Suntory Group business is supported by precious global resources such as water and agricultural products. It is our responsibility to engage in sustainable business practices through the promotion of environmental management in accordance with our mission To Create Harmony with People and Nature so that we may pass down a rich global environment to future generations. We have established our Environmental Vision toward 2050 and set Environmental Targets toward 2030 in 2018 based on corporate tagline “Mizu To Ikiru.” Suntory Group commits to the promotion of environmental management based on two axes: preservation and regeneration of natural environment and reduction of environmental impact. That is the reason why the entire Group promotes environmental management.

- **Environmental Management Promotion**
- **Preserving and Regenerating the Natural Environment**
- **Reducing Environmental Impact**
- **Environmental Communication**

**Environmental Management**

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

**Water Sustainability**

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

**Measures Against Climate Change**

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

**Environmental Communication**

Suntory Group values communication with its stakeholders and communicates information related to the environment.
## Preserving and Regenerating the Natural Environment

### Global expansion of conservation activities to protect wild birds that are the symbol of biodiversity

- Surveys of birds focusing on birds of prey at Natural Water Sanctuaries are conducted at 16 locations, and maintenance is conducted in forests of focus giving consideration to their breeding and nesting environments.

### Nest building and rearing of chicks by eagles and hawks at all the Natural Water Sanctuaries in Japan

- Supported wild bird protection activities in Japan and overseas through grants from the Suntory Fund for Bird Preservation.

- Expanded informational communication through updates to the Save the Birds website.

### Expand the area of Natural Water Sanctuary so as to make it twice the size of the territory where Suntory withdraws water for its plants in Japan. (12,000ha)

- In addition to implementing various activities such as tree thinning and transport of trimmings, building roadways and walkways, installing protective fences around vegetation, planting and nurturing seedling of local trees based on the mid- to long-term vision, Natural Water Sanctuary Project has also been used to provide forestry engineer training and help restore mountain forests damaged from typhoons. There are more and more case examples of Ikurinzai - Timber from cultivated forests *1 inside and outside of the company, and we are continuing to establish a system for strengthening and intensifying its utilization in the future. 2019 is the year during which we built a bridgehead for the expansion of Natural Water Sanctuary contract areas.

- In addition to continuing to implement activities such as tree thinning and transport of trimmings, building roadways and walkways, installing protective fences around vegetation, planting and nurturing seedling of local trees based on the mid- to long-term vision, Natural Water Sanctuary Project will continue to be used to help restore mountain forests damaged from typhoons. Through the project, a system is being created for the practical use of Ikurinzai - Timber from cultivated forests *1 in the future. In regards to Natural Water Sanctuary contract area expansion, realize land sizes of approximately 10,000ha, and establish Natural Water Sanctuaries so as to make them twice the size of the territory where Suntory withdraws water for its plants.

### Results in FY2018

#### Surveys of birds focusing on birds of prey at Natural Water Sanctuaries are conducted at 16 locations, and maintenance is conducted in forests of focus giving consideration to their breeding and nesting environments.

- We will continue surveying birds focusing on birds of prey, which are the top of the ecological pyramid, at Natural Water Sanctuaries and promote comprehensive forest maintenance giving consideration to their breeding and nesting environments. Suntory Fund for Bird Preservation will continue to promote the support for wild bird conservation activities through aiding various organizations in and outside Japan.

### FY2019 Action Plan

#### Surveys of birds focusing on birds of prey at Natural Water Sanctuaries are conducted at 16 locations, and maintenance is conducted in forests of focus giving consideration to their breeding and nesting environments.

#### Target achieved:  ●●●  Achieved 70% or more:  ●●  Achieved less than 70%:  ●
<table>
<thead>
<tr>
<th>Prioritized items</th>
<th>Mid-Term Targets</th>
<th>Results in FY2018</th>
<th>FY2019 Action Plan</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preserving and Regenerating the Natural Environment</strong></td>
<td>Sharing our values and raising awareness on the importance of water</td>
<td>Expanded content of Suntory Mizuiku activities and enhanced awareness raising and dissemination of value of water and importance of nature that nurture water</td>
<td>Expand content of Suntory Mizuiku activities, which have been implemented for 15 years, and enhance awareness raising and dissemination of value of water and importance of nature that nurture water.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Outdoor School of Forest and Water held a total of 53 times and 1,753 people participated</td>
<td>Outdoor School of Forest and Water held a total of 57 times and 1,960 people participated Teaching about Water at Schools held at total of 206 schools and 15,971 people participated</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Teaching about Water at Schools held at total of 200 schools and 15,971 people participated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,300 participants in the <em>Mizuiku</em> - Natural Water Education Program in elementary schools in Vietnam and Teaching about Water at Schools with roughly 14,000 people in total taking part in activities such as factory tours and outdoor activities</td>
<td>Expand <em>Mizuiku</em> - Natural Water Education Program in elementary schools in Vietnam, 5,600 people expected to participate</td>
<td></td>
</tr>
<tr>
<td><strong>Reducing Environmental Impact</strong></td>
<td>Reduce water consumption at the Suntory Group**2 plants by 15%**3</td>
<td>Further reduce water usage at Group plants (reduction of water use intensity by 5.8% compared to 2015)</td>
<td>Reduce the use of water for washing and cooling manufacturing equipment and containers</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Reduce CO2 emission in the entire value chain of Suntory Group**2 by 20%**3</td>
<td>Further reduce CO2 emissions throughout the entire value chain (reduction of CO2 emissions intensity by 2.8% compared to 2015)</td>
<td>Reduce the weight of containers, use of renewable resources and energy conservation at plants, proactively introduce vending machines that consume the least amount of electricity in Japan, etc.</td>
<td></td>
</tr>
</tbody>
</table>

*1 Suntory coined wood materials generated during maintenance for nurturing healthy forests as Ikurinzai - timber
*2 Group companies that collectively account for more than 80% of the Suntory Group’s sales in 2012 (including overseas companies)
*3 Reduction per unit production based on the business fields in 2007
We promote environmental management in the entire Group to pass down natural environment, our important source of business, to the next generation.
Environmental Management

Environmental Vision

The natural environment is an important foundation of our business. That is the reason why the entire Group promotes environmental management. Suntory Group actively engages in activities to pass down a sustainable society to the next generation.

Basic Policy on Group's Environmental Activity

We believe that while providing the bounties of water to the customers, protecting beautiful and clean water, using them appropriately and returning water to the nature is a great responsibility that we as a company that coexists with water. The circular system consisting from plants and forests that are nurtured by water, rivers, oceans, atmosphere, and the ecosystem made by living things are the basis of all life. Suntory Group realizes that environment of earth itself is our important basis of business.

We will continue striving to build a rich and sustainable society through spreading this policy to the entire Group and preserving and regenerating the natural environment and reducing environmental impact.

Suntory Group sets principles that clearly indicate our prioritized initiatives such as water sustainability, preserving biodiversity, efficient use of resources and challenging for a low-carbon company. With a more global perspective, we have revised the principles for the first time in five years in 2015

1. Achieving water sustainability
We treat water, the most important resource for our business, carefully and contribute to the healthy circulation of water in the natural environment.

2. Taking initiative in conserving biodiversity
As a company that relies on the riches of water and agricultural produce, we strive to conserve biodiversity, the source of their blessings, for the future.

3. Promoting the 3Rs in innovative ways for an effective usage of resources.
We aim to help bring about a recycling-oriented society, we promote the 3Rs (reduce, reuse, recycle) of raw materials and energy resources by continuously refining our technologies.

4. Mobilizing group-wide efforts to become a low-carbon company
We strive to reduce the emission of greenhouse gases throughout all of our workplaces in order to prevent climate change.

5. Communication with the Society
We strive to pass down vibrant global environment for the next generation by active disclosure of information and engagement in activities through interaction with the society.
Formulation of the Suntory Environmental Vision toward 2050 and setting Environmental Targets toward 2030

In 2014, the Suntory Group established the Environmental Vision Toward 2050 and revised targets toward 2018 to provide clear direction to its environmental management. In addition, we established Environmental Targets toward 2030.

**Suntory Environmental Vision toward 2050**

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

1. **Water Sustainability**
   - Reduce water consumption at our plants worldwide*
   - Preserve water resources and the ecosystem to cultivate more water than is used by our plants worldwide
   - Realize sustainable water use at primary raw material farms
   - Share the Sustainable Water Philosophy broadly in communities where we are expanding our primary businesses

2. **Climate Change Measures**
   - Contribute to realizing a decarbonized society to prevent global warming

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

**Environmental Targets toward 2030**

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

1. **Water**
   - Reduce water use at our plants 15% globally by using the latest water conservation technologies*1
   - Conduct water resource cultivation activities in areas with high water stress at more than half of our plants
   - Pursue sustainable water use in cooperation with suppliers for main raw materials with a high water load
   - Expand water enlightenment programs and initiatives to provide safe water to more than 1 million people

2. **CO2**
   - Reduce CO2 emissions 25% at our bases globally through efforts such as the adoption of that latest energy-saving technologies and the use of renewable energy*2
   - Reduce CO2 emissions 20% in the value chain outside our bases*2

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

Greenhouse Gas Reduction Goals (Environmental Targets toward 2030) Certified by SBT Initiative

The Science Based Targets (SBT) international initiative* has certified the CO2 and other greenhouse gas reduction goals for 2030 of the Suntory Group as fulfilling science-based standards to achieve the 2°C target in the Paris Accord.

* Science Based Targets (SBT) Initiative: Science Based Targets is an initiative established by the CDP, United National Global Compact, World Resources Institute (WRI) and the World Wildlife Fund (WWF) in 2015. This initiatives encourages companies to work toward science-based greenhouse gas reduction targets (SBT) to limit the rising temperature to less than 2°C above pre-industrial levels.
Declaration of Approval of Task Force on Climate-related Financial Disclosures (TCFD) Recommendations

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

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

*1 The Task Force on Climate-related Financial Disclosures
We are engaging in activities to reduce environmental impact in the entire product life cycle.

Reducing Environmental Impact in the Entire Product Life Cycle

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

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

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

Water Risk Assessment by Location of Suntory Group Plants

<table>
<thead>
<tr>
<th>Baseline Water Stress</th>
<th>Japan, Mexico, Spain, Indonesia, the Philippines, India, and Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>America, England, Ireland, and Malaysia</td>
</tr>
<tr>
<td>Low-medium</td>
<td>Canada, France, Thailand, Vietnam, and New Zealand</td>
</tr>
<tr>
<td>Low</td>
<td>Taiwan, Nigeria</td>
</tr>
</tbody>
</table>

Created based on the Baseline Water Stress score for each country adopted in the Aqueduct by the World Resources Institute. Covers 25 production plants in Japan and 56 production plants overseas owned by companies that collectively account for more than 90% of the Suntory Group’s sales


Quantitative Evaluation Through Natural Capital

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

* The ratio is for raw materials used by production sites in Japan
* The calculation is based on data from the Water Footprint Network (WFN)
* Total of green water (rain water, etc.) and blue water (irrigation water, etc.)
Overview of business activities and environmental impact (from January 1 to December 31 in 2018; manufacturing facilities in Japan, excluding outsourcing contractors)

![Diagram showing the flow of inputs, business processes, and outputs]

- **Inputs**
  - Packaging materials: 385 thousand t (Glass bottles: 88 thousand t, Aluminum cans: 50 thousand t, Steel cans: 52 thousand t, PET bottles: 70 thousand t, Cardboard boxes: 101 thousand t, Others: 23 thousand t, Ingredients: 460 thousand t)
  - Water: 22,161 thousand m³
  - Electricity: 335 million kWh
  - Fuel (converted to crude oil): 102 thousand kl

- **Business Processes**
  - Production: 4,889 thousand kl (alcoholic and non-alcoholic beverages)

- **Outputs**
  - Waste water: 16,195 thousand m³
  - Air emissions: CO₂: 359 thousand t, SO₂: 16.4 t, NO₃: 147 t
  - Waste and by-products: 258 thousand t
  - Air emissions: CO₂: 133 thousand t, NO₃: 351 t
  - Containers: 8,096 million bottles/cans (Glass bottles: 272 million bottles, Aluminum cans: 3,042 million cans, Steel cans: 1,716 million cans, PET bottles: 3,066 million bottles)

* BOD: Biochemical Oxygen Demand An indicator of water pollution
* Emission factors for GHG calculation are as follows:
  - Fuel: Factors specified by the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures. CO₂ from Electricity consumption: The adjusted emission factors for each electric company specified by the Act on Promotion of Global Warming Countermeasures.
  - GHG other than CO₂: Factors specified by the Act on Promotion of Global Warming Countermeasures.
**Suntory Beverage & Food Ltd. was named as a CDP Water Security 2018 A List Company**

In the CDP*1 Water Security 2018 environmental activity survey conducted for public companies worldwide by the CDP*1, Suntory Beverage & Food Ltd. received high praise for its water conservation activities including water replenishment and the reduction of water use at its plants. It was also selected for the Climate A-List.

*1 International NPO that measures, publicizes, manages, and shares important environmental data of companies and cities.

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**Suntory Okudaisen Bunanomori Water Plant is the first in Japan to receive Alliance for Water Stewardship (AWS) certificate**

The Suntory Okudaisen Bunanomori Water Plant received the Alliance for Water Stewardship (hereinafter AWS)*1 certificate, which is related to sustainable water use in areas near plants. It is the first plant in Japan to receive the certificate. The Okudaisen Bunanomori Water Plant aims to conserve forests that comprise an area that can recharge groundwater at an amount larger than the amount of water collected at the factory, and is expanding water resource cultivation activities to make Natural Water Sanctuary Okudaisen a 495ha water source. For the certification, the following were highly appraised: Our company’s understanding of the water balance in the area surrounding the plant, in line with the Suntory Group’s "Sustainable Water Philosophy," water resource cultivation based on scientific data, plant based water conservation and water quality management initiatives, our work with stakeholders in drainage areas, and appropriate information disclosure.

*1 An organization for promoting water sustainability globally established by both NGOs, such as the World Wildlife Fund (WWF) and The Nature Conservancy (TNC), and companies.
Environmental Management Promotion System

With the awareness that coexistence with nature is one of the most important issues facing all of humankind, back in 1991 the Suntory Group established the Environmental Department and Environment Committee. In 2010, Suntory Holdings Ltd. created the Environmental Sustainability Strategy Department, whose purpose is to ensure that business and ecology are promoted by the entire Group. The Division seeks to reinforce environmental management at Group companies based on the Basic Principles of Suntory’s Environmental Policy. The Global Communication Committee established in April 2016 set the construction of a global environmental management system as an important theme in addition to strengthening environmental management at Group companies in Japan. The Global Communication Committee established the Sustainability Strategy Department, which evolved from the Environmental Sustainability Strategy Department, in April 2017 while restructuring the Sustainability Promotion Department, which promotes sustainable management, in April 2018. The Global Sustainability Committee works at formulating strategic plans and on important issues to promote sustainable management and checks progress. We strive toward making it so that all our corporate activities, including the business activities of the Suntory Group, contribute to the improvement of the sustainability of the overall value chain.

Suntory Group’s Environmental Management Promotion System

- Sunory Holding’s Executive Committee
- Global Sustainability Committee
- Committee per business field
  - Food*
  - Alcohol
- Meeting per functional and focus themes
  - Containers and packaging
  - Production
  - Vending machine
  - Office
  - Distribution

*Sunory Beverage and Food Ltd. is promoting independently with its Environmental Committee
Promotion of ISO14001 Certification Acquisition Throughout the Group

We have actively advanced the acquisition of the international ISO14001 certification standard at each Group company as one method to continually evolve by integrating business and environmental activities. With the completion in acquiring the integrated certification and the start of operations at Group companies* in Japan, we are working to enhance management to abide by laws at sites with a low environmental burden and conduct even more efficient environmental management with these sites as targets from 2017. We are in the process of obtaining certifications at overseas Group companies with focus on our production sites. We are 70% complete in certifying overseas Group company production sites as of 2018.

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

* Group companies complying to the Japanese SOX Act

■Initiatives at production sites

We have also successively advanced the acquisition of the ISO14001 certification since 1998 at production sites and have acquired the comprehensive certification as of today. We are deploying activity examples horizontally and taking both auditors and auditees to the next level by dispatching bilateral internal auditors while appointing auditors at each site as internal ISO14001 auditors. We are also progressing with the acquisition of certifications even at production plants of overseas Group companies.

■Initiatives at Research and Development Sites

We have acquired the ISO14001 certification in 2007 even at research and development sites to accelerate environmentally-friendly initiatives from the research and development stage even further in order to strengthen environmental management throughout the entire value chain.

■Initiatives at the Headquarters and Sales Offices

We have completed the acquisition of the ISO14001 certification at all headquarters and sales departments at Suntory Group companies in Japan. We are also building a PDCA system to reflect the Basic Principles of Suntory Group’s Environmental Policy in the operational objectives of each department and periodically feedback the results of activities to top management.

■Initiatives at Restaurant-related Group Companies

We are acquiring the ISO14001 integrated certification for the headquarters and all stores at restaurant-related Group companies who are increasing their number of establishments in Japan in an effort to save energy and water, reduce food loss, and enhance recycling.

Introducing Environmental Accounting

We use and disclose the content of environmental accounting that conforms to the 2005 Environmental Accounting Guidelines of the Ministry of the Environment. Environment accounting serves as an important tool for periodic quantitative evaluations of our environmental conservation initiatives in our business activities.
## Suntory Group’s Environmental Accounting (total of business in Japan)

*(Period: January 1 to December 31, 2018)*

*(million yen)*

<table>
<thead>
<tr>
<th>Item</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Environmental investment</td>
<td>Environmental costs</td>
<td>Environmental investment</td>
</tr>
<tr>
<td><strong>Business area cost</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pollution prevention cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Preventing water pollution</td>
<td>261</td>
<td>1,903</td>
<td>326</td>
</tr>
<tr>
<td>· Air pollution prevention cost, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global environmental preservation cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· CO2 reduction</td>
<td>871</td>
<td>3,491</td>
<td>266</td>
</tr>
<tr>
<td>· Energy conservation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Cogeneration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Air treatment, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource circulation cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Conserving water through recirculation</td>
<td>17</td>
<td>2,807</td>
<td>67</td>
</tr>
<tr>
<td>· Reducing sludge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Reusing waste</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Wastewater treatment cost, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,148</td>
<td>8,201</td>
<td>659</td>
</tr>
<tr>
<td><strong>Upstream and downstream cost</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Commission for resource recycling containers and packaging</td>
<td>0</td>
<td>1,195</td>
<td>0</td>
</tr>
<tr>
<td>· Environmentally-friendly containers and packaging measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Management activities costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Building and maintaining Environmental Management System</td>
<td>0</td>
<td>1,128</td>
<td>0</td>
</tr>
<tr>
<td>· Sustainability Reports, Exhibits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Factory greenification, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Research and development costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Research and development activities to reduce environmental impact</td>
<td>73</td>
<td>323</td>
<td>1</td>
</tr>
<tr>
<td><strong>Social activities costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Suntory Natural Water Sanctuary</td>
<td>86</td>
<td>410</td>
<td>90</td>
</tr>
<tr>
<td>· Bird Conservation Activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Suntory Mizuiku - Natural Water Education Program, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental damage response cost</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,307</td>
<td>11,258</td>
<td>751</td>
</tr>
</tbody>
</table>

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

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

*In general, all cost for management and research activities are directly confirmed. Costs that are difficult to confirm directly are prorated and allocated based on a past survey of each procedure.*
### Environmental Preservation Effect of Suntory Group (production sites in Japan)

(Period: January 1 to December 31, 2018)

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Reduction against previous fiscal year per unit production basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of pollutant emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOx</td>
<td>Total (t)</td>
<td>12.6</td>
<td>14.4</td>
<td>16.4</td>
<td>-1.5t/year</td>
</tr>
<tr>
<td></td>
<td>Per Unit (g/kℓ)</td>
<td>2.7</td>
<td>3.0</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>NOx</td>
<td>Total (t)</td>
<td>132.4</td>
<td>134.5</td>
<td>147</td>
<td>-7.9t/year</td>
</tr>
<tr>
<td></td>
<td>Per Unit (g/kℓ)</td>
<td>28.3</td>
<td>28.5</td>
<td>30.1</td>
<td></td>
</tr>
<tr>
<td>Preserving global environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO₂ (Fuel + Electricity) Derivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of energy consumption</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel</td>
<td>Total (thousand t)</td>
<td>102</td>
<td>104</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per Unit (kℓ/kℓ)</td>
<td>21.9</td>
<td>22.1</td>
<td>20.8</td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>Total amount (million kWh)</td>
<td>306</td>
<td>332</td>
<td>335</td>
<td>26.6 thousand t/year</td>
</tr>
<tr>
<td></td>
<td>Per Unit (kWh/kℓ)</td>
<td>65.3</td>
<td>70.2</td>
<td>68.6</td>
<td>6192kℓ/year</td>
</tr>
<tr>
<td>Resource circulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainwater</td>
<td>Total amount (thousand m³)</td>
<td>21,332</td>
<td>22,361</td>
<td>22,161</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per Unit (m³/kℓ)</td>
<td>4.5</td>
<td>4.7</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>Reduction of waste emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By-products and waste emissions</td>
<td>Total (t)</td>
<td>244,604</td>
<td>258,027</td>
<td>257,951</td>
<td>8.984t/year</td>
</tr>
<tr>
<td></td>
<td>Per Unit (kg/kℓ)</td>
<td>52.3</td>
<td>54.6</td>
<td>52.8</td>
<td></td>
</tr>
<tr>
<td>Resource recycling rate (%)</td>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

*Electricity based CO₂ emissions are the adjusted emission factors for each electric power company as specified by the Act on Promotion of Global Warming Countermeasures.

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

(million yen)

<table>
<thead>
<tr>
<th>Item</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from recycling (sales of byproducts)*1</td>
<td>339</td>
<td>380</td>
<td>355</td>
</tr>
<tr>
<td>Cost saved by conserving energy*2</td>
<td>496</td>
<td>510</td>
<td>429</td>
</tr>
</tbody>
</table>

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

*2 The calculation method is the same as the costs saved for waste disposal
< Yearly Costs Before Utility × Ratio Compared to Previous Year’s Production Volume - Current Year’s Costs >
## FY2018 Targets, Results and Evaluation

### Prioritized items | FY2018 target | FY2018 results | Evaluation
--- | --- | --- | ---
1. Environmental Management | ISO14001: Maintain certification | Operated and sustained the 2015 certification standards in the environmental management system | ●●●
2. Water resource cultivation and water use reduction | Zone forests in detail and create a 5-year and 10-year mid-term maintenance plan based on various survey results of Natural Water Sanctuaries. Establish a cooperative system with academics with experience, government and foresters to further promote water resource cultivation activities from multiple angles | Clarified the forest we aim for in the future as a mid-term vision and established a maintenance plan, etc. for major Natural Water Sanctuaries | ●●●
| Further enhance information dissemination related to water resource cultivation activities | | ●●●
| Further promote the reduction of water use in production activities | Water consumption per unit of production*1 in Suntory Group*2 plants increased by 2.8% compared to 2015 | ●●●
3. CO2 reduction | Further promote the reduction of CO2 emission in the entire value chain | Suntory Group*1 Scope 1/Scope 2 emissions*1 decreased 0.8% compared to 2015 and Scope 3 emissions decreased 5% compared to 2015 | ●
| Operated at maximum capacity with renewable energy usage facilities in Japan (114.560Mwh/year) | Used renewable energy in a scope compatible with our business activities | ●●
4. 3R in containers and packaging | Reduce | Collected and reused a total of 89 million returnable bottles | ●●●
| Reduce the weight of PET bottles | Continue utilization of RePET Bottles which use 100% reused PET resin through mechanical recycling | ●●●
| Reduce the weight of glass bottles, paper containers, etc. | | ●●●
| Reduce the weight of resin and paper labels and cardboards | | ●●●
| Reuse | | ●●●
| Maintain the system of returnable bottles | | ●●●
| Recycling | | ●●●
| Utilization of RePET Bottles | | ●●●
| Promote the establishment of an efficient and effective container recycling system through participation in activities of recycling organization for each container and packaging materials | | ●●●
5. Reduction and Recycling of Waste | Promoted a high-quality resource recycling that sustains a recycling rate of 100% at plants | Maintained 100% resource recycling rate at plants | ●●●
| Achieved target of Food Recycling Law for each business | Achieved target of Food Recycling Law for each business | ●●●
6. Suntory Mizuiku-Education Program for Nature and Water | Implement a one-day course in Outdoor School of Forest and Water as part of the Suntory Mizuiku - Education Program for Nature and Water which children and parents can participate. Total of approximately 2,000 participants are planned from Hakushu, Okudaisen and Aso Schools | Outdoor School of Forest and Water held a total of 53 times and 1,753 people participated | ●
| Implement a program linked to the subject with subject teachers with the theme of passing down water to the future in Teaching about Water at Schools. Approximately 15,800 participants are planned | Teaching about Water at Schools held at total of 206 schools and 15,971 people participated | ●●●

---

*1 The group of companies of the Suntory Group in 2015 (including overseas companies)

*2 "Per unit of production" refers to the amount purchased, used, or emitted per the amount of one unit. The amount of one unit in production: products 1kℓ
Environmental Management

Environmental Education for Employees

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

Promoting Environmental Education in the Group

We promote environmental education to raise employees’ environmental awareness strategically. In 2018 we implemented various environmental education initiatives including e-learning for all Group employees in Japan and dissemination of information on the Intranet. In addition, we regularly hold workshops and seminars to learn specific skills that are required in each operation.

FY2018 Environmental Training

<table>
<thead>
<tr>
<th>Name</th>
<th>Target</th>
<th>Number of participating employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onboarding training (environmental management class)</td>
<td>New employees</td>
<td>All</td>
</tr>
<tr>
<td>ISO14001 awareness and special education</td>
<td>Plant employees</td>
<td>All</td>
</tr>
<tr>
<td>Environmental management training (e-learning, etc.)</td>
<td>Group employees in Japan</td>
<td>19,701</td>
</tr>
<tr>
<td>Training for newly appointed employees in charge of ISO14001</td>
<td>Employees in charge of ISO14001</td>
<td>5</td>
</tr>
<tr>
<td>Internal ISO14001 auditor training</td>
<td>Internal ISO14001 auditor</td>
<td>118</td>
</tr>
<tr>
<td>Eco-products seminar</td>
<td>Employees in charge of product development</td>
<td>42</td>
</tr>
<tr>
<td>Environmental Law Training</td>
<td>Employees from relevant departments</td>
<td>32</td>
</tr>
<tr>
<td>Wastes Disposal and Public Cleansing Act seminar</td>
<td>Employees from relevant departments</td>
<td>140</td>
</tr>
<tr>
<td>Training held for on-site confirmation of industrial waste</td>
<td>Employees from relevant departments</td>
<td>33</td>
</tr>
</tbody>
</table>
■Raising Awareness among Employees on First Hand Experience with Forestry

We are advancing employee participation in the First Hand Experience with Forestry at Suntory Natural Water Sanctuaries where Group employees and their families have participated in volunteer activities since 2013. We have been engaged in an activity for approximately 7,400 employees in alcoholic and nonalcoholic businesses that encourage employees to participate in first-hand experience with forestry to make each employee experience and understand Suntory’s value of coexisting with nature since 2014. It is still being implemented in new employee training programs.

■Promoting Environmental Action on the Intranet and Internal Magazine

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

The MADO internal magazine and the e-MADO published on our intranet play a role in introducing the latest environmental activities and information of the Suntory Group to not only enlighten employees but also their families.
Only about 0.01% of the entire fresh water on Earth can be used by mankind. Suntory Group business is supported by precious global resources such as water and agricultural products. Suntory Group uses water carefully and not only returns clean water to nature, but protects forests that nurture groundwater and contribute to healthy circulation of water in nature. In other words, we recognize that water sustainability is the most important issue in our business activity.

Realizing Preservation and Regeneration of Natural Environment

The Suntory Group businesses are supported and realized by precious global resources such as water. We are reducing the environmental burden in our business activities to pass down a global environment rich with water and abundant nature to the future generations. We are also promoting activities that contribute to the preservation and revitalization of the natural environment such as the preservation of the natural environment in Natural Water Sanctuaries, Save the Birds activities to share the importance of protecting the wild birds that symbolize a rich ecosystem with society, and the Suntory Mizuiku - Education Program for Nature and Water that communicates the importance of water to children.

Within our Environmental Vision 2050, we declare an ambition to take on the challenge of actively engaging in environmental preservation and restoration activities in the main countries of operation, while also setting various targets for them in the Environmental Targets toward 2030.
Our craftsmanship is only possible through nature’s gifts. It is our duty to nurture and protect water as an invaluable natural resource. Everything we create is grounded in respect and appreciation for water and we are committed to our efforts to keep water in its purest and most abundant form for future generations.

**Sustainable Water Philosophy Overview**

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.

**Establishing Our Sustainable Water Philosophy**

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

**Suntory Group's Sustainable Water Philosophy (Established 2017)**

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

1. Understanding the natural cycle of water
   - We investigate watersheds around our sites to understand the local hydrological cycle, using a scientific approach when needed.

2. Promoting environmentally conscious water use
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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.
Suntory is a "water" company. Without quality water, we are unable to produce any beer, soft drinks, or whisky. This is because water, especially groundwater, serves as Suntory's lifeline. This precious groundwater (natural water) is nurtured in the forest.

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

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

### <Natural Water Sanctuary> Development Targets

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

Video: Philosophy of Activities and Creating Forests that Protect Water and the Future of Life on Earth
- Short Version
Looking at Groundwater -- Comparing simulation models with results from field surveys

One of the main purposes of our Natural Water Sanctuary activities is 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 water resource cultivation activities.
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 activities are diverse and linked organically. In doing so, cooperation based on the knowledge and skills of experts in various fields and of people in local communities is indispensable. We also use Natural Water Sanctuaries to conduct activities including human resource development support for passing on knowledge and skills (road creation, preventing damage from harmful animals, etc.), Suntory Mizuiku - Education Program for Nature and Water, which allows children to experience the importance of forests since they cultivate water, and First Hand Experience with Forestry by Suntory employees.

Suntory continues implementation of Natural Water Sanctuary activities in order to provide the blessing of nature, something that cannot be replaced, to our children, grandchildren, and future generations to come by first humbly listening to various related issues and work together with local communities to gain knowledge.
A Healthy Forest is One Full of Life -- Protecting Biodiversity

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

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

Biodiversity 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, nest building and rearing of chicks by eagles and hawks at all the Natural Water Sanctuaries in Japan has been raised as targets toward 2020 with the purpose of advancing the development of a forest rich with biodiversity by taking the perspective of natural wild birds in the Natural Water Sanctuaries.

Becoming More Familiar with Natural Water Sanctuaries

Ikurinzai - Timber From Cultivated Forests Project

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

Case Examples of Timber Utilization Inside and Outside of the Company
Natural Water Sanctuary Forum 2018

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 activities are invited the form which serves as an opportunity to share the newest expertise and policies for future activities. The forum was held eight times from 2011 to 2018.

First Hand Experience with Forestry by Employees

Many group employees and their families have volunteered in Natural Water Sanctuary activities 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 activity for Suntory Group company employees, mainly current employees of Suntory Holdings Ltd. and Suntory Beverage & Food Ltd.

University of Tokyo “The Wisdom of Water” (Suntory) Corporate Sponsored Research Program

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

Activity Case Examples

“Water Map of Japan”

“Water Drill” educational contents for elementary students

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

**History of Suntory Bird Conservation Activities**

<table>
<thead>
<tr>
<th>Year of activity</th>
<th>Content</th>
</tr>
</thead>
</table>
| 1973年            | - 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年            | - Foundation of the Suntory Fund for Bird Conservation |
| 1990年            | - The 1st Fund Granting Ceremony of the public trust, Suntory Fund for Bird Conservation |
| 1993年            | - Start of the Save 1000 Albatrosses! Campaign |
| 2006年            | - Newly established Grant for Community Bird Activities to the Suntory Fund for Bird Conservation |
| 2014年            | - Newly established Grant for Riparian Large Bird Conservation to the Suntory Fund for Bird Conservation |
| 2016年            | - 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年            | - The 29th Fund Granting Ceremony of the public trust, Suntory Fund for Bird Conservation (Total of ¥456.66 million from the 1st to 29th fund granting have been made to 366 organizations)  
|                  | - Relevant businesses certified under Japan Committee for the United Nations Decade on Biodiversity (UNDB-J) |
| 2019年            | - The 30th Fund Granting Ceremony of the public trust, Suntory Fund for Bird Conservation (Total of ¥496.46 million from the 1st to 30th fund granting have been made to 400 organizations) |
The Hakushu Distillery Bird Sanctuary

We started bird conservation activities in 1973, and in the same year, as the first private company, we opened a wild bird sanctuary in the Hakushu Distillery in Yamanashi Prefecture. Surrounded by rich forests and many clear streams, the Hakushu Distillery is a relay point of migration for wild birds. In the bird sanctuary, Suntory periodically conducts bird research and, together with the local people, engages in forest preservation activities to maintain an environment by various activities including nest box hanging and other activities.

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 180 species of wild birds through illustrations with explanations, bird calls, and pictures. The Bird Watching that Starts Today website recommends bird watching spots nearby while introducing hints and points of caution when observing wild birds. These websites can even be enjoyed while out and about on a smartphone. We are also creating leaflets on how to easily distinguish the birds around you to help in bird watching as well as posters and leaflets about how to easily make feeders, birdbaths and nest to encourage birds into your area.
Suntory Mizuiku - Education Program for Nature and Water

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

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

Suntory Mizuiku-Education Program for Nature and Water celebrates its 15th year in 2019. Suntory Mizuiku-Education Program for Nature and Water is a program unique to Suntory designed for the next generation to realize the beauty of nature and importance of water and the forests that nurture the groundwater and to think about what they can do to ensure there is water in the future. The program centers on two activities: Outdoor School of Forest and Water and Teaching about Water at Schools.

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

■Outdoor School of Forest and Water

This hands-on nature program geared to elementary school students from grades three through six and their parents or guardians is held in the home regions of (Mineral Water) Suntory Tennensui. Participants experience for themselves the importance of water and of the forests that produce it amid the great outdoors at Hakushu (Yamanashi prefecture), Okudaisen (Tottori prefecture), and Aso (Kumamoto prefecture). Around 25,000 students and their parents took part in the program since it began in 2004 through 2018.

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

**Total number of participants at the Suntory Mizuiku - Natural Water Education Program Outdoor School of Forest and Water (total of three schools)**

![Graph showing the number of participants from 2004 to 2018]
Teaching about Water 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. These programs have been held in metropolitan areas from Keihanshin, Aichi, Gifu, Yamanashi, where our natural water plant is located, Tottori, and Kumamoto prefectures with the participation of roughly 137,800 students at approximately 1,800 schools as of 2018.

Total number of participants for Teaching about Water at Schools

![Graph showing the total number of participants for Teaching about Water at Schools from 2006 to 2018.](image)

Outdoor School of Forest and Water

Teaching about Water at Schools
Suntory Mizuiku - Natural Water Education Program Website

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

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

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

Vietnam

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

We developed original education materials in collaboration with international NGOs such as Live and Learn, started collaboration with the Central Council of Ho Minh Young Pioneer Organization as well as the Vietnam National Union of Students from 2017, and have been conducting classes for third and fourth grade children to learn about the importance of water, sanitary management, and the importance of preserving water resources. We are also expanding teaching classes in each region by dispatching qualified Mizuiku instructors as a summer program. Starting in Hanoi City, classes are also taught in Ho Chi Minh City, Bac Ninh City, and Ben Tre City. Since March 2018 we have expanded the program to include Quang Nam Province, Lang Son Province, and Ha Giang Province with approximately 18,000 children participating by the end of 2018.

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.”
■Thailand

From July 2019, we started Suntory Mizuiku - Education Program for Nature and Water in Thailand, the second foreign country in addition to Vietnam to serve as a program target location. Through the collaboration of group company Suntory PepsiCo Beverage Thailand and a local NGO, we plan to have approximately 1,100 fourth, fifth, and sixth grade children from Saraburi Province and Rayong Province, where Suntory PepsiCo Beverage Thailand plants are located, and Chiang Mai Province, which possesses the most water resources in Thailand, participate in the program. It is an original nature experience program which teaches children about the importance of water, the importance of protecting water resources, and similar matters. In addition, in May we prevented sediment based erosion by slowing the currents of streams in northern Chiang Mai Province, installed small weirs to support permeation of underground water, planted trees to prevent soil from flowing into the streams, and carried out other water resource preservation activities which we plan to continue.

■Indonesia

We started the Indonesia Version of Suntory Mizuiku - Education Program for Nature and Water from July 2019. Through the collaboration of group company Suntory Garuda, a local foundation, and a local NGO, we plan to have approximately 1,000 children from 14 elementary schools located in Gowa (South Sulawesi Province), Banjarbaru (South Kalimantan Province), Sidoarjo (East Java Province), and Tangerang (Banten Province) participate in the program. As in Vietnam, we plan to expand classes to teach about the importance of water, sanitary management, and the importance of preserving water resources through an original learning program. The program provides basic knowledge about water, addresses water pollution and how to eliminate it, and explores water preservation efforts that children can contribute to on an individual level. This contributes to improving the environment of children in Indonesia as well as their awareness about sanitation.
To Create Harmony with Nature: Environment

**Measures Against Climate Change**

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

**Continuing activities to reduce environmental impact**

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

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

Initiatives to combat global warming are debated at Global Sustainability Committee under the guidance of the executives in charge. These initiatives are approved on an annual basis and are overseen by the Board of Directors.
Reducing CO2 Emissions throughout the Value Chain

We have set challenges for each division to reduce CO2 emissions throughout the value chain related to our domestic operations, from raw material procurement, manufacture, distribution, sales to recycling. We are striving to meet the Environmental Targets toward 2030 for a 25% reduction in Scope 1 and Scope 2 emissions and a 20% reduction of Scope 3 emissions throughout the entire Suntory Group worldwide.

2018 Results

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

Scope 1/Scope 2 emissions

<table>
<thead>
<tr>
<th>Area</th>
<th>CO2 emissions (thousand tons)</th>
<th>Per unit reduction rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>454</td>
<td>3.1% reduction</td>
</tr>
<tr>
<td>Americas</td>
<td>236</td>
<td>13.7% increase</td>
</tr>
<tr>
<td>Europe</td>
<td>126</td>
<td>6.3% increase</td>
</tr>
<tr>
<td>Asia</td>
<td>122</td>
<td>16.3% reduction</td>
</tr>
<tr>
<td>Oceania</td>
<td>15</td>
<td>34.3% reduction</td>
</tr>
<tr>
<td>Total</td>
<td>953★ (Scope 1: 579★; Scope 2: 374★)</td>
<td>2.4% reduction</td>
</tr>
</tbody>
</table>

* Data covers 25 production plants in Japan and 56 production plants overseas, and non-production sites in Japan (base of operations, R&D facilities, sales sites, restaurants and development sites).

* The above emissions do not take into account the emissions offset by purchasing carbon credits.

* CO2 emissions per unit production are the amount of emissions per kiloliter produced; the reduction rate is shown as a comparison to the previous year.

* Emission factors for GHG calculation are as follows:
  

  CO2 from Electricity consumption: For Japan: The adjusted emission factors for each electric power company specified by the Act on Promotion of Global Warming Countermeasures. For Overseas: As a general rule, emissions factors obtained from electricity suppliers were used. When those could not be obtained, emission factors for each country in 2016 from IEA 2018 were used.

  GHG other than CO2: For 25 plants in Japan: Factors specified by the Act on Promotion of Global Warming Countermeasures. Of which, CO2 emissions from the Suntory Beverage & Food Group are 462 thousand tons★ (Scope 1: 241 thousand tons★ Scope 2: 221 thousand tons★).

* The change in the amount of emissions from the base year 2015 was a 0.8% increase.

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

* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The assured value is indicated with ★.
### Scope 3 Emissions

**Suntory Group**

<table>
<thead>
<tr>
<th>Category</th>
<th>Emissions (thousand tons)</th>
<th>Calculation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purchased goods and services</td>
<td>4,065★</td>
<td>Calculated by multiplying the weight of purchased raw materials and packages for products produced and sold by the food and liquor businesses of Suntory Group (Japan and overseas) by emissions factors. For products produced and sold in Japan, CO2 emissions by subcontracts during production, during the production of imported products, and during transport of imported ingredients are included.</td>
</tr>
<tr>
<td>2. Capital Goods</td>
<td>249</td>
<td>Calculated by multiplying the amount of capital expenditure by the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>3. Fuel-and energy-related activities not included in Scope 1 or 2</td>
<td>118</td>
<td>Calculated by multiplying the amount of energy consumed by the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>4. Upstream transportation and distribution</td>
<td>266</td>
<td>Calculated by multiplying the transportation volume in tons-km of goods owned by the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>5. Waste generated in operations</td>
<td>26</td>
<td>Calculated by multiplying the weight of waste disposed by the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>6. Business travel</td>
<td>15</td>
<td>Calculated by multiplying the amount of business travel expenses of the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>7. Employee commuting</td>
<td>26</td>
<td>Calculated by multiplying the amount of commuting expenses of the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>8. Upstream leased assets</td>
<td>11</td>
<td>Calculated by multiplying the floor area of distribution centers rented by the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>9. Downstream transportation and distribution</td>
<td>202</td>
<td>Calculated by multiplying the transportation volume and sales volume of goods of the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>10. Processing of sold products</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>11. Use of sold products</td>
<td>39</td>
<td>Calculated by multiplying the sales volume of goods of the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>12. End-of-life treatment of sold products</td>
<td>334</td>
<td>Calculated by multiplying the weight of packaging materials for products sold by the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>13. Downstream leased assets</td>
<td>525</td>
<td>Calculated by multiplying the amount of electricity used by vending machines leased by the food and liquor businesses of Suntory Group (in Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>14. Franchises</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>15. Investments</td>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

* Data for the food and liquor businesses of Suntory Group (Japan and overseas).
* For some overseas group companies, values were estimated by using Japan-based emission factors and emission per unit production.
* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The numerical values assured are indicated with ★.
### Measures Against Global Warming

The Suntory Group is also working to combat the effects of global warming. The Suntory Group strives to raise awareness about ways to prevent heat stroke with the rising temperatures at elementary schools and companies with efforts that include the free provision of posters and leaflets (total of 11,860,000 copies distributed as of February 2019) to raise awareness about preventing heat stroke created together with The Education Newspaper to elementary schools throughout Japan and the support of heat stroke measures at each school. We are also linking to other activities to raise awareness about heat stroke by manufacturing and selling GREEN DAKARA as a product designed for rehydration with 40mg/100ml natrium suitable as a heat stroke measure*4.

*4 The amount of natrium recommended by the Ministry of Health, Labour and Welfare as a measure against heatstroke is 40mg-80mg/100ml.

---

<table>
<thead>
<tr>
<th>Category</th>
<th>Emissions (thousand tons)</th>
<th>Calculation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purchased goods and services</td>
<td>2,877★</td>
<td>Calculated by multiplying the weight of purchased raw materials and packages for products produced and sold by the Suntory Beverage &amp; Food Group (Japan and overseas) by emissions factors. For products produced and sold in Japan, CO2 emissions by subcontracts during production, during the production of imported products, and during transport of imported ingredients are included.</td>
</tr>
<tr>
<td>2. Capital Goods</td>
<td>117</td>
<td>Calculated by multiplying the amount of capital expenditure of Suntory Beverage &amp; Food (Japan and overseas) by emissions factors.</td>
</tr>
<tr>
<td>3. Fuel-and energy-related activities not included in Scope 1 or 2</td>
<td>60</td>
<td>Calculated by multiplying the amount of energy consumed by Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>4. Upstream transportation and distribution</td>
<td>195</td>
<td>Calculated by multiplying the transportation volume in tons-km of goods owned by Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>5. Waste generated in operations</td>
<td>20</td>
<td>Calculated by multiplying the weight of waste disposed by Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>6. Business travel</td>
<td>12</td>
<td>Calculated by multiplying the amount of business travel expenses of Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>7. Employee commuting</td>
<td>19</td>
<td>Calculated by multiplying the amount of commuting expenses of Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>8. Upstream leased assets</td>
<td>9</td>
<td>Calculated by multiplying the floor area of distribution centers rented by Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>9. Downstream transportation and distribution</td>
<td>165</td>
<td>Calculated by multiplying the transportation volume and sales volume of goods of Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>10. Processing of sold products</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>11. Use of sold products</td>
<td>32</td>
<td>Calculated by multiplying the sales volume of goods of Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>12. End-of-life treatment of sold products</td>
<td>308</td>
<td>Calculated by multiplying the weight of packaging materials for products sold by of goods of Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>13. Downstream leased assets</td>
<td>483</td>
<td>Calculated by multiplying the amount of electricity used by vending machines leased by of goods of Suntory Beverage &amp; Food (Japan and overseas) by corresponding emissions factors.</td>
</tr>
<tr>
<td>14. Franchises</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>15. Investments</td>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

* Data for the businesses of Suntory Beverage & Food (Japan and overseas).
* For some overseas group companies, values were estimated by using Japan-based emission factors and emission per unit production.
* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The numerical values assured are indicated with ★.
Preventing Global Warming

Initiatives in Production

Reducing CO\textsubscript{2} through Energy-saving and Use of Renewable Energy

We are committed to energy efficiency at Suntory Group plants through production activities harmonized with the environment. Making records of and managing the operational status centrally is useful for employing energy efficient activities in the production process. Furthermore, we are working to combat global warming from a variety of angles, including by switching to low CO\textsubscript{2} emitting fuels and by using renewable energy.

Activities being carried out at plants are shared at regularly-held engineer meetings to expand horizontally.

■ Reductions Made by Introducing Cogeneration Systems

We are utilizing cogeneration system (combined heat and power) in our production activities. This system recovers heat generated from in-house generation and uses it as part of a heat source for preparing beer and extraction of coffee and tea, which increases energy efficiency to 70-80% and reduce CO\textsubscript{2} emissions by 20-30%. As of April 2019, the system is introduced at three plants in Japan. These are the Haruna Plant of Suntory Products Ltd, and the "Natural Water Beer Plant" Tonegawa Brewery in Gunma Prefecture and Kyoto Brewery of Suntory Beer Ltd.

■ Switching to Fuels Low in CO\textsubscript{2} Emissions

Most factories have completed the conversion from using heavy oil to city gas and LNG (liquefied natural gas). These gas fuels have fewer CO\textsubscript{2} emissions per unit of heat and they contain almost no sulfur.

Energy-saving Activities in Accordance with Increase in Production Capability - Suntory Beer Ltd.

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

We have been increasing the use of various kinds of renewable energy at our plants, including the use of solar power, snow ice, biomass and micro-hydro power.

Use of Photovoltaic Energy

The Minami Alps Hakushu Water Plant of Suntory Products Ltd. is installed with the largest photovoltaic panels in the beverages industry, capable of generating approximately 490kW of electricity. They provide some of the plant’s power, and make it possible for us to reduce our CO\textsubscript{2} emissions by approximately 205 tons per year compared to when we buy electricity from a power company.

In addition, The Minami Alps Hakushu Water Plant and Hakushu Distillery introduced lithium-ion battery equipped electric buses for the first time in private company for factory visits in 2011, using electricity generated from photovoltaic power generation at the Hakushu Plant.

Solar power generation equipment has been installed on some of the roofs and premises by Solar Frontier K.K. and the Development Bank of Japan, Inc. at the Suntory Products Ltd. Haruna Plant and Suntory Beer’s Kumamoto Aso Brewery. The two plants generate a combined output of approximately 3.2 MW, which is an equivalent to the yearly power for roughly 660 households. This is estimated to have a CO\textsubscript{2} reduction effect of approximately 1,900 tons.

Use of Snow and Ice Thermal Energy

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

In Okudaisen Bunonomori Water Plant of Suntory Products Ltd., which also is located in region of heavy snowfall, also implements snow room and used as part of thermal control during spring.
Use of Cold Groundwater
We are effectively using cold groundwater that stays at an almost constant temperature (low temperature) throughout the year to cool manufacturing equipment and in other processes at the Hakushu Water Plant of Suntory Products Ltd. In addition, hot and cold water such as effectively recycling heat produced in air compressors and boilers to heat groundwater to prevent condensation when filling plastic bottles with low temperature groundwater.

Promoting the Use of Energy from Biomass
SUNTORY CHITA DISTILLERY LIMITED. has been using residue liquid from distilling and corn residue when making grain whisky as fuel for generating steam needed to heat when distilling since 1997. Approximately 6,000 tons of CO2 can be reduced by reducing liquefied natural gas (LNG) usage with the use of biomass resources. This is the equivalent of roughly 40% of fuel used at SUNTORY CHITA DISTILLERY LIMITED.

CO2 emission reduction

Energy consumption

Fuel (crude oil conversion) consumption

* Data covers 25 production plants in Japan
* Electricity based CO2 emissions are calculated by the adjusted emission factors for each electric power company as specified by the Act on Promotion of Global Warming Countermeasures.
- The total amount of CO2 emissions decreased by 3.2% and CO2 emissions per unit production decreased by 8.5% compared to 2015.

* Data covers 25 production plants in Japan
* Crude oil conversion consumption are calculated using a method specified by the Act on the Rational Use of Energy
- The total amount of fuel decreased by 4.0% and fuel amount per unit production decreased by 9.6% compared to 2017.
Power consumption

* Data covers 25 production plants in Japan
- The total amount of power consumption increased by 1.0% and power consumption amount per unit production decreased by 2.3% compared to 2017.
Preventing Global Warming
Initiatives in Distribution

Implementing Distribution Considering the Environment

We are striving to reduce the environmental impact caused by our distribution and transport operations, from procurement of ingredients and packaging materials to delivery of products to consumers. More specifically, we are promoting a modal shift and the use of larger vehicles, and also have a highly efficient truck transport system in place owing to a computerized system we developed in-house. In 2018, sales (KL) was 106% and the CO2 emissions increased 5% to approximately 133 thousand tons compared to the previous year, but the unit production was 21.9 (CO2 emissions/thousand KL of sales), which was 99% compared to the previous year. We will continue to promote initiatives to further reduce emissions.

Promoting the Use of Larger Vehicles

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

Promoting Modal Shift

We are promoting a modal shift to rail and sea transport which produces fewer CO2 emissions than trucks when transporting over medium to long distances. In 2018, the modal shift rate was 47.8%, 40.6% of which was sea transport and 7.2% of which was rail transport. In the future, we will also steadily promote modal shifts for summer heat waves.
Suntory Liquors Ltd.* has been certified as 1st Eco Ship Mark* certified company in 2009. In addition, Suntory Liquors Ltd. received an Eco-Rail Mark certification from the Ministry of Land, Infrastructure, Transport and Tourism in 2011.

*1 Currently Suntory Spirits Ltd. and Suntory Beer Ltd.
*2 Eco-ship Mark system certifies cargo owners and logistic operators that use more than set amount of sea cargo that is friendly to the environment. Screened by Businesses with Excellent Eco Ship and Model Shift Selection Committee

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

201 of our distribution affiliates (as of FY2018) have acquired certifications, such as the ISO14001 (55 sites) and Eco Stage (141 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 CO2 emissions data such as the monthly distance driven by vehicles, the amount of fuel consumed, and the useful load of distribution affiliates. Moreover, we are supporting the efforts of affiliate companies in initiatives that include raising awareness such as eco driving and promoting the use of green eco belts that can be uses over and over instead of palette warp to prevent cargo from shifting.

Promoting Collaborative Efforts with Other Companies

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

<table>
<thead>
<tr>
<th>Participating Companies</th>
<th>Coordination</th>
<th>Description</th>
<th>Starting Period</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suntory Group</td>
<td>Kirin Group</td>
<td>Joint distribution of soft-drink beverages within Chiba prefecture</td>
<td>July 2009</td>
<td>Reduced CO2 emissions approx. 46 tons/year</td>
</tr>
<tr>
<td>Suntory Logistics Ltd.</td>
<td>Toyobo Logistics Co., Ltd.</td>
<td>Each company packs cargo on return trips in vehicles that only have one-way cargo</td>
<td>January 2010</td>
<td>Reduced CO2 emissions approx. 100 tons/year</td>
</tr>
<tr>
<td>Suntory Logistics Ltd.</td>
<td>Toshiba Lighting &amp; Technology Corporation</td>
<td>Joint use of railway containers</td>
<td>January 2011</td>
<td>Reduced CO2 emissions approx. 140 tons/year</td>
</tr>
<tr>
<td>Suntory Group</td>
<td>Four beer companies</td>
<td>Joint distribution in some areas of Hokkaido (Kushiro/Nemuro)</td>
<td>September 2017</td>
<td>Reduction of approximately 330 tons of CO2 emissions per year (*Figures apply to all four beer companies)</td>
</tr>
</tbody>
</table>

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

One of our social responsibilities is to engage in reduction of the environmental impact caused by transporting import goods. We have been conducting an initiative to handle export goods by jointly using the containers that we use with other companies within the country based on this belief in February 2011. Up until now, we have been able to realize efficient transport reducing our CO2 emissions through the round-trip use of containers that would have flown back empty.

This initiative was presented the Minister Prize of Economic, Trade and Industry at the Green Logistics Partner Awards announced in December 2013.
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 CO2 in the entire value chain.

Key Features of Suntory Vending Machines

- **Heat-pump Function**: This allows to recycle the heat generated in the cooling chamber for the heating chamber.
- **Peak-cut feature**: Cuts cooling for a fixed period of time to help balance power usage during peak hours, up to a maximum of 11 hours in summer.
- **Vacuum Heat Insulation**: Improves energy efficiency to prevent loss of heating and cooling.
- **Zone Heating and Cooling**: Reduces power consumption through heating and cooling products just prior to actual sales.
- **Promoting a 24-hour Lights Out**: With indoor vending machines having a 24-hour “Lights Out” rule and outdoor machines having no lighting during daytime hours, the industry is now aiming for 50% of the 2005 power consumption figure by 2020.
- **Smart Energy-Saving Feature**: Determines sales quantities and temperature of products, reduces power consumption accordingly.
- **LED Illumination**: Uses LED lighting for reduced power consumption.
- **Dimmer Function**: Incorporates light dimmer that reduces brightness by 50%.
- **Fluorocarbon measures**: Use of coolant (CO2, HFC-134a) minimizing global warming to prevent destruction of the ozone layer.
- **Initiatives to Reuse Vending/Machine Parts**: In order to make use of parts retrieved from retired vending machines, Suntory has been working to develop both the technology to reuse parts as well as a control system for stock of reuse parts.

Reducing Energy Consumption of Vending Machines

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

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

In addition, by fitting refurbished machines*1 with heat-pump equipment, the ratio of heat-pump vending machines against all Suntory vending machines was 73% in the end of 2018.

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

*1 Vending machines that have been removed from service, refurbished, and reinstalled for retail use
*2 Vending machine that is capable of suspending cooling for extended time due to high refrigerant effect by using vacuum heat insulation materials, etc. Refrigeration is suspended for 8 to 14 hours each day.
Introducing Vending Machines with the Smallest Power Consumption in Japan

In April 2014, we began adopting "Extremely-Energy-Saving Vending Machines" (Eco Active Machines) that operate on approximately half the energy consumption (420kWh/year) compared to conventional heat-pump vending machines with the cooperation of machinery manufacturers. The use of two compressors, one dedicated to heating and the other to cooling, and the use of various latest technologies such as inverter control, vacuum heat insulation materials, electronic expansion valve, and LED lighting to control energy consumption to an optimum condition to realize lowest electricity consumption in Japan*1.

*1 Compared to a selection of 25 primary automatic vending machine manufacturers in Japan as of January 2019 (Survey conducted by Suntory Beverage Solution Ltd.)

What is a heat-pump vending machine?

In Japan, a heat-pump vending machine 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.

Promoting a 24-hour Lights Out

To promote reductions in CO2 emission and combat global warming, vending machine manufacturers have promoted energy-saving measures since 1991, prior to establishment of the Kyoto Protocol. As a result, during the 15 years leading up to 2005, we achieved an approximate 50% reduction in energy consumption per vending machine. The industry also agreed to aim for a further 37% reduction by 2012, in comparison to 2005 figures, with indoor vending machines having a 24-hour "Lights Out" rule and outdoor machines having no lighting during daytime hours*. The industry met its goal in 2011. As a follow-up midterm goal, the industry is now aiming for 50% of the 2005 figure by 2020.

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

Controlled chlorofluorocarbons that destroy the ozone layer are not used for refrigerants in our vending machines today. New vending machines that are introduced also use no chlorofluorocarbons substitutes that have a large impact on global warming. All of our machines use a refrigerant with a low global warming coefficient such as natural refrigerants and R-1234yf.

■Initiatives to Reuse Vending Machine Parts

We are actively conducting initiatives to realize effective use of resources even in vending machines. We are advancing development of technology toward the reuse of parts as well as management systems for the reuse of parts in order to use vending machine parts that are collected in vending machines again. In 2018, the reuse rate of parts that required repair or maintenance was 61%. We are striving to effectively use resources by expanding the components to reuse parts even further in the future.

■Ensuring Reasonable Waste Disposal of Vending Machines

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

■Installation of Vending Machines to Provide Beverages in Emergencies

We are developing and advancing the installation of vending machines to provide beverages in emergencies to contribute to building cities able to combat disasters. This system normally sells beverages from vending machines in peace times but will provide them for free during emergencies such as when disasters strike. Beverages can be easily accessed even if the power goes out. Many people used this system after the Great East Japan Earthquake that struck in March of 2011. We are progressing with the installation of these vending machines centered upon public institutions, hospitals, and companies with roughly 21,000 units put in place through the end of 2018 by implementing wire type vending machines that have the benefit of not requiring maintenance in addition to battery-type vending machines. In Japan, we plan to actively introduce these types of vending machines in the future.
Environmental Activities in Sales Divisions

■ Reducing Environmental Impact of Sales Vehicles
We are promoting introduction of hybrid vehicles and other energy-saving vehicles for use in sales activities. In addition, we have introduced vehicle traffic control system that acquire travel data such as distance traveled, driving behavior and fuel efficiency in sales vehicles. We promote safe driving and eco-driving by feeding back the result of the analysis of collected data.

■ More efficient Vending Machine Operations by Introducing Wireless Systems
Suntory Beverage Service Ltd., which includes secondary products for soft drink vending machines to expand the vending machine operations each day, introduced wireless systems to vending machines operating throughout Japan in 2013. We are able to analyze information such as the type and amount of products for refilling, the timing for refilling, and the most efficient route for refilling of each vending machine while allowing us to instantaneously obtain the sales trends of each and every vending machine. We have reduced the number of visits to vending machines through the use of this wireless system, which has connected to reducing environmental impact by decreasing power lost when opening and shutting vending machines when conducting operations such as refilling products.

Environmental Activities in R&D Sites
Since acquiring ISO14001 certification in 2007, the R&D sites (World Research Center/product development center) where about 700 employees work has been promoting environmental activities incorporated in daily work in the entire division. In 2013, the site acquired comprehensive certification from an external certification agency to operate under the ISO14001 throughout the entire Group to strengthen coordination with other divisions as a Research & Technology Development Division that has strong connection with the Group’s entire value chain. It also promotes activities to reduce environmental impact in corporation with plants and sales divisions while incorporating environmental considerations into daily operations.

Environmental activities in the restaurant business
The Pronto Corporation is promoting environmental management through a variety of environmental initiatives, including the Pronto Love Green activity that donates a portion of the revenue from menus and the total amount of in-store donations to environmental greening, the adoption of glasses to use in stores made from recycled bottles of Kakubin Whisky, the provision of a choice menu of domestic ingredients that give diners a taste of the local bounty, reduction of food waste as well as the adoption of energy saving equipment. Furthermore, Pronto Corporation satisfied the certification criteria for the first restaurant eco mark in Japan as a certification program for restaurants created by the Eco Mark Office in 2017 and earned the right to use the eco mark for chain restaurants. The Pronto Love Green Activity that has been underway since 2008 donated a total of 91,306,624 yen in 2018 and was given letters of thanks three times from the Minister of Agriculture, Forestry, and Fisheries.
Environmental Activity in the Office

Installing Energy-saving Equipment and Reduction of CO₂ and Water Consumption by Employee Action

Various initiatives are carried out by all employees daily with higher awareness on saving energy in each office. The Odaiba Office in Tokyo installs photovoltaic power generation, use of reused water, automatic lighting control system, and human detection sensors for lights in toilets and escalators. Reduction of CO₂ emission are being promoted in each office by implementing cool biz and warm biz and actively using web conference system.

Latest Environmentally-friendly Equipment

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

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


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

Green Procurement and Purchase

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

Promoting Green Procurement

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

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

### Suntory Group Green Procurement Standard (revised 2011)

1. **Basic policy**

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

2. **Prioritized items**

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

Promoting Green Purchase

When actually purchasing an item, we promote Green Purchase based on the Green Purchase Guideline which sets standards for determining whether it’s a Green Purchase with the goal of making more Green Purchases than in the previous year. We also implement online purchasing system that registers a standard Green Qualified Items and deploying it to Group companies. Furthermore, we uses work uniforms made using fibers from recycled PET bottles according to seasons in production plants.
The Suntory Group has formulated the Plastic Policy to provide strong leadership for transforming our current society into a recycling-oriented and zero carbon society, aiming toward the realization of a sustainable society. Our group is promoting sustainability management globally with the aim of realizing our mission “To Create Harmony with People and Nature” as stated in our corporate philosophy. In the field of containers and packaging, we have developed the world’s first F-to-P direct recycling technology (see news release No. 13428) which eliminates some PET bottle recycling processes and simultaneously reduces environmental impact and increases recycling efficiency.

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

Based on this newly established Plastic Policy, we aim for 100% sustainability by using only recycled or plant-derived materials for all PET bottles used globally by 2030 and achieving zero use of virgin petroleum-based materials.

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

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

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

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

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

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

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

Participation in the Clean Ocean Material Alliance (CLOMA)

The Suntory Group has been participating in CLOMA, a public-private alliance established in January 2019 at the request of the Ministry of Economy, Trade and Industry since the alliance was established. Through this alliance, we aim to build an efficient recycling system that responds to country specific conditions by working closely with government agencies and the industry to develop and promote the use of plastic substitute materials and through information dissemination to overseas countries and technical consulting.
Aiming to help bring about a recycling-oriented society, we promote the effective use of various resources such as water and other bounties of nature.
Effective Use of Resources

Effective Use of Water Resources

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

Enhanced 3Rs for Water to Reduce Water use

The Suntory Group’s plants use a large amount of water, for example, in cleaning production equipment and cooling, in addition to using it as an ingredient in our products. In order to conserve limited water resources, we intensify our activities to achieve targets toward 2030 of “Reduce water consumption at the Suntory Group plants worldwide by 15%" through enforcement of 3Rs for water, ensuring that the minimum amount of water is required (Reduce), water can be used repeatedly (Reuse), and water can be processed and used elsewhere (Recycle).

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

Water Use Performance 2018

<table>
<thead>
<tr>
<th>Area</th>
<th>Water use (thousand m³)</th>
<th>Change in amount of usage per unit production*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>22,161</td>
<td>4.2% decrease</td>
</tr>
<tr>
<td>Americas</td>
<td>8,366</td>
<td>8.4% increase</td>
</tr>
<tr>
<td>Europe</td>
<td>5,780</td>
<td>0.4% decrease</td>
</tr>
<tr>
<td>Asia</td>
<td>5,809</td>
<td>0.5% decrease</td>
</tr>
<tr>
<td>Oceania</td>
<td>576</td>
<td>8.6% decrease</td>
</tr>
<tr>
<td>Total</td>
<td>42,692★</td>
<td>2.2% decrease</td>
</tr>
</tbody>
</table>

* Data covers 25 production plants in Japan and 56 production plants overseas
* Per unit production is the amount of usage per kiloliter produced; the reduction rate is shown as a comparison to the previous year
* The reduction rate was 6.4% from 2015, which is the base year.
* Therein, the water use by Suntory Beverage & Food Group companies in Japan and overseas was 22,526 thousand m³★
* Results have received independent assurance from KPMG AZSA Sustainability Co., Ltd. The assured value is indicated with ★.
When selecting equipment and devices in our plants, we follow the "3Rs of Water": Reduce the amount of water as much as possible, Reuse water, and Recycle water through treatment.

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

### Applying 3Rs in Water Usage

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

### Water use

* Data covers 25 production plants in Japan
* Per unit production is the amount of usage per kiloliter produced
- Result: Total amount decreased by 0.9% and 4.2% per unit production compared to previous year

### Using Cascades of Water

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

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<table>
<thead>
<tr>
<th>Intake source</th>
<th>Amount of water (thousand m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>Groundwater</td>
<td>17,643</td>
</tr>
<tr>
<td>Rivers/lakes</td>
<td>12,788</td>
</tr>
<tr>
<td>Rain water</td>
<td>1</td>
</tr>
<tr>
<td>City water</td>
<td>10,080</td>
</tr>
<tr>
<td>Water supplied from external sources (recycled water)</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>40,511</td>
</tr>
</tbody>
</table>

* Data covers production plants in Japan and 56 production plants overseas in 2018
* Since the calculation method was revised, the amount of water used in the past fiscal years was changed.

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

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Comprehensive Waste Water Management

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

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

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

### Water discharge

<table>
<thead>
<tr>
<th>Destination</th>
<th>Waste Water (thousand m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>Rivers/lakes</td>
<td>14,948</td>
</tr>
<tr>
<td>Sea</td>
<td>0</td>
</tr>
<tr>
<td>Sewers</td>
<td>7,570</td>
</tr>
<tr>
<td>Others (for watering plants, etc.)</td>
<td>232</td>
</tr>
<tr>
<td>Total</td>
<td>22,750</td>
</tr>
</tbody>
</table>

* Data covers 25 production plants in Japan and 56 production plants overseas in 2018
* Therein, the waste water from Suntory Beverage & Food Ltd. plants in Japan and overseas amounts to 12,868 thousand m³
Effective Use of Resources

3R in Containers and Packaging

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

Setting Environmental Standards for Containers and Packaging

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

Three Rs of Containers and Packaging

The Suntory Group works to develop containers and packaging that give consideration to the environment, based on the Three Rs of “Reduce, Reuse, and Recycle”. We work on designs that take into account usability from the point of consumption by the customer to recycling, and focus on designs that are lighter as well as use materials that have a lower impact on the environment and are easier to recycle. We also work in collaboration with various recycling organizations and local governments to promote recycling.

Policy on 3Rs of Containers and Packaging
Initiatives in Plastic Bottles

We are dramatically decreasing the amount of resources that we use and are actively introducing renewable resources as a measure to limit the environmental impact as much as possible. At the same time, we are conducting design and development while also taking into account the usability by customers.

2R+B strategy

In regards to plastic bottle containers, we are striving forward according to our 2R+B strategy that is unique to Suntory. The concept is to make thoroughly efficient use of resources by reducing the amount of resins used, and by using recycled materials, while replacing petroleum-based raw materials with bio-based raw materials as much as possible in the development.

Reduce: Lightweighting

Environmentally-friendly Green Eco Bottle*1

The 550ml plastic-bottled (Mineral Water) Suntory Tennensui renewed in May 2013 is packaged in the lightest plastic bottle in Japan*2 (11.3g) developed by Suntory’s technology, which resulted in approximately 40% reduction of using petroleum-derived ingredients per bottle. The weight of 2ℓ bottles is reduced by 20% per bottle compared to conventional bottles. By bringing the weight to 29.8g, we were the first in Japan to achieve the weight of less than 30g for 2ℓ bottles.

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

*2 Plastic bottles for mineral water (500ml to 600ml) in Japan. As of April 2019

Introducing Record Breaking Thinnest Roll Label*3 for Plastic Bottle Beverages in Japan

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

*1 These labels are not removed through the use of perforations; instead, the glued portion is peeled off.
*2 1/1,000mm
*3 Reduction rate in the film (label) manufacturing process
Adoption of the Japan’s lightest bottle cap that uses 100% bio-based PET materials\(^1\).

We are also reducing our environmental impact in the bottle caps on plastic bottles. Since September 2016, we have adopted 1.85g bottle caps, which are the lightest in Japan\(^3\) that use 30% bio-based PET materials for Suntory Minami-Alps Tennensui mineral. This innovation reduces the use of petroleum-derived raw materials by 35%\(^2\) and decreases CO\(_2\) emissions by 27% compared to conventional PET bottle caps.

In addition, we have evolved our environmental efforts by using biomaterials and from March 2019 started using a polyethylene cap made ethylene which is 100% plant-derived for our 550mL Suntory Aso Natural Water bottles at our Kyushu Kumamoto Plant (Kamimashiki District, Kumamoto Prefecture). This innovation reduces the use of petroleum-derived raw materials by 90%\(^4\) and decreases CO\(_2\) emissions by 56% compared to current PET bottle caps.

\(^1\) Polyethylene caps made from 100 percent plant-derived raw materials in place ethylene, the main raw material. However, except for traces of oil-derived components and coloring components when the manufacturing line is switched
\(^2\) As of April 2019
\(^3\) One bottle of Suntory Tennensui Mineral Water (550mL)
\(^4\) One bottle cap of Suntory Tennensui Mineral Water (550mL)

Evaluation from Society
Suntory Beverage & Food Ltd. was awarded the 2016 Minister of the Environment Award for Promoters of the Development of a Recycling-Oriented Society for the high praise that it received for activities to reduce the environmental impact, which includes the adoption of the world’s first soft drink plastic bottle cap that uses 30% bio-based PET materials.

Primary lightweight plastic bottle products

Initiatives in In-house Blow Molding PET Bottles
In Minami Alps Hakushu Water Plant of Suntory Products Ltd., PET bottles are manufactured by blowing PET preform from PET resin. A comprehensive design and management from shaping bottles to filling them is made possible, making it easier to reduce the amount of resin used and weight of the bottle.

In addition, use of fuel and CO\(_2\) emission from transporting and purchasing already made PET bottles. Furthermore, we reuse high pressure air used during shaping of PET bottles to use energy effectively and reduce CO\(_2\) emission.
Introducing Thinnest Shrink Labels in the World through New Technology

There are primarily two types of labels for the product labels for soft drinks -- roll labels and shrink labels. Roll labels are labels wrapped around bottles in which thinning of the label can be adopted, but there are some limitations according to the bottle geometry. On the other hand, shrink label uses thermal contraction, enabling use for various shapes of bottles but there is a limiting thinning due to its process.

Thus, we have commercialized Roll On Shrink On (ROSO) method that has the characteristics of both shrink label and roll label to realize thinning of labels without being effected by the shape of the bottle. The world’s thinnest 18µm shrink label was introduced in some products, including the 420ml Orangina bottles. This reduces CO2 emissions by 50% or more.

Plastic Bottle Development in the Spirits Business

We are taking great advantage of the technology cultivated in our soft drink business in our spirits business. Suntory Spirits Ltd. has launched the 450ml PET bottle, which is the lightest in Japan, to whisky products such as Kakubin, Torys and other alcoholic products starting from June 2016. We are reducing the amount of the PET plastic used through a maximum of an 18% reduction from the conventional 134g and 120g bottles to reduce the yearly CO2 emissions by approximately 460 tons (17%)*. The bottles are also been made easy-to-use by removing the handle area that had adopted conventional PET bottles and applying a new grip area deep in the center of the bottle with the cooperation of plastic bottle manufacturers.

* Company calculations

Development of Extremely Lightweight* Heat-resistant Plastic Bottles Through the Use of Japanese Technological Skill

The Japanese manufacturing technology and design skills for reducing weight of plastic bottles have been used in Group companies in Europe. In 2017, we have successfully developed a heat-resistant PET bottle for Vietnam that is the lightest in South East Asia (18g). Creating the lightest heat-resistant bottle project was a technological challenge in this region, but we have succeeded in the project through mutual cooperation with Suntory MONOZUKURI Expert, Ltd. and Suntory PepsiCo Vietnam Beverage Co., Ltd.

* For 500ml class heat-resistance PET bottles (at the time of introduction in April 2019)

As a further effort, Suntory MONOZUKURI Expert Ltd, Suntory Garuda Beverage, and equipment manufacturers collaborated in 2018 in Indonesia to utilize technology for using uplift pressure on resistant PET bottles, successfully developing a heat resistant PET bottle that is lighter at 17g.
RePET Bottles for Horizontal Recycling of PET Resin in Japan

In 2011, Suntory Beverage & Food Ltd. partnered with Kyoei Sangyo Co., Ltd. to develop the Japanese beverage industry's first B-to-B*1 mechanical recycling system*2 for PET bottles. Reused PET resin was 50% at the time of introduction but after confirming that stable supply was possible after about a year of operation, we increased the percentage of reused PET resin to 100%. This realized manufacturing of reused PET bottle that reduce CO2 emission (including CO2 emission from manufacturing PET resin) by 83%*3 compared to bottles made by 100% oil based materials. This PET bottle using 100% reused PET resin is used for many products including 2.5 Suntory Oolong Tea and Iyemon.

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

Adoption of F-to-P direct recycling technology

In 2017, as part of our recycling efforts, we worked with Kyoei Sangyo Co., Ltd. and overseas machine manufacturers (EREMA in Austria and SIPA in Italy) to succeed in developing F-to-P direct recycling technology expected to be effective in further reducing the environmental burden, and started manufacturing in the fall of 2018. F-to-P direct recycling technology can directly manufacture preforms after processing crushed and cleaned flake from recycled PET bottles through a high-temperature dissolving process. Compared to the conventional system which required several processes such as crystallization and drying before manufacturing preforms, the F-to-P direct recycling technology can reduce CO2 emissions 25%* (manufacturing 1 kg of preforms for PET bottles).

* Processes from spent PET bottles to the preform
Introducing and Promoting Product Labels Made with Recycled PET Bottles

Suntory Beverage & Food Ltd. introduced product label made with recycled PET bottles in part of 2 bottles for major non-alcoholic beverages such as (Mineral Water) Suntory Tennensui, Iyemon and Suntory Oolong Tea in November 2010 and currently uses role label* method for all its products. This label is the first role label in the industry to use recycled PET bottles and the percentage of recycle PET bottles used has been increased from 60% to 80% in March 2012.

* These labels are not removed through the use of perforations; instead, the glued portion is peeled off.

Bio: Actively Use of Plant-derived Resin

Aiming for 100% plant-derived plastic

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

Suntory Holdings Ltd. and Anellotech, Inc., a green innovation and technology company in the United States, have worked in a collaborative development of a plastic bottle that uses 100% plant-derived raw materials, and construction has begun in 2016 on a development and testing plant to produce plastic bottle materials in the state of Texas. We are planning to initiate the introduction of plastic bottles made from 100% bio-based PET materials around the (Mineral Water) brand of Suntory Beverage & Food Ltd. in the future. In development, we are aiming to generate only plant-derived raw materials of non-foodstuff (wood chips) so that we do not impact the supply chain of foodstuff ingredients with paraxylene, which is a precursor of terephthalic acid that makes up 70% of the raw materials for plastic bottles.

Efforts in Cans, Glass Bottles, and Barrels

Reduce: Lightweighting

Lightweighting in Cans

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

We have conducted initiatives for aluminum cans that include shrinking the diameter of the lid of beer cans in 2008 and the bodies of aluminum cans containing low-alcohol beverages such as beer and Chu-Hi in 2014. In addition, the promotion of even more lightweighting is underway with the introduction of thinner bodies even in steel cans for coffee.
Lightweighting in Glass Bottles
The medium-sized glass bottle for The Premium Malt’s has achieved weight savings of roughly 10g to 460g in 2014. The thickness of the body section that the label is adhered has been designed 0.2 to 0.3 millimeters thinner to prevent damage by bumping into other bottles. We are also improving the shape of the bottle so it does not get damaged when opening the bottle with cap opener and other improvements in the quality of the bottle.

Returnable containers for soft drinks had also conventionally used different bottles for each and every brand, but we standardized the specifications* in May 2016 to allow for bottles to be both pressure and heat resistant for the first time in Japan. The CO2 emissions were also reduced by 500 tons per year by reducing the conventional weight (300g-399g) drastically in these containers (245g).

* Targets for bottle lightweighting are our Soda, Ginger Ale, Tonic Water, Oolong Tea, Orangeaid, and Pepsi.

■ Reuse: Promoting Collection and Reuse of Containers
Reusing Glass Bottles and Barrels
Returnable containers (bottles, barrels, etc.) 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 (in 2017, 94 million bottles were collected and reused). 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.
Non-returnable bottles are also effectively separated and collection routes utilized such as in each municipal.

Initiatives for Paper Packs and Cardboard
■ Reduce: Lightweighting
Reducing Weight of Cardboard
The Suntory Group has been participating in The Consumer Goods Forum Japan* that was launched in August 2011 to engage in activities to solve common issues in Japan. As part of the initiative, short flap cardboard cartons for beverages of small size plastic bottles started from spring of 2012 with the aim of contribution to environmental issues (preventing global warming, reducing waste, etc.) and improving work efficiency in the supply chain. Through this, we reduced the use of paper by about 20% compared to conventional cardboards.

* An organization of companies that agree with the philosophy of The Consumer Goods Forum (TCGF) that act on their own in Japan. It mainly consists from Japanese companies from consumer goods distribution industry and cooperatively engage in initiatives related to manufacturing, distribution and sales.
Recycle: Easier-to-Collect Containers

Shifting to recyclable paper containers

From April 2010, paper containers for shochu and spirits have been gradually changed to more recyclable containers, and most has completed transition. In February 2014, we introduced similar paper containers with the renewal of Japanese casual wine “Delica Maison Delicious.” 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 instead uses evaporated silica (glass material), which is more suitable for recycling.

Achieved 100% Use of FSC-certified Cardboard

The Suntory Group is gradually adopting paper packaging materials that have acquired the FSC certification*1 that ensures proper management of international forests for products made in Japan. Suntory Beverage & Food Ltd. introduced FSC-certified cardboard packaging to (Mineral Water) Suntory Tennensui for products manufacture from August 2017. Since the end of February 2019, we have achieved 100% use of FSC-certified cardboard used for packaging all our Suntory Tennensui brand products. We are promoting the use of FSC-certified paper packaging materials throughout the Group with the sequential adoption of these materials for Suntory Beer Ltd. and Suntory Spirits Ltd. products and as packaging for six packs.

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

Collaboration for Container Recycling

Suntory Group uses vast amount of container’s in its business. We are committed to recycling containers to reduce environmental impact in collaboration with industry organizations and local governments, as well as with our consumers. For example, we agree with the theme of 9 Tokenshi Containers and Packaging Diet Statement* promoted by 9 Tokenshi Waste Issue Exploratory Committee and participate in its activities.

In addition, Suntory Group comply with Containers and Packaging Recycling Law and bear the cost for commissioning remerchandising as a responsibility of business operator and participate in each recycling industry organizations to build efficient recycling system and promoting recycling.

* A cooperative initiative of nine prefectures and cities (Saitama, Chiba, Tokyo, and Kanagawa prefectures and cities of Yokohama, Kawasaki, Chiba, Saitama and Sagamihara) and companies that are making initiatives to reduce weight of containers and packaging.
The issue of oceanic pollution due to plastic bottles and other plastic containers is a serious one. The problem is being debated as an environmental issue around the world. The Suntory Group strives to resolve this issue by actively cooperating with countries, regions, and industries in various initiatives as a beverage company who handles many of these containers. We have always been promoting 2R+B while expanding activities to raise consumer awareness about recycling. In the future, we aim to improve the recycling rate even further in each country and region around the world and will encourage activities to promote improvements together with our various stakeholders.

In addition, as a part of the employee volunteer activities, each member of the company sees this issue as something that needs to be handled at the individual level and takes action through efforts including participating in the Beach Cleanup Activity sponsored by a non-profit organization in Japan, and participating in cleanup activities in the Chicago River basin overseas (Beam Suntory employees). We are conducting enlightenment activities to encourage employees to volunteer in similar cleanup efforts.

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

Collection of Bottles
Spent plastic bottles had been conventionally recycled and reused after collection for goods such as textiles and food containers, but these materials can now be recycled and reused as new plastic bottles.

Collection of Glass Bottles
A collection and recycling route has also been established for glass bottles, which have a long history of use as beverage containers. Returnable bottles are collected and cleaned for reuse as beverage containers while one-way bottles are collected after use and fabricated into cullet (finely broken glass bottles) to mainly use as a raw material in manufacturing glass bottles. Moreover, this cullet is use for applications besides bottles such as insulation, tiles and road surfaces.

Collection of Cans
Spent cans (aluminum/steel) can be traded as a valuable resource, and these materials are reused for cans, motor vehicles, construction materials and more through a wide range of routes.
Effective Use of Resources
Promoting the Reduction and Recycling of Waste

As part of our efforts toward establishing a recycling-oriented society, Suntory works to reduce byproducts and waste generation, and attain a 100% resource recycling rate.

Byproducts and Waste Generation Performance 2018

<table>
<thead>
<tr>
<th>Area</th>
<th>Emissions (thousand tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>258</td>
</tr>
<tr>
<td>Americas</td>
<td>187</td>
</tr>
<tr>
<td>Europe</td>
<td>95</td>
</tr>
<tr>
<td>Asia</td>
<td>28</td>
</tr>
<tr>
<td>Oceania</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>574★</td>
</tr>
</tbody>
</table>

* Data covers 25 production plants in Japan and 56 production plants overseas
* Therein, the byproducts and waste generated by Suntory Beverage & Food Group companies in Japan and overseas amount to 150 thousand tons★

Maintaining a 100% Resource Recycling Rate

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

In 2018, our plants in Japan (including Group companies) generated 257,951 tons of byproducts and waste. This means total waste generated is the same and by-products and waste amount per unit of production decreased by 3% compared to 2017. The resource recycling rate has been maintained at 100%.

By-products and waste generation

* Data covers 25 production plants in Japan
### By-products and Waste generation, recycling rate and the purpose of use for recycled products

<table>
<thead>
<tr>
<th>Type of waste</th>
<th>Main Purpose of Use</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Generation (t)</td>
<td>Recycling Rate(%)</td>
<td>Generation (t)</td>
<td>Recycling Rate(%)</td>
<td>Generation (t)</td>
<td>Recycling Rate(%)</td>
<td>Generation (t)</td>
</tr>
<tr>
<td>Vegetable (glycation, tea, coffee dregs, etc.)</td>
<td>Animal feed</td>
<td>181,515</td>
<td>100</td>
<td>187,439</td>
<td>100</td>
<td>186,184</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Fertilizer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sludge (excess sludge, etc.)</td>
<td>Fertilizer</td>
<td>30,100</td>
<td>100</td>
<td>29,522</td>
<td>100</td>
<td>27,194</td>
<td>100</td>
</tr>
<tr>
<td>Wood waste (cask, palette)</td>
<td>Animal feed</td>
<td>3,266</td>
<td>100</td>
<td>2,693</td>
<td>100</td>
<td>1,610</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Fertilizer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass and ceramic scrap</td>
<td>Glass materials</td>
<td>4,109</td>
<td>100</td>
<td>3,928</td>
<td>100</td>
<td>4,136</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Base course material</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper scraps (cardboards, paper labels, etc.)</td>
<td>Recycled paper</td>
<td>5,727</td>
<td>100</td>
<td>6,192</td>
<td>100</td>
<td>6,175</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Cardboard materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td>- Palette</td>
<td>4,026</td>
<td>100</td>
<td>4,287</td>
<td>100</td>
<td>4,938</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>- Solid fuel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Plementary fuel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal scraps (aluminum, steel)</td>
<td>Aluminum</td>
<td>2,600</td>
<td>100</td>
<td>3,016</td>
<td>100</td>
<td>3,277</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Steel ingredients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>2,870</td>
<td>100</td>
<td>2,725</td>
<td>100</td>
<td>3,182</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>234,214</td>
<td>100</td>
<td>239,801</td>
<td>100</td>
<td>236,697</td>
<td>100</td>
</tr>
</tbody>
</table>

* Data covers 25 production plants in Japan
Izutsu Maisen Co., Ltd. is actively striving to reuse food loss to not waste the invaluable blessings of nature. One predominate initiative is the setup of a recycling circulation cycle for the crusts of bread.

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

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

Product line-up of the Suntory Whiskey Barrel Furniture 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 striving to reuse food loss to not waste the invaluable blessings of nature. One predominate initiative is the setup of a recycling circulation cycle for the crusts of bread.

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

Preventing Pollution and Management of Chemical Substances

We are implementing necessary measures to address environmental risks recognizing that even though we mostly use ingredients of natural origin, they still might produce negative impacts on the environment.

Environmental Risk Management Strategies

As products that Suntory Group offers mainly use agricultural products and water, environmental risk originating from ingredients are low compared to other industries. Nevertheless, chemicals are used for cleaning and sterilizing equipment in the production process, which may pollute surrounding environment. Thus, we consider every possibility of abnormalities and emergencies, evaluate risks and implement countermeasures.

Preventing Air Pollution

Suntory Group manages substances that pollute the air in gas emission of boilers, etc. by transferring to gas fuels that does not include sulfur content, introduces low-NOx burners, etc. and reduce SOx and NOx emission and also sets voluntary standards that are stricter than required by the law.

<table>
<thead>
<tr>
<th>SOx emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
</tr>
<tr>
<td>Emissions (t)</td>
</tr>
<tr>
<td>Per Unit (g/kℓ)</td>
</tr>
</tbody>
</table>

* 25 production plants in Japan

<table>
<thead>
<tr>
<th>NOx emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
</tr>
<tr>
<td>Emissions (t)</td>
</tr>
<tr>
<td>Per Unit (g/kℓ)</td>
</tr>
</tbody>
</table>

* 25 production plants in Japan

Preventing water pollution

We manage waste water through setting voluntary standard values that are stricter than required by the law at each plant.
Preventing Soil Pollution

Suntory Group plants use chemical substances for cleaning equipment, etc. These are strictly managed to avoid any leaks but for in case there are any leaks of cleaning agents or chemicals, liquid control dam are placed surrounding chemical tanks in each factory to prevent and regular inspection are done to prevent polluting soil.

Measures for Alcohol Evaporation

Some amount of alcohol escapes 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 determine if alcohol evaporation is being reduced.

Chemical Substance Management

Suntory Group manages chemical substances according to Pollutant Release and Transfer Register (PRTR) Law, a law that promote the understanding of emission of specific chemical substances to the environment and improving their management, Poisonous and Deleterious Substances Control Act, Fire Service Act and other related laws and in-house guideline on chemical substance management based on PRTR Law (established 2003).

Proper Management and Treatment of Waste

We are promoting electronic manifest for the purpose of enhancing compliance of manifest systems and unified management of information of waste for the proper management of waste. We also hold lectures, on-site confirmation and role-playing training for production, sales, cultural sites, headquarters and Group companies such as a waste management seminars and on-site confirmation of waste seminars to increase knowledge and skills on waste management and continue initiatives for proper treatment 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 for Promotion of Proper Treatment of PCB Wastes. We have registered Japan Environmental Storage & Safety Corporation (JESCO) as a subcontractor for the disposal of PCB and began disposal of equipment that uses PCB from 2007.

Status of the use and storage of equipment that uses PCB is as follows.

<table>
<thead>
<tr>
<th>Quantity of equipment that uses PCB (as of January 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stored</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Capacitor</td>
</tr>
<tr>
<td>Transformer</td>
</tr>
<tr>
<td>Stabilizer for lighting device</td>
</tr>
</tbody>
</table>

Claims, Accidents and Lawsuits

There were no claims, accidents or lawsuits related to environment in 2018.
To Create Harmony with Nature: Environment

Environmental Communication

Suntory Group values communication with the stakeholders and communicates information related to Suntory’s spirit of “Coexisting with Nature” to the society.

Appropriate and Timely Disclosure of Information and Communication

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

■ Website Communicating Detailed Information

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

■ Environmental Communication at Plants

Suntory Group welcomes approximately 700,000 visitors to tour its beer, whisky, mineral water and other plants. These tours include a section on the environment to introduce related activities. We also hold special events where parents and children can enjoy and learn about the environment and its importance.
Corporate Ad to Share the Tagline "Follow Your Nature" with the Society

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

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

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

**Newspaper ad**
“Suntory Natural Water Sanctuary”

**Television commercial**
“Suntory Natural Water Sanctuary” (Soil Cultivation)

**First television commercial**
“Joining the Company” (from July 2014)

**Second television commercial**
“Natural Water Sanctuary: Lecture” (from October 2014)