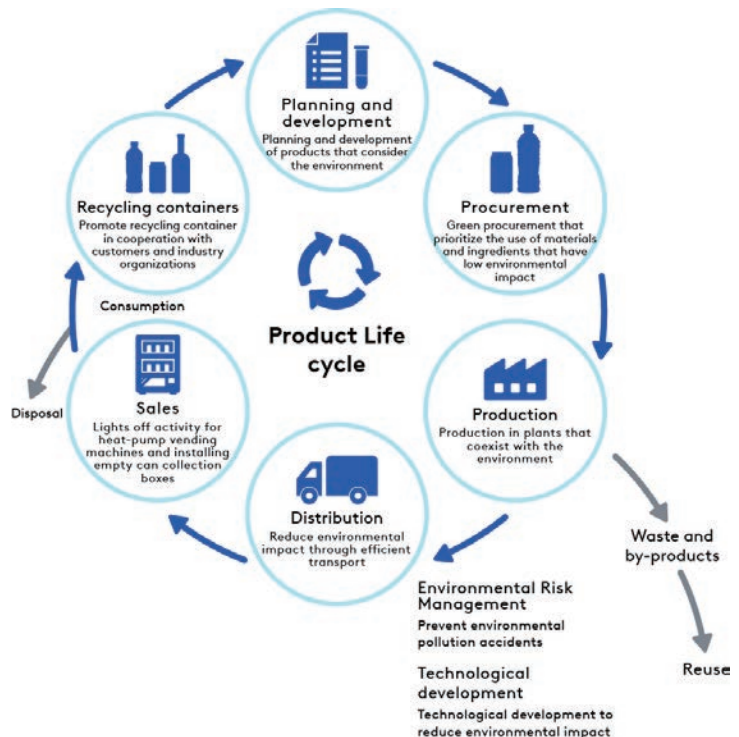
- **16.9%** reduction compared to 2019
- **3.5%** reduction compared to 2019

## Our Initiatives

### Reducing Environmental Impact in the Entire Product Life Cycle

The 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 planet throughout a product's life cycle - from planning and 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. The Suntory Group actively communicates with the suppliers throughout the entire supply chain.



## Compliance with environmental laws and regulations

In addition to complying with environmental laws and regulations (such as the Act on Promotion of Global Warming Countermeasures and the Energy Conservation Act in Japan), each Suntory Group plant is committed to environmental management by setting voluntary standards for wastewater treatment, boiler facilities and other environmental facilities that are equal to or more stringent than those set by laws and regulations.

In 2022, no serious accidents or violations affecting environmental pollution occurred.

## Group-wide promotion of ISO 14001 Certification

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 environmental perspectives in all stages from the procurement of ingredients to disposal.

\*Group companies complying to the Japanese SOX Act

## Introducing Environmental Accounting

We disclose the 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.

## Promoting Environmental Education in the Group

We promote environmental education to raise employees' environmental awareness. We implemented various environmental education initiatives including e-learning for all Group employees in Japan and sharing information on the Intranet. In addition, we regularly hold workshops and seminars to learn specific skills that are required in each operation. We also have started online program on sustainability management that can be taken by all Group employees globally.



Seminar on managing Wastes Disposal and Public Cleansing Act

## First Hand Experience with Forestry at Suntory Natural Water Sanctuary

We are advancing employee forestry volunteer activity at Suntory Natural Water Sanctuaries. Many employees and their families have participated until 2013. From 2014, the program was conducted with an aim to deepen understanding of corporate philosophy and approximately 7,600 employees in alcoholic and non-alcoholic businesses have participated so far. The program is continuing as a part of new employee on-board 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 related to our business, internal guidelines and other materials on the intranet. We are also raising awareness in our employees and encouraging action through e-learnings and sharing information on sustainability portal site.

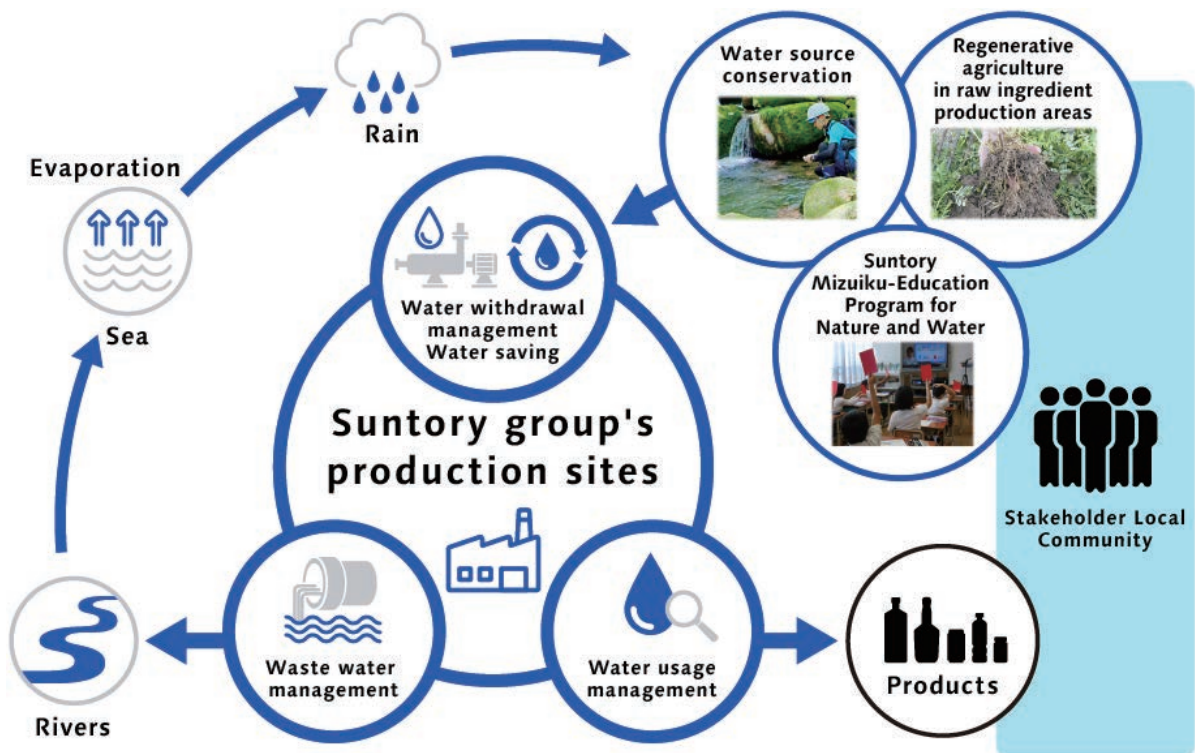
The internal magazine MADO and the e-MADO published on our intranet play a role in presenting the latest environmental activities and information of the Suntory Group to enlighten not only employees but also their families.

# Water Sustainability

## Policies and Our Approach

Water is a valuable resource for supporting people's lives and the source of the Suntory Group's corporate activities. Water is a renewable resource and will not disappear from the planet, but only about 0.01% of the planet's freshwater is available for human use. On the other hand, there is a prediction that people may face severe water scarcity in the future due to the increase of global population and climate change; that is to say, approximately five billion people will suffer from water shortages globally by 2050\*. The global water scarcity involves numerous issues; in addition to drinking and domestic use, a substantial amount of water is used in food production. We have placed achieving water sustainability as the priority of the Suntory Group's Environmental Principles to promote various initiatives.

\*World Meteorological Organization (WMO) "The State of Climate Services 2021"



## **Sustainable Water Philosophy**

As a company that depends on and benefits from the water and as a company that operates globally, the Suntory Group must contribute towards a sustainable society by taking an honest look at the world's water challenges. Based on our Basic Environmental Principle, we have formulated the Suntory Group Sustainable Water Philosophy to develop initiatives that contribute to solving water issues in each world region of the world. Based on this philosophy, we are developing and promoting initiatives that are tailored to the conditions for water resources in each area of the world where we do business.

### **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 the 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.

## **Promoting Structure**

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### **Global Sustainability Committee**

To promote sustainability management, the Global Sustainability Committee (GSC) acts as an advisory committee to the Board of Directors. The Group's sustainability strategies and the progress on priority themes (water, climate change, containers and packaging, raw ingredients, health, human rights and enriching life) are discussed in the GSC under the lead of the Chief Sustainability Officer.



# Targets and Progress

## Environmental Vision toward 2050



### Water Sustainability

- Reduce the water intensity of production at our owned plants\*1 by **50%\*2** globally.
- Replenish more than 100% of water used at all of our owned plants globally through conservation of the surrounding ecosystem.
- Achieve sustainable water use for all key ingredients.
- Share the Sustainable Water Philosophy to the 4 communities where our business operates.



#### Environmental Targets toward 2030



##### Reduction of water used in direct operation

Reduce the water intensity of production at our owned plants\*1 by **35%\*2** 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\*1 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\*3 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**.

#### 2022 Progress

- Reduced the water intensity of production by **28.0%** compared to 2015.
- Water resource cultivation activities implemented in **34%** of all owned plants globally. For the plants located in highly water stressed areas, activities are implemented in **30%** of those areas.
- As an initiative on barley production through regenerative agriculture, we began working with our malt suppliers to verify the improvement of water use efficiency by improving soil water retention.
- Started building a pilot program to assess and support water use through regenerative agriculture for coffee farmers in the Cerrado region of Brazil.
- Total **810,000** people  
Water education program: **510,000** people  
Provision of safe water: **300,000** people

\*1 Owned plants that manufactures finished products and excludes plants for packaging and ingredients

\*2 Reduction of water intensity of production based on 2015 baseline year

\*3 Coffee, barley, grapes

# Our Initiatives

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## Initiatives at Production and Research Sites

### Effective Use of Water Resources

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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%\*" 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).

\*Reduction water intensity based on the business fields in 2015

A variety of activities related to the 3Rs are being implemented at the Minami Alps Hakushu Water Plant of Suntory Products Ltd. In particular, through advanced "water cascade" recycling process, we are an industry leader in terms of water usage per production unit.



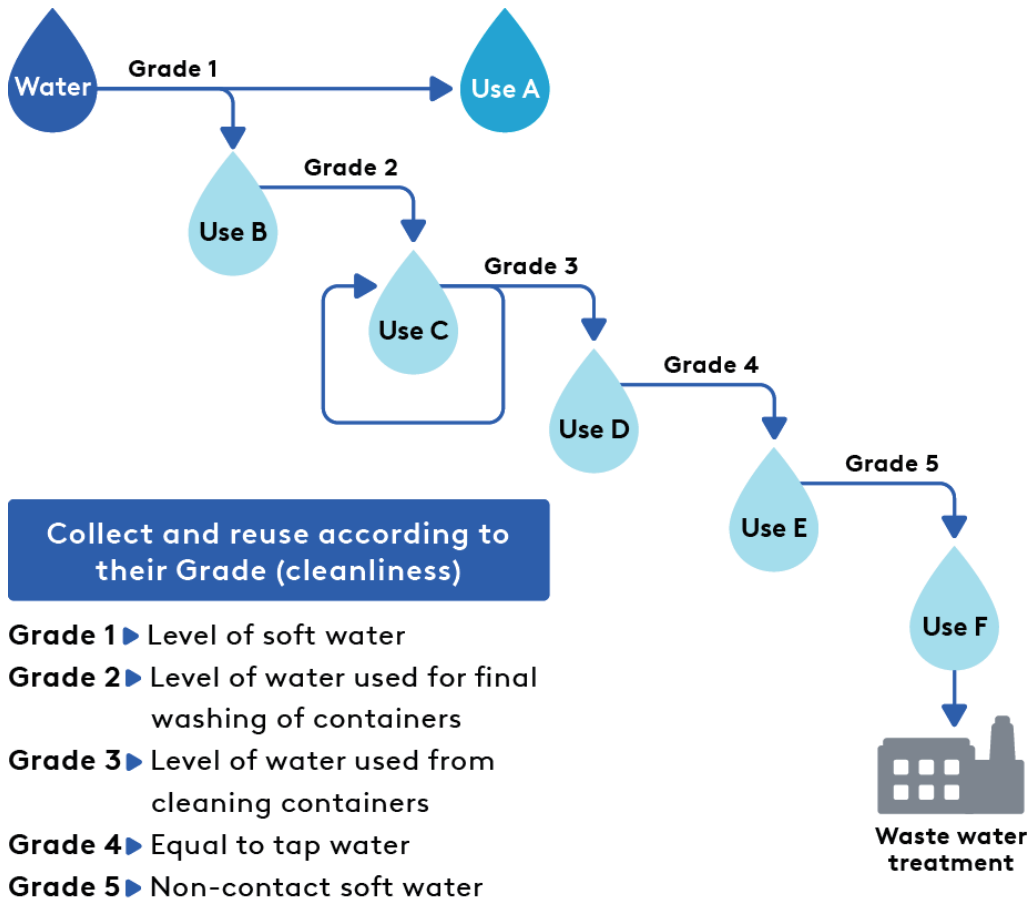
The Minami Alps Hakushu Water Plant of Suntory Products Ltd.



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

## Water Cascade Recycling Process

Water used in the manufacturing process is classified into five grades based on quality, such as coolant water and cleaning water. This is a technology to reuse water in stages, from applications that require a higher grade to those that can be supplied at the next grade.



## 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

## Strict Wastewater 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.



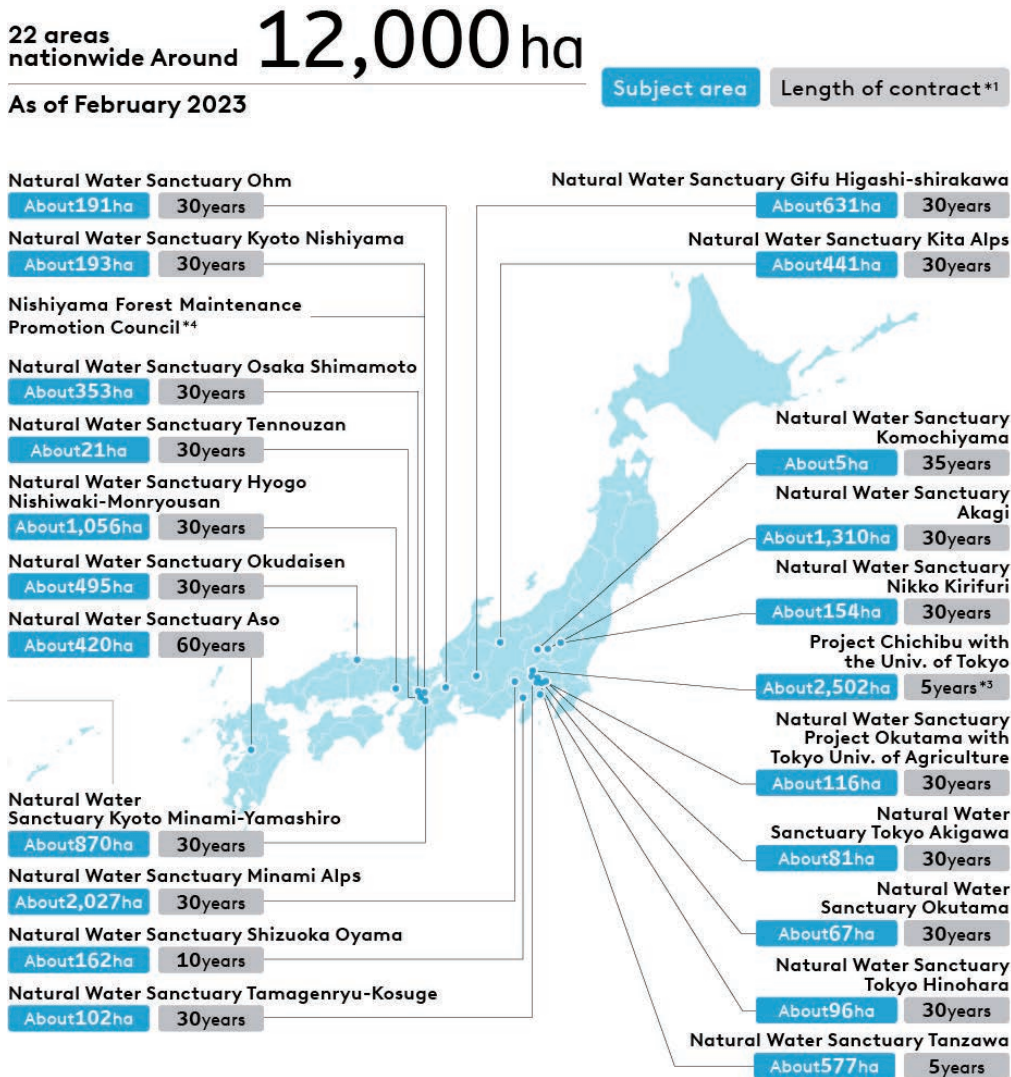
24-hour waste water management system

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

## Initiatives at the Water Source

### Suntory Natural Water Sanctuary (Water Source Conservation/ Preserving Biodiversity)

The Suntory Group started its Natural Water Sanctuary Initiative in 2003 to improve water resource cultivation and preserving biodiversity. The initiative has now expanded to approximately 12,000 hectares in 22 locations in 15 prefectures across Japan, and is recharging twice the volume of water it pumps from underground at its owned plants in Japan. With the Suntory Institute for Water Science playing a central role, we are collaborating with researchers from various fields to carry out ongoing activities based on science, looking ahead decades or even 100 years into the future.



\*1 When there are 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.

\*For more details, see page 40 "Feature 2: Natural Water Sanctuary (Water Resource Cultivation/ Preserving Biodiversity)".

## Working with Local Communities

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 started in 2004 in Japan. The program is unique to Suntory and designed for the next generation to realize the beauty of nature and the importance of water and the forests that nurture groundwater. It also inspires students to think about what each of them can do for water sustainability. The program centers on two activities: Outdoor School of Forest and Water and Teaching Program at Schools. It started online in 2020, allowing more people to participate.

*Mizuiku* is currently deployed in Japan and eight other nations. As of December 31, 2022, the cumulative number of participants exceeded 510,000.

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

\*For more details, see page46 "Feature 3:Suntory Mizuiku - Education Program for Nature and Water".

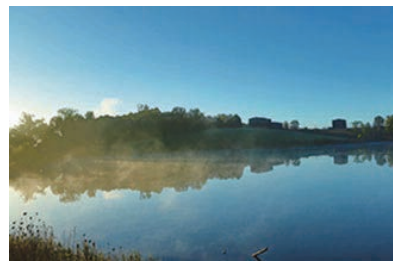


## Water Initiatives Worldwide

The Suntory Group practices coexistence with nature in all regions of the world where we do business. We will continue to engage in various initiatives in the future with an aspiration of becoming a global pioneer of water sustainability.

### United States of America

We have worked to preserve the natural environment, such as water conservation activities around our 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 Maker's Mark distillery land (approx. 13 hectares) as a water resource cultivation effort. 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.



### Mexico

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.

## Scotland

In Scotland, the Peatland Water Sanctuary, a large-scale series of peatland restoration and conservation and watershed conservation projects, was 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 amount of peat that Beam Suntory harvests every year in making its Scotch whiskies on an ongoing basis. Through this activity, we will contribute to water quality, water retention function enhancement, and biodiversity conservation. Peatlands also contribute to GHG emission control, thanks to their ability to store carbon.



## France

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.

## Spain

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. In addition, together with local universities and specialist institutions, we are conducting a hydrological survey for water source conservation activities in the Tagus River basin, centering on the Guajaraz reservoir, which is the Toledo Plant's water source.



## Vietnam

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.

## Thailand

Since 2019, we have been engaged in water resource preservation activities in the northern province of Chiang Mai and the southern province of Nakhon Nayok. Such activities include slowing stream currents to prevent sediment-based erosion, installing small weirs to support permeation of underground water, and planting trees to prevent soil from flowing into streams.

# Water Risk Assessment

The Suntory Group, which has made achieving water security a vital issue in Suntory Group's Environmental Principles, 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 Direct Operation sites

Water is the most vital ingredient for our business, as well as a precious shared resource. As such, the Suntory Group must understand the impact on our business, local communities, and the ecosystem based on water risk assessment for sustainable business growth.

Based on this, the Suntory Group conducted a risk assessment of water sustainability at direct operation sites\*.

\*Suntory Group plants that manufacture finished products: 23 plants in Japan, 54 plants overseas

### 1. Water stress situation in countries where direct operation sites are located

We identified the water stress situation in countries where direct operation sites are located using Baseline Water Stress, an indicator in the Aqueduct Country Ranking developed by the World Resources Institute. The Aqueduct Country Ranking is a global tool for uniformly assessing the water risk of each country.

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

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

### 2. Water risk assessment in watersheds where direct operation sites are located

In addition to assessing the water stress situation in countries where direct operation sites are located, we prioritized the area by determining the water supply risk of all watersheds where they are in to manage the risks. The following is the assessment process and progress of risk management.

## Primary Assessment — Prioritization (Screening) of sites based on water stress assessment

The primary assessment was conducted using a method we developed based on the knowledge acquired during the Science Based Targets (SBT) for Water pilot study program in which we participated in 2021.

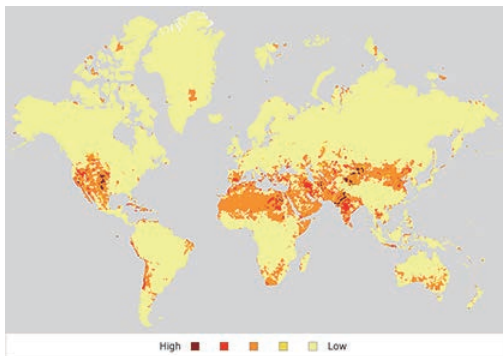
As a first step, we identified materiality related to water based on the characteristics of the beverage industry. Through this, we found that the most critical materiality is the water availability in watersheds where direct operation sites are located. We also found that groundwater and surface water are the ecosystem services we depend on most.

Next, we assessed the risks related to water availability in all watersheds where our sites are located to narrow down the plants that need water risk management as a priority. For assessment, in addition to the indicator of the Aqueduct mentioned earlier, we also referred to the Water Risk Filter developed by World Wide Fund for Nature (WWF). From those tools, we adopted four indicators that we can use to assess risks related to water availability. These indicators were used to determine 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 the four indicators assessed "current" water stress levels, such as Water Depletion in the Water Risk Filter. We defined the average score of three indices as the current water risk score. For the remaining indicator, we adopted the 2040 Water Stress of the Aqueduct, which estimates the water availability in 2040 based on climate change scenarios, etc., as "future" water risk score. All indices are scored in five risk levels and we categorized sites in watersheds with average current water risk score of "5: Extremely High" and "4: High" as sites with "Extremely high water-stressed" and sites with future water risk score of four or above as sites with "Highly water-stressed."

Supposing the total water withdrawal by all our plants in 2021 as 100%, 3% were by sites with "Extremely high water-stressed," and 15% were by sites with "Highly water-stressed." In the secondary assessment, we have set 18% of the plants as priority plants to prioritize in risk reduction.

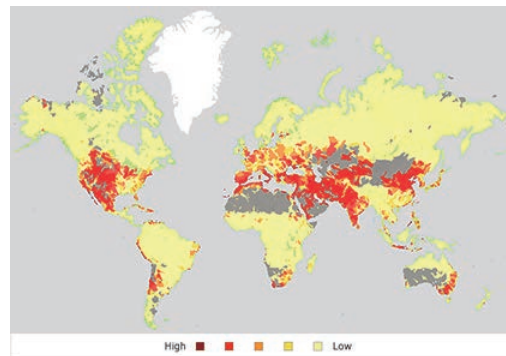
\*Pilot study to verify methodology related to SBT settings for water by Science Based Targets Network

**Water Depletion of Water Risk Filter (Five Levels)**

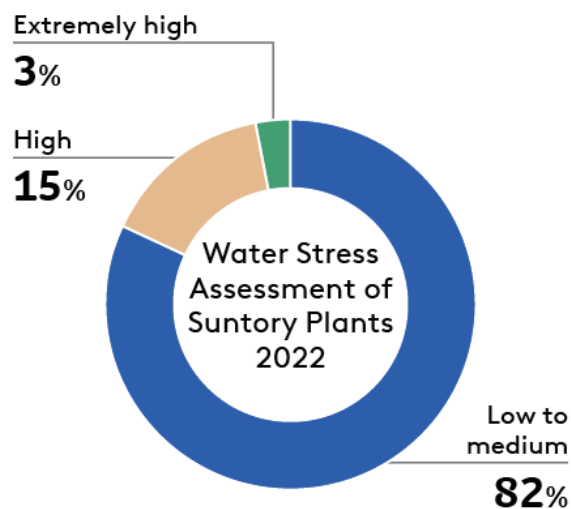


Source: Created based on Water Risk Filter of World Wide Fund for Nature (WWF)

**2040 Water Stress BAU Scenario of Aqueduct (Five Levels)**



Source: Created based on Aqueduct Project of World Resources Institute





## Secondary assessment — Assessing the level of risk reduction measures at each plant

The level of risk reduction measures progress from the perspective of water management (water withdrawal and water-saving) and coexistence with the communities at sites narrowed down in the primary assessment as we assessed priority plants. Since the condition of the water resource is different in each watershed where our sites are located, we conduct measures to reduce risks that correspond with local conditions.

### a. Water management (Water withdrawal and water-saving management)

As water is a precious resource shared with the community and ecosystem, our plants must manage water in a responsibly and appropriately.

Our plants water sources fall into two main categories: municipal water and natural water (surface water and/or groundwater). Since municipal water is generally shared with various users in the community, its source area is extensive, and the local water authorities are the primary entity responsible for managing water withdrawal from the source. The plant needs to follow the water supply management policies and plans of the water authorities, including climate change adaptation plans, and promote appropriate water-saving management. On the other hand, if a plant uses natural water as a source, the primary entity responsible for managing water withdrawal is the plant, which has water intake inside the site. Therefore, the plant needs to take the initiative in water withdrawal and water-saving management to adapt to environmental changes such as climate change.

Based on the above points, we have assessed the level of measures progress to manage water withdrawal and water-saving at each plant. We evaluated the following two items:

#### (1)Water withdrawal management

The ability to prove that water withdrawal is managed properly (that water is not excessively withdrawn)

\*Plants that use municipal water are not covered as the water authorities manage the water withdrawal

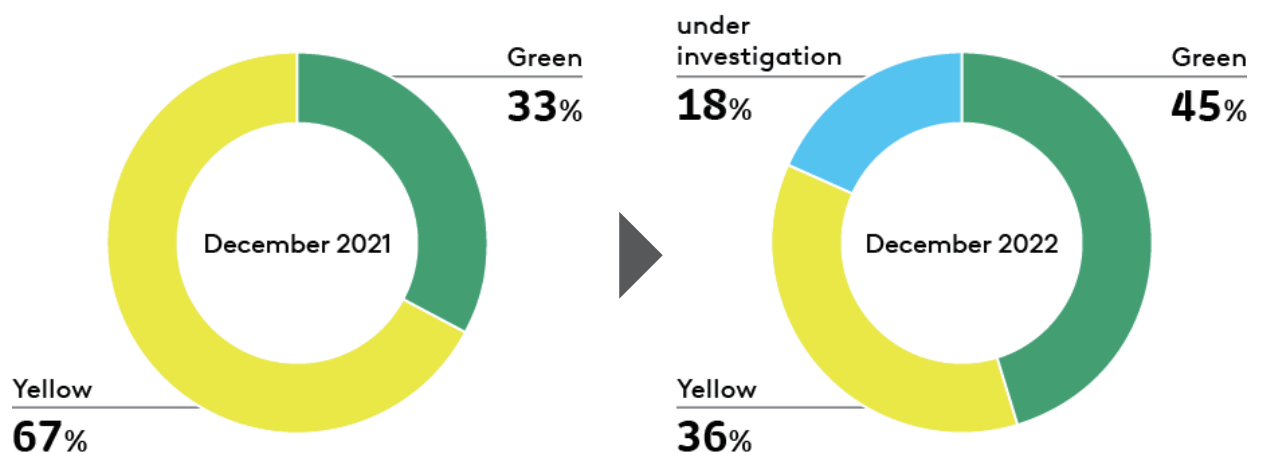
##### <Assessment criteria>

- The ability to collect the required water withdrawal data to demonstrate that water withdrawals are not significantly impacting local river and groundwater levels.
- Required water withdrawal data is being collected.

Required water withdrawal data is not collected	→	<b>Red</b>
Part of the required water withdrawal data is collected	→	<b>Yellow</b>
All required water withdrawal data is collected, and water withdrawal is appropriately managed	→	<b>Green</b>

##### <Assessment Results>

The following is water withdrawal management level of each plant represented as a pie chart. As a result of corrective actions taken at plants with assessed as having insufficient measures of progress, the percentage of plants whose progress level is Green has changed from 33% (December 2021) to 45% (December 2022).



## (2)Water Saving Management

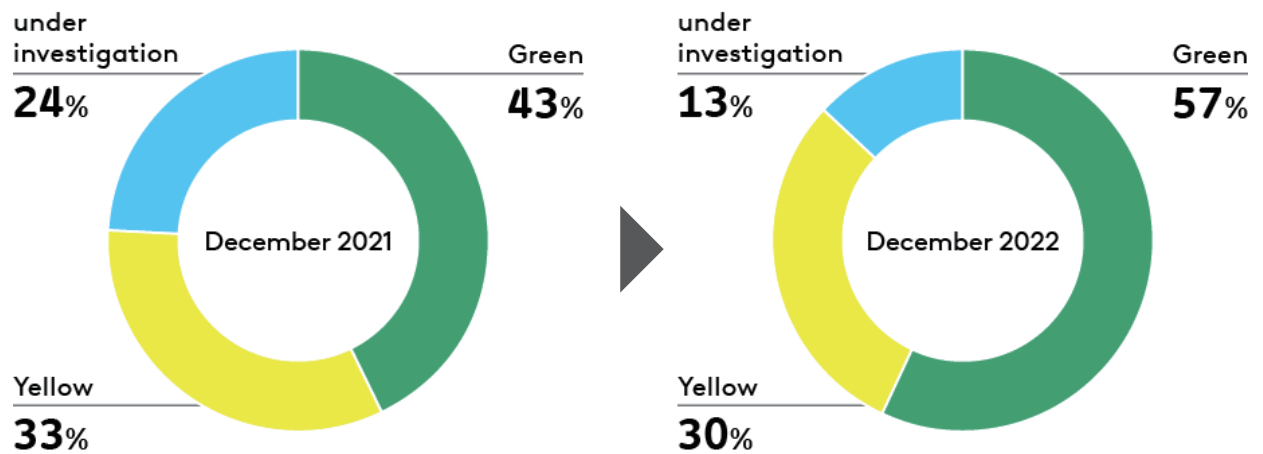
The ability to demonstrate that the progress of water saving activities is adequately managed

### <Assessment standard>

<ul style="list-style-type: none"><li>●Target was established to promote efficient use of water.</li><li>●Conducting activities to achieve the target yearly.</li><li>●Target is achieved yearly.</li></ul>	
No med-term target for water intensity	→ <b>Red</b>
No yearly target for water intensity or not achieved	→ <b>Yellow</b>
The yearly target for water intensity has achieved	→ <b>Green</b>

### <Assessment results>

The following is the water-saving management level of each plant represented as a pie chart. As a result of setting a medium-term target and conducting water-saving measures to achieve the yearly target, the percentage of plants that have the water-saving management level of Green increased from 43% (December 2021) to 57% (December 2022).



We will continue to conduct measures to reduce risks using this process.

**b. Coexistence with the community**

As we are users of water as a shared resource with the community, Suntory recognizes ourselves as a part of the many stakeholders in the watershed; we aim to contribute to the development of the watershed society by conserving the water resource in each watershed to work hand-in-hand with the other stakeholders.

Precisely, following the roadmap for water source conservation efforts in the Environmental Targets toward 2030, we are identifying water-related issues in the watershed where our sites are located with local stakeholders. With the agreement of major stakeholders, we then begin conducting measures to conserve the water source area upstream of the site.

Based on the above points, we have assessed the progress of measures to co-exist with the community at each plant.

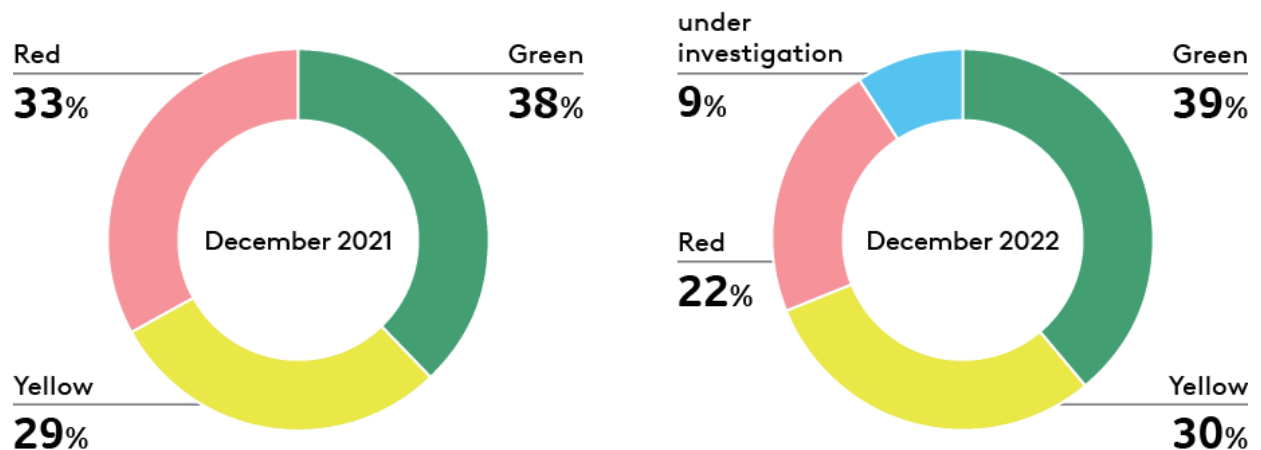
**<Assessment standard>**

- Have identified issues related to ensuring water sustainability in the watershed.
- Have worked with local stakeholders to implement measures that contribute to resolving the issues.

Water-related issues in the watershed are not identified	→ <span style="background-color: #f08080; padding: 2px 5px;">Red</span>
Water-related issues in the watershed are identified	→ <span style="background-color: #ffff00; padding: 2px 5px;">Yellow</span>
Working with the community to resolve water-related issues in the watershed	→ <span style="background-color: #008000; padding: 2px 5px;">Green</span>

**<Assessment results>**

The following is the progress of measures related to coexisting with the local community at each plant, represented as a pie chart. As a result of steady efforts at each plant, 39% of the plants reached the level of Green (December 2022).



In each area, we identify water-related issues and progress water source conservation efforts with experts such as university professors. At the Behror Plant in India, we have implemented activities to recharge the aquifers, which are the water source, by utilizing reservoirs that can collect rainwater based on a local hydrological survey regarding the water balance of the entire watershed where the plant belongs. In addition, at the Toledo Plant in Spain, we collaborate with a local NGO and a university in researching the ecosystem and conducting hydrological surveys to improve the water quality of the Tagus River basin through a project called "Guardians of the Tagus." We are running a more detailed field survey of the upstream of a municipal water reservoir used by the plant, which is identified as the recharge area, to make a plan for conservation activities. Furthermore, at the Bogor Plant in Indonesia, we have identified the recharge area of the groundwater aquifer our plant use based on the hydrological survey of the watershed about river flow rates considering the rainy and dry seasons, water quality, and geological structure in cooperation with a local university in preparation for formulating a plan for groundwater conservation. We will continue to follow the roadmap toward 2030 for water source conservation efforts and steadily conduct those activities.

We will also conduct "Mizuiku" - Education Program for Nature and Water at areas we perform these activities to teach the importance of conserving the water source to the local children who will lead the next generation.

## Feature 1

# Achieving the AWS Certification for Water Stewardship

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

The Suntory Group has achieved the first AWS International Certification in Japan for the Suntory Okudaisen Bunanomori Water Plant (Tottori Prefecture) in 2018, followed by the Kyushu Kumamoto Plant (Kumamoto Prefecture) in 2019, the Minami Alps Hakushu Water Plant (Yamanashi Prefecture) was the third to be certified in 2021, and the Suntory Kyushu Kumamoto Plant has received "Platinum," the highest rating within the Alliance for Water Stewardship (AWS) certification in 2023. This page introduces its significance.

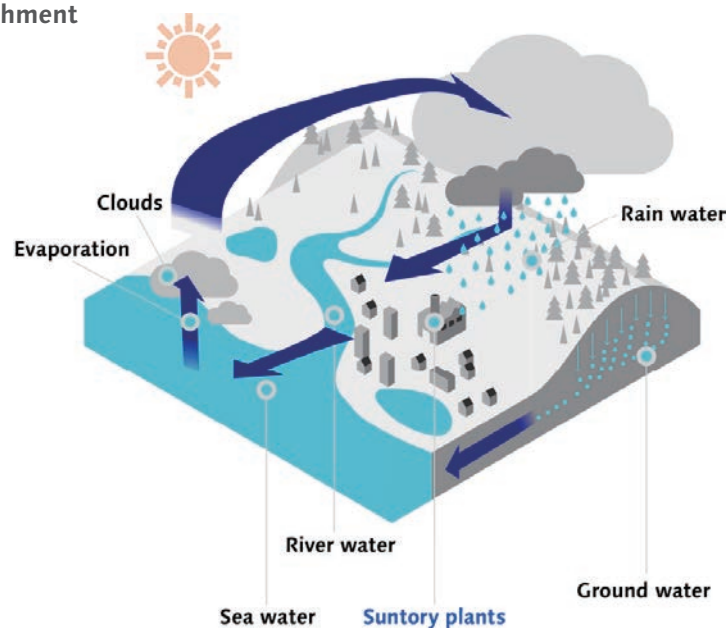


Harumichi Seta  
General Manager, Sustainability Management Division  
Suntory Holdings Limited

### 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. The Suntory Group 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, the Suntory Group established the 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 the Kyushu Kumamoto Plant to conserve the water source, have now expanded the area to 22 locations totaling about 12,000ha in Japan and achieved the target of recharging more than twice the amount of water withdrawn by our plants in Japan. 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 followed by signing between Suntory Holdings and AWS International Secretariat in 2023. 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. In addition, in February 2023, we established the AWS Japan Day Executive Committee with WWF Japan and held Japan's first "AWS Conference - Responsible Management of Water Resources in the Watershed for Businesses," which was attended by numerous Japanese companies, central ministries, local governments, universities, and NGOs. We will continue to lead the networking with stakeholders to promote water stewardship.

# 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

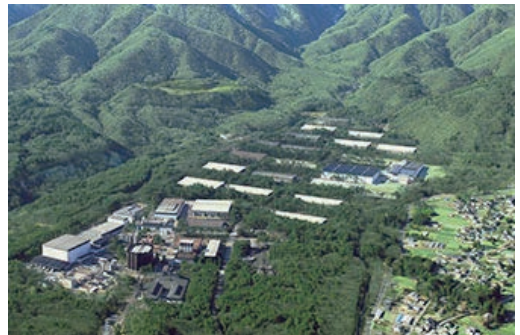
<First in Japan>

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



2023

<First in Japan>

Suntory Kyushu Kumamoto Plant  
Achieved the AWS "Platinum" Certification



We will continue to further engage in AWS activities

## Feature 2

## Natural Water Sanctuary (Water Resource Cultivation/ Preserving Biodiversity)

### Natural Water Sanctuary Initiative — For the future of water and life

Suntory is a "water" company.

Without high 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 withdrawn 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 Tokyo Hinohara" (located in Hinohara Village, Tokyo) in February 2023, there are 22 Suntory Natural Water Sanctuaries in 15 prefectures which comprise a total area of approximately 12,000ha.





## <Natural Water Sanctuary> Development Targets

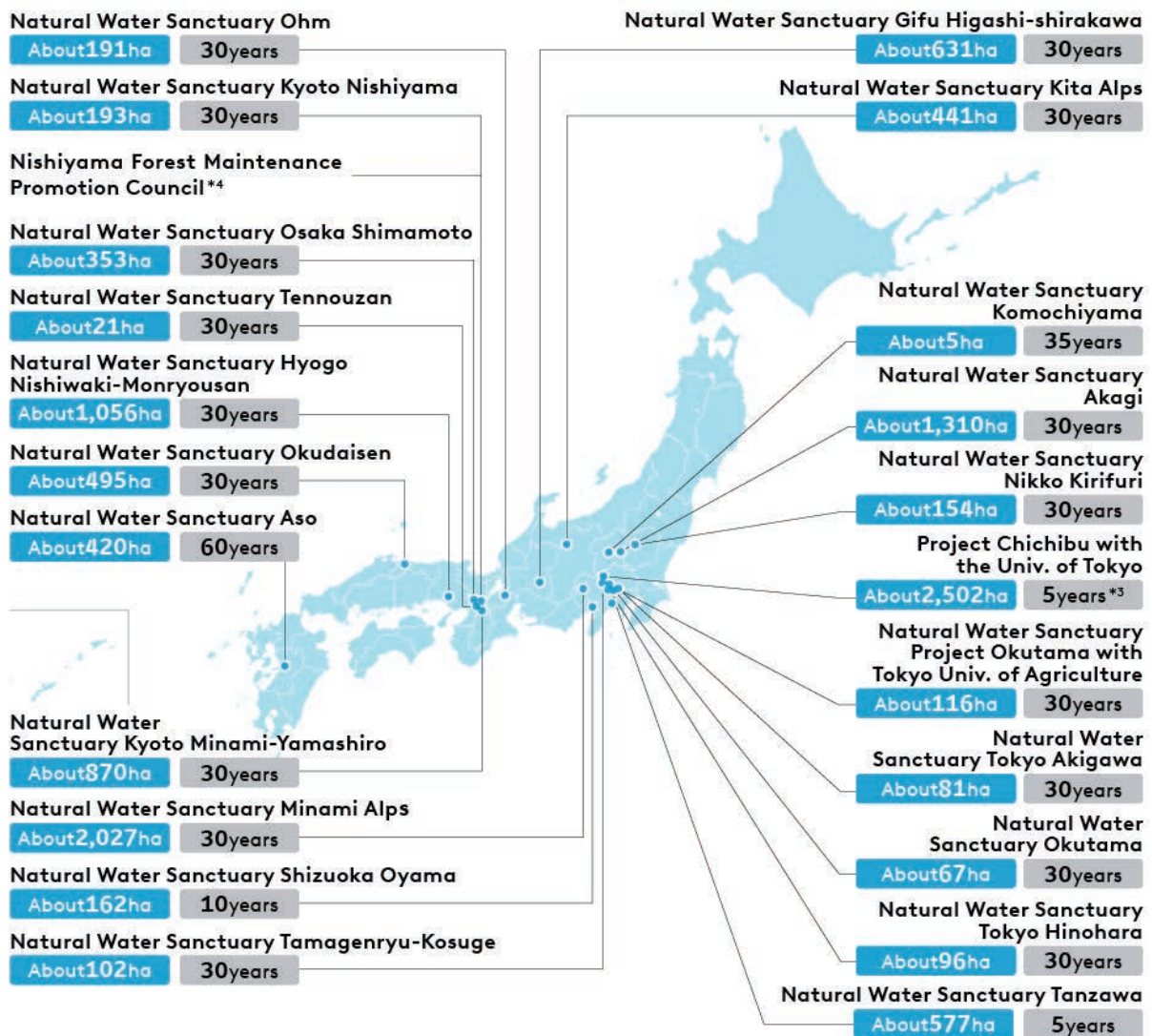
- (1) Forests with a great capacity for cultivating water resources
- (2) Forests rich in biodiversity
- (3) Forests able to withstand flooding and landslides
- (4) Forests with great CO<sub>2</sub> absorption capabilities
- (5) Beautiful forests where visitors can encounter nature in all its abundance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

22 areas nationwide  
As of February 2023

Around **12,000 ha**

Subject area

Length of contract\*1



\*1 When there are 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.



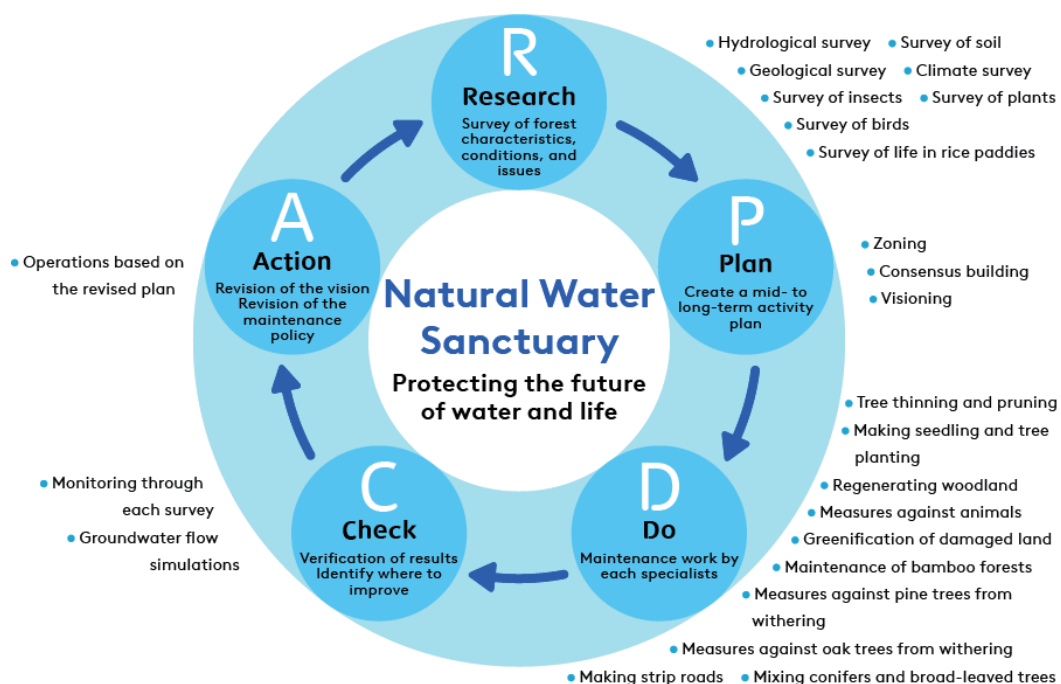
In addition to simulation results, it is also important to combine these results with results based on information gathered in the field during hydrologic surveys, etc. for verification.

## 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 are 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 2022, we published the Suntory Natural Water Sanctuary Biodiversity Restoration Report. This report consists of two sections, a "Facts & Data" section that summarizes various issues facing Japanese forests and an "Actions" section which provides simple explanations and examples of activities taken to address these issues in "Suntory Natural Water Sanctuary."



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



Suntory Natural Water Sanctuary Biodiversity Restoration Report Published

## 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

### Ikurinzaï - 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 "Ikurinzaï - 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

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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 in total from 2011 to 2019.



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

## Training Program for Employees

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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

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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 communicate the 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.

## Wisdom of Water (Suntory) Corporate Sponsored Research Program Organization for Interdisciplinary Research Project The University of Tokyo

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Suntory Holdings Ltd. established the Wisdom of Water (Suntory) Corporate Sponsored Research Program Organization for Interdisciplinary Research Project The University of Tokyo 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

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"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

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The Suntory Group has concluded the "Official Partnership for National Parks" with the Ministry of the Environment in 2016. 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.



## Feature 3

## Suntory *Mizuiku* - Education Program for Nature and Water

The Suntory Group is supported by the bounty of water and nature, and we engage in environmental activities to preserve beautiful water for the future, including Natural Water Sanctuary initiatives to protect forests where water is nurtured.

One of these activities is Suntory *Mizuiku* — Education Program for Nature and Water, a next-generation environmental education program launched in 2004. *Mizuiku* is a program unique to Suntory that helps children experience the wonder of nature, become aware of the importance of water and the forests nurturing it, and consider what they can do to pass on water to future generations.

The program is deployed in Japan and, in collaboration with local NGOs and other organizations, in eight other nations. As of December 31, 2022, the cumulative number of participants exceeded 450,000.

### Suntory *Mizuiku* Expanding in 9 Countries



### Japan

*Mizuiku* education in Japan is centered on two programs: the Outdoor School of Forest and Water, offering shared hands-on nature experiences for parents and children, and the Teaching Program at Schools, a program for elementary schools. Suntory *Mizuiku* — Education Program for Nature and Water received the Ministry of Education, Culture, Sports, Science and Technology's Jury Award for Excellence for Companies Promoting Youth Experiential Activities in fiscal 2022.

\*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 3 through 6 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), Kita Alps (Nagano prefecture), Okudaisen (Tottori prefecture), and Aso (Kumamoto prefecture). We also operate a remote school that enables participants to experience nature from home. The Outdoor School of Forest and Water staff conduct the program together with expert instructors who play active roles locally in environmental education.



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. We also conduct online classes, and elementary schools all over Japan can participate.



Teaching Program at Schools

## Vietnam

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Since March 2015, we have offered a *Mizuiku* program in Vietnam.

In cooperation with international NGOs, we have developed original teaching materials, and since 2017 we have been working with the Young Pioneer Organization (CCYPO) of the Central Committee of the Communist Party of Vietnam. Moreover, since 2022, we have been collaborating with the Ministry of Education and Training to provide classes for elementary school students in grades 3 and 4 on the importance of water, water sanitation, and water source conservation. 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."

In December 2022, Suntory PepsiCo Vietnam Beverage concluded a comprehensive collaboration agreement with the Ministry of Education and Training to deploy *Mizuiku* programs across Vietnam over a three-year period.



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

## Thailand

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We have offered a *Mizuiku* program in Thailand since July 2019.

With cooperation from local NGOs, we are developing water awareness projects in elementary schools in the capital of Bangkok, as well as in Rayong and Saraburi provinces. We are also engaged in erosion prevention projects in the northern province of Chiang Mai and the southern province of Nakhon Nayok. By slowing stream currents, installing small weirs to support permeation of underground water, and planting trees to prevent soil from flowing into streams, we can prevent sediment-related erosion, and we plan to continue these efforts.



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

## Indonesia

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We have also offered a *Mizuiku* program in Indonesia since July 2019.

In collaboration with local environmental education associations, we implemented programs in Gowa, South Sulawesi; Banjarbaru, South Kalimantan; Sidoarjo, East Java; Tangerang, Banten; the capital of Jakarta; Bogor, West Java; and Pati, Central Java. The classes teach children about the importance of water, the healthy water cycle, and the importance of preserving water resources, and have contributed to raising their environmental awareness.

In collaboration with the Ministry of Environment and Forestry and the Ministry of Education, Culture, Research, and Technology, PT Suntory Garuda Beverage has also prepared a *Mizuiku* Teacher's Guide that can be used by more teachers, and we will continue to expand water education into the future.



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

## France

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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.

In 2017, Suntory Beverage & Food France initiated a 20-year water-conservancy partnership with Grand Parc Miribel Jonage. Together with the local community, we are promoting conservation activities in forests extending into the park, including protecting and nurturing the water and natural environment in areas near factories. We are also conducting *Mizuiku* educational activities in line with this partnership.



Workshop-based water education program in France

## China

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Since September 2021, with the cooperation of the Shanghai Volunteer Foundation, a local public interest group, we have been conducting a *Mizuiku* program for grade 3 and 4 elementary school students in Shanghai. 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

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Since May 2022, we have been conducting a *Mizuiku* program in Spain. With support from local environmental experts, we are offering an educational program for elementary 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 children the importance of water, such as by deepening their understanding of 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 provides training and ideas on how to preserve and improve the quality and quantity of water in the future.



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



## United Kingdom

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In May 2023, we launched a *Mizuiku* program in the United Kingdom. In collaboration with a charitable organization that conserves the environment of local rivers, we are developing a nature experience program for children up to elementary school age and their families in the Severn River basin, the water source for the Coleford Factory. The program teaches students about the importance of water and water conservation, including basic knowledge about water and the water cycle, and the relationship between water and biodiversity.



Suntory *Mizuiku* - Education Program for Nature and Water in the United Kingdom

## New Zealand

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In May 2023, we launched a *Mizuiku* program in New Zealand. In collaboration with an NPO that works to preserve local river environments, we are developing on-site classes for elementary school students. The program conveys to students the mechanisms of nature and the importance of water, and covers basic water knowledge, including the water cycle, as well as ocean pollution prevention, including upstream river cleanup.



Suntory *Mizuiku* - Education Program for Nature and Water in New Zealand

# Climate Action

## Policies and Our Approach

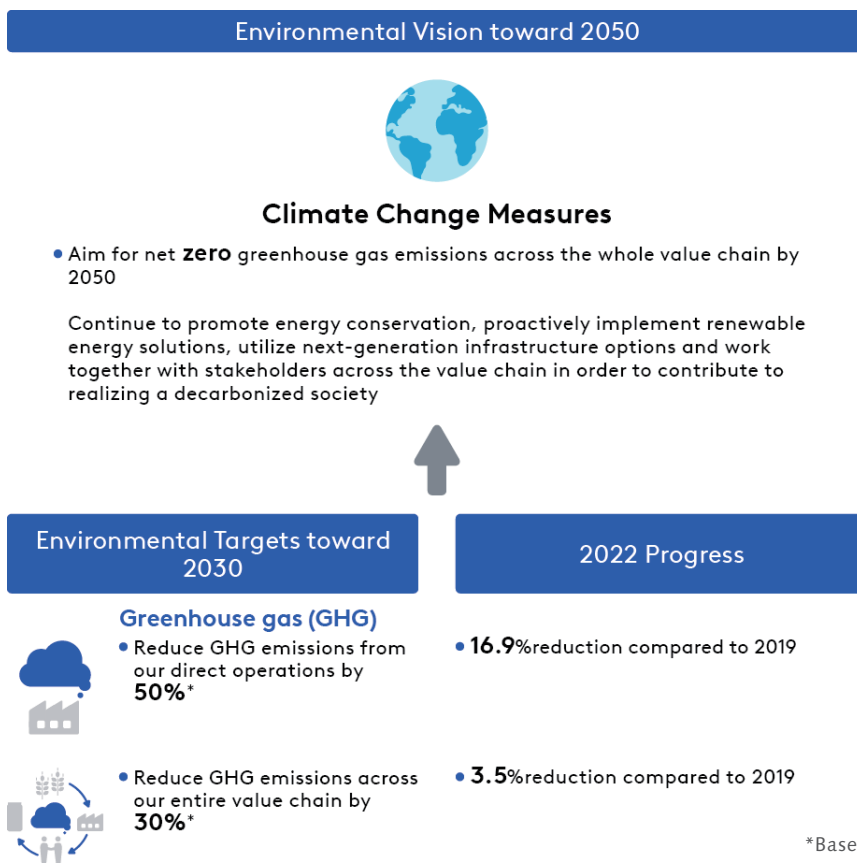
An ongoing stable supply of products will be difficult if the effects of global warming more drastically change the climate patterns as well as greatly impact water resources, which are crucial for beverage manufacturers. The Suntory Group recognizes global warming as one of the major challenges in business 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. In May 2019, the Suntory Group expressed its support for the Task Force on Climate-related Financial Disclosures (TCFD) recommendations established by the Financial Stability Board (FSB).

## Promoting Structure

### Global Sustainability Committee

To promote sustainability management, the Global Sustainability Committee (GSC) acts as an advisory committee to the Board of Directors. The Group's sustainability strategies and the progress on priority themes (water, climate change, containers and packaging, raw ingredients, health, human rights and enriching life) are discussed in the GSC under the lead of the Chief Sustainability Officer

## Targets and Progress



# Our Initiatives

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## Internal carbon price

The Suntory Group introduced internal carbon pricing to from 2021 and plan to invest a total of approximately 100 billion yen by 2030 to promote decarbonization. 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.

## Initiatives in Production and R&D

### Use of Renewable Energy

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The Suntory Group uses 100% renewable energy for electric power purchased at all of its alcohol and non-alcohol manufacturing sites and R&D facilities in Japan, the Americas, and Europe. This policy contributes to an annual reduction of approximately 230,000 tons\* of GHG emissions.

In addition to procured power, we are installing solar panels and introducing biomass boilers as required to generate renewable energy on site.

\*Based on power procured, 2021



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)



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

## Installing Japan's largest 16-megawatt P2G (Power to Gas) system for in-house green hydrogen production

On September 5, 2022, Suntory Holdings Ltd. signed a basic agreement with Yamanashi Prefecture for realizing an environmentally harmonious and sustainable society. Suntory will collaborate with Yamanashi Prefecture on decarbonizing Suntory Hakushu Distillery and Suntory MInami Alps Hakushu Water Plant by installing the Yamanashi Model Power to Gas (P2G) System\* at the company's Hakushu facilities by 2025. This will constitute Japan's largest green hydrogen production system, and does not emit any greenhouse gas (GHG). The green hydrogen produced will not only be used as fuel for heat energy at the company's Hakushu facilities, but are also planned to be utilized in the surrounding communities.



Governor Kotaro Nagasaki (Yamanashi Prefecture) and then-Managing Executive Officer Makiko Ono (Suntory Holdings) (2022)

## Promoting Energy Conservation

At Suntory Spirits Ltd. Gunma Brewery, expansion of beer production capacity has boosted energy efficiency by about 20%. The Tequila Sauza Plant in Mexico has been selected for the Financing Programme for JCM Model Projects in 2016 that contributes to reducing GHG emissions for its initiatives to improve heat recovery rate and the installment of once-through boilers.

In addition, a wide range of energy conservation initiatives are underway at locations such as the Suntory World Research Center, which utilizes natural energy actively and has introduced equipment to reduce its environmental impact, and Iwanohara Vineyard, which takes advantage of its location in an area with heavy snowfall to control wine fermentation and storage temperatures by using a "snow room" that stores winter snow throughout the year.



Suntory Spirits Ltd. Gunma Brewery



Newly installed boiler at the Beam Suntory Sauza Plant in Mexico



Suntory World Research Center



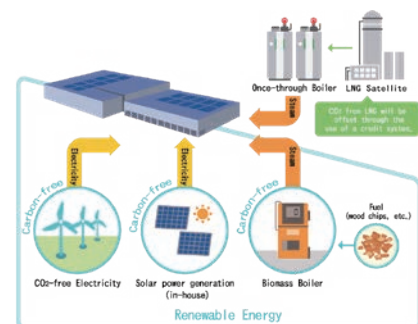
Snow room at Okudaisen Bunanomori Water Plant of Suntory Products Ltd.

## Suntory Group's first net-zero CO<sub>2</sub> Emissions plant in Japan

The Kita Alps Shinano-no-Mori Water Plant (Omachi City, Nagano Prefecture) which started operation in May 2021 as a fourth water source for Suntory Tennensui Mineral Water, became the Suntory Group's first net-zero CO<sub>2</sub> 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.

In June 2023, the Kita Alps Shinano-no-Mori Water Plant has been proved to be a carbon-neutral facility after receiving a PAS2060\*1 verification from the British Standards Institution (BSI). This is the first verification received by a food & beverage factory in Japan.

\*1 Abbreviation for Publicly Available Specification 2060, an international standard issued by BSI to quantify, reduce, and carbon offset greenhouse gas (GHG) emissions from products/services/activities, thereby declaring them neutral (i.e., emissions of GHGs are effectively zero).



## Initiatives in Logistics

The Suntory Group is working to reduce the environmental impact of its logistics operations, including transport and delivery operations and warehouse operations.

We are working to shorten transport and delivery distances traveled from plants to customers by promoting local production for local consumption, maximizing utilization of large vehicle load capacity, and switching to next-generation fuels and transport modes with lower GHG emission levels.

In warehouse operations, we are working to shorten operating hours and reduce power consumption.

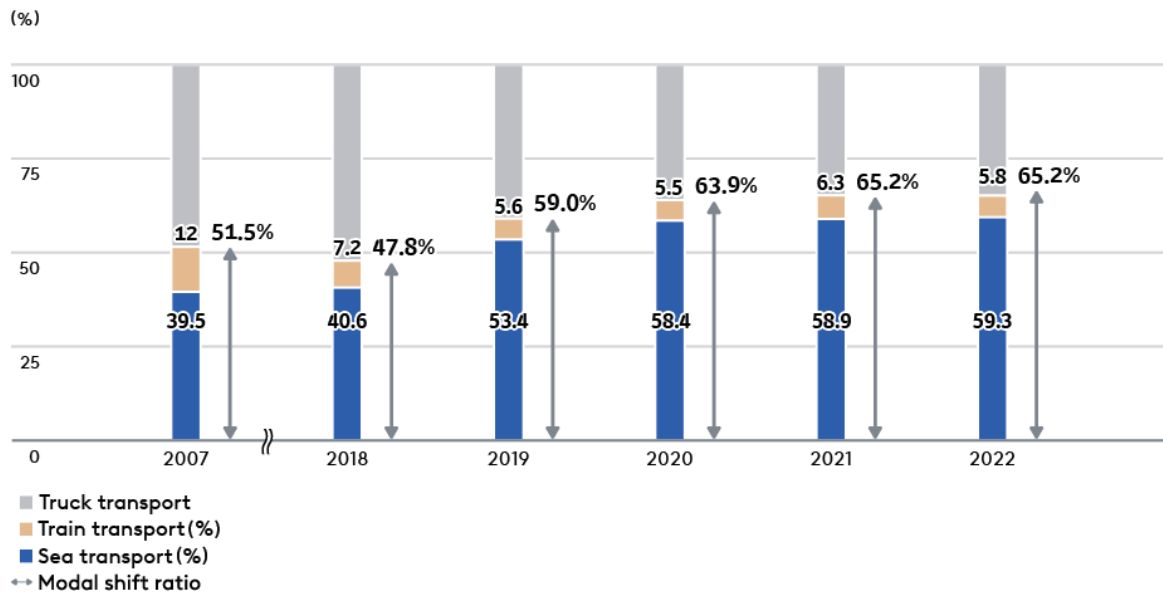
During 2022, sales (KL) expanded by 7% over the previous year. GHG emissions rose 9% to 150,000 CO<sub>2</sub>-tons\* while the basic unit was 22.7 CO<sub>2</sub>-ton/thousand KL sold.

\*Due to a supply/demand mismatch caused by extremely high summer temperatures, transportation distances and frequency of travel increased.

### Reducing GHG Emissions with a Modal Transport Shift

#### Enhancing the modal shift rate

We are promoting a modal shift to rail and ocean transport, which emits less GHG than trucks. The 2022 modal shift rate rose over the previous year.



#### Enhancing usage of fuels with less GHG emissions

To encourage our transportation partners to use next-generation fuels that emit less GHGs than conventional fuels, we identified issues for expanded use in the future and are engaged in discussions for solving those issues. In 2022, a total of four companies used renewable fuels.

### Collaborative Efforts with Logistics Affiliates

201 of our logistics affiliates (as of 2021) 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 logistics affiliates.

## Collaborative Efforts with Other Companies

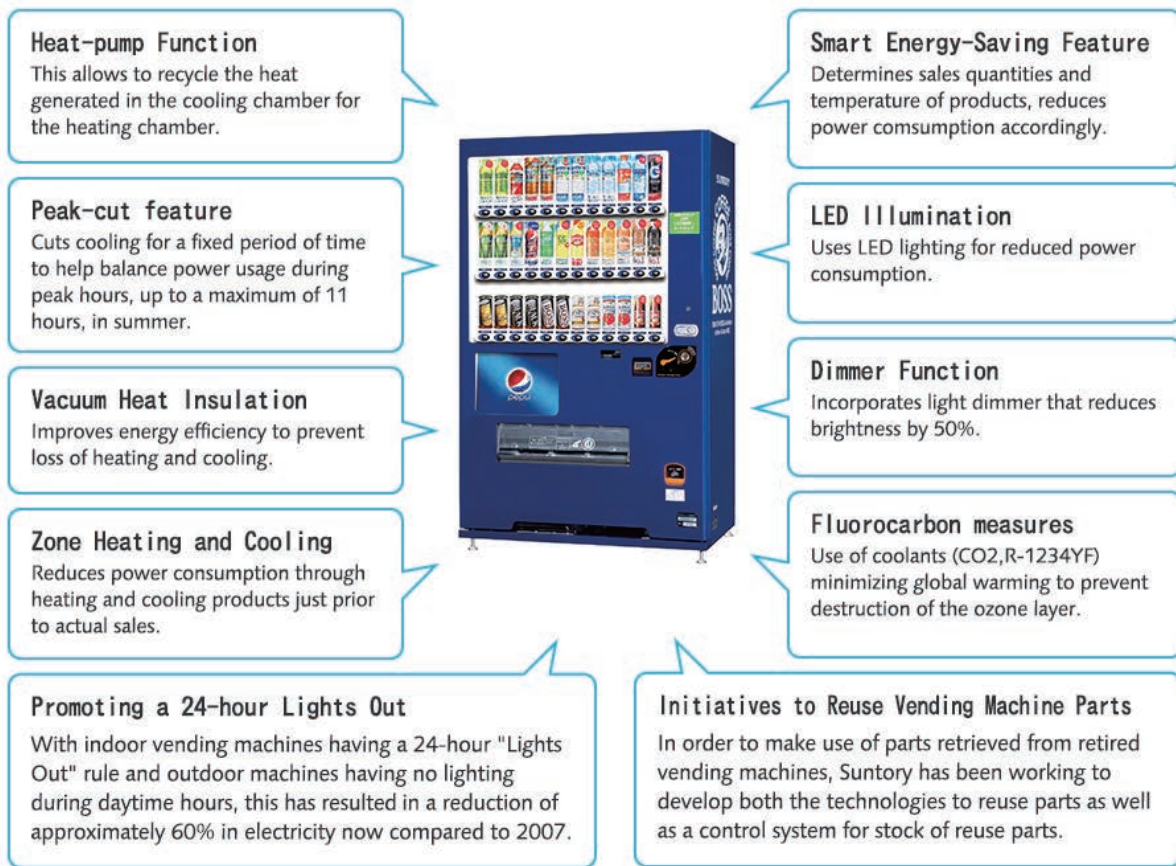
We are partnering with other companies for reducing environmental impact in logistics through joint distribution and joint use of containers.

Coordination	Description	Starting from	Results
Kirin Group	Joint distribution of soft-drink beverages within Chiba prefecture	July 2009	Reduced GHG emissions approx. 46 tons/year
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
Toshiba Lighting & Technology Corporation	Joint use of railway containers	January 2011	Reduced GHG emissions approx. 140 tons/year
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)
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)
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)
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)
Daio Logistics Co., Ltd.	Joint Kanto-Kansai transport	August 2022	Approximate annual GHG reduction of 115 tons (*Two-company total)
Daio Logistics Co., Ltd.	Parties share one-way rail containers	August 2022	Approximate annual GHG reduction of 100 tons

## Energy Conservation in Vending Machines

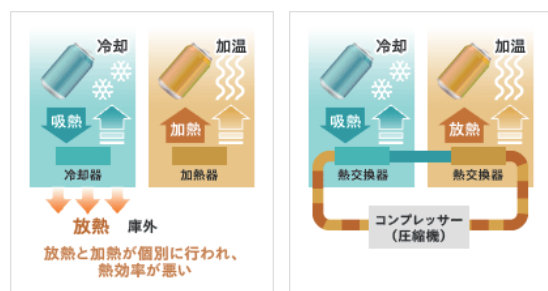
We are implementing various initiatives to save energy in vending machines in Japan as one of priority initiatives to reduce GHG in the entire value chain.

### Key Features of Suntory Vending Machines



### 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.



Vending machines prior to heat-pump type

Heat-pump vending machine

### 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.

## Initiatives in Offices and Other Facilities

### Actions in the Offices

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Our major offices purchase 100% renewable electricity. In addition, 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 greenhouse gas(GHG) emission are being promoted in each office by implementing cool biz and warm biz and actively using web conference system.

### Suntory Hall and Suntory Museum of Art Purchase 100% Renewable Electricity

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From April 2022, the Suntory Group purchases 100% renewable electricity for all 30 directly owned manufacturing sites and R&D facilities in Japan. Suntory Hall and Suntory Museum of Art have also switched to purchasing 100% of their electricity from renewable energy sources. Through these efforts, the two facilities have been able to reduce CO<sub>2</sub> emissions by approximately 800 tons per year compared to the past.



### Reducing Environmental Impact of Sales Vehicles and Vehicle Accidents

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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 driving distance, 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.

## Initiatives in Raw Ingredients

The Suntory Group is working to mitigate the impact of climate change on its business with respect to raw ingredients, including green tea and blackcurrant.

### Green Tea

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To promote sustainable tea leaf procurement, the raw material for green tea beverages, the Suntory Group has launched a long-term initiative in collaboration with tea farming areas. By working with the Kuma Regional Agricultural Cooperative (JA Kuma) to introduce environmentally friendly tea farming processes, we have reduced GHG emissions by over 30%\* compared to conventional processes.



In conjunction with the pursuit of high-quality tea production, we hope to go on contributing to stable succession and training of successors in tea farming regions.

\*GHG emitted per weight unit during the production of green tea material, from raw leaves to rough tea

### Blackcurrant

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Suntory Beverage & Food Great Britain and Ireland has been conducting research on new, climate change-resistant species of blackcurrant. In July 2020, after years of research in collaboration with the James Hutton Institute, an agricultural research facility, we harvested a new climate change-resistant species, named Ben Lawers.





## Wine Grapes

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In collaboration with University of Yamanashi, Suntory Tominooka Winery has introduced a new, secondary-shoot cultivation technique for wine grapes. The daily temperature range normally begins to expand as nighttime temperatures start to drop around mid-July, causing the sugar content of grapes to increase as they ripen. However, climate warming has recently slowed the ripening process. In secondary-shoot cultivation, the tips of shoots that sprout in April are trimmed, and the resulting side shoots are nurtured. This shifts the start of ripening from mid-July to early September, when temperatures start to drop, and grapes are harvested in mid-November.

In other vineyard initiatives, we are promoting formation of soil rich in biodiversity by minimizing the use of pesticides and fertilizer. This boosts the population of microorganisms and beneficial insects in the soil and decreases the population of pests. We also store carbon by carbonizing pruned branches and mixing them into the soil.



# Disclosure Based on TCFD

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



In May 2019, the Suntory Group has declared its support for the Task Force on Climate-related Financial Disclosures (TCFD) recommendations established by the Financial Stability Board (FSB).

In July 2019, we also established seven important sustainability themes for the group including the reduction of greenhouse gas (GHG) emissions as one of the key themes.

In 2022, risks and opportunities related to climate change that effect the society and corporations were assessed and identified to calculate the monetary impact on business. We aim to improve resilience by incorporating specific measures for actualized risks and opportunities in the strategy. We will continue to expand disclosure of related information.

## 1. Governance

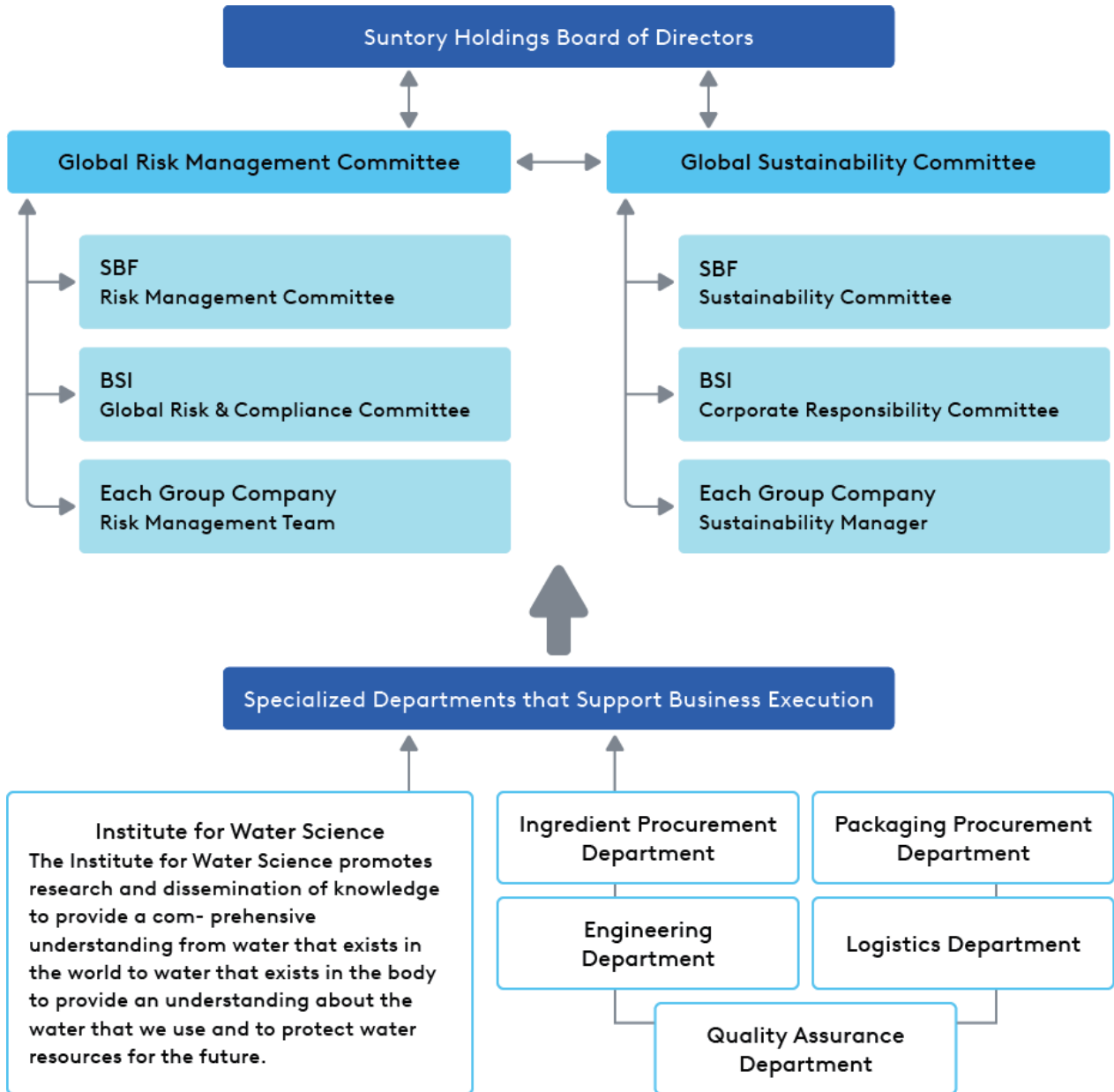
In April 2015, we established The Global Risk Management Committee (GRMC) to strengthen risk management throughout the entire Group. We have established a risk management committee and risk management team based on this GRMC (e.g. installation of a Risk Management Committee at Suntory Beverage & Foods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

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 relating to climate change. 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 climate change, 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.

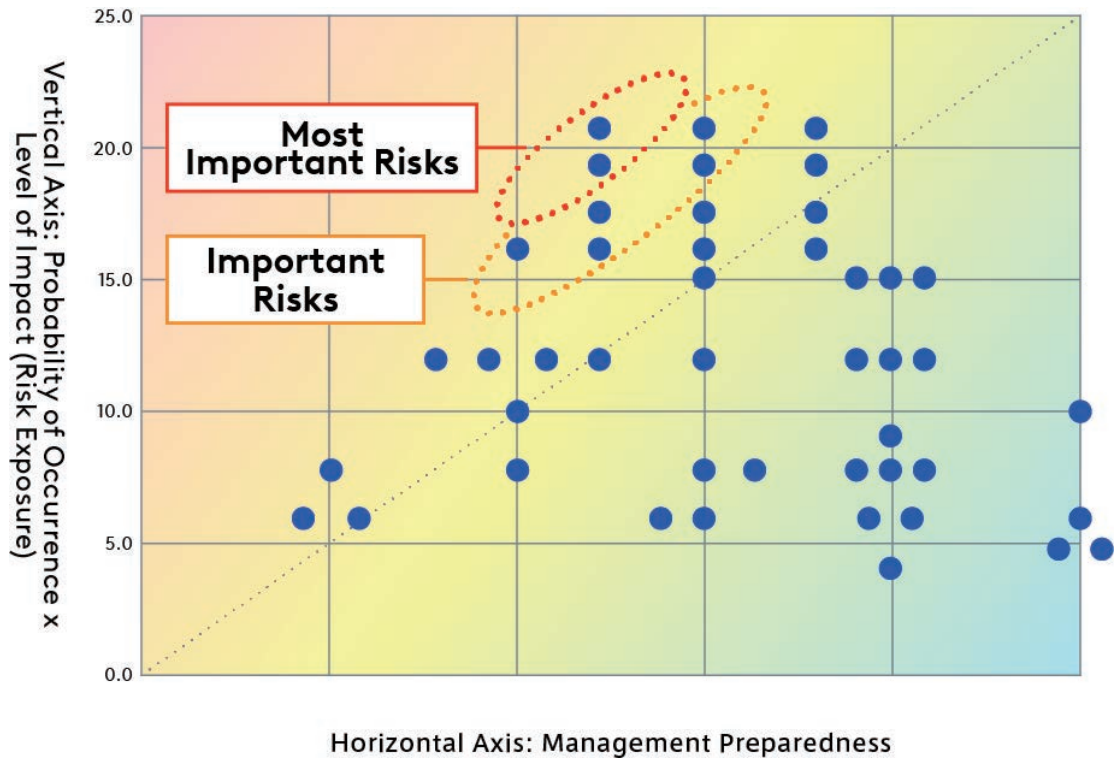
Climate related KPIs are set in the management strategy meeting. CEO is responsible for climate related issues and CSO is responsible for assessment of climate related risks and opportunities as well as their management Sustainability is included as target used for business performance which determine officer remunerations.

Organizational Chart



## 2. Strategy

The Suntory Group assesses climate change related issue based on their importance. For risks that are expected to have a large impact on business, we have set medium- to long-term targets and are proceeding with initiatives. As the approach to identifying risks and their assessment, we create a heat map of the identified risks based on the two axes of "Risk Exposure" and "Degree of Response," evaluate their 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.



With consumers, investors, and other stakeholders increasing interest in GHG emissions by corporations, we recognize that risks and opportunities related to climate change may greatly affect our business strategy. We conduct scenario analysis to understand and take measures against risks and opportunities related to climate change that may impact business and consider them during financial planning.

## Risks and Opportunities (Identify risks and opportunities, estimate the amount of monetary impact)

To identify important financial risks and opportunities for an organization, impact and frequency of each item in the span of short (0 to 3 years), medium (3 to 10 years), and long (10 to 30 years) term were considered. Result of the internal assessment is organized and shown below. Of the identified risks and opportunities, we recognized that increase in costs due to introduction of carbon tax, opportunity loss due to insufficient supply of water at production sites, and increase in raw material costs due to decrease in yield of agricultural products are the three items that may have a significantly impact and estimated the amount of their monetary impact on business. For the basis of analyzing risks and opportunities, we used RCP 8.5 as global warming scenario and IEA NZE 2050 and other scenarios as decarbonization scenario.

1. Identify major risks and opportunities		2. Assess the impact of each risks and opportunities on business (For most important risk, estimate the amount of monetary impact)		3. Determine/conduct response measures
Types of Risks and Opportunities		Estimated impact on business		Measures to reduce risks/seize opportunities
Transition Risk	New regulation	Increase in production costs due to introduction of carbon pricing	<ul style="list-style-type: none"> <li>Increase in financial burden due to introduction of carbon tax and its tax rate increase</li> <li>Estimated impact on business: JPY 17.0 billion in 2030 and JPY 33.5 billion in 2050 <sup>(Note 1)</sup></li> </ul>	<ul style="list-style-type: none"> <li>Introduction of internal carbon pricing and use it for decision making related to investment</li> <li>Plan to invest an approximately JPY 100 billion (shift to renewable energy, utilization of heat pumps, etc.) by 2030 to promote decarbonization.</li> <li>If the targets set in "Environmental Targets toward 2030" and "Environmental Vision toward 2050" are met, effects of reduction will be JPY 8.5 billion in 2030 and JPY 33.5 billion in 2050.</li> </ul>
	Physical risks	Chronic risks	Impact of insufficient supply of water on operation of production sites	<ul style="list-style-type: none"> <li>Opportunity loss due to suspension of plant operations caused by insufficient supply of water, Group's most important raw material</li> <li>Estimated impact on business: JPY 26.5 billion <sup>(Note 2)</sup></li> </ul>
Increase in procurement costs due to decline in yield of agricultural products			<ul style="list-style-type: none"> <li>Increase in costs to procure raw materials with same level of quality as now</li> <li>Estimated impact on business: JPY 11.0 billion (RCP 8.5 scenario, 2050) (For details, refer to "Activities for stable procurement of raw materials")</li> </ul>	<ul style="list-style-type: none"> <li>Assess the impact of estimated future yield considering climate change and other factors by origin of raw materials and formulate strategy for stable procurement</li> <li>Start trial of sustainable farming (For details, refer to "Activities for stable procurement of raw materials")</li> </ul>
Acute risks		Flood, etc. caused by large typhoon or heavy rain	<ul style="list-style-type: none"> <li>Suspension of operations due to flooding, disruption of value chain, and other damages from a flood</li> </ul>	<ul style="list-style-type: none"> <li>Build a system or assessing risk of all productions sites at the Global Risk Management Committee</li> </ul>

Note 1: Estimated using our Scope 1 and 2 emissions in 2019 and carbon tax price independently estimated based on forecast figures of the International Energy Agency (IEA)'s "Net Zero by 2050: A Roadmap for the Global Energy Sector (NZE)."

● 2030: Japan, Europe, and Americas. US\$130/ton, APAC US\$90/ton.

● 2050: Japan, Europe, and Americas. US\$250/ton, APAC US\$200/ton.

Note 2: Estimated impact on profit if all plants located in areas with high level of water stress have restriction on water withdrawal. Aqueduct Country Ranking developed by World Resources Institute and Water Risk Filter developed by World Wide Fund for Nature (WWF) are used for assessing water stress level of areas where our plants are located in.

(Exchange rate as US\$1 = JPY139)

1. Identify major risks and opportunities		2. Assess the impact of each risks and opportunities on business (For most important risk, estimate the amount of monetary impact)	3. Determine/conduct response measures	
Types of Risks and Opportunities		Estimated impact on business	Measures to reduce risks/seize opportunities	
Opportunities	Products/ Services	Impact on health due to rising temperatures	<ul style="list-style-type: none"> <li>· Rising average temperatures and heat waves will increase the need for anti-heat stroke beverages and water beverages</li> </ul>	<ul style="list-style-type: none"> <li>· Invested in capital to increase production capability and stable supply system</li> <li>· Products development that meet consumer needs</li> </ul>
		Change in consumer behavior due to increased environmental awareness	<ul style="list-style-type: none"> <li>· Enhancement of brand value through public recognition of the company's commitment to the conservation of water resources</li> </ul>	<ul style="list-style-type: none"> <li>· Continue and strengthen water cultivation activities based on scientific data, water-saving and water quality management activities at plants, and "Mizuiku" - Natural Water Education Program as well as sharing information with the public</li> </ul>
	Resource efficiency	Cost reduction due to introduction of new technology	<ul style="list-style-type: none"> <li>· Reduction in use of petroleum resources and CO2 emissions due to development of new technology</li> <li>· Cost reduction in taxes related to one way plastics</li> </ul>	<ul style="list-style-type: none"> <li>· Development of new technology for more efficient PET preform manufacturing process (F-to-P direct recycling technology, etc.)</li> <li>· Development of efficient used plastic recycling technology (R Plus Japan Ltd.)</li> </ul>

We aim to resilient by considering both scenarios and taking strategic approach toward the above actualized risks and opportunities. We have been focusing on identifying water supply risks, proper management of water, water resource cultivation activities, and other water sustainability activities but are considering risks related to raw material procurement and other aspects. In addition, in order to reduce GHG emissions throughout the value chain, from raw material procurement to manufacturing, distribution, sales, and recycling, we set challenges for each department and take action. For opportunities, we are expanding product portfolio of beverages with ingredients which are recommended by the Ministry of Environment of Japan as products addressing climate change. We believe that continuing and enhancing water resource cultivation activities, "Mizuiku" - Natural Water Education Program and other activities related to water as well as sharing information about Suntory Group's approach to water to the public will raise are brand value and lead to increased sales. In terms of resource efficiency, we are actively promoting recycle of plastic bottles.

## Water Risk Assessment

Water is the most important ingredient of our products, as well as a precious shared resource, it is imperative for the Suntory Group to understand the impact that water risk has on our business, local communities, and the ecosystem based on water risk assessment for sustained business growth.

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

\*Owned plants that manufacture finished products and exclude plants for packaging and ingredients: 23 plants in Japan, 56 plants overseas

\*For more details, see page31 "Water Risk Assessment".

## Stable Procurement of Raw ingredients

With regard to agricultural products and other raw ingredients, 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 their production activities, including fluctuations in yield and the need to move production to other areas which offer suitable cultivation. As corporate activities become more and more globalized, need to appropriately manage human rights of people who work in the supply chain and other social issues increase.

To offer our consumers high-quality products and services, 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, we established and promote long-term strategy for safe, reliable, and sustainable supply of raw materials.

\*For more details, see page106 "Sustainable Procurement".

### 3. Risk Management

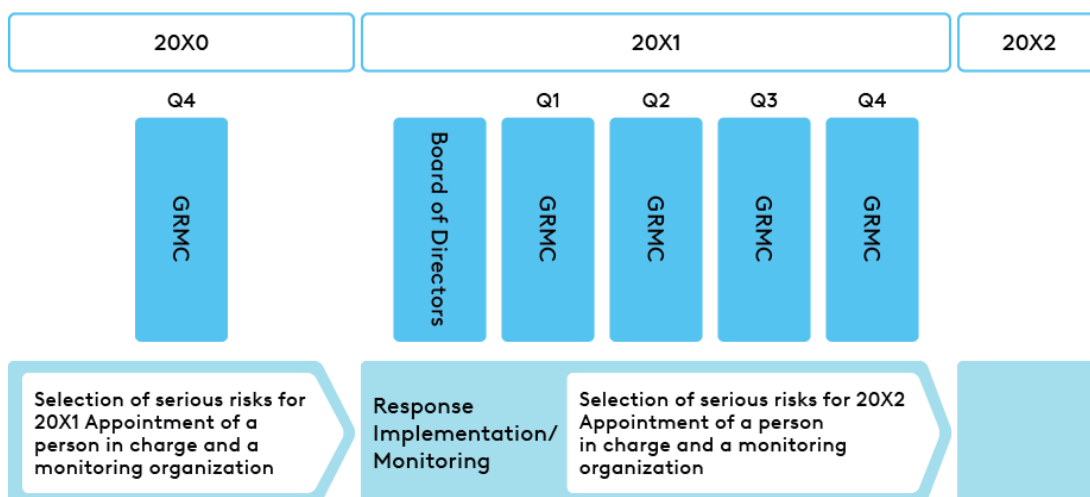
We define risk as current and future uncertainties that may affect the execution of business strategy and the achievement of business objectives. Through the Global Risk Management Committee (GRMC) and the risk management committees and risk management teams established at each group company, we identify and evaluate climate change and other 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



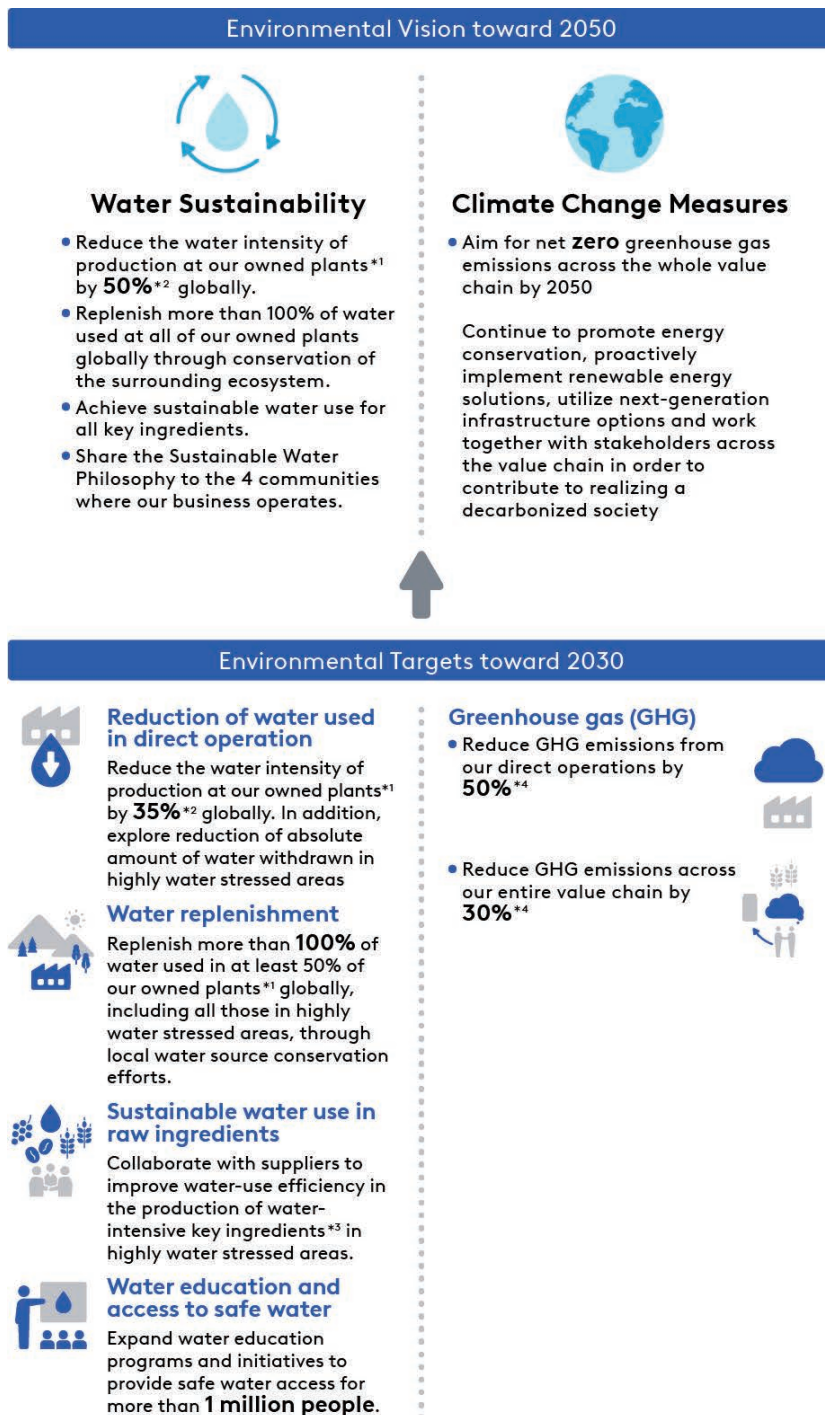
#### Approach to Managing Identified Risks

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.



\*1 Suntory Group plants that manufactures finished products

\*2 Reduction per unit production based on the business fields in 2015

\*3 Coffee, barley, grapes

\*4 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 22 Suntory Natural Water Sanctuaries in 15 prefectures which cover a total area of approximately 12,000ha 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, 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 have switched purchased electricity to 100% renewable in all our 63 manufacturing sites and R&D facilities in Japan, the Americas and Europe by 2022. In addition, we introduced internal carbon pricing to from 2021 and plan to invest a total of approximately 100 billion yen by 2030 to promote decarbonization. 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. For GHG related measures, we are reducing Scope 3 emissions through strengthening recycling of plastic bottles as well as starting project on regenerative agriculture. We have also approached raw ingredient suppliers to kick start collaborations.

### 2022 Progress



#### Water Sustainability

##### Reduction of water used in direct operation

- Reduced the water intensity of production by **28.0%** compared to 2015.

##### Water replenishment

- Water resource cultivation activities implemented in **34%** of all owned plants globally.

##### Sustainable water use in raw ingredients

- As an initiative on barley production through regenerative agriculture, we began working with our malt suppliers to verify the improvement of water use efficiency by improving soil water retention.
- Started building a pilot program to assess and support water use through regenerative agriculture for coffee farmers in the Cerrado region of Brazil.

##### Water education and access to safe water

- Total **810,000** people  
Water education program: **510,000** people  
Provision of safe water: **300,000** people



#### Climate Change Measures

##### Greenhouse gas (GHG)

- **16.9%** reduction compared to 2019
- **3.5%** reduction compared to 2019

# Packaging & Resource Efficiency

## Policies and Our Approach

To build a recycling-oriented society, the 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.

Containers and packaging protect and preserve the quality of products until they reach customers. However, most end up becoming post-consumer waste.

The 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.

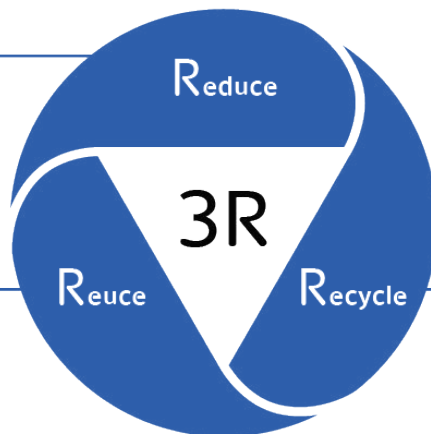
### 3Rs of Containers and Packaging

#### Reduce the Amount Used

We are coming up with ways to reduce the amount of materials used in containers, by, for example, making them lighter, to better value our resources.

#### Use Over Again

We are reusing containers such as beer bottles and casks, as well as on-premise non-alcoholic beverage bottles.



#### Use as a Resource

We are actively using recycled materials. We are also incorporating processes and designs to make it easier to recycle.

## Promoting Structure

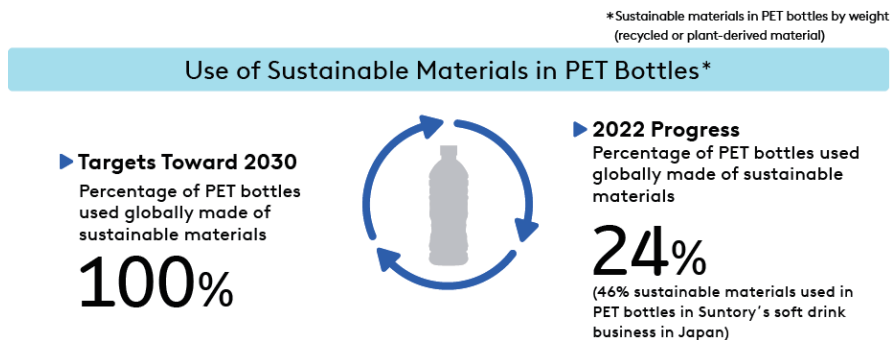
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### Global Sustainability Committee

To promote sustainability management, the Global Sustainability Committee (GSC) acts as an advisory committee to the Board of Directors. The Group's sustainability strategies and the progress on priority themes (water, GHG, containers and packaging, raw ingredients, health, human rights and enriching life) are discussed in the GSC under the lead of the Chief Sustainability Officer.

## Targets and Progress

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## Our Initiatives

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### Initiatives for Plastic

Plastic products have enriched our lives through their usefulness. On the other hand, the environmental impact caused by improper handling of used plastics has become a social problem. In Japan, the Ministry of the Environment has formulated the "Plastic Resource Recycling Strategy" as a strategy to comprehensively promote resource recycling while recognizing the convenience of plastic products.

The Suntory Group also formulated the Plastic Policy in 2019 in order to strongly lead the transformation to a recycling-oriented and decarbonized society. Based on this policy, we aim to achieve 100% sustainable bottle by using only recycled or plant-derived materials for all our PET bottles used globally by 2030 and eliminating the use of virgin petroleum-based materials.

## 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-derived 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:

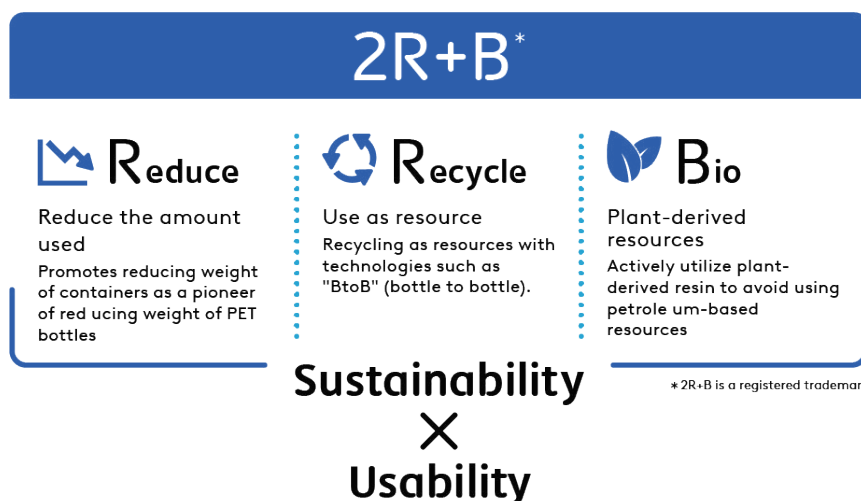
Actively invest in innovation for materials and processes that improve the recycling rate and minimize environmental impact.

### 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.

## 2R+B Strategy

In regards to PET bottle containers, we are taking action based on the 2R+B (Reduce/Recycle + Bio) strategy, which is unique to Suntory. The concept is to replace fossil-fuel-derived materials with renewable materials to the extent possible, while reducing the use of resin and using recycled materials in development to achieve thorough and effective use of resources.



## Reduce: Lightweighting

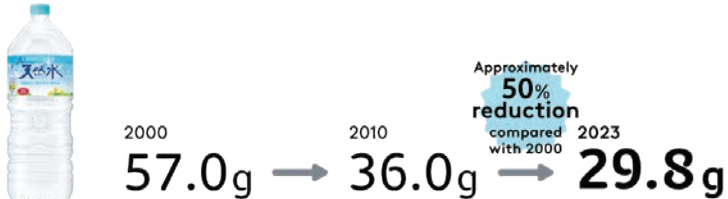
For approximately 20 years now, Suntory Group has been working to make PET bottles as well as their caps and labels lighter and thinner. We are aiming to effectively use resources while maintaining and improving bottle quality (maintaining beverage quality and ease of bottle use) while drinking.

### Change in Weight of 550-mℓ Suntory Tennensui PET Bottles\*1

\*1 500-mℓ capacity through 2009



### Change in Weight of 2-ℓ Suntory Tennensui PET Bottles



## Recycle: Recycling PET Bottles

Suntory Group engages in "bottle to bottle" horizontal recycling, where used PET bottles are turned into new ones.

Starting with introducing the Japanese soft drink industry's first PET bottles using 100% recycled materials in 2012, we have continued to advance "bottle to bottle" horizontal recycling, including development of the world's first F-to-P direct recycling technology, which has lower CO<sub>2</sub> emissions compared with conventional recycling methods.



## Bio: PET Bottles Using Plant-Derived Material

We have set the Suntory Group target of switching all products to using 100% sustainable PET bottles (made of recycled or plant-derived material) by 2030. Prioritizing environmentally friendly "bottle to bottle" horizontal recycling, we are aiming to achieve PET bottle circularity by repeatedly recycling PET bottles as a resource.

Meanwhile, there are needs in the soft drink industry as a whole to provide new resources to make up for some PET bottles being recycled for other purposes as well as the growth of the PET bottle beverage market. In response, in addition to "bottle to bottle" horizontal recycling, we are also working to develop PET bottles using plant-derived material.

In 2013, we launched a 550-mℓ PET bottle for Suntory Tennensui natural mineral water that uses 30% plant-derived material\*. We started releasing a 2-ℓ version in April 2023 and have plans for all Suntory Tennensui PET bottles to use plant-derived material by the fall of 2023.

\*Excluding some products for vending machines



Current PET bottle (using 30% plant-derived material) (left)  
PET bottle using 100% plant-derived material (right)

Suntory Holdings Ltd. and Anellotech, Inc., a green innovation and technology company in the United States, are working on collaborative development of a PET bottle that uses 100% plant-derived material. Construction began in 2016 on a development and testing plant to produce PET bottle materials in the state of Texas, and testing of the technology for commercialization was completed in 2019. We have achieved to produce paraxylene, a precursor of terephthalic acid that constitutes 70% of PET bottle materials, exclusively from inedible plant-derived material (woodchips) that does not affect the supply chain of materials for food use. We successfully created a PET bottle made from 100% plant-derived material using this technology in December 2021. This marks a breakthrough in commercializing PET bottles made from 100% plant-derived material that do not affect the supply chain of materials for food use.

## Cooperation with Stakeholders

### 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. As of April 2023, the number of participating companies has expanded to 40, and together with Anellotech, we are developing technologies to recycle used plastics.

Many types of plastic apart from PET bottles are reportedly incinerated\* in Japan at present. This technology enables plastics including PET bottles to be chemically recycled by directly turning such plastics into base chemicals (benzene, toluene, xylene, ethylene, propylene and other chemicals). It requires fewer treatment processes compared to other chemical recycling that requires liquefaction and is anticipated to reduce CO2 emissions and energy use. Establishing this technology will allow more used plastic to be recycled efficiently.

RPlus Japan Corporation aims to contribute to the solution of the plastics problem, which is common worldwide, through collaboration across industries, in addition to technological development and its implementation in society.

\*Includes thermal recovery (heat utilization), in which heat generated during incineration is recovered and utilized for power generation and heat supply



### Social Activities

Suntory employees strive to change their lifestyle, promote sorting and collection, and actively participate in social contribution activities such as cleaning up rivers and beaches.

In September 2022, Suntory PepsiCo Vietnam Beverages in Vietnam conducted a beach cleanup near Hanoi in cooperation with Ocean Conservancy, a global marine nature conservation organization, with more than 150 participants, including employees and their families.



## Cans/Bottles/Barrels/Paper Packaging/Cardboard

### Reduce: Lightweighting

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#### 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 10 g to 460 g 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

#### Reducing the Weight of Cardboard

To reduce our environmental impact, we are using short flap cardboard cartons in cooperation with the industry, beginning with using them for beverages in small PET bottles since the spring of 2012. Through this, we have reduced the use of paper by about 20% compared to conventional cardboard cartons. Short flap cardboard cartons have been used for beer and RTD products since 2019.



Short flap cardboard cartons that  
reduce cardboard usage on its sides

### Reuse: Promoting Collection and Reuse of Containers

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#### 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.

## Reuse: Promoting Collection and Reuse of Containers

### The World's First 100% Recycled Aluminum Can

Suntory Spirits Ltd. (Suntory) launched the world's first 100% recycled aluminum can\*1 in its limited editions of The Premium Malt's CO2 Reduction Can (350 mℓ, 5.5% ABV) and The Premium Malt's <Kaoru> Ale CO2 Reduction Can (350 mℓ, 6% ABV) in September 2022. This first of its kind 100% recycled aluminum can\*1 was jointly developed by UACJ Corporation and Toyo Seikan Group Holdings, Ltd. and emits 60% less CO2 compared to when creating a regular aluminum can\*2.



\*1 First as a commercialized SOT (Stay on Tabs) can which uses only recycled aluminum derived from canned materials (based on research by Toyo Seikan Group and UACJ, as of July 2022)

\*2 350 mℓ beverage aluminum can produced by Toyo Seikan using UACJ aluminum material

### 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\*.

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.

\*As of April 2023



Suntory Umeshu  
Delica Maison

### Use of FSC®-Certified Cardboard

Suntory Group is gradually adopting paper packaging materials that have obtained FSC certification\*, which ensures proper management of international forests, for products made in Japan. We introduced FSC-certified cardboard packaging for Suntory Tennensui natural mineral water products manufactured after August 2017. Since 2018, we have switched to FSC-certified cardboard for the packaging of all Suntory Tennensui brand products. We are promoting the use of FSC-certified paper packaging materials throughout the Suntory Group, with the phased adoption of these materials for the cardboard cartons of non-alcoholic and alcoholic beverage products and for the packaging of six-can packs.

\*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.





# Overview of Waste Management

## Promoting Waste Reduction and Recycling

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

Suntory Beverage & Food Europe has set the target of zero waste from its factories and is engaging in waste-reduction and recycling activities. With the target of reducing food waste from products by 50%, it is donating surplus products to charitable organizations to support people struggling with poverty as part of its efforts to achieve this target.

## By-products and Waste Generation Performance

Area	Amount of discharge (thousand tons)		
	2020	2021	2022
Japan	228	218	230
Americas	156	410	541
Europe	95	119	144
Asia	32	30	54
Oceania	7	7	6
Africa	0	0	0
Total	518	783	975★

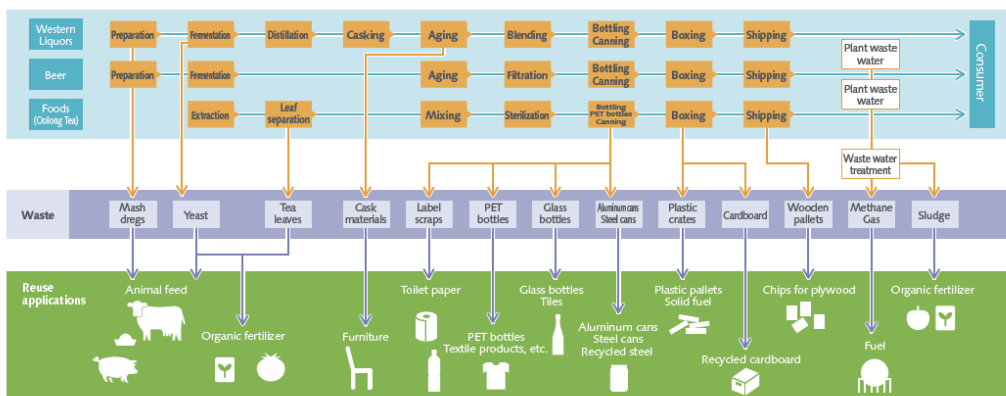
\*Data covers 27 production plants in Japan and 62 production plants overseas.

\*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.

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

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

	2020	2021	2022
Amount of discharge (thousand ton)	228	218	230
Amount recycled (thousand ton)	228	217	230
Recycling rate (%)	100.0	99.7	100.0



## By-products and Waste Generation, Recycling Rate and the Purpose of Use for Recycled Products

Type of waste	Main purpose of use	2020		2021		2022	
		Generation (t)	Recycling rate (%)	Generation (t)	Recycling rate (%)	Generation (t)	Recycling rate (%)
Vegetable (glycation, tea, coffee dregs, etc.)	<ul style="list-style-type: none"> <li>Animal feed</li> <li>Fertilizer</li> </ul>	164,185	100	158,823	100	167,855	100
Sludge (excess sludge, etc.)	<ul style="list-style-type: none"> <li>Fertilizer</li> </ul>	30,275	100	27,337	100	28,396	100
Wood waste (cask, pallets)	<ul style="list-style-type: none"> <li>Animal feed</li> <li>Fertilizer</li> </ul>	5,186	100	5,267	100	3,658	100
Glass and ceramic scrap	<ul style="list-style-type: none"> <li>Glass materials</li> <li>Base course material</li> </ul>	2,285	100	1,337	100	1,172	100
Paper scraps (cardboards, paper labels, etc.)	<ul style="list-style-type: none"> <li>Recycled paper</li> <li>Cardboard materials</li> </ul>	5,520	100	5,398	100	5,735	100
Plastic	<ul style="list-style-type: none"> <li>Pallet</li> <li>Solid fuel</li> <li>Supplementary fuel</li> </ul>	6,033	100	5,796	100	5,810	100
Metal scraps (aluminum, steel)	<ul style="list-style-type: none"> <li>Aluminum</li> <li>Steel ingredients</li> </ul>	3,314	100	3,506	100	3,123	100
Other		11,558	100	9,731	100	13,979	100
Total		228,355	100	217,925	100	229,728	100

\*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

Products in the line-up of "Suntory Barrel Story" created from whiskey cask materials that have fulfilled their distillery role

### 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 fillet 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 suitable 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

## Feature4 Reduce: Lightweighting

### Lightweighting of PET Bottles

The 550-mℓ Suntory Tennensui natural mineral water PET bottle (excluding products for vending machines) was developed by Suntory and is the lightest such bottle made in Japan\* (11.9 g).

The bottle design reduces the use of fossil-fuel-derived materials by approximately 40% per bottle compared with conventional bottles (13.5 g). For the 2-ℓ version, we were the first in Japan to achieve a 2-ℓ bottle of less than 30 g by reducing the weight by approximately 20% to 29.8 g per bottle from conventional bottles (36.2 g).

\*PET bottles for mineral water (500 mℓ to 600 mℓ) in Japan. As of April 2023

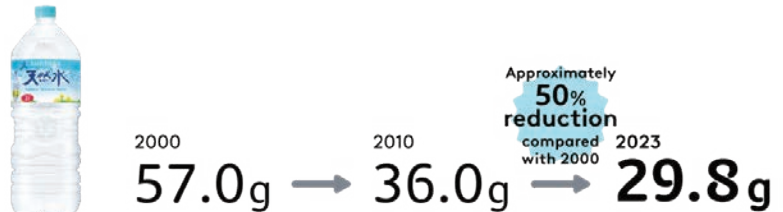


### Change in Weight of 550-mℓ Suntory Tennensui PET Bottles\*1

\*1 500-mℓ capacity through 2009



### Change in Weight of 2-ℓ Suntory Tennensui PET Bottles



### Thinnest Roll Label\*1 for PET Bottle Beverages in Japan

We are reducing the weight of product labels on PET bottles to reduce their environmental impact. We achieved the thinnest PET bottle roll label in Japan at 16 micrometers ( $\mu\text{m}^2$ ) in 2012. We launched an even thinner label of 12  $\mu\text{m}$  for the 2-ℓ and 550-mℓ PET bottles of Suntory Tennensui natural mineral water in April 2014. Thereafter, we have been extending the label to all of our products that use roll labels. This has allowed us to reduce CO<sub>2</sub> emissions by 25%\*<sup>3</sup> compared to the existing (16  $\mu\text{m}$ ) labels.

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

\*2 1/1,000 mm

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



12  $\mu\text{m}$  thick roll label, thinnest in Japan

## Lightest PET Bottle Caps in Japan

We are also reducing our environmental impact for the bottle caps on PET bottles. Since September 2016, we have adopted 1.85-g bottle caps, which are the lightest in Japan\*<sup>1</sup> and use 30% plant-derived material, for Suntory Minami-Alps Tennensui natural mineral water. This innovation reduces the use of fossil-fuel-derived material by 35%\*<sup>2</sup> and decreases CO<sub>2</sub> emissions by 27% compared to conventional PET bottle caps.

In addition, in March 2019 we began using polyethylene caps\*<sup>3</sup> made of 100% plant-derived ethylene for 550-mℓ Suntory Aso Tennensui natural mineral water, which is manufactured at our Kyushu Kumamoto Plant. This innovation reduces the use of fossil-fuel-derived material by 90% and decreases CO<sub>2</sub> emissions by 56%\*<sup>4</sup> compared to conventional PET bottle caps.

\*1 As of April 2023

\*2 Per bottle of Suntory Tennensui natural mineral water (550 mℓ)

\*3 Polyethylene caps with 100% plant-derived ethylene as the main raw material. Excluding trace amounts of fossil-fuel-derived components and colorant components at the time of production line changeover.

\*4 Per bottle cap of Suntory Tennensui natural mineral water (550 mℓ)

## Adopting Technology to PET Bottle for Spirits Products

We are taking great advantage of the technology cultivated in our soft drink business in our spirits business. Suntory Spirits Ltd. has launched the 4-ℓ PET bottle weighing 110 g, 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 134 g or 120 g, the use of PET resin is reduced, resulting in an annual CO<sub>2</sub> 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 4-ℓ PET bottle and new lightweight 4-ℓ PET bottle

## Development of World's Lightest\* Heat-resistant PET Bottle in Southeast Asia Leveraging Japanese Technological Capabilities

The Japanese manufacturing technology and design capabilities for reducing weight of PET bottles have been used in Group companies in Europe and Asia. In 2020, we succeeded in developing the world's lightest\* PET bottle weighing 15 g in heat-resistant filled containers that also pursue functionality, versatility, and design. This heat-resistant PET bottle utilizes technology that prevents deformation of the bottle by dropping nitrogen to create positive pressure.

We have introduced this bottle to Suntory PepsiCo Beverage (Thailand) and Suntory Garuda Beverage (Indonesia) and Suntory PepsiCo Vietnam Beverage (Vietnam). We also have started using 100% recycled materials for these bottles from 2023.

\*In the 450-mℓ class of heat-resistant PET bottles (as of April 2023, according to our own research)



Lightest Heat-Resistant Bottle with Liquid Nitrogen Injection in Southeast Asia

## PET Bottle Self-Manufacturing Technology at Beam Suntory

Beam Suntory has been introducing its first bottle self-manufacturing 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.

We plan to introduce even lighter bottles by 2023, and expect to reduce the bottle weight by approximately 26% compared to the weight before the 2017 self-manufacturing project. We are also considering using the self-manufactured bottle technology obtained through this initiative to further expand to other capacities, such as 100 mℓ to 1 ℓ.

Feature 5

# Recycle: Promote "Bottle to Bottle" Horizontal Recycling

## Initiatives in Japan

### "Bottle to Bottle" Horizontal Recycling

"Bottle to bottle" horizontal recycling refers to recycling used PET bottles into new ones. PET bottles are a resource that can be recycled many times, which can help reduce the use of fossil-fuel-derived materials and CO<sub>2</sub> emissions. "Bottle to bottle" horizontal recycling through



mechanical recycling\* is the recycling method with the least environmental impact (CO<sub>2</sub> emissions in processes from raw materials procurement to PET preform production). In 2011, Suntory was the first company in the Japanese beverage industry to establish this technology, and has continued promoting "bottle to bottle" horizontal recycling since then.

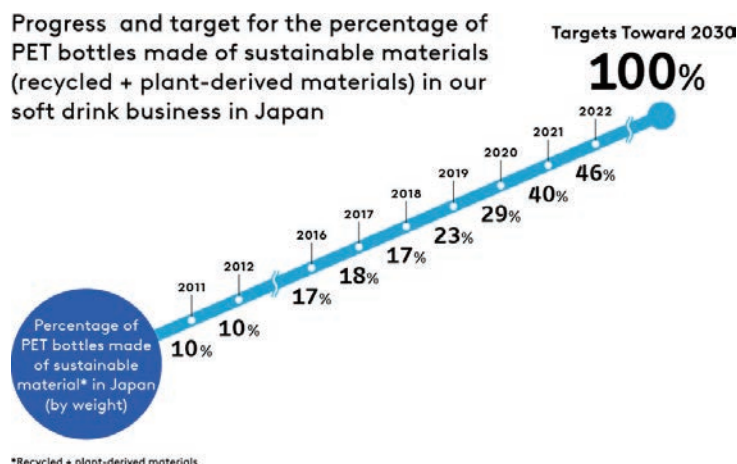
\*Mechanical recycling: A method in which recycled resin obtained by material recycling (used products are processed by crushing, washing, and made into raw materials for products again) is further processed under high temperature and reduced pressure for a certain period of time to remove impurities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

### History of Efforts to Create 100% Sustainable PET Bottles

Toward realization of a sustainable society, we have led the industry in recycling used PET bottles into beverage PET bottles together with cooperating companies for more than 10 years. In cooperation with Kyoei Sangyo Co., Ltd., in 2011 we built the first "bottle to bottle" horizontal recycling system in the Japanese beverage industry. Starting with launching the first PET bottle made of 100% recycled material\*<sup>1</sup> in the Japanese soft drink industry in 2012, we have made technological innovations over these many years, including development of the world's first F-to-P direct recycling technology\*<sup>2</sup> to reduce CO<sub>2</sub> emissions more than conventional technology, and have proactively commercialized and promoted "bottle to bottle" horizontal recycling.

In 2019, we established the Suntory Group Plastic Policy. In it, we set the 2030 target of using 100% sustainable PET bottles globally by using only recycled or plant-derived material with zero use of virgin fossil-fuel-derived materials and are conducting various activities toward this target. In 2022, we expanded use of sustainable PET bottles (using only recycled or plant-derived material) in our soft drink business in Japan to 46% of all PET bottles Group-wide by weight. We will continue to actively promote "bottle to bottle" horizontal recycling and the use of plant-derived material, aiming to achieve more than 50% use of sustainable PET bottles among all PET bottles by weight in 2023.

\*<sup>1</sup> Mechanical recycling \*<sup>2</sup> Joint development among four companies including Kyoei Sangyo Co., Ltd.



## Promoting Horizontal Recycling with Local Governments and Corporations

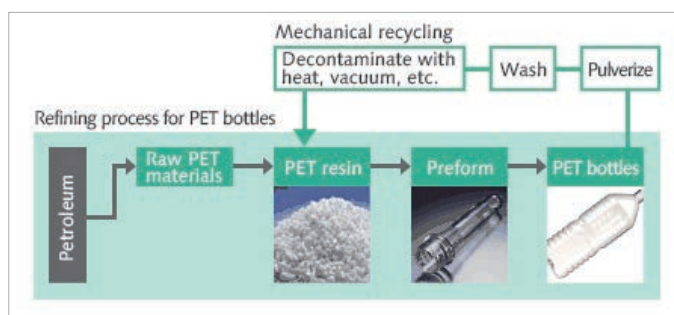
With the aim of realizing a recycling-oriented society, the Suntory Group has been working on "bottle to bottle" horizontal recycling, in which used PET bottles are recycled into new PET bottles, in cooperation with local governments and companies. We have concluded similar agreements with distribution companies and commercial facilities to recycle used PET bottles collected at stores and other locations into Suntory beverage bottles through "bottle to bottle" horizontal recycling and hold consumer awareness events.

Also, by concluding an agreement on "bottle to bottle" horizontal recycling with local governments, we will recycle PET bottles discharged by residents as resources into new PET bottles for Suntory beverages. In addition, educational classes on PET bottle recycling are held at elementary and junior high schools in municipalities with which we have concluded agreements.

## Development of the "Bottle to Bottle" Horizontal Recycling System

In 2011, in collaboration with Suntory Beverage & Food Ltd. and Kyoei Sangyo Co., Ltd., we built the first "bottle to bottle" mechanical recycling system\*1 for PET bottles in the Japanese beverage industry. In addition, we published a joint assessment\*2 on the safety of recycled PET bottles in 2012.

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 April 2023.

\*1 Mechanical recycling: A method in which recycled resin obtained through material recycling (where used PET bottles are crushed, washed and otherwise processed into materials to make more PET bottles) 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.

\*2 Japanese Journal of Food Chemistry and Safety, Vol. 19 (1), 2012, pp. 7-13

\*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 with virgin PET bottles made of fossil-fuel-derived material. (Current mechanical recycling can reduce CO2 emissions by 60%\*.)

\*Processes from used PET bottles to the preform production



Products that use F-to-P direct recycling technology

## Active Implementation of Recycled PET Bottles within the Group

To achieve the 2030 fully sustainable PET bottle goal, we are promoting implementation of recycled PET bottles globally.

In Japan, we have introduced PET bottles made of 100% recycled PET bottles for GREEN DA-KA-RA Yasashii Mugi-cha (680 mℓ, 600 mℓ). In addition, we use 100% recycled PET bottles for many of our products, including Craft Boss and Iyemon.

We have adopted the logo mark "Bottles are resources! Towards a Sustainable Bottle" on all PET bottled products\* to communicate to consumers that PET bottles are a resource that can be recycled many times. Apart from the soft drink business in Japan, we also use 100% recycled PET bottles for 720-mℓ wine products in Japan. We will continue to accelerate these efforts Group-wide.

\*Excluding label-less products



Yasashii Mugicha 680 mℓ  
Delica Maison Red 720-mℓ  
PET bottle

Logo "Bottles are resources!  
Towards a Sustainable Bottle"

## "Bottle to Bottle" Horizontal Recycling Progress Through Packaging Improvements

"Label-free" PET bottle products do not have the plastic label wrap found on conventional PET bottle products. This provides greater user convenience from not having to remove the label. We believe that giving customers a more convenient sorting experience for recycling will help encourage "bottle to bottle" horizontal recycling that turns used PET bottles into new ones. We introduced label-free bottles in 2020 and have adopted them in flagship products including for the Suntory Tennensui natural mineral water, CRAFT BOSS and Iyemon brands.



We developed a new 2-ℓ PET bottle for Suntory Tennensui natural mineral water that is easy to fold into a size about one-sixth its original shape when empty and launched it in April 2023. This new bottle resolves some dissatisfaction in the home with empty PET bottles, namely how the bottles pop back to their original shape after being crushed and how they take up space until collection day. The new bottle is also expected to help create higher-quality recycling for PET bottles by making it easier for consumers to sort PET bottles without having to remove their cap or label.



## Awareness-raising Activities for Horizontal Recycling

The Suntory Group has been working to promote understanding of horizontal recycling initiatives and sorted collection of PET bottles through seminars outside the company to help realize a sustainable society. In 2021, we signed an agreement with Waseda University on the realization of a resource-recycling society, and we are also making efforts for the next generation.

At elementary and junior high schools in municipalities with which we have concluded "bottle to bottle" agreements, we conduct educational classes on the significance of horizontal "bottle to bottle" recycling and how to correctly sort PET bottles, providing an opportunity for students to think about recycling and resource circularity. At companies with which we have concluded these agreements, we also hold educational seminars for employees and events for their families.



## Communication with Consumers

Since 2022, we have released a series of digital videos in Japanese using a cat cartoon character to highlight simple, ordinary things that people do without even thinking that are in fact sustainable practices. We are also proactively communicating with consumers and raising awareness for sustainability in other ways, including holding "PET bottle post" events based on the concept of having as many people as possible think of PET bottles not as garbage but as a resource, and of recycling bins not as garbage bins but as something more like postal boxes that "deliver" the resource to the next person.



Sustainability digital video series



PET bottle post

## Promoting Horizontal Recycling Through Industry Cooperation

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

New recycling boxes with innovations such as a downward-facing insertion slot have been shown to reduce the amount of foreign matter put into them. This improves the quality of collected PET bottles and contributes to "bottle to bottle" horizontal recycling. Using recycling boxes with industry-standard specifications will improve efficiency for vending machine operators and recycling processes and promote PET bottle resource circularity.



## Initiatives outside Japan

### Introducing Recycled PET Bottles Overseas

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.



100% sustainable Ribena bottle

## Development of New Technology to Drive Horizontal Recycling

Suntory Beverage & Food Europe (SBFE) is participating in a consortium with green biotech company Carbios. In June 2021, the consortium successfully developed the world's first PET bottle of food-grade quality made from chemical recycling using enzymatic technology\*. A prototype was made for SBFE's Orangina brand, and a Japanese technical team helped test aspects of the prototype that Carbios was not able to, including the safety and ease of manufacturing the bottle. In September 2021, Carbios opened its first demonstration plant with the goal of launching commercial plant operations in 2025. This innovative technology breaks down polyethylene terephthalate (PET) into its building blocks using a special enzyme that only breaks down PET plastic to create the raw materials of PET bottles that can then be reused. This technology is anticipated to enable recycling of PET bottles that are not properly sorted and color PET bottles that are commonly used in Europe to the quality level of virgin PET bottles.

\*Based on our research

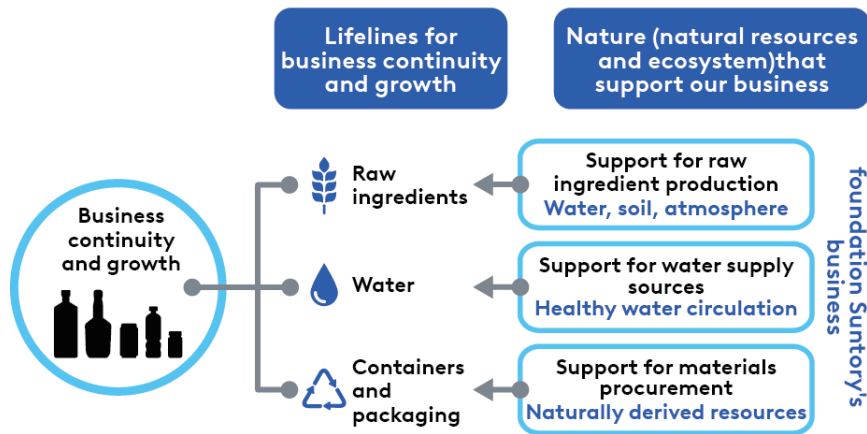


# Biodiversity

## Our Policy and Approach

The nature and its ecosystem - forests nurtured by water, rivers, oceans, atmosphere and living creatures - are the valuable management foundation of the Suntory Group's business. As a company whose products rely on blessings of nature, we strive to protect nature and its ecosystem at the source of our water and ingredients through water source conservation, bird conservation activities, and a shift to sustainable agricultural practices.

The nature and its ecosystem - forests nurtured by water, rivers, oceans, atmosphere and living creatures - are the foundation of the Suntory Group's business.



## Promoting Structure

### Global Sustainability Committee (GSC)

To promote sustainability management, the Global Sustainability Committee (GSC) acts as an advisory committee to the Board of Directors. The Group's sustainability strategies and the progress on priority themes (water, climate change, containers and packaging, raw ingredients, health, human rights and enriching life) are discussed in the GSC under the lead of the Chief Sustainability Officer.

# Initiatives

## Water Sustainability

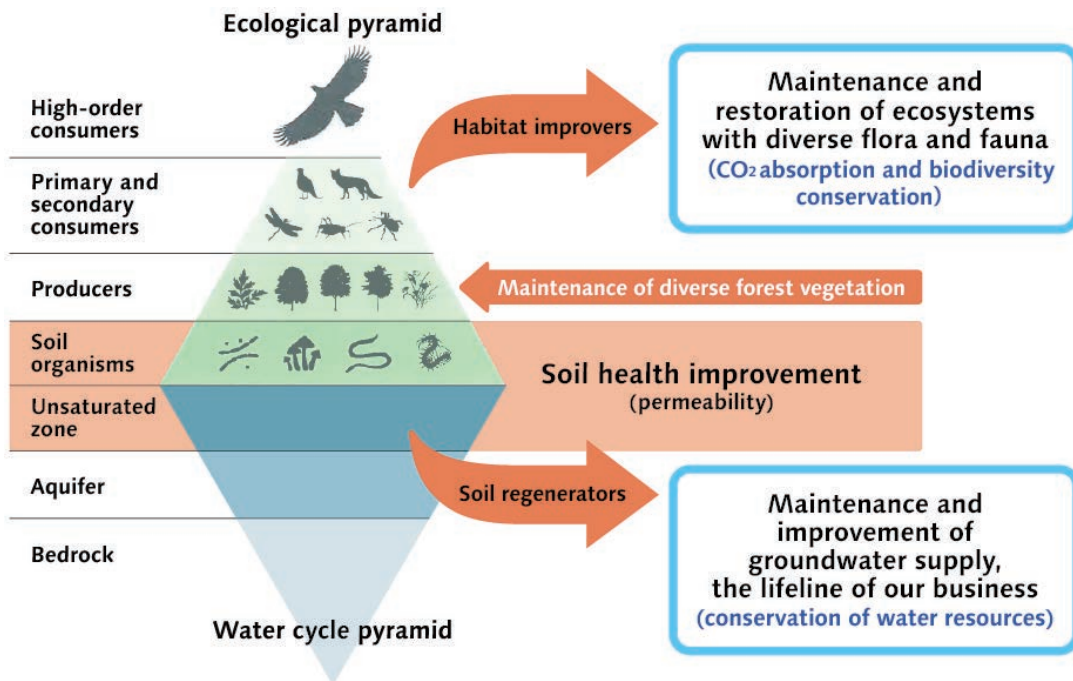
### Suntory Natural Water Sanctuary

To preserve the integrity and sustainability of groundwater, the Suntory Group has been cultivating forests in the watersheds around our plants as sanctuaries to nurture groundwater. These forests recharge more than twice the amount of water withdrawn by our plants in Japan.

Forests that nurture pristine groundwater are also rich in biodiversity. When the forest ecosystem is restored, the flora and fauna also begin to thrive in new ways. The Suntory Natural Water Sanctuary is managed systematically through continuous monitoring of the ecosystem, which includes plants, birds, and other wildlife.

Considering how wild birds are a barometer of environmental health, we have experts conduct a wild bird survey every year to furnish a broader understanding of the changes taking place in the entire supporting ecosystem.

At Natural Water Sanctuaries in Japan, we are carrying out an Eagle and Hawk Chick-Rearing Support Project to support the nesting and breeding of birds of prey, which are at the top of the ecological pyramid. The aim is to continue maintaining forests rich in biodiversity from the perspective of protecting birds.



## 30by30 Alliance for Biodiversity

In April 2022, the Suntory Group joined the 30by30 Alliance for Biodiversity. The alliance is formed as a voluntary coalition of local governments, companies, and NPOs to conserve or protect at least 30% of Japan's land and sea areas by 2030 to halt loss and restore biodiversity. Its objective is to promote and to actively communicate the initiative to expand Japan's national parks and to register socio-ecological production landscapes (satochi-satoyama) and company-owned forests in the World Database as OECMs\*.

As a member of this alliance, the Suntory Group aims to contribute to achieving the "30by30" goals by having its Natural Water Sanctuaries certified as OECMs. The company will continue to promote sustainability management to conserve biodiversity and to achieve sustainable society.

\*OECM stands for "Other Effective area-based Conservation Measures." OECMs are areas conserved at the initiative of private organizations or areas where the conservation of nature is achieved mainly as a by-product of other management.



The "Suntory Natural Water Sanctuary Biodiversity Restoration Report" was issued in September 2022. The report is structured into two parts — a "Facts & Data" section that summarizes various issues facing Japanese forests and an "Actions" section which provides simple explanations and examples of activities taken to address these issues in the Suntory Natural Water Sanctuary.

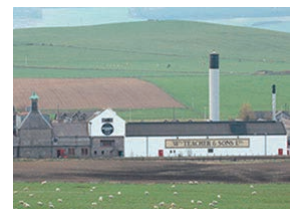


## Suntory's Peatland Water Sanctuary Initiative in Scotland

The Suntory Group acknowledges the immeasurable amount of learning it has received from Scotland and scotch whisky, which has been utilized in the production of whisky in Japan. Today, Suntory owns several distilleries in Scotland, including the Bowmore and Laphroaig distilleries. Peat, an accumulation of partially decayed vegetation or organic matter in wetland areas known as peatlands, is an important natural material for drying the barley from which whisky is made. Suntory's Peatland Water Sanctuary initiative started in November 2022 to protect these peatlands and conserve watersheds at various locations in Scotland. The initial peatland restoration project was undertaken on nearly 15ha near the Ardmore distillery in partnership with the Forestry and Land Scotland, which owns the land, and the James Hutton Institute, which is assisting with the research, planning, and execution of the restoration. Additional projects in other areas are expected to launch, and the Suntory Group aims to have restored sufficient peatlands by 2040 to equate to twice the volume of peat that the Suntory Group harvests to make its scotch whiskies. The work will have a long-term positive impact on water retention and quality, and will also support carbon sequestration and biodiversity in Scotland's natural environment.



Restored peatland with a variety of marsh plants (Courtesy of Andrew McBride)



Ardmore Distillery

## Raw Ingredients

As a beneficiary of nature's bounty, the Suntory Group is committed to preserving biodiversity in the raw ingredient crops it uses for raw ingredients. Suntory Beverage & Food Great Britain and Ireland has been providing blackcurrant farmers with sustainable farming support since 2004. The company has established a biodiversity roadmap tailored to each farm and its surrounding habitat and is promoting ecosystem conservation for rivers and wetlands. In 2022, the company has shared the results from its Farm Stewardship Programme which aims to boost biodiversity on blackcurrant farms across the UK. Other efforts within the Group include adopting regenerative agriculture methods that help improve soil organism diversity such as the use of mulching at vineyards and start of pilot program for sourcing barley produced using regenerative agriculture practices.



Cover crops



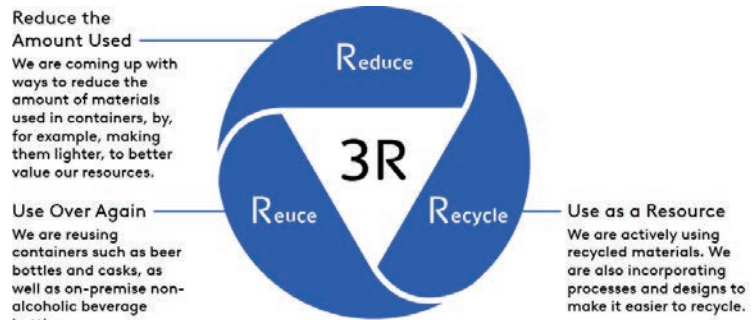
Vineyard with grass mulch at Suntory Tominooka Winery



Farm Stewardship Programme Report

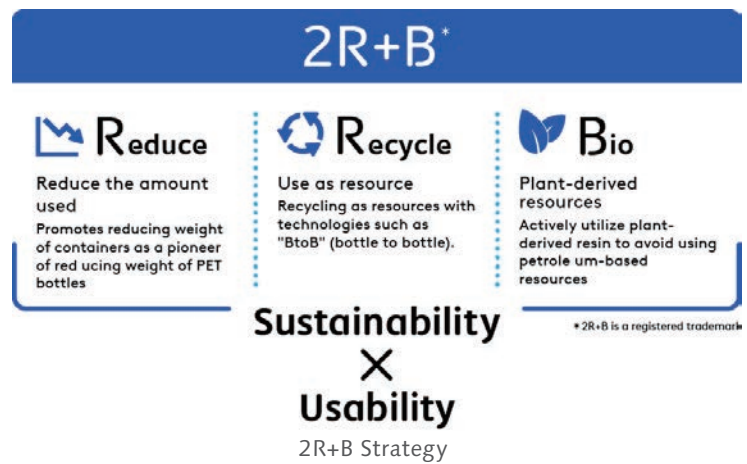
## Containers and Packaging

In addition to ecological efforts in water and crops, the Suntory Group aims to make effective use of limited natural resources by promoting the 3Rs (reduce, reuse, recycle), employing renewable resources, collaborating with diverse stakeholders to build efficient recycling systems, and working to reduce the environmental impact of our products throughout their lifecycles.



Concept of 3Rs in Containers and Packaging

In regard to PET bottles specifically, the Suntory Group has a unique 2R+B (Reduce/Recycle + Bio) strategy. We are pursuing the efficient use of resources by developing bottles with reduced resin content and enhanced use of plant-based materials and thereby replacing petroleum-derived materials with renewable materials as far as possible.



## Bird Conservation

Recognizing that wild birds are barometers of the environment, Suntory has advocated that protecting birds leads to protecting human beings and the natural environment and started its bird conservation activities in 1973. The company established the Suntory Fund for Bird Conservation in 1989 to promote environmental conservation by providing grants to various bird conservation activities. The Fund has granted a total of approximately 600 million Japanese yen to a total of 494 organizations as of the end of 2022.



1st Save the Birds! Campaign newspaper ad

## Feature6 Bird Conservation Activities

Wild birds are said to be barometers of natural environment. This is because birds have wings and fly away when the environment deteriorates and return when it improves. The Suntory Group, which is taking advantage of the rich blessings of nature, is committed to "Today Birds, Tomorrow Humans - Happiness that happens to birds today may make tomorrow's humans happy. 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	-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.
2023	-The 34st Fund Granting Ceremony of the public trust, Suntory Fund for Bird Conservation (Total of ¥662.5 million from the 1st to 34st fund granting have been made to 494 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 34 years since becoming a charitable trust in 1990, the Foundation has granted total of ¥662.5 million to 494 organizations up to 2023, making great achievements. The 2020 presentation ceremony was cancelled to avoid the risk of new coronavirus(Covid-19) infection; the 2021 and 2022 ceremonies were held online; the 2023 ceremony was held at the venue with an online connection to overseas organizations.



The 34th Fund Granting Ceremony of Public Trust Suntory Fund for Bird Conservation



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



The members of the "Grants for Community Bird Activities" category

## 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 with the advice of experts and uses the data as one of the guidelines for creating a better environment for birds and other living creatures.



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 portal site "eBird Japan" (operated by Cornell University Lab of Ornithology and the Wild Bird Society of Japan), which provides access to the world's largest bird observation database of birdwatchers' records, and the bird identification app Merlin are tools that make it easy to enjoy birdwatching activities in Japan and overseas. Suntory is working to promote the use of these tools as the main sponsor.

We provide leaflets on how to easily distinguish the birds around you to help in bird watching.



Japanese Bird Encyclopedia website



The portal site "eBird Japan" (operated by Cornell University Lab of Ornithology and the Wild Bird Society of Japan)



Save the Birds Activity leaflets

# Pollution Prevention and Chemical Substance Management

## Policies and Our Approach

Many of the products handled by the Suntory Group are made mainly from agricultural products and water, the risk of environmental pollution caused by chemical substances is considered to be small and compared to other industries. However, the production process is not free from the risk of polluting the surrounding environment, as exhaust gas is generated from boiler combustion and chemicals are used to clean and sterilize equipment. Therefore, we assume all kinds of abnormal and emergency situations, assess the risks that may arise, and take measures to deal with them.

## Our Initiatives

### Preventing Air Pollution

The Suntory Group strives to reduce SO<sub>x</sub> and NO<sub>x</sub> emissions by switching to gas fuel that does not contain sulfur and adopting low NO<sub>x</sub> burners. We have set voluntary standards that are stricter than legal limits and control air pollutants in exhaust gas from boilers.

### Preventing Water Pollution

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

### Preventing Soil Pollution

The Suntory Group's plants use chemical substances for cleaning equipment and other purposes. These substances are strictly controlled to prevent leakage. However, in the unlikely event of a leakage of cleaning agents or chemicals, each plant has installed dikes around chemical tanks and conducts periodic inspections to prevent soil contamination.

### 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 can be reduced.

### Chemical Substance Management

The 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.

## Waste Management

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 thorough implementation of proper disposal of waste.

## 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 serious accidents or lawsuits related to the environment in 2022.