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.

1 Creating a Low-Carbon Society

- Reduce $LCCO_2$* emissions per tire by the fiscal year 2022

  Fiscal 2022:

  ≥14% reduction over fiscal 2005

→ Fiscal 2020: **Reduced by 12.9% (compared to fiscal 2005 levels; per tire)** *Life-cycle CO_2

2 Building a Recycling-Oriented Society

- Maintain our **"Complete Zero landfill waste"** policy at major production bases in Japan and overseas until 2020

→ Since fiscal 2010: **Continued achievement for 11 years**

- Establish a technology for **100% recycling** of wastewater at a model factory by 2020

→ Fiscal 2019: **Establishing water-recycling technology at the Turkey Factory**

3 Promoting Harmonious Coexistence with Nature

- Acorn Project
  Conducts activities at least **20 times a year**

→ Fiscal 2020: Conducted tree planting activities **18 times**

- Take action to protect **biodiversity**

→ Fiscal 2020: **Conserving 21 species**

Implementing Global Environmental Management

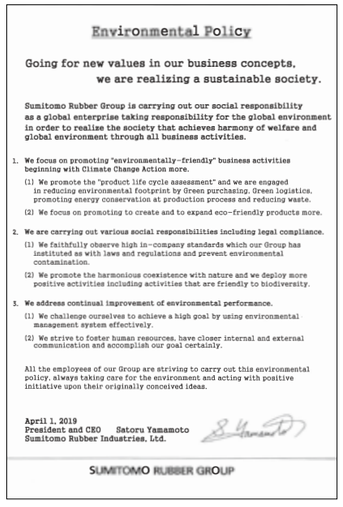
Environmental preservation is one of the most important responsibilities that companies must fulfill within a global society.

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.



Environmental Policy

Going for new values in our business concepts, we are realizing a sustainable society.

Sumitomo Rubber Group is carrying out our social responsibility as a global enterprise taking responsibility for the global environment in order to realize the society that achieves harmony of welfare and global environment through all business activities.

1. **We focus on promoting "environmentally-friendly" business activities beginning with Climate Change Action more.**
   (1) We promote the "product life cycle assessment" and we are engaged in reducing environmental footprint by Green purchasing, Green logistics, promoting energy conservation at production process and reducing waste.
   (2) We focus on promoting to create and to expand eco-friendly products more.
2. **We are carrying out various social responsibilities including legal compliance.**
   (1) We faithfully observe high in-company standards which our Group has instituted as with laws and regulations and prevent environmental contamination.
   (2) We promote the harmonious coexistence with nature and we deploy more positive activities including activities that are friendly to biodiversity.
3. **We address continual improvement of environmental performance.**
   (1) We challenge ourselves to achieve a high goal by using environmental management system effectively.
   (2) We strive to foster human resources, have closer internal and external communication and accomplish our goal certainly.

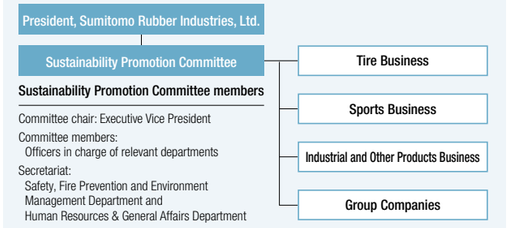
All the employees of our Group are striving to carry out this environmental policy, always taking care for the environment and acting with positive initiative upon their originally conceived ideas.

April 1, 2019
President and CEO Satoru Yamamoto
Sumitomo Rubber Industries, Ltd.

SUMITOMO RUBBER GROUP

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_2 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

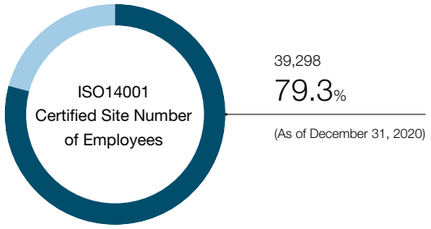
ISO 14001 Global Multi-Site Certification

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.

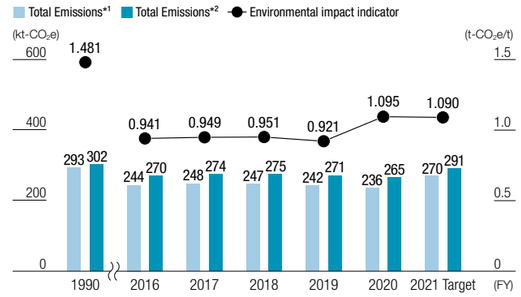
CO_2 Emissions Reduction Activities in Production Bases

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_2 emissions from production activities at the Group's factories in Japan decreased by 6 kt-CO_2 to 265 kt-CO_2 from the previous fiscal year.

However, the environmental impact indicator of CO_2 emissions showed an 18.9% increase from the previous fiscal year.

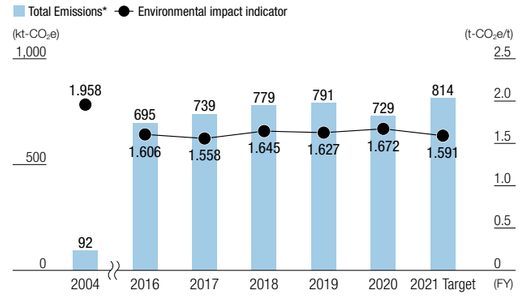
In fiscal 2021, the Company will work on the predictive maintenance of facilities and on reducing CO_2 through such initiatives as deploying AI and IoT platforms to search for, extract, and analyze factors that affect energy savings.

CO_2 Emissions (Factories in Japan) ◎



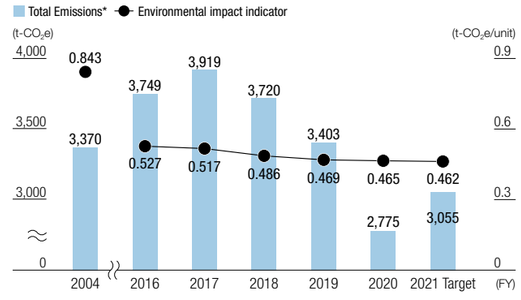
*1 Total emissions are calculated using the cogeneration credits based on the "Guide for Calculating Greenhouse Gas Emissions," published by the Japan Rubber Manufacturers Association (used to calculate the environmental impact indicator). CO_2 emission factors for electricity consumption, published by electricity companies in 2004, are applied.
*2 Total emissions without considering cogeneration credits.

CO_2 Emissions (Overseas Factories) ◎



* CO_2 emission factors for electricity consumption are based on a WRI/WBCSD GHG Protocol Initiative Calculation Tool (2004).

CO_2 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_2 emission factors for electricity consumption, published by electricity companies in 2004, are applied.

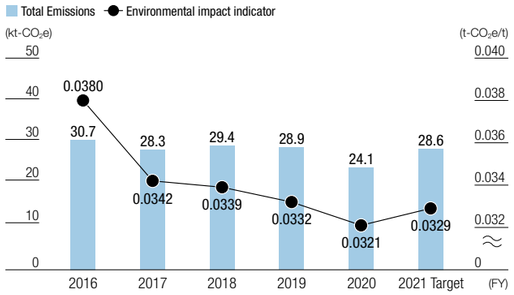
CO_2 Emissions Reduction in Logistics

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_2 emissions from transporting tires fell 16.6% compared to the previous fiscal year, to 24.1 kt-CO_2, 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_2 Emissions in Logistics (Domestic)



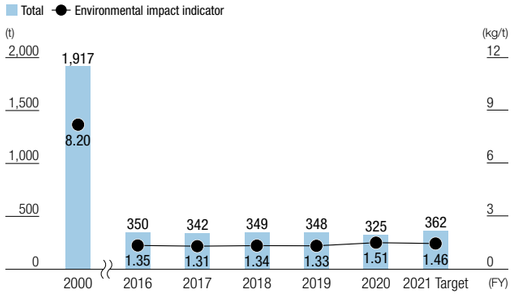
Promoting Environmental Footprint Management

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

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.

Continue to Achieve Complete Zero Landfill Waste

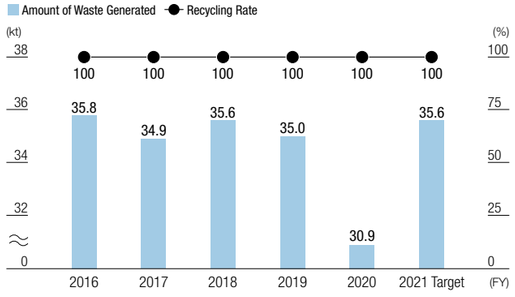
The Sumitomo Rubber Group is promoting the 3Rs (reduce, reuse, and recycle) of waste management in order to build a recycling-oriented society.

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

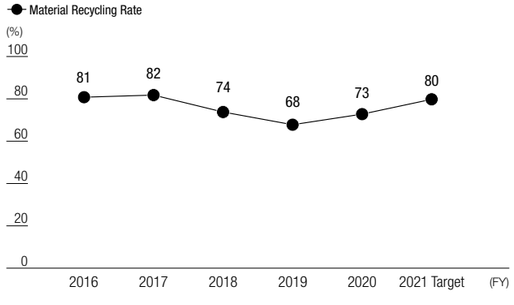
Complete zero landfill waste is defined as the complete diversion of landfill waste, meaning a 100% recycling rate and no waste sent directly to landfills.

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)

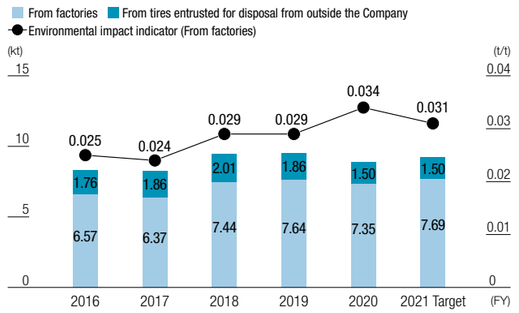


Reducing Waste Disposal*

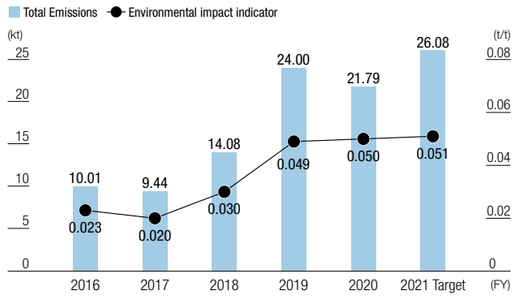
In fiscal 2020, the Group made efforts to curb waste disposal, for example by reducing metal scrap. However, the environmental impact indicator deteriorated, reflecting the cut in production volume.

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

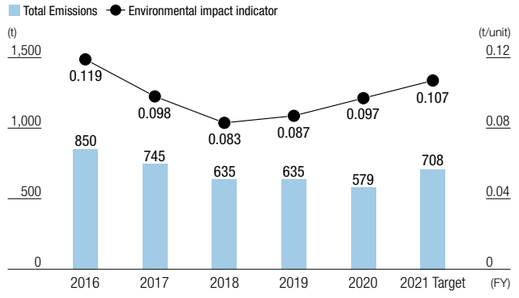
Waste Disposal (Excluding Valuables) (Factories in Japan) ◎



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.

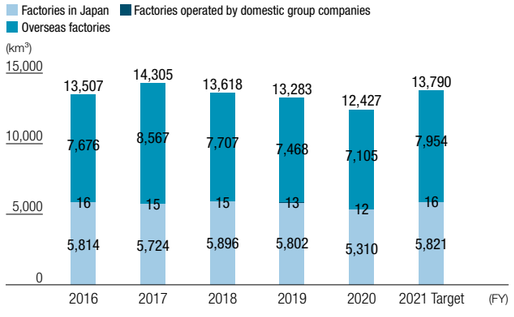
In 2020, total water usage at all of the Sumitomo Rubber Group's factories was reduced by about 8.5% year on year. We will push forward with water usage optimization in production processes at each base and measures that utilize the results of assessments based on the WRI* Aqueduct Water Risk Atlas on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

Wastewater recycling facilities (Brazil Factory)

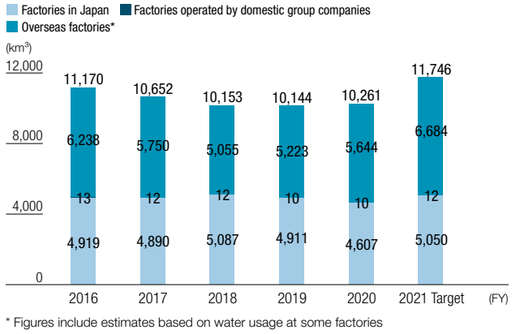
100% recycling of factory wastewater
Thailand Factory Natural Rubber Processing
Turkey Factory

* World Resources Institute

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

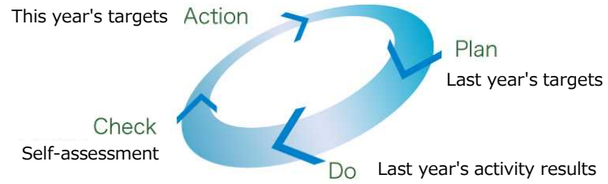


Wastewater (Factories in Japan ◎, Factories Operated by Domestic Group Companies, Overseas Factories)



* Figures include estimates based on water usage at some factories

Targets and Results



We verify the results and formulate targets for this fiscal year based on the Group's activity guidelines "GENKI."
Here are some excerpts of the main items.

The item of the "◎" mark is the data subject to third-party verification. The unit of material is not included in the validation data.
The number is different because the coefficient is different from the validation value.

Plan Fiscal 2020 Target			GRI Guidelines	Do Fiscal 2020 Activity Result	Check Self-Assessment *1	Action Fiscal 2021 Target	Medium-to-long-term (2025) Targets
④Creating a low-carbon society							
Reduce global life-cycle CO_2 emissions per tire by at least 15.0% compared to 2005 levels			302-1,2,5	12.9% reduction	98%	≥16.0% reduction from fiscal 2005	≥20.0% reduction from fiscal 2005
Energy Saving*7	6 factorie in Japan	Environmental impact indicator of energy usage (crude oil equivalent)*2 : ≥1.0% reduction from the previous fiscal year	302-3	8.3% increase	91%	2.9% reduction from the previous fiscal year	≥6.5% reduction from fiscal 2016
	15 factories overseas	Crude oil equivalent energy consumption per unit*2 ≥0.9% reduction from the previous fiscal year	302-3	6.6% increase	95%	≥0.9% reduction from the previous fiscal year	≥4.7% reduction from fiscal 2016
	Affiliates in Japan	Crude oil equivalent energy consumption per unit ≤1.0% increase from the previous fiscal year	302-3	0.4% reduction	100%	≤1.0% increase from the previous fiscal year	≥13.4% reduction from fiscal 2016
Reduction of CO_2 emissions in production *3*7	6 factories in Japan◎	CO_2 emissions per unit*2 ≥1.0% reduction from the previous fiscal year	305-4	18.9% increase	83%	≥0.4% reduction from the previous fiscal year	≥8.8% reduction from fiscal 2016
	15 factories overseas	CO_2 emissions per unit*2 ≥0.9% reduction from the previous fiscal year	305-4	2.5% increase	99%	≥0.9% reduction from the previous fiscal year	≥3.9% reduction from fiscal 2016
	Affiliates in Japan	CO_2 emissions per unit ≤1.0% increase from the previous fiscal year	305-4	3.3% reduction	100%	≤1.0% increase from the previous fiscal year	≥11.9% reduction from fiscal 2016
Reduction of CO_2 emissions in logistics*7	Four tire factories in Japan*4	CO_2 emissions (total) ≥1.0% reduction from the previous fiscal year	305-4	3.3% reduction	100%	≥1.0% reduction from the previous fiscal year	—

Plan Fiscal 2020 Target			GRI Guidelines	Do Fiscal 2020 Activity Result	Check Self-Assessment *1	Action Fiscal 2021 Target	Medium-to-long-term (2025) Targets
⑤Building a recycling-oriented society							
Reduction of waste	6 factories in Japan◎	Waste emissions per unit excluding valuables*2 ≥0.5% reduction from the previous fiscal year	306-2	17.2% increase	82%	≥8.2% reduction from the previous fiscal year	≤5.1% increase from fiscal 2016
	15 factories overseas	Waste emissions per unit excluding valuables*2 ≥0.9% reduction from the previous fiscal year	306-2	3.9% reduction	100%	≥0.9% reduction from the previous fiscal year	≤40.2% increase from fiscal 2016
	Affiliates in Japan	Waste emissions per unit excluding valuables ≤24% increase from the previous fiscal year	306-2	14.1% increase	100%	≤24% increase from the previous fiscal year	≤30.4% increase from fiscal 2016
	6 factories in Japan	Waste emissions per unit*2 ≥1.0% reduction from the previous fiscal year	306-2	4.3% increase	95%	≥1.0% reduction from the previous fiscal year	≥5.9% reduction from fiscal 2016
	15 factories overseas	Waste emissions per unit*2 ≥0.9% reduction from the previous fiscal year	306-2	4.0% increase	98%	≥0.9% reduction from the previous fiscal year	≥5.9% reduction from fiscal 2016
	Affiliates in Japan	Waste emissions per unit*2 ≥1.0% reduction from the previous fiscal year	306-2	3.7% reduction	100%	≥1.0% reduction from the previous fiscal year	≥5.9% reduction from fiscal 2016
Reduction of landfill waste	Major manufacturing bases in Japan and overseas	Maintaining complete zero emission*5	306-2	Maintained	100%	Maintaining complete zero emission	Continuing complete zero emission until 2025
Improving material recycling rate	6 factories in Japan	Material recycling rate ≥85%	306-2	73%	86%	≥85%	≥85%
Reduction of water consumption	6 factories in Japan◎	Water usage per unit*2 ≥1.0% reduction from the previous fiscal year	303-1	11.5% increase	87%	≥4.8% reduction from the previous fiscal year	≥8.0% reduction from fiscal 2016
	15 factories overseas	Water usage per unit*2 ≥0.9% reduction from the previous fiscal year	303-1	6.1% increase	94%	≥0.9% reduction from the previous fiscal year	≥17.9% reduction from fiscal 2016
	Affiliates in Japan	Water usage per unit ≤1.0% increase from the previous fiscal year	303-1	13.7% increase	88%	≤1.0% increase from the previous fiscal year	≥19.6% reduction from fiscal 2016

Plan Fiscal 2020 Target			GRI Guidelines	Do Fiscal 2020 Activity Result	Check Self-Assessment *1	Action Fiscal 2021 Target	Medium-to-long-term (2025) Targets
⑥Promoting environmental footprint management							
Reduction of organic solvent emissions*6	6 factories in Japan	Total organic solvent emissions per unit*2 ≥0.8% reduction from the previous fiscal year	305-7	1.3% reduction	99%	≥0.8% reduction from the previous fiscal year	≥8.0% reduction from fiscal 2016
	15 factories overseas	Total organic solvent emissions per unit*2 ≥0.9% reduction from the previous fiscal year	305-7	10.6% reduction	100%	≥0.9% reduction from the previous fiscal year	≤40.2% increase from fiscal 2016
	Affiliates in Japan	Total organic solvent emissions per unit ≤0.5% increase from the previous fiscal year	305-6	41.8% increase	59%	≥0.5% reduction from the previous fiscal year	≥21.5% reduction from fiscal 2016
Reduction of chemical substances	6 factories in Japan	Emissions and transfers of substances subject to the PRTR Act ≥55.0% reduction from the previous fiscal year	305-6	97.5% reduction	100%	≥55.0% reduction from fiscal 2001	≥55.0% reduction from fiscal 2016
Reduction of air pollutants	6 factories in Japan	（NOx＋SOx＋dust）amount ≥80.0% reduction from fiscal 2005	305-7	86.1% reduction	100%	≥1.0% reduction from the previous fiscal year	≥80.0% reduction from fiscal2005
⑦Implementing global environmental management							
Construction and expansion of environmental management system	Maintain and continue ISO14001 global integrated certification		103-2	Maintained/Continued	100%	Maintain and continue global integrated certification	Maintain and continue global integrated certification
	Establishment of environmental management guidelines at tire sales bases nationwide		—	Operational retention	100%	Operational retention	Operational retention
	Establishment of environmental management guidelines at sports industrial product sales bases		—	Operational retention	100%	Operational retention	Operational retention

*1 Self-assessment uses comparison with baseline year (1 − reduction ratio) in the following formula to calculate the achievement rate: $\left(1-\frac{\text{target value}}{\text{actual value/target value}}\times 100\%\right)$

*2 The denominater of the unit is the consumption of new rubber (natural rubber + synthetic rubber).

*3 To calculate CO_2 emissions, we use the The Japan Rubber Manufacturers Association LCCO2 Calculation Guideline.

*4 4 domestic tire plants, domestic tire division: Shirakawa Factory, Nagoya Factory, Izumiotsu Factory, Miyazaki Factory

*5 Complete zero emissions: Complete zero landfill waste is defined as complete diversion of landfill waste, with 100% recycling rate and no waste sent directly to landfills.

*6 To calculate VOC emissions, we use "The Japan Rubber Manufacturers Association voluntary regulation of VOC Emissions".

*7 Calculated according to ISO14064. When linking GHG emissions, we use the operational control in accordance with the GHG protocol.
The global warming potential is based on the Japan Rubber Manufacturers Association Greenhouse Gas Emission Calculation Guidelines and Act on Promotion of Global Warming Countermeasures, except for the following.
The following emission factors are used for electricity supply.
ⅰ）Japan: Emission factor in 2004 (released on ministry of the environment website)
ⅱ）Overseas: "WRI/WBCSD GHG Protocol Initiative Calculation Tool'' 2007 ver1.02
ⅲ）Credits of cogeneration system and green power electricity are deducted.