

Environmental: Our Environmental Initiatives



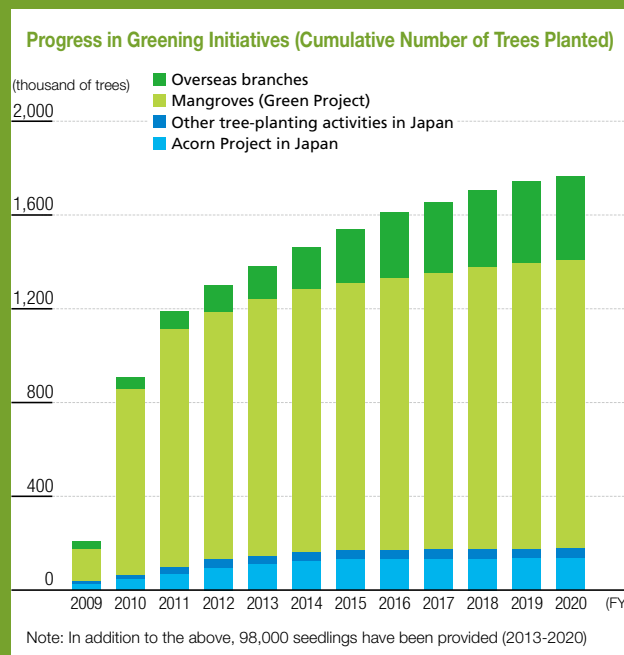
# Green

Green initiative

## Management Approach

Forests absorb CO<sub>2</sub>, which contributes to global warming, and are an important component of the social infrastructure that preserves biodiversity. Based on the concept that preserving this infrastructure is one of our corporate social responsibilities, we promote "Green (Green initiative)" through ongoing tree planting activities in and around our operation bases within Japan and overseas.

In fiscal 2009, we began tree-planting activities at our facilities in Japan and overseas. As of the end of 2020, we had planted a cumulative total of 1,760,000 trees. We will continue to plant trees while participating in forest maintenance.



## Forestation Activities to Help Curb Global Warming

### "Sumitomo Rubber GENKI Forest," a Green Initiative in Japan

In addition to the grounds of our facilities, we engage in forestation activities in the surrounding area and at the 11 locations (23 ha) in Japan designated as "Sumitomo Rubber GENKI Forest."

When planting trees, one has to be aware of the negative effect non-native species can have on local ecosystem. As such, we plant only seedlings grown from acorn seeds that employees and their families gather in the target area. Our continued efforts are aimed at increasing the amount of greenery around us while protecting biodiversity.

Although our activities in fiscal 2020 were somewhat restricted due to the need to prevent the risk of COVID-19 infection, 938 trees were planted in "Sumitomo Rubber GENKI Forest" in said fiscal year.

Maintenance work after tree planting is also important for forestation. Accordingly, we constantly carry out such tasks as cutting back weeds, removing vines, removing unnecessary trees, pruning and thinning.



Volunteers who worked to maintain "GENKI Forest" in the Kanemidake mountain near the Miyazaki Factory

### Greening Initiatives Overseas

We are promoting greening initiatives at overseas factories and sales companies. In fiscal 2020, due to the need to prevent COVID-19 infection, these Group entities faced restrictions on their activities as did our Japanese bases. However, a total of 902 trees have been planted and 2,105 seedlings provided.

In addition, 15,000 trees were planted in Indonesia through the "Team ENASAVE Green Project," wherein mangrove seedlings are planted using some of the proceeds from sales of the fuel-efficient "ENASAVE" tire series. Furthermore, 2,400 trees were planted through the "1 Pair for 1 Love activities," in which some of the proceeds from the sales of rubber gloves are allocated to the DUNLOP Home Products Forest on the island of Borneo, Malaysia, in order to protect the orangutan, an endangered species.



DUNLOP Home Products Forest

## Connecting with Local Communities via Forestation Activities

### Collaborative Activities with Local Residents in "Sumitomo Rubber GENKI Forest"

The objectives of forestation activities include the prevention of global warming by absorption of CO<sub>2</sub>, landslide prevention, and biodiversity preservation. We also consider communicating with local communities through satoyama (working forests that are maintained and managed by humans) conservation activities, another important objective.

To align our forestation activities with the circumstances unique to each local community, we promote activities in which employees, former employees, families, friends, local residents and regional organizations participate. In 2020, we provided a total of 5,031 seedlings to green initiative organizations and the people of neighboring communities.



A Shirakawa Factory employee giving a seedling to a community resident

### Protecting Culture and Nature—Team ENASAVE Future Project

In September 2013, the Sumitomo Rubber Group launched the Team ENASAVE Future Project in cooperation with the National Federation of UNESCO Associations in Japan (NFUAJ). This project aims to ensure that Japan's beautiful cultural and natural heritages are passed down to future generations for the next 100 years. As part of this project, we engage in environmental protection activities in tandem with people from communities across the nation.

Having started with one location in 2013, we have expanded the number of locations where these annual activities are held from eight in 2014 to 10 in 2019. The locations are scattered throughout Japan and take place with the help of employees, their families, and local associations as well as volunteers from the public. In 2020, however, our activities were canceled due to the COVID-19 pandemic.

#### Topics

### Participating in a biodiversity symposium—helping rediscover the natural beauty of the Rokko mountain range environment

Celebrating the 80th anniversary of the commencement of its construction, in 2021 Kobe Municipal Arboretum hosted a symposium in tandem with Kobe City, with the aim of communicating the natural beauty of the environment of Mount Rokko. The symposium was held from January 29 to March 31, 2021, and due to the COVID-19 pandemic, it was made accessible to the public only via the internet.

Having participated in the event in the category of biodiversity-related presentations focused on Mount Rokko, we exhibited materials showcasing green initiatives undertaken by the Sumitomo Rubber Group. This event provided us with a good opportunity to let a broad range of the general public know about our locally-rooted green initiatives that exemplify the variety of activities that can contribute to a sustainable society, energize neighboring communities, and protect the global environment.



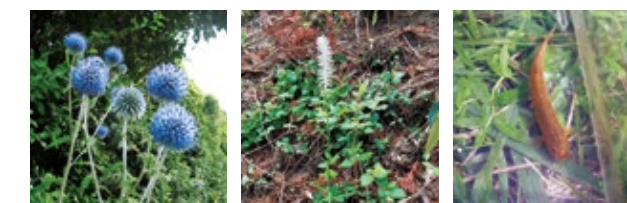
## Initiatives to Preserve Biodiversity

The Group is involved in conservation activities in relation to endangered, near threatened, and rare species (five species of animal and 16 species of plant) at all eight of its sites in Japan, consisting of six factories, the Head Office and the Tire Proving Ground.

In terms of contributing to the immediate neighborhood, activities include transplanting "Fujibakama" (*Eupatorium japonicum*) cultivated in the grounds of our factory to river beds, as well as providing this plant to neighboring cities. We also provide kindergarten children with the opportunity to observe *Sasakia charonda*, which is designated as a national butterfly. In 2020, this butterfly successfully emerged on the premises of the Okayama Tire Proving Ground. Also in 2020, we began working on the preservation of *Lilium japonicum*.



On the premises of the Okayama Tire Proving Ground, a *Sasakia charonda* (Nymphalidae family) butterfly, which is designated by Okayama Prefecture as a species requiring particular interest, emerges successfully for the first time



*Echinops setifer* (Asteraceae family), an endangered species designated by Miyazaki Prefecture cultivated on the premises of the Miyazaki Factory  
*Chionographis japonica* (Melanthiaceae family) cultivated on the premises of the Nagoya Factory is a rare species  
*Lefua echigonia* (Cobitidae family), a class I endangered species designated by Hyogo Prefecture, lives on the premises of the Ichijima Factory





# Ecology

Ecological process

## Management Approach

As a global company responsible for the environment, we will fulfill our social responsibility through all areas of our activities in order to achieve sustainable development of society wherein human prosperity and the environment co-exist harmoniously.

Sumitomo Rubber Industries was certified in March 2009 as an "Eco-First company" under the "Eco-First Program" established by the Ministry of the Environment and renewed its "Eco-First Commitments" in October 2017.

<p><b>1 Creating a Low-Carbon Society</b></p> <ul style="list-style-type: none"> <li>Reduce LCCO<sub>2</sub>* emissions per tire by the fiscal year 2022</li> </ul> <p>Fiscal 2022: ≥14% reduction over fiscal 2005</p>	<p>Fiscal 2020</p> <p>Reduced by <b>12.9%</b> (compared to fiscal 2005 levels; per tire) <small>*Life-cycle CO<sub>2</sub></small></p>
<p><b>2 Building a Recycling-Oriented Society</b></p> <ul style="list-style-type: none"> <li>Maintain our "Complete Zero landfill waste" policy at major production bases in Japan and overseas until 2020</li> <li>Establish a technology for <b>100%</b> recycling of wastewater at a model factory by 2020</li> </ul>	<p>Since fiscal 2010 Continued achievement for <b>11</b> years</p> <p>Fiscal 2019 Establishing water-recycling technology at the Turkey Factory</p>
<p><b>3 Promoting Harmonious Coexistence with Nature</b></p> <ul style="list-style-type: none"> <li>Acorn Project Conducts activities at least <b>20</b> times a year</li> <li>Take action to protect <b>biodiversity</b></li> </ul>	<p>Fiscal 2020 Conducted tree planting activities <b>18</b> times</p> <p>Fiscal 2020 Conserving <b>21</b> species</p>

## Implementing Global Environmental Management

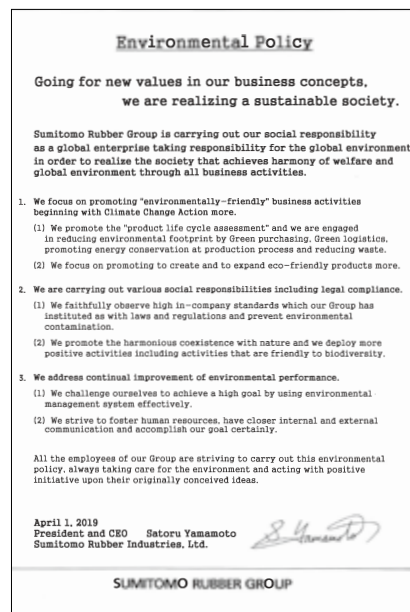
Environmental preservation is one of the most important responsibilities that companies must fulfill within a global society.

There are strong demands that global companies implement uniform environmental management throughout the world regardless of country or region.

As it accelerates its global expansion, the Sumitomo Rubber Group is focusing ever more energy on promoting global environmental management.

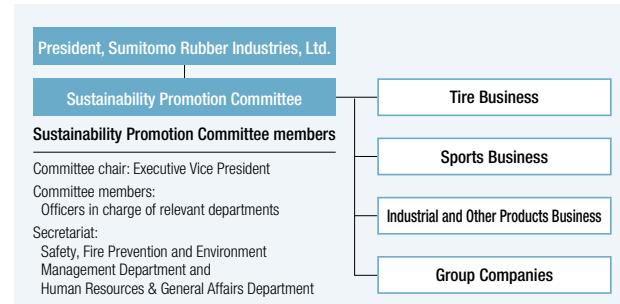
## Our Basic Policy on Environmental Preservation (fundamental philosophy)

The Sumitomo Rubber Group established its Environmental Policy in July 2007 and revised said policy in April 2019, putting it into practice via environmental initiatives.



## Global Environmental Management System

### Environmental Management System



In order to strengthen global environmental management, the Global Environmental Management Central Committee, which is composed primarily of responsible parties at bases in Japan and overseas and individuals responsible for issue-specific working groups, meets twice a year.

In 2020, the committee met in February and July. At these meetings, there were reports by representatives from domestic and overseas manufacturing factories on a wide range of activities, including actual results and improvements in various indicators such as CO<sub>2</sub> emissions, energy savings, waste disposal and water usage, as well as efforts to improve the environment (odors, etc.) and contribution to society. Also, the Hybrid Rubber Products Division reported on its environmental initiatives, while CSR-related departments reported on their efforts to contribute to the United Nations Sustainable Development Goals (SDGs) via the promotion of ESG-oriented management. Thus, attendees at both meetings engaged in active discussion on these matters.

In 2021, the committee was renamed the Sustainability Promotion Committee to indicate a shift to stronger focus on ESG-oriented management. The committee will engage in the follow-up monitoring of initiatives aimed at addressing priority issues associated with contributions to SDGs. The committee will also facilitate the in-house sharing of relevant information while submitting reports and recommendations to the Board of Directors.



The Global Environmental Management Central Committee meeting held in 2020

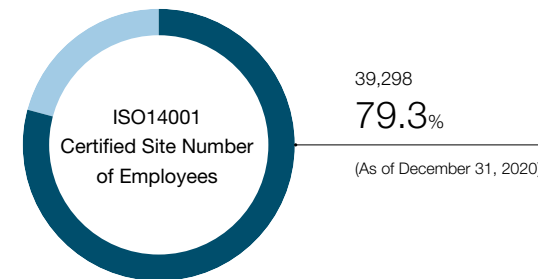
## ISO 14001 Global Multi-Site Certification

To implement global management in all of its corporate activities including the creation of a low-carbon society, in December 2010, the Group obtained ISO 14001 Global Multi-Site Certification for its 30 bases in Japan and overseas. This enabled us to carry out unified environmental management at major production and development bases in Japan and overseas.

At the end of 2020, the number of employees working at ISO 14001 Certified Sites as a percentage of total employees was 79.3%, and the ratio of Certified Sites was 94.7%.

In fiscal 2020, the Slovenia Factory obtained ISO 14001 certification on a stand-alone basis. Looking ahead, we will continue to work on activities aimed at adding the Switzerland Factory, which has already been certified on a stand-alone basis, and the above Slovenia Factory, to the Global Multi-Site Certification, and on new certification for the Philippines Factory.

### Coverage Rate of ISO 14001 Certified Sites (Percentage of employees)



## Initiatives to Address Climate Change

We recognize that addressing risks and opportunities arising from climate change is an important management issue. In line with this recognition, we aim to appropriately implement mitigation and adaptation measures and, to this end, have established the Sustainability Promotion Division in addition to launching the Sustainability Promotion Committee chaired by the President and tasked with comprehensively overseeing relevant initiatives carried out by all departments. As part of these efforts, preparations are now under way to publicly announce our support of the TCFD\*1 recommendations and clarify our commitment to STB.\*2

\*1 Task Force on Climate-related Financial Disclosures

\*2 Science Based Targets

## Creating a Low-Carbon Society

Items marked with "⊙" have been verified by third parties. The environmental impact indicator was not verified by third parties. The figures shown in the graphs differ from the verified figures as different coefficients were used.

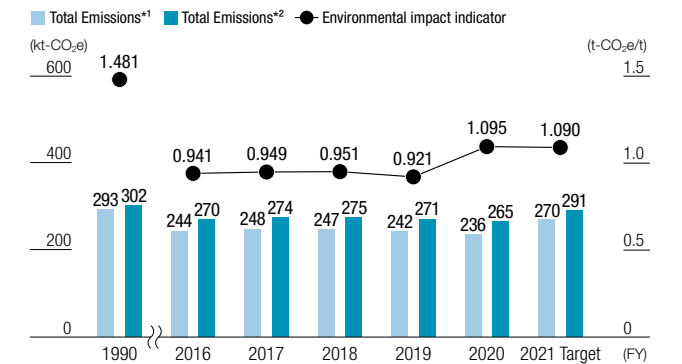
### CO<sub>2</sub> Emissions Reduction Activities in Production Bases

In fiscal 2020, we had to temporarily suspend operations at some factories due to the COVID-19 pandemic. Although we were thus unable to sufficiently implement energy-saving activities, we strove to launch new energy-saving measures by putting into practice insights offered by consultants in fiscal 2019. As a result, CO<sub>2</sub> emissions from production activities at the Group's factories in Japan decreased by 6 kt-CO<sub>2</sub> to 265 kt-CO<sub>2</sub> from the previous fiscal year.

However, the environmental impact indicator of CO<sub>2</sub> emissions showed an 18.9% increase from the previous fiscal year.

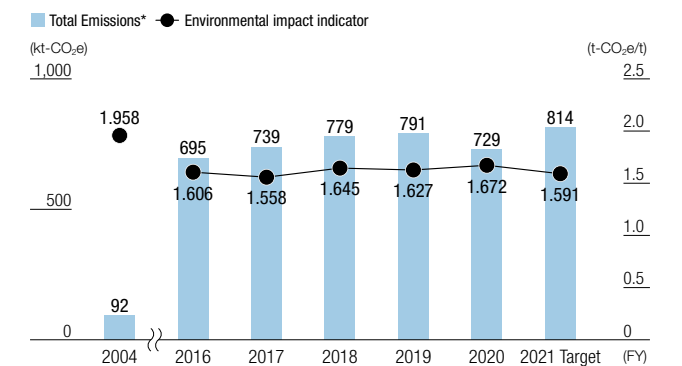
In fiscal 2021, the Company will work on the predictive maintenance of facilities and on reducing CO<sub>2</sub> through such initiatives as deploying AI and IoT platforms to search for, extract, and analyze factors that affect energy savings.

### CO<sub>2</sub> Emissions (Factories in Japan) ⊙



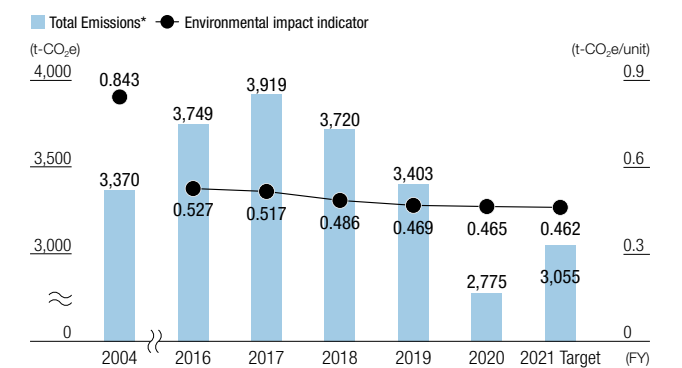
\*1 Total emissions are calculated using the cogeneration credits based on the "Guide for Calculating Greenhouse Gas Emissions," published by the Japan Rubber Manufacturers Association (used to calculate the environmental impact indicator). CO<sub>2</sub> emission factors for electricity consumption, published by electricity companies in 2004, are applied.  
\*2 Total emissions without considering cogeneration credits.

### CO<sub>2</sub> Emissions (Overseas Factories) ⊙



\* CO<sub>2</sub> emission factors for electricity consumption are based on a WRI/WBCSD GHG Protocol Initiative Calculation Tool (2004).

### CO<sub>2</sub> Emissions (Factories Operated by Domestic Group Companies) ⊙



\* Total emissions are calculated using cogeneration credits based on the "Guide for Calculating Greenhouse Gas Emissions," published by the Japan Rubber Manufacturers Association. CO<sub>2</sub> emission factors for electricity consumption, published by electricity companies in 2004, are applied.

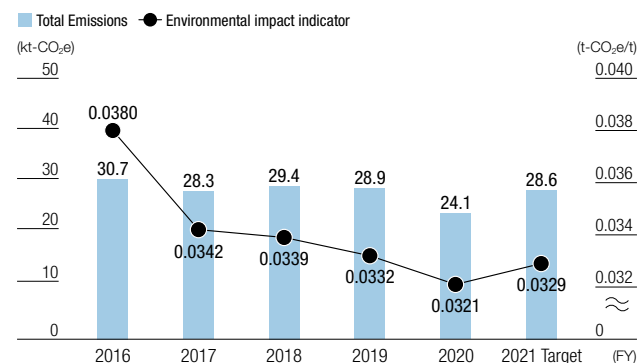
### CO<sub>2</sub> Emissions Reduction in Logistics

In fiscal 2020, we worked to increase the modal shift rate by raising the precision of demand forecasts and ensuring scheduled shipments for marine and train transportation.

CO<sub>2</sub> emissions from transporting tires fell 16.6% compared to the previous fiscal year, to 24.1 kt-CO<sub>2</sub>, and the environmental impact indicator fell 3.3%.

In fiscal 2021, we will work on optimizing the location of our production sites and reducing the number of products transported from one warehouse to another.

### CO<sub>2</sub> Emissions in Logistics (Domestic)



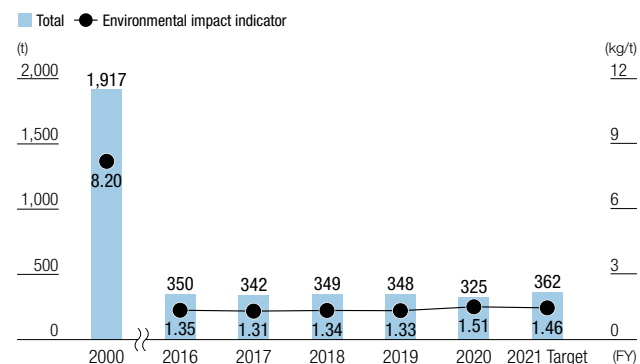
### Promoting Environmental Footprint Management

#### Efforts to Reduce Organic Solvents Use

The Group has been making voluntary efforts to reduce emissions of VOCs (volatile organic compounds). In fiscal 2020, there was a decrease in the total amount of VOCs emitted due to a significant cut in production volume. On the other hand, the environmental impact indicator deteriorated substantially.

In fiscal 2021, we will strive to achieve further reduction in the quantities of VOCs used while implementing measures to curb the evaporation of these substances.

#### Total Amount of VOCs Emitted (Factories in Japan)



### Building a Recycling-Oriented Society

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#### Continue to Achieve Complete Zero Landfill Waste

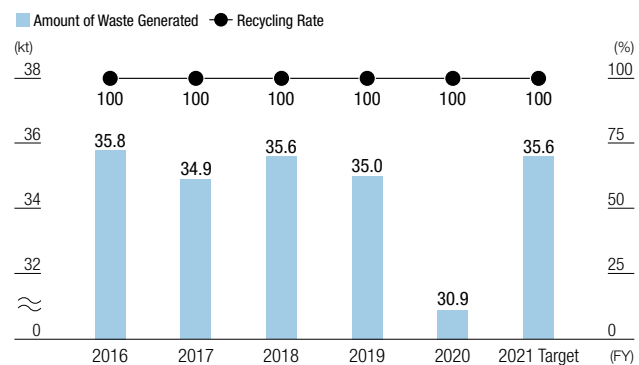
The Sumitomo Rubber Group is promoting the 3Rs (reduce, reuse, and recycle) of waste management in order to build a recycling-oriented society.

In fiscal 2020, we achieved complete zero landfill waste for the 11th consecutive year at our major production bases both in Japan and overseas.

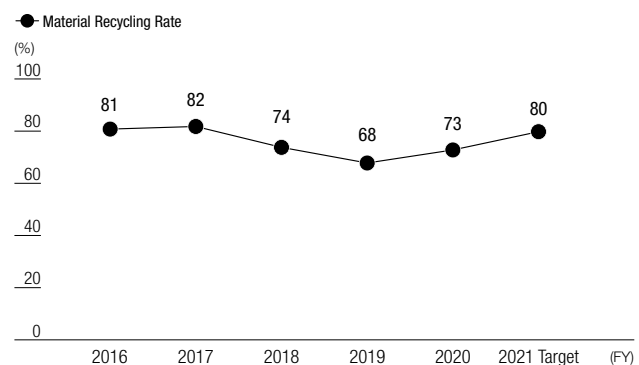
Complete zero landfill waste is defined as the complete diversion of landfill waste, meaning a 100% recycling rate and no waste sent directly to landfills.

In fiscal 2021, the aim of our efforts is to proceed with our mission to achieve zero emissions.

#### Amount of Waste Generated and Recycling Rate (Factories in Japan)



#### Material Recycling Rate (Factories in Japan)

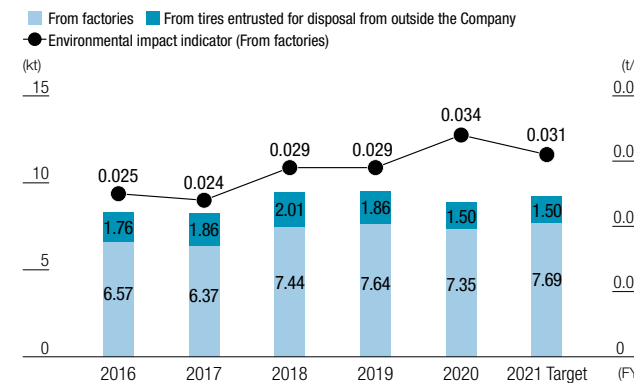


#### Reducing Waste Disposal\*

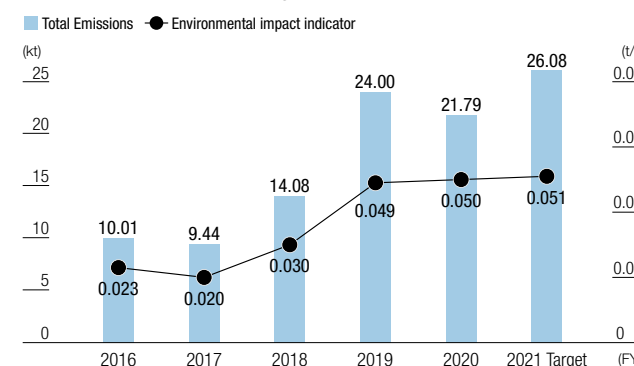
In fiscal 2020, the Group made efforts to curb waste disposal, for example by reducing metal scrap. However, the environmental impact indicator deteriorated, reflecting the cut in production volume.

\* Waste disposal refers to the amount of waste diverted for the thermal/material cycle.

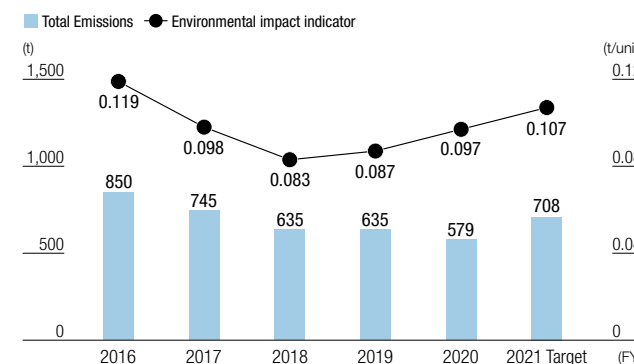
#### Waste Disposal (Excluding Valuables) (Factories in Japan) ⊙



#### Waste Disposal (Excluding Valuables) (Overseas Factories)



#### Waste Disposal (Excluding Valuables) (Factories Operated by Domestic Group Companies)



#### Water Usage Reduction

With the aim of dealing with the global shortage of water resources, as a measure to reduce water usage, the Group aims to achieve a wastewater recycling rate of 100% at all 26 factories around the world by fiscal 2050. The Turkey Factory is one of those within the Group with a higher level of water stress, and has been working on trial operations to establish water-recycling technology since 2018. In the summer of 2019, it achieved 100% recycling for factory wastewater by using concentrated water from the recycling facilities to water trees on the site of the factory and to flush toilets. In accordance with the Midterm Plan, the Group is aiming to establish water-recycling technology for 100% of the wastewater from a second factory in 2021, namely the Changshu Factory in China, which also has a high level of water stress. Partial

recycling of wastewater has also been implemented at the Thailand Factory and the Kakogawa Factory, while the Brazil Factory and the South Africa Factory initiated the recycling of factory wastewater. Furthermore, the Indonesia Factory is moving ahead with the use of rainwater to reduce external water usage.

In 2020, total water usage at all of the Sumitomo Rubber Group's factories was reduced by about 8.5% year on year. We will push forward with water usage optimization in production processes at each base and measures that utilize the results of assessments based on the WRI\* Aqueduct Water Risk Atlas on an ongoing basis.



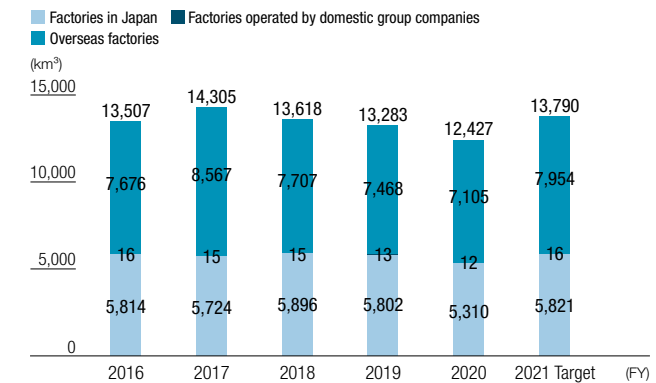
Wastewater recycling facilities (Brazil Factory)

#### 100% recycling of factory wastewater

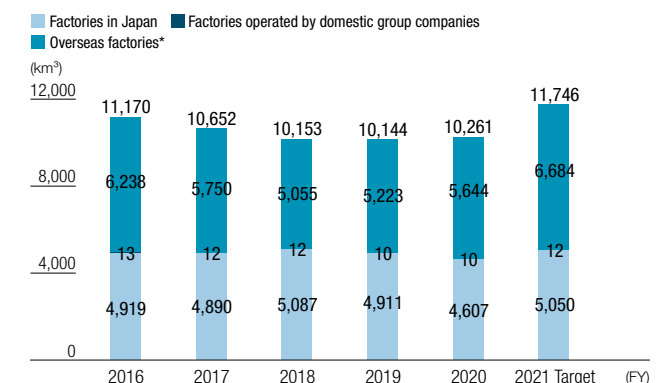
- Thailand Factory Natural Rubber Processing
- Turkey Factory

\* World Resources Institute

#### Water Usage (Factories in Japan ⊙, Factories Operated by Domestic Group Companies, Overseas Factories)



#### Wastewater (Factories in Japan ⊙, Factories Operated by Domestic Group Companies, Overseas Factories)



\* Figures include estimates based on water usage at some factories





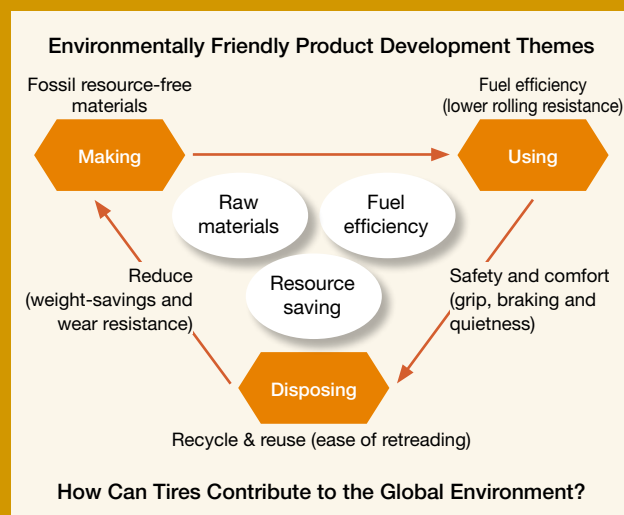
# Next

Next-generation product development

## Management Approach

Underpinning the activities of the Sumitomo Rubber Group is the question “How can tires contribute to the global environment?” To this end, the Group is developing environmentally friendly products with a focus on three areas—fuel efficiency, raw materials and resource saving.

While the environment surrounding the automobile industry faces drastic changes, the Group is pushing forward with the development of environmentally friendly products based on its “ENASAVE technology,” which delivers “even higher environmental performance.”



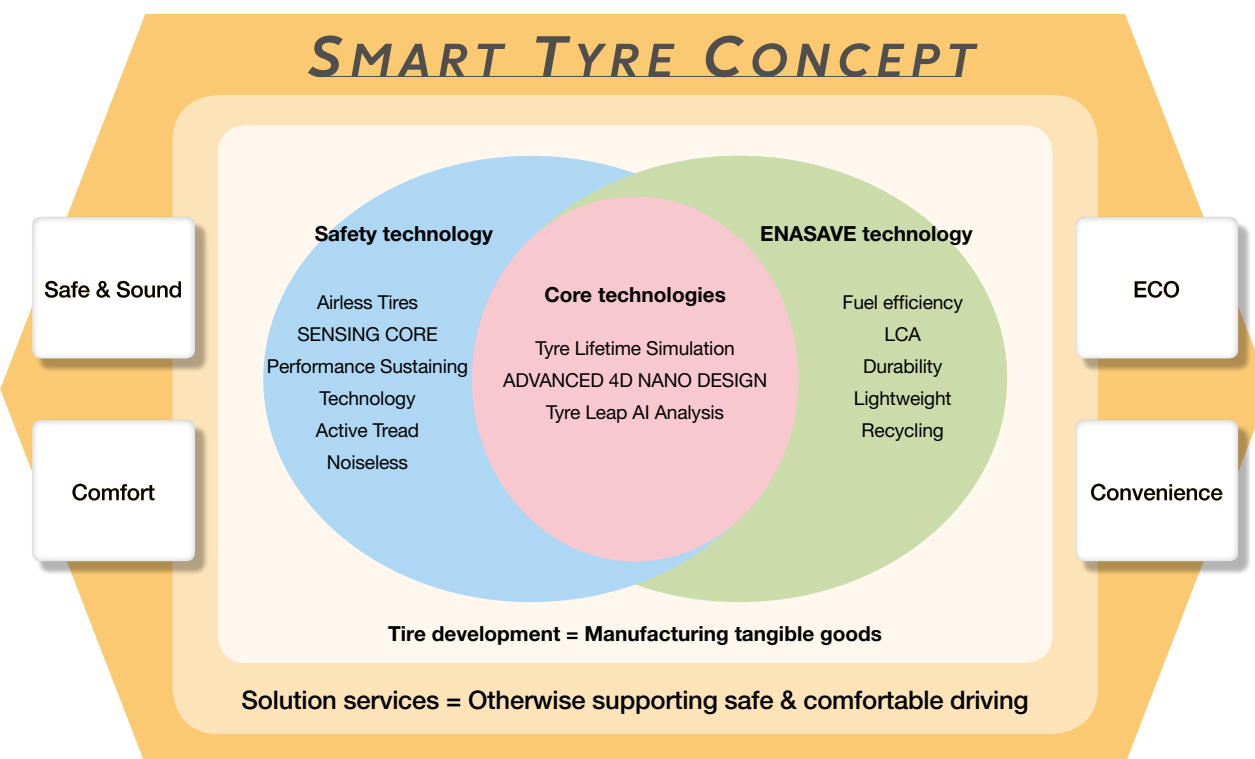
## Pursuing “Safety and Comfort,” “Economy” and “Quality”

### SMART TYRE CONCEPT

Reflecting the ongoing advance of the Mobility as a Service (MaaS) industrial trend, tire manufacturers are confronting changes in tire performance requirements as the shift from car ownership to car sharing and pooling progresses. In response, Sumitomo Rubber

Industries is striving to advance its SMART TYRE CONCEPT, which guides its efforts to create tires with ever better safety performance and environmental friendliness, as well as to develop peripheral services with an eye to meeting the needs of future generations.

### SMART TYRE CONCEPT



## Developing Environmentally Friendly Products

Based on the SMART TYRE CONCEPT, our Performance Sustaining Technology has been incorporated into the “VEURO VE304” premium comfort tire. This concept also led to the release of the flagship “ENASAVE NEXT III” fuel-efficient tire. The release of these tires helped us step up our sales expansion efforts.

Both of these tires also incorporate a hydrogenated polymer that helps prevent a decline in wet grip performance while contributing to superior wear resistance.

The release of the “VEURO VE304” was achieved via the establishment of a technology that makes it possible to incorporate this polymer into products designed for large volume sales. We therefore consider the “VEURO VE304” a testament to our remarkable technological advancements.

The “ENASAVE NEXT III,” on the other hand, incorporates

cellulose nanofiber, thereby achieving driving comfort and steering stability. This product is the first in the world to incorporate cellulose nanofiber, a biomass material boasting environmental friendliness. From the viewpoint of sustainability, we believe that our success in utilizing biomass as a tire material is a matter of great significance.

We have received robust customer reviews for these products.

In addition, the “VEURO VE304” was named a Grand Prix winner under the DAILY AUTOMOTIVE NEWS Car Parts Awards 2020 program, while the “ENASAVE NEXT III” was chosen to receive multiple awards under the Eco-Pro Award program, the Super Parts Manufacturer Award program, and the Energy Conservation Grand Prize program. As such, our products are similarly lauded by external organizations.

**VEURO VE304**

**Incorporating a hydrogenated polymer**

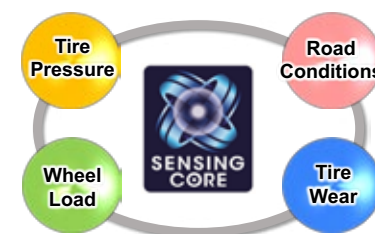
- Prevent a decline in wet grip performance over time
- Boast superior wear resistance

**エナセーブ NEXT III**

**The first in the world to incorporate cellulose nanofiber (“ENASAVE NEXT III”)**

- Simultaneously realize driving comfort and steering stability

### SENSING CORE



This technology is distinctively unique as it allows the tire itself to serve as a sensor and thereby eliminates the need for the additional installation of other sensing devices as well as eliminating a great deal of maintenance.

As a testament to our SENSING CORE-based offerings, this tire pressure sensing technology has been installed in a cumulative total of 40 million vehicles, garnering a solid reputation.

Recently, we advanced SENSING CORE by establishing a technology for detecting the extent of tire abrasion. In addition to existing technologies for detecting tire pressure, tire load and road conditions, we will leverage this new technology for detecting tire abrasion, with the aim of making further contribution to CASE, MaaS and other technological trends supporting the future advancement of a mobility society.

One of our proprietary technologies, SENSING CORE is used for detecting tire pressure, tire load, and road conditions via the use of sensors installed in tires. While this technology helps drivers assess tire conditions on a real-time basis, it can also be used to improve vehicle control and other aspects of automobile operations.

