

SUMITOMO CHEMICAL



Change and Innovation

Create New Value

Sustainability Data Book 2018

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Editorial Policy

Since 2017, Sumitomo Chemical has integrated its *Annual Report* and *CSR Report* into Sumitomo Chemical's new *Annual Report*, which will serve as one of its principal communication tools. The report provides comprehensive coverage of both financial and non-financial aspects of the Sumitomo Chemical Group's operations, including its corporate governance system; environmental and social initiatives; strategies and measures; and reports on business performance.

What was formerly *CSR Report* has been retitled *Sustainability Data Book*. Covering principally the environmental and social perspectives, the data book complements Sumitomo Chemical's new *Annual Report*, presenting information deemed important to both the Sumitomo Chemical Group and its stakeholders. Regarding quantitative information, assurance is provided on the indicators labeled with a star★ by KPMG AZSA Sustainability Co., Ltd. (Regarding other disclosed information, please check pages 104–106, "Calculation Standards for Environmental and Social Data Indicators," wherein a summary of data collection and calculation methods is presented.)

Sumitomo Chemical hopes that its reports can act as a tool for communication with all its stakeholders that enriches their understanding of the Company and its Group companies. Going forward, we will continue working to improve corporate value and achieve sustained growth by helping to build a sustainable society through our businesses.

Sumitomo Chemical's Three Reports

Annual Report



We aim to explain the Company's value creation story in an easy-to-understand way.

https://www.sumitomo-chem.co.jp/english/ir/library/annual_report/

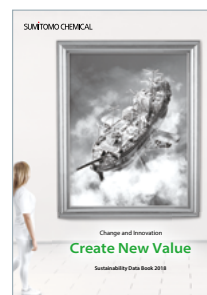
Investors' Handbook



We explain the Company's businesses and products in detail.

https://www.sumitomo-chem.co.jp/english/ir/library/investors_handbook/

Sustainability Data Book



We present information about the Company from an environmental and social perspective.

<https://www.sumitomo-chem.co.jp/english/csr/report/>

Report Profile

● Boundary of This Report

Sumitomo Chemical Co., Ltd. and its consolidated subsidiaries

In this report, "Sumitomo Chemical" and "Sumitomo Chemical Group" are distinguished as follows.

Sumitomo Chemical: Sumitomo Chemical Co., Ltd.

Sumitomo Chemical Group: Sumitomo Chemical and Group companies

► Environmental Data (pages 19–21, 34–44, and 50–74)

Sumitomo Chemical's manufacturing facilities and the production plants of major Group companies (21 companies in Japan and 20 companies overseas)

[Sumitomo Chemical]

Sumitomo Chemical non-consolidated manufacturing facilities

[Group Companies in Japan]

The production plants of 15 companies sharing the Common Targets (Sumika-Kakoushi Co., Ltd.; Sumika Color Co., Ltd.; Sumika Plastech Co., Ltd.; Nippon A&L Inc.; Nihon Methacryl Monomer Co., Ltd.; Asahi Chemical Co., Ltd.; Ceratec Co., Ltd.; Sumika Assembly Techno Co., Ltd.; SanTerra Co., Ltd.; Sumika Agro Manufacturing Co., Ltd.; SC Environmental Science Co., Ltd.; Sumika Agrotech Co., Ltd.; Sumitomo Chemical Garden Products Inc.; Nihon Medi-Physics Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.). In addition to the 15 companies above, **the production plants of 6 information disclosure companies** are included in the calculations of material flow on page 44 (Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Tanaka Chemical Corporation; SCIOCS COMPANY LIMITED; Sumitomo Dainippon Pharma Co., Ltd.; SN Kasei Co., Ltd.) for a total of 21 companies.

[Overseas Group companies]

Production plants of 20 overseas Group companies (Dongwoo Fine-Chem Co., Ltd.; The Polyolefin Company (Singapore) Pte. Ltd.; Sumika Technology Co., Ltd.; Sumika Electronic Materials (Wuxi) Co., Ltd.; Sumitomo Chemical Asia Pte Ltd; Sumika Huabei Electronic Materials (Beijing) Co., Ltd.; Sumitomo Chemical India Private Limited; Zhuhai Sumika Polymer Compounds Co., Ltd.; Sumika Polymer Compounds (Thailand) Co., Ltd.; Sumitomo Chemical Advanced Technologies LLC; Dalian Sumika Jingang Chemicals Co., Ltd.; Sumipex (Thailand) Co., Ltd.; Bara Chemical Co., Ltd.; SSLM Co., Ltd.; Sumika Electronic Materials (Xi'an) Co., Ltd.; Sumika Electronic Materials (Hefei) Co., Ltd.; Sumipex Techsheet Co., Ltd.; Dalian Sumika Chemphy Chemical Co., Ltd.; Sumika Electronic Materials (Shanghai) Co., Ltd.; Sumika Polymer Compounds Dalian Co., Ltd.)

Notes: More detailed information about the scope of data is listed on each page.

Regarding affiliated companies and plants newly included in the scope of environmental data reporting, results data are tabulated from the fiscal year when the survey was conducted as the Sumitomo Chemical Group.

● **Period covered by this report:** April 1, 2017 – March 31, 2018 (FY2017) (with specific exceptions outside this time frame)

● **Date of publication:** October 2018 (The previous issue was published in August 2017.
Next issue: Scheduled for publication in August 2019)

● **Frequency of publication:** Once annually

● Guidelines referred to when preparing this report

- The GRI Standards*
- The Japanese Ministry of the Environment's "Environmental Reporting Guidelines" (2012 edition) and "Environmental Accounting Guidelines" (2005 edition)
- The ISO 26000 international standard on Social Responsibility (SR)

* This report references GRI standards issued in 2016.

Please refer to "the GRI guidelines standard reference table" for more details.

<https://www.sumitomo-chem.co.jp/english/csr/report/docs/GRIguideline2018e.pdf>

Management for Sustainability

President's Message

**We Aim for Sustainable Growth by
Creating Value for Society
while Sustaining Economic Activity.**



About a century ago, Sumitomo Chemical got its start by manufacturing fertilizers from harmful gas emitted from copper smelting operations, aiming to solve the environmental problem of smoke pollution while helping to increase agricultural output. Since then, we have put into practice “Creating Shared Value,” the concept that a business should not just work to sustain its economic activity, but should also strive to create value for society.

We encourage each employee to put into action Sumitomo’s Business philosophy—our business must not just benefit Sumitomo, but also society and the local communities where we operate—and work to have all employees participate in efforts to provide solutions through business, and all our top executives are committed to the initiatives. These efforts include our program to designate as “Sumika Sustainable Solutions” those Sumitomo Chemical Group products and technologies that contribute to mitigating global warming and reducing environmental burdens and our “Sustainable Tree” initiative, in which employees express their own commitment to the Sustainable Development Goals (SDGs) on a dedicated website. All these are being implemented under our “T-S-P” principle—“T” representing top management’s leadership, “S” solutions through our business, and “P” participation by all employees.

In order to further strengthen these initiatives for creating a sustainable society, we established the “Sustainability Promotion Committee” in April 2018. This committee not only takes a comprehensive view of the Sumitomo Chemical Group’s various initiatives for promoting sustainability, it also evaluates how much these initiatives are contributing overall, with the aim of accelerating our effort to address SDGs and sustainability issues.

Going forward, we at Sumitomo Chemical will continue striving to create new value by leveraging the versatile power of chemistry, and to achieve sustained growth while contributing to building a sustainable society.

十倉 雅和

Masakazu Tokura
Representative Director & President



Management for Sustainability

Our Basic Stance

Sumitomo Chemical's Heritage—The Sumitomo Spirit

Carrying on the Sumitomo Spirit, which goes back to the 17th century, Sumitomo Chemical was founded to manufacture fertilizer from copper smelting emissions, helping to simultaneously overcome an environmental problem and increase crop yields. In 1915, the Company opened for business as Sumitomo Fertilizer Works. Part of the Sumitomo Spirit is the concept of harmony between the individual, the nation, and society, meaning that our business must benefit society, not just our interests. This principle is the heritage of Sumitomo Chemical's founding. By honoring and carrying on this heritage, the Company has developed diverse businesses and helped enrich lives through constant technological innovation.

What Sumitomo Chemical Strives to Be

Based on the Sumitomo Spirit, Sumitomo Chemical has made creating new value by building on innovation to contribute to society through its business activities part of its Business Philosophy. Furthermore, based on the Business Philosophy, in 2004 we established the Basic CSR Policy. Under this policy, Sumitomo Chemical strives to not only pursue economic opportunities, but to contribute to solving the problems facing society and the environment, enrich people's lives, and achieve the sustainable growth of the Sumitomo Chemical Group while contributing to the creation of a sustainable society. In 2016, this basic policy was amended to become the Group's Basic CSR Policy.

Initiatives through the Sumitomo Chemical Group's Businesses

The Sumitomo Chemical Group boasts the capability to develop innovative solutions by leveraging its technological expertise in diverse areas based on technologies developed through its many years of broad-ranging R&D (see "Six Core Technologies" on page 6 of *Annual Report 2018*); the capability to reach global markets; and loyal employees. These three core competencies are strengths of the Group.

The Sumitomo Chemical Group has designated environment and energy, ICT, and life sciences as business sectors to focus on, sectors where it can use the above strengths to the fullest. While working to solve problems that society faces in the areas of the environment, food, resources, and energy, we will provide solutions that help improve quality of life, including health promotion and enabling comfortable living, and build an affluent and comfortable society.

The Sumitomo Spirit

<https://www.sumitomo-chem.co.jp/english/company/principles/sumitomo.html>

Corporate Slogan and Statement

<https://www.sumitomo-chem.co.jp/english/company/principles/slogan.html>

Basic CSR Policy

<https://www.sumitomo-chem.co.jp/english/csr/management/policy.html>



Management for Sustainability

Our Approach to Sustainability

What Sumitomo Chemical Strives to Be

Business Philosophy

- We commit ourselves to creating new value by building on innovation.
- We work to contribute to society through our business activities.
- We develop a vibrant corporate culture and continue to be a company that society can trust.

Basic CSR Policy

Creating new value through innovative technologies

Proactive work for profitable business operations

Addressing environmental and social problems

The sustainable growth of
the Sumitomo Chemical Group

Contributing to the realization of
a sustainable society

Initiatives Through the Sumitomo Chemical Group's Business

Core Competence

Capabilities to develop innovative solutions by leveraging its technological expertise in diverse areas

Capabilities to reach global markets

Loyal employees

Provide Solutions

Challenges & Business Opportunities

● Environment

● Food

● Resources and energy

Solve issues facing society

Improve quality of life and build an affluent and comfortable society

● Comfortable life

● Health promotion



Priorities and Performance of the Sumitomo Chemical Group

Leveraging the strengths developed based on its Business Philosophy, Sumitomo Chemical strives to provide solutions that address the challenges it has taken on, thereby achieving the ongoing growth of the Group and contributing to the realization of a sustainable society.

Challenges & Business Opportunities

Working to Solve Issues Facing Society and Build an Affluent and Comfortable Society

Sumitomo Chemical is putting its full strength into solving issues facing society, such as environmental and food supply problems, and improving quality of life. In particular, to address urgent environmental problems, we have set common Group goals for environmental activities in such areas as climate change action and the use of valuable water resources and are working to reduce our environmental footprint. Furthermore, to fulfill its social responsibilities as a company in the chemical industry, Sumitomo Chemical strives to establish and maintain safe and stable operations; secure safety, the environment, and health with respect to the Sumitomo Chemical Group's products; and maintain and improve the quality of those products.

Sumitomo Chemical's Strength (Core Competence)

Capabilities to Develop Innovative Solutions by Leveraging Its Technological Expertise in Diverse Areas

Through its many years of broad-ranging R&D, Sumitomo Chemical has established six core technologies. We have designated environment and energy, ICT, and life sciences as three focus areas where we can make maximum use of these core technologies and are working to bring to market products and technologies under development.

Capabilities to Reach Global Markets

Aiming to become truly global, the Sumitomo Chemical Group has expanded its businesses around the world. Today, more than 60% of the Group's total sales are outside Japan. Going forward, the Sumitomo Chemical Group will continue to actively develop businesses in which it has competitive strength in markets around the world to achieve sustained growth.

Loyal Employees

The strong loyalty that all employees bring to their daily work is one of the great strengths of the Sumitomo Chemical Group. We consider it essential to provide all employees with motivating workplaces where they can fully demonstrate their skills and abilities in a variety of situations. As a part of that effort, the Group is focusing on the active advancement of women and promoting priority measures aimed at creating an environment in which as many women as possible can excel.

Working with Society

Participation in Initiatives

Sumitomo Chemical is working to address a wide range of issues confronting society, including poverty, climate change, educational disparity, and gender inequality. We believe that in doing so, it is important to not only comply with international standards, but to collaborate with various international organizations, NGOs, and other companies, and we are actively participating in initiatives with such entities.

Dialogue with Stakeholders

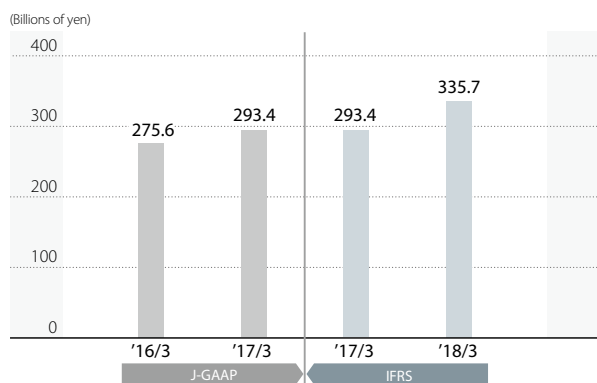
The Sumitomo Chemical Group's Basic CSR Policy dictates that the Sumitomo Chemical Group shall take into consideration the interests of all stakeholders when pursuing and promoting CSR activities. To ensure that we maintain appropriate accountability to all stakeholders, we will continue working to deepen mutual understanding with stakeholders as well as to live up to the trust of society through a variety of efforts, including not only our business activities but also initiatives that contribute to society and regional dialogues.



Priorities and Performance of the Sumitomo Chemical Group

Challenges & Business Opportunities

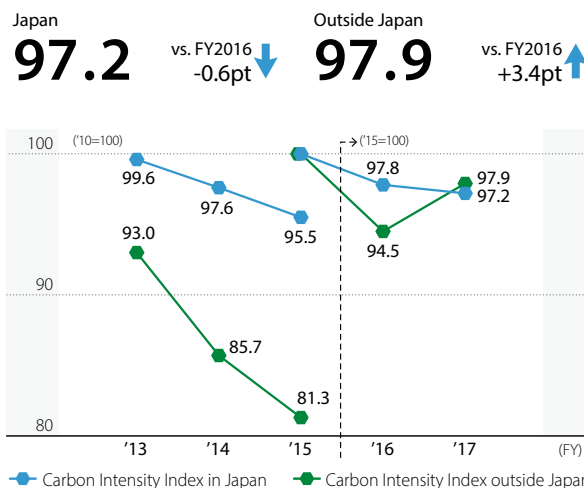
J-GAAP SSS*-designated Product Net Sales
IFRS SSS*-designated Product Sales Revenue



Fiscal 2017 SSS sales revenue came to ¥335.7 billion, a rise of 6% year on year, mainly attributable to increased sales of existing products. SSS-designated products accounted for 15.3% of all sales revenue.

* Sumika Sustainable Solutions

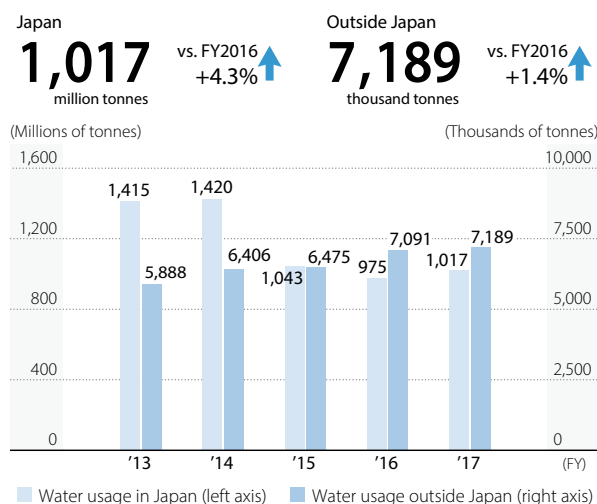
Carbon Intensity Index in Japan* /
 Carbon Intensity Index outside Japan*



The reason for the deterioration in the intensity index of CO₂ emissions outside Japan in fiscal 2017 is due to factors such as new and expanded plant facilities. Sumitomo Chemical is working to improve this index, both inside and outside Japan, putting greater focus on saving energy.

* Index reflects the total production plants of Sumitomo Chemical and its major Group companies that share CO₂ emission intensity index reduction goals.

Water Usage in Japan*^{1, 3} /
 Water Usage outside Japan*^{2, 3}



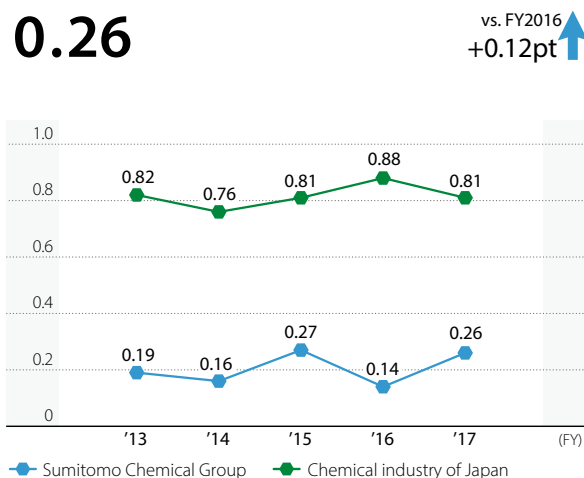
Water usage in Japan increased 4.3% year on year in fiscal 2017, while water usage outside Japan increased 1.4%. We will continue working to reduce water usage.

*1 Total for Sumitomo Chemical and its major Group companies in Japan (for production plants)

*2 Total for major overseas Group companies (for production plants)

*3 Water usage includes seawater

Lost-workday Incident Rate*



The frequency rate of lost-workday incidents for fiscal 2017 was 0.26, failing to meet the goal of less than 0.1. To achieve this goal, Sumitomo Chemical is working to ensure thorough compliance with basic safety rules and implementing policies to prevent recurrence.

* Indicates the frequency of industrial incidents as the number of deaths and injuries per one million hours of total work time.



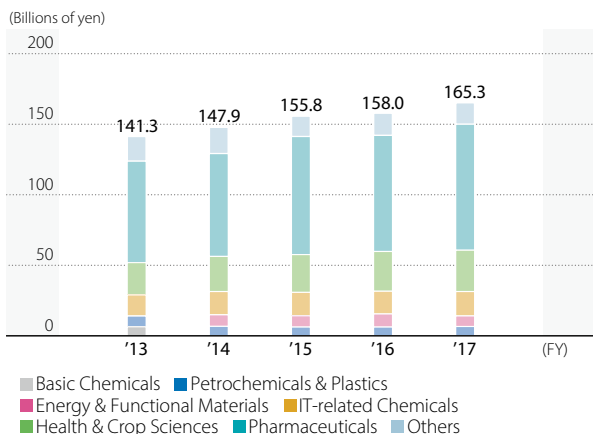
Priorities and Performance of the Sumitomo Chemical Group

Utilizing Sumitomo Chemical's Strengths (Core Competencies)

Research and Development Expenses

¥165.3 billion

vs. FY2016
+4.7% ↑



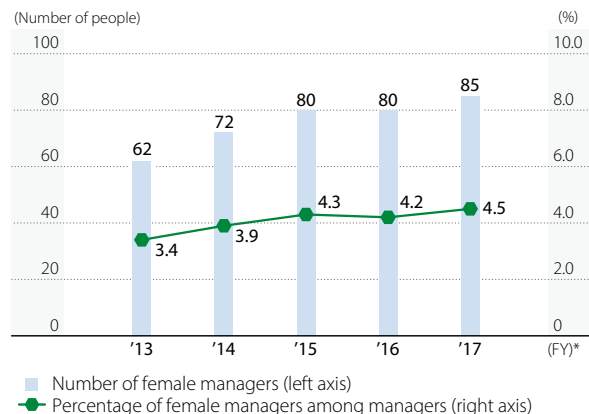
Fiscal 2017 research and development expenses came to ¥165.3 billion, up 4.7% year on year. Around 90% of research and development expenditure is earmarked for the specialty chemicals field, chiefly in the life sciences sector.

Number of Female Managers / Percentage of Female Managers among Managers (Non-consolidated)



4.5% (Percentage of Female Managers among Managers)

vs. FY2016
+0.3pt ↑



In order to promote the advancement of female employees, Sumitomo Chemical is aiming for women to account for at least 10% of positions equivalent to manager or above by 2020.

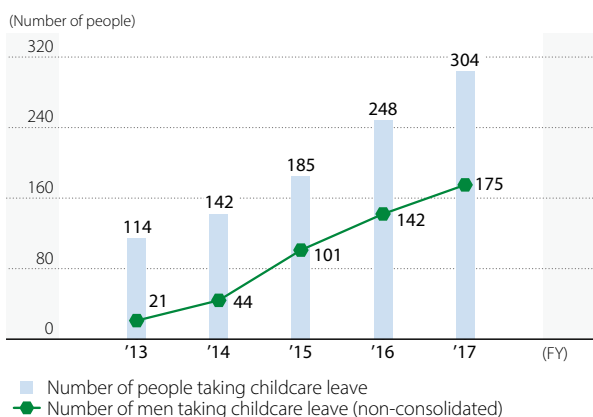
* All numbers as of April 1 of that year

Number of People Taking Childcare Leave / Number of Men Taking Childcare Leave (Non-consolidated)



175 people (Number of Men Taking Childcare Leave)

vs. FY2016
+33 people ↑

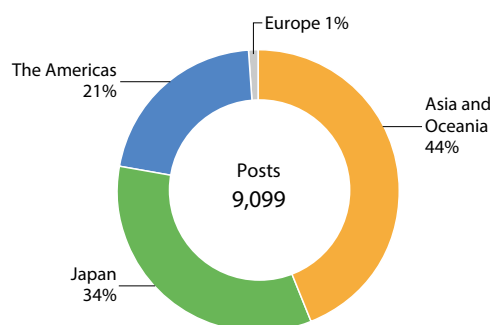


Sumitomo Chemical is encouraging male employees who have had children to take childcare leave, with a goal of achieving a ratio of male employees taking childcare leave of at least 50%* by 2020 (the ratio for fiscal 2017 was 18.7%).

* The number of people who have taken leave divided by the number of male employees who have had children in the relevant period (one year).

Promoting the SDGs: Posts on our Sustainable Tree

2017 **9,099**



The Sustainable Tree is a project in which posts about contributions to achieving the SDGs are made on a dedicated website. The Sustainable Tree is a global initiative, and we aim to have all Group companies participate.

Participation in Initiatives

Basic Policy

Sumitomo Chemical is tackling various challenges facing humanity, specifically poverty, climate change, and educational and gender inequality. On this front, we are going beyond just complying with international regulations and are working with a range of organizations, including various international organizations and NPOs as well as other companies, to actively participate in initiatives.

Initiative Participation Record

Some of the major sustainability-related initiatives in which Sumitomo Chemical participates take a general approach and some focus on one among a variety of specific causes, such as the environment, health, hygiene, human rights, and equality.

Our UN Global Compact Activities

The Sumitomo Chemical Group became the first Japanese chemical company to become a participant in the UN Global Compact (UN GC) in January 2005 and has been a participant of the UN GC LEAD since its launch in November 2011. As a leading company, we respect the Ten Principles set by the UN (related to human rights, labor, the environment, and anti-corruption) and are actively participating in relevant initiatives to further ramp up our efforts.

In fiscal 2017, we participated in two action platforms: Breakthrough Innovation for the SDGs and Pathways to Low-Carbon and Resilient Development. Breakthrough Innovation for the SDGs aims to realize sustainable agriculture and food production, and we gave a presentation on a solution that uses biosensors. In addition, in September 2017, we participated in the 9th annual UN Private Sector Forum held in New York City, and conducted networking and information sharing activities.

The UN Global Compact's Ten Principles

Human Rights

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.

WE SUPPORT



Labour

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.



The Ten Principles of the UN Global Compact (from the Official Website of the UN Global Compact)

<https://www.unglobalcompact.org/what-is-gc/mission/principles>



Participation in Initiatives

Our WBCSD Activities



In the World Business Council for Sustainable Development (WBCSD),* we partnered with member companies in the chemical sector to create the Chemical Sector SDG Roadmap, which organizes sustainability-related fields and issues pertaining to the chemical industry using the SDG framework with the aim of realizing sustainability. In addition, reflecting our public endorsement of the TCFD recommendations, we and 25 CEOs of WBCSD member companies that support the recommendations signed a document announcing our cooperation.

* WBCSD:

This organization was established to advocate for business sector views on sustainable development. The group weighs in at international conferences, such as the World Economic Forum, the B20 Summit, and the Conference of the Parties of the UNFCCC.

Support of the TCFD



In June 2017, Sumitomo Chemical signed, together with over 100 leading companies in the world, the Recommendations on Promoted Disclosures of Climate-related Information, prepared by the Task Force on Climate-Related Financial Disclosures (TCFD), which was established by the Financial Stability Board (FSB).^{*} Sumitomo Chemical sees climate change as one of the most important challenges facing society. Toward its resolution, the Company has actively been working on such issues as greenhouse gas reductions, by capitalizing on its versatile technical capabilities cultivated over many decades as a chemical company operating comprehensively in diverse industrial fields.

* FSB:

An international organization whose members include central banks, financial regulatory authorities, and ministries of finance from 25 major countries.

Our ICCA^{*} Activities



Sumitomo Chemical served as the chair of the Global Working Group on Energy and Climate Change of the International Council of Chemical Associations (ICCA) between June 2016 and June 2018. We led joint international research related to helping reduce GHG emissions through chemical products and technologies. We also worked to promote the spread of the results of the research.

In addition, we also participate in the leader group for chemical substance policy and health. We conduct surveys related to regulatory trends around the world and mechanisms for relaying information on chemical substances contained in products. We also cooperate in promoting widespread product stewardship in each participating country, focusing on those in Asia. Furthermore, we actively participate in measures aimed at new issues, such as the marine plastic problem.

* ICCA:

This organization was established to harmonize the strategies of chemical industry associations and councils around the world through dialogue and cooperation. As the principal representative of the chemical industry, ICCA presents opinions to international organizations about key topics shared by its members and various activities of the chemical industry.

Our WEPs Activities

In 2013, the Group (under the President's name) endorsed the "Women's Empowerment Principles" (WEPs), which were formulated through collaboration between UN GC and UN Women. We have engaged in global efforts aimed at promoting the WEPs in Japan and overseas. Since 2015, we have participated in the annual WEPs forum and in the Global Compact Network Japan's WEPs Subcommittee as a leading company.

In fiscal 2017, Sumitomo Chemical conducted a self-check of its measures related to promoting the active advancement of women using the Gap Analysis Tool developed in part by UN GC with the aim of enabling self-evaluations and gap analyses related to gender equality in companies. We announced the results (Achiever)* on our official website.

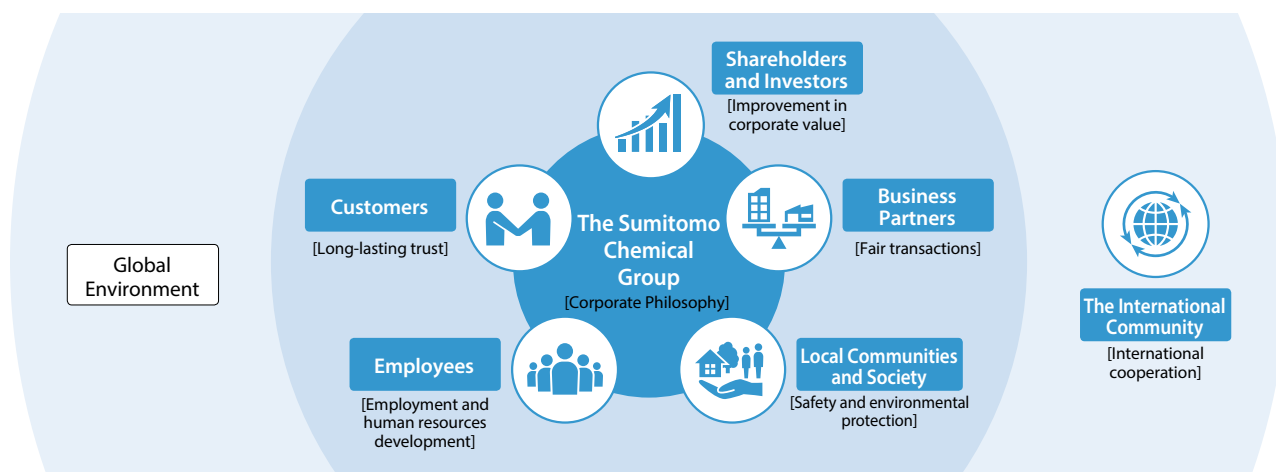
* Based on the degree of achievement, companies are sorted into four ranks: Leader, Achiever, Improver, and Beginner.








Communication with Stakeholders

Basic Policy

Under its Basic CSR Policy, the Sumitomo Chemical Group pursues and promotes CSR activities taking into consideration the interests of all stakeholders. The Group will continue to fulfill its responsibilities to all its stakeholders and work to enhance communication with everyone through a variety of efforts, which include not just business activities but also initiatives that contribute to society and regional dialogues, with consideration given to the international community and global environment.



Communication Opportunities with Each Stakeholder

Stakeholders	Sumitomo Chemical Group's Responsibility	Methods
Shareholders and Investors 	<p>We promote scheduled, effective and strategic communication with shareholders and investors in regard to our management policies, business strategies, and earnings trends. Through this communication, we fulfill our responsibility to disclose information to shareholders with the aim of maintaining and improving the market's trust in Sumitomo Chemical. By promoting an accurate understanding of our operations, we support appropriate share price formation and improvement in corporate value.</p>	<ul style="list-style-type: none"> • Conducting general meetings of shareholders • Holding management strategy briefings and business strategy briefings • Holding conference calls • Holding briefings for individual investors • Holding one-on-one interviews with analysts • Disclosing information via the <i>Annual Report</i>, <i>Investors' Handbook</i>, and other publications • Providing information on the Company's website
Customers 	<p>We are working to supply high-quality products and services that satisfy customers' needs and ensure safety in their use, thereby building long-lasting relations of trust with customers.</p>	<ul style="list-style-type: none"> • Engaging in communication through operating activities and supporting quality assurance • Providing information through various media including the Company's website • Offering customer support through consultation services
Business Partners 	<p>We are committed to building progressive and mutual relations with business partners based on the Basic Procurement Principles. In addition, we conduct fair and transparent transactions, promote responsible procurement activities, and encourage all our business partners to engage in CSR activities.</p>	<ul style="list-style-type: none"> • Engaging in communication through purchasing activities • Monitoring and feedback that draws on the <i>CSR Deployment Guidebook</i> and check sheets • Providing contact points for inquiries
Employees 	<p>We are working to create human resources development systems and a workplace environment in which individual employees can make the most of their abilities, while respecting the well-being and diversity of employees. Also, the Company and its labor union will maintain a favorable relationship that has been built based on mutual understanding and trust.</p>	<ul style="list-style-type: none"> • Conducting central and regional labor-management meetings • Convening the Labor-Management Committee for Diversity and Work-Life Balance • Providing various training programs • Communicating via in-house magazines and internal network
Local Communities and Society 	<p>In the belief that its business must be based on mutual prosperity with society, we are building and maintaining good relationships with local communities by conducting activities to meet local needs while aiming to enhance communications, and ensure the safety of the region and preservation of the environment.</p>	<ul style="list-style-type: none"> • Publishing the <i>Report on the Environment and Safety</i> (at all worksites) • Publishing local PR magazines • Hosting local dialogues • Holding science workshop classes • Engaging in local cleanup activities



Communication with Stakeholders

Dialogue with Shareholders and Investors: Conducting Proactive IR Activities

Through communication with shareholders and investors, Sumitomo Chemical fulfills our accountability to shareholders and maintain and raise market confidence while endeavoring to convey an accurate understanding of the Company, which will be reflected properly in the stock price and in higher corporate value.

Page 72 of *Annual Report 2018*

https://www.sumitomo-chem.co.jp/english/ir/library/annual_report/

Dialogue with Customers: Improving Service

The entire Sumitomo Chemical Group aims to supply high-quality products and services that satisfy customers' needs and ensure safety in their use. Sales representatives and product hotlines support these efforts and respond appropriately depending on the product and inquiry. We actively participate in exhibitions and similar events that provide opportunities for communicating with many customers while promoting widespread understanding of the Company and its aims.

Dialogue with Business Partners: Promoting Responsible Procurement

We conduct fair and transparent transactions and promote responsible procurement activities to encourage all our business partners to engage in CSR activities throughout their supply chains to enforce a spirit of compliance. Specifically, we use check sheets to monitor the CSR measures undertaken by all new as well as current suppliers of raw materials and packaging materials, especially those outside Japan. For those suppliers that require a follow-up, we provide individual feedback that outlines the improvements we want to see and ask for their understanding and cooperation in ensuring responsible procurement. Through these efforts, we are committed to building progressive and mutually beneficial relationships with business partners.

Dialogue with Employees: Promoting Health Management and Maintenance

Sumitomo Chemical actively engages in health management to ensure that each employee is physically and mentally healthy and able to work to their full potential.

In fiscal 2017, in collaboration with the Group's health insurance union, we implemented a range of initiatives, including health seminars at each worksite, mental health-related seminars and training based on the results of group analyses of stress checks, and regular medical interviews with employees deployed overseas under the auspices of the chief occupational health physician of the Company. In addition, at the Tokyo Head Office, we jointly held a health event with the Company labor union in February 2018 at which we provided various opportunities for employees to learn about managing and maintaining their health, for example, by conducting physical strength tests and holding seminars related to physical and mental health. These health management measures received praise, and Sumitomo Chemical was certified as a Health & Productivity Management Outstanding Organization (White 500), which is jointly selected by the Ministry of the Economy, Trade and Industry and the Japan Health Council. Going forward, we will continue to take various measures that help employees manage and maintain their health.



Communication with Stakeholders

Dialogue with Local Communities: Holding Dialogue Meetings

To maintain ties with local communities, Sumitomo Chemical regularly sets up opportunities to interact with various local stakeholders, including municipalities and school officials. These opportunities range from plant tours and dialogue meetings to opinion exchanges and other more casual events.

In local dialogue meetings, we strive to deepen mutual understanding by moving conversations ahead with explanations to neighboring residents about the environmental and safety measures we have in place. In addition, we promote smooth communication with communities by holding plant tours and briefings for each worksite. We also publish local newsletters for the proactive distribution of area-specific information. These are often delivered to residents as newspaper inserts.

Page 70 of *Annual Report 2018*

 https://www.sumitomo-chem.co.jp/english/ir/library/annual_report/ 

Sustainability Promotion System and Activities

Establishment of the Sustainability Promotion Committee

In April 2018, Sumitomo Chemical enhanced the CSR Promotion Committee, thereby creating the Sustainability Promotion Committee. The committee aims to accelerate measures related to resolving social challenges, such as the SDGs, by fully understanding the Group's sustainability promotion activities and comprehensively assessing their contributions thereto.

In addition, from fiscal 2013 we began holding Regional CSR Meetings in each region and the Global CSR Meetings for CSR managers and presidents from the regional headquarters established in each of the world's four regions. From fiscal 2016 we began holding CSR Meetings for Group Companies in Japan.

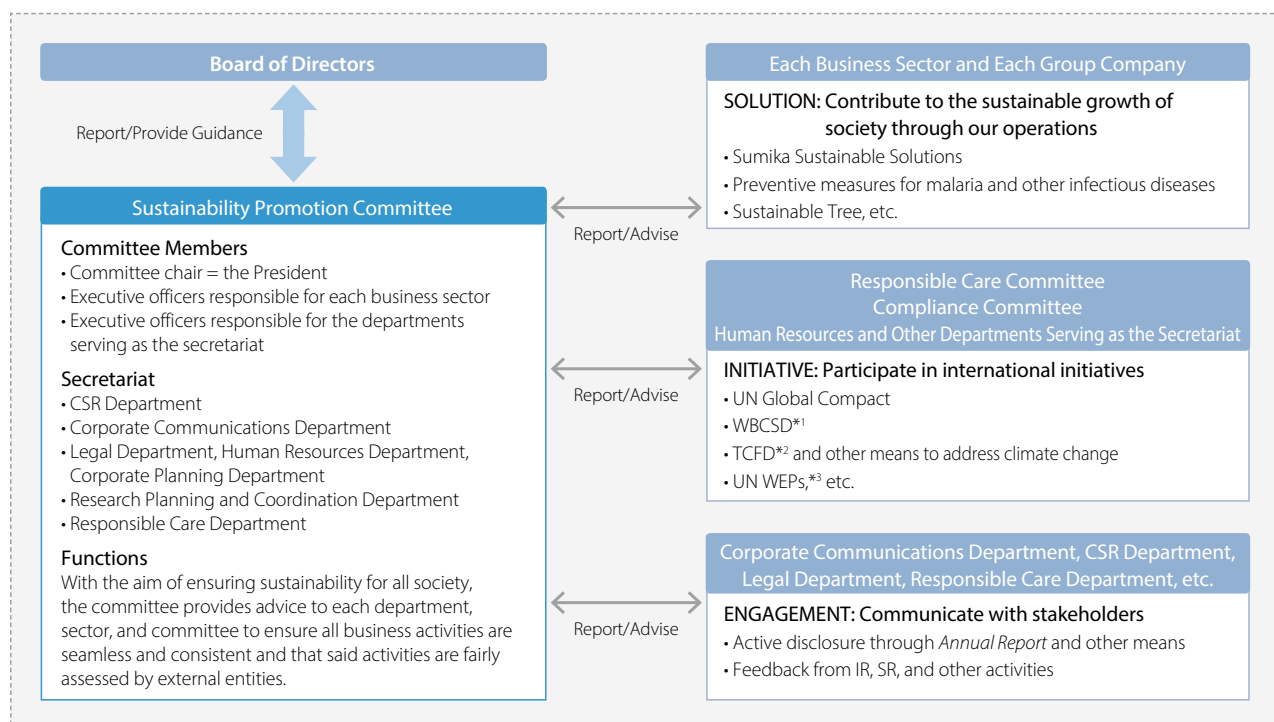
Purpose

- ① Oversee the Group's sustainability promotion activities
- ② Comprehensively verify contributions to sustainability
- ③ Accelerate efforts to solve issues in society, including the SDGs

Sustainability Promotion System

The Sustainability Promotion Committee is chaired by the president and composed of executive officers from each business division as well as the executive officers from the corporate divisions responsible for economic, environmental, and social activities in addition to the disclosure thereof.

Sustainability Promotion Committee Overview



*1 WBCSD: World Business Council for Sustainable Development

*2 TCFD: Task Force on Climate-related Financial Disclosures

*3 UN WEPs: Women's Empowerment Principles



Sustainability Promotion System and Activities

The Sumitomo Chemical Group's Sustainability Promotion Activities

Promoting SDG Measures across the Three Aspects of T, S, and P

Since the adoption of the SDGs, the entire Sumitomo Chemical Group is promoting sustainability activities across the three aspects of T, S, and P; that is, with the commitment of top management (T), through its business solutions (S), and with the participation of all employees (P).



Top Commitment

At the CSR Promotion Committee meeting held in 2017, the committee approved each member's commitment, SDG targets, and CSR promotion activities. The approved CSR action plans were communicated with each worksite and Group company in Japan and overseas mainly through operational lines. Based on these plans, each worksite and Group company in Japan and overseas is creating their own CSR action plan.

In addition, the SDG targets and statements of commitment of each member at the Sustainability Promotion Committee meeting held in 2018 are available on the Company's website.

SDG Lapel Pins



Wearing these UN-issued pins demonstrates our executives' commitment to the SDGs and raises awareness of the SDGs among Group employees.

President's Message

https://www.sumitomo-chem.co.jp/english/csr/top_message.html

Annual Report 2018

https://www.sumitomo-chem.co.jp/english/ir/library/annual_report/



Sustainability Promotion System and Activities

Solutions: Sumika Sustainable Solutions (SSS)

Since fiscal 2016, the Sumitomo Chemical Group has identified those of its products and technologies that contribute to such issues as global warming countermeasures and reducing environmental burdens as Sumika Sustainable Solutions. By promoting the development and the widespread use of these products and technologies, the Sumitomo Chemical Group is offering solutions that will help build a sustainable society, with the aim of contributing to the achievement of the SDGs.



Certification Requirements for SSS Designation

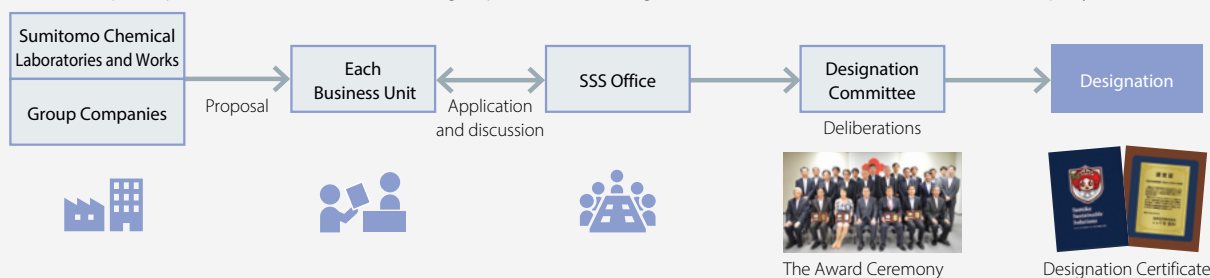
- ① Contribute to reducing greenhouse gas emissions
- ② Contribute to adapting to the climate change impacts
- ③ Contribute to reducing wastes, hazardous substances, and other environmental burdens
- ④ Contribute to the efficient use of water resources and five other requirements

Measuring Contribution to Reducing Environmental Burdens

Sales of currently designated products were 335.7 billion yen in fiscal 2017, contributing to a reduction in greenhouse gas emissions of approximately 53 million tonnes (CO₂ equivalent, predicted total by fiscal 2020) over the lifecycle of the products.

SSS Designation Process

The Designation Committee officially designates products and technologies as SSS after they have been proposed for certification by laboratories, works, or Group companies. Moreover, when discussing requirements for designation, the Committee seeks advice from third-party institutions.



Sumika Sustainable Solutions

https://www.sumitomo-chem.co.jp/english/csr/process_product/

Participation: Our Sustainable Tree

Since fiscal 2016, we have conducted the Sustainable Tree, which is an SDG-based initiative aimed at all Group officers and employees in Japan and overseas. The campaign is waged for 100 days every year from the end of June to the beginning of October. At each designated website, participants select one of the 17 SDGs that they want to focus on and post about their efforts.

Fiscal 2017 was the second year of this campaign. We titled it "Our Sustainable Tree Round 2, Work Together towards the SDGs!" Participants uploaded 9,099 posts about how in their work and workplace they are undertaking measures related to the 17 SDGs. During the campaign, study sessions were held at companies and workplaces. Many officers and employees realized they could contribute to the SDGs through their daily work. This increased the number of passionate posts displaying an understanding of how global issues are their own personal issues.

This year marks the third year. As Our Sustainable Tree 3.0, the aim is to ingrain the SDGs. In other words, we want employees to fully demonstrate their creative capabilities and come up with solutions that create new value through the power of chemistry. In addition to the 100-day call for posts, we stepped up indicatives contributing to the society undertaken by Group companies through their business operations, posting about the measures and top commitments of each.



The Sustainable Tree poster

Our Efforts to Help All Officers and Employees Achieve Their Goals

<https://www.sumitomo-chem.co.jp/english/csr/management/sdgs/sustainabletree.html>



Responsible Care Activities

Responsible Care (RC) activities refer to the voluntary initiatives undertaken by business operators in the chemical industry, with the goals of ensuring safety, the environment, and health throughout the life cycles of chemical products—from development through manufacture, sales, use, and disposal after final consumption—maintaining and improving the quality of those products. Through these activities, we also strive to gain the further trust of society through continuous dialogue. Based on the core principle of “Making safety our first priority,” the Sumitomo Chemical Group engages in RC activities from a variety of perspectives.

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Contributing to the SDGs through
Responsible Care Activities





Responsible Care Activity Goals and Results

Goal achieved or steadily progressing: ○ Goal not achieved: △

	Items	Boundary	Fiscal 2017 Goals	Fiscal 2017 Results	Evaluation	Fiscal 2018 Goals	Page
Responsible Care (RC) Audits	Responsible Care (RC) Audits		Expand RC audit scope	Enhanced auditing methods related to data reliability	○	Expand RC audit scope	pp. 22–27
	Review from the viewpoint of a third party		Review accidents from the viewpoint of a third party	Enhanced management's monitoring functions	○	Review accidents from the viewpoint of a third party	
	RC Global Management		Promote RC Global Management	Verified the Group's adaptability to globalization	○	Promote RC Global Management	
Occupational Safety and Health / Industrial Safety and Disaster Prevention	Lost-workday injuries	Sumitomo Chemical	0	1	△	0	pp. 28–33
		Partner companies*1	0	3	△	0	
	Frequency rate of lost-workday injuries*2	Group*3	Less than 0.1	0.26	△	Less than 0.1	
	Severe accidents*4	Group	0	2	△	0	
	Severe industrial accidents*5	Group	0	0	○	0	
	Lost-workday injuries in logistics*6	Logistics	0	0	○	0	
Environmental Protection / Climate Change Action	Promotion of Environmental Management						pp. 34–44
	Severe environmental accidents	Sumitomo Chemical and consolidated subsidiaries in Japan and overseas	0	0	○	0	
	Laws and regulations, etc.	Sumitomo Chemical	Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations	Studied and responded to amendments to the Soil Contamination Countermeasures Act and the Air Pollution Control Act. Thoroughly discussed legislation to ease or tighten regulations with the Diet.	○	Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations	
	Environmental protection management methods, etc.	Sumitomo Chemical	Promote labor-saving and streamlining	Continued to collect environmental performance data for major Group companies in Japan and overseas using a cloud system and continued taking action toward common goals	○	Provide individual support to Group companies for responding to environmental regulations	

Note: Further details are provided in the supplementary data (pp. 50–74).

*1 A partner company injury is defined as one suffered within a Sumitomo Chemical worksite by an employee of a company affiliated with a logistics or construction subcontractor.

*2 The Responsible Care Department determines if accidents that occur at overseas consolidated subsidiaries are considered to be lost-workday injuries or non lost-workday injuries based on how the accidents are handled in Japan.

*3 For the purposes of occupational safety and health/industrial safety and disaster prevention, the Group is defined as Sumitomo Chemical (including its partner companies and others) and consolidated subsidiaries in Japan and overseas.

*4 Severe accidents are defined as those that result in a fatality or those that result in severe lost-workday injuries, including blindness and loss of a limb.

*5 Severe industrial accidents are defined as industrial accidents resulting in any of the below conditions.

- The local residents suffer injuries requiring at least regular hospital visits or treatment.
- Employees at the facility suffer injuries that at least require a lost workday.
- The damage to the facilities totals more than ¥10 million.

*6 In 2017, this goal was changed to lost-workday injuries in logistics.



Responsible Care Activity Goals and Results

Goal achieved or steadily progressing: ○ Goal not achieved: △

Items	Boundary	Fiscal 2017 Goals	Fiscal 2017 Results	Evaluation	Fiscal 2018 Goals	Page
Environmental Protection / Climate Change Action	Climate Change Action					
	Improve unit CO ₂ emissions from energy use	Sumitomo Chemical	Improve 15% by 2020 compared to 2005 levels	Improved by 20.4% relative to fiscal 2005		Improve 15% by 2020 compared to 2005 levels
		Sumitomo Chemical and Group companies in Japan	Improve over 1% per year on average	Improved by 2.8% relative to fiscal 2015	○	Improve over 1% per year on average
		Group companies overseas	Improve over 1% per year on average	Improved by 2.1% relative to fiscal 2015		Improve over 1% per year on average
	Improve unit energy consumption	Sumitomo Chemical	Improve unit energy consumption 15% by fiscal 2020 compared to 2005 levels	Improved by 21.3% relative to fiscal 2005		Improve 15% by 2020 compared to 2005 levels
		Sumitomo Chemical and Group companies in Japan	Improve over 1% per year on average	Improved by 2.1% relative to fiscal 2015	○	Improve over 1% per year on average
		Group companies overseas	Improve over 1% per year on average	Improved by 2.4% relative to fiscal 2015		Improve over 1% per year on average
	Improve unit energy consumption in the logistics division	Sumitomo Chemical*1	Improve over 1% per year on average	Improved by an annual average of 0.2% relative to the fiscal 2006 standard	△	Improve over 1% per year on average
	Waste Reduction Initiatives					
	Reduce the amount of industrial waste sent to landfills	Sumitomo Chemical	Maintain 80% reduction compared to fiscal 2000 levels	Reduced by 94.3% relative to fiscal 2000	○	Maintain 80% reduction compared to fiscal 2000 levels
Sumitomo Chemical and Group companies in Japan		Maintain waste volume at below fiscal 2015 levels to fiscal 2020	Reduced by 13.1% relative to fiscal 2015	○	Maintain waste volume at below fiscal 2015 levels to fiscal 2020	
Properly treated PCB waste	Sumitomo Chemical and Group companies in Japan	<ul style="list-style-type: none">• (High concentrations of PCB*2) Work toward appropriate storage and recovery of waste containing high concentrations of PCBs and complete PCB waste treatment at an early stage• (Minute amounts of PCB*3) Work toward appropriate storage and recovery of waste containing minute amounts of PCBs and complete PCB waste treatment by March 2025	<ul style="list-style-type: none">• (High concentrations of PCB) Largely completed the treatment of waste containing high concentrations of PCBs (excluding certain factories and equipment); continued to promote the storage and recovery of untreated waste• (Minute amounts of PCB) Implemented the treatment of waste containing minute amounts of PCBs at certain factories; continued to promote the storage and recovery of untreated waste	○	<ul style="list-style-type: none">• (High concentrations of PCB) Work toward appropriate storage and recovery of waste containing high concentrations of PCBs and complete PCB waste treatment at an early stage• (Minute amounts of PCB) Work toward appropriate storage and recovery of waste containing minute amounts of PCBs and complete PCB waste treatment by March 2025	

pp. 34–44

pp. 34–44

Note: Further details are provided in the supplementary data (pp. 50–74).

*1 Within the scope of specified shippers according to the definition stipulated under the Act on the Rational Use of Energy

*2 High concentrations of PCB: Polychlorinated biphenyl (PCB) intentionally used as insulation oil in such items as electric appliances

*3 Minute amounts of PCB: PCB unintentionally mixed in as insulation oil in such items as electric appliances (over 0.5mg/kg)



Responsible Care Activity Goals and Results

Goal achieved or steadily progressing: ○ Goal not achieved: △

Items	Boundary	Fiscal 2017 Goals	Fiscal 2017 Results	Evaluation	Fiscal 2018 Goals	Page
Environmental Protection / Climate Change Action	Protecting the Atmosphere, Water, and Soil					
	Prevention of air and water pollution	Sumitomo Chemical	Meet voluntary management criteria*1	There was one instance of the legal limit being exceeded and another instance where a limit agreed upon with a municipality was exceeded. We have investigated the causes and taken countermeasures.	△	Meet voluntary management criteria
	Effective use of water resources	Sumitomo Chemical	Promote effective and efficient use of water resources	Unit water usage increased by 4.1% relative to fiscal 2016	△	Promote effective and efficient use of water resources
		Group companies overseas	Improve unit water consumption by at least 1% on average per year	Unit water usage worsened by 4.4% relative to fiscal 2015		Improve unit water consumption by at least 1% on average per year
	Response to PRTR	Sumitomo Chemical	Maintain 60% lower total emissions of air and water pollutants relative to fiscal 2008	Reduced emissions by 89.0% relative to fiscal 2008	○	Maintain 60% lower total emissions relative to fiscal 2008
		Sumitomo Chemical and Group companies in Japan	Maintain total emissions of air and water pollutants at below fiscal 2015 levels to fiscal 2020	Reduced emissions by 10.6% relative to fiscal 2015		Maintain total emissions of air and water pollutants at below fiscal 2015 levels to fiscal 2020
	Reduction of VOC emissions	Sumitomo Chemical	Maintain VOC emissions reductions at 30% relative to fiscal 2000	Reduced emissions by 49.3% relative to fiscal 2000	○	Maintain VOC emissions reductions at 30% relative to fiscal 2000
	Prevention of soil and groundwater contamination	Sumitomo Chemical and Group companies in Japan	Keep hazardous materials strictly within Company premises*2	Kept hazardous materials strictly within Company premises	○	Keep hazardous materials strictly within Company premises
Product Stewardship / Product Safety / Quality Assurance	Prevention of ozone layer depletion	Sumitomo Chemical and Group companies in Japan	<ul style="list-style-type: none"> Eliminate the use of refrigeration units that use CFCs as coolants by fiscal 2025 Eliminate the use of refrigeration units that use HCFCs as coolants by fiscal 2045 	Systematically replaced refrigeration units that use CFCs and HCFCs as coolants	○	<ul style="list-style-type: none"> Eliminate the use of refrigeration units that use CFCs as coolants by fiscal 2025 Eliminate the use of refrigeration units that use HCFCs as coolants by fiscal 2045
	Conservation of Biodiversity	Sumitomo Chemical	Ensure compliance with "Sumitomo Chemical's Commitment to the Conservation of Biodiversity"	Ensured compliance with "Sumitomo Chemical's Commitment to the Conservation of Biodiversity" and promoted detailed initiatives	○	Ensure compliance with "Sumitomo Chemical's Commitment to the Conservation of Biodiversity"
	Laws and regulations	Sumitomo Chemical	Continue to act precisely in accordance with domestic and overseas laws and regulations	Acted precisely in accordance with relevant laws and regulations	○	Continue to act precisely in accordance with domestic and overseas laws and regulations
	Chemicals management and information disclosure	Sumitomo Chemical	Continue to promote risk-based chemicals management and information disclosure	Systematically put in place risk assessment methods	○	Continue to promote risk-based chemicals management and information disclosure
	Chemical management system	Sumitomo Chemical	Continue to promote utilization of the comprehensive chemical management system (SuCESS) and develop concrete plans for expansion to Group companies	As part of our efforts to promote utilization of SuCESS, we introduced a substance volume tracking (SVT) system	○	Continue to promote utilization of the comprehensive chemical management system (SuCESS) and develop concrete plans for expansion to Group companies
Product Stewardship / Product Safety / Quality Assurance	Risk assessment	Sumitomo Chemical	Promotion of product safety risk assessments focused on high-risk products*3	Completed reassessments of all high-risk products and performed 134 risk assessments, including for high-risk products	○	Steadfastly perform product safety risk reassessments
	Logistics quality-related incidents	Sumitomo Chemical*4	No Rank A or Rank B incidents, two or fewer Rank C Incidents	No Rank A or Rank B incidents, one Rank C incident	○	No Rank A or Rank B incidents, two or fewer Rank C Incidents

Note: Further details are provided in the supplementary data (pp. 50–74).

*1 Voluntary management targets that are stricter than the criteria of relevant laws and regulations, including agreements reached with local authorities.

*2 Keep hazardous materials strictly within Company premises: Controlled on the premises.

*3 High-risk products: Products likely to have relatively high risks in terms of the nature of the chemical substances in the product and their application.

*4 Includes some Group companies in Japan that have Works within a Sumitomo Chemical worksite.

pp.
34–44

pp.
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Responsible Care Management

Basic Stance

Responsible Care (RC) activities refer to the voluntary initiatives undertaken by business operators in the chemical industry, with the goals of ensuring safety, the environment, and health throughout the life cycle of chemical products, from development through to the manufacture, sales, use, and disposal after final consumption, maintaining and improving the quality of those products. These activities also strive to gain the further trust of society through continuous dialogue.

The Sumitomo Chemical Group has positioned Responsible Care activities as one of its most important management pillars. Based on the core principle of "Making safety our first priority," the Group has set goals for each of the following fields: occupational safety and health; industrial safety and disaster prevention; environmental protection and climate change; product stewardship, product safety, and quality assurance; Responsible Care audits; and logistics. The entire Group is working in unison to achieve the goals it has set.

Corporate Policy on Safety, the Environment and Product Quality

Sumitomo Chemical has set forth safety, the environment, and product quality as top priorities for all phases of its business activities in its Corporate Policy on Safety, the Environment and Product Quality. This policy has been communicated to all employees of Sumitomo Chemical and its Group companies to ensure that each and every employee is fully aware of it.

In conformity with Sumitomo's Business philosophy, our Company fulfills its responsibility to develop, manufacture, and supply a variety of products that satisfy the fundamental necessities of human life and contribute to the growth of society. Under the concept of "Making safety our first priority," which is fundamental to all the Company's operations, Sumitomo Chemical has based management of its activities on the principles of (i) maintaining zero-accident and zero-injury operations, (ii) ensuring customer satisfaction, and (iii) promoting mutual prosperity with society.

Paying due respect to these principles, our Company is determined to conduct all activities, including production, R&D, marketing & sales, and logistics, in accordance with the following policy related to safety, the environment, and product quality.

1. Maintain zero-accident and zero-injury operations and the safety of neighboring communities and our employees.
2. Ascertain the safety of raw materials, intermediates, and products and prevent our employees, distributors, customers, and consumers from being exposed to any possible hazard.
3. Supply high-quality products and services that satisfy customers' needs and ensure safety in their use.
4. Assess and reduce our environmental impact at all operational stages, from product development to disposal, and undertake all practical environmental protection measures.

All sections and employees of our Company shall be made fully aware of the significance of this policy and shall constantly strive to improve operational performance, while at the same time abiding by all relevant laws, regulations, and standards.

Revised: November 1, 2005 (Established: April 1, 1994)



Responsible Care Management

Policy on Responsible Care Activities

Sumitomo Chemical has summarized its key Responsible Care initiatives in its Policy on Responsible Care Activities, which is incorporated into the specific activity targets and plans formulated annually by each Sumitomo Chemical workplace and Group company.

In accordance with the Sumitomo Chemical Charter for Business Conduct and the Corporate Policy on Safety, the Environment and Product Quality, the Sumitomo Chemical Group as a whole will strive to promote Responsible Care Activities, thereby earning the trust of society, promoting business activities, and contributing to the sustainable development of society.

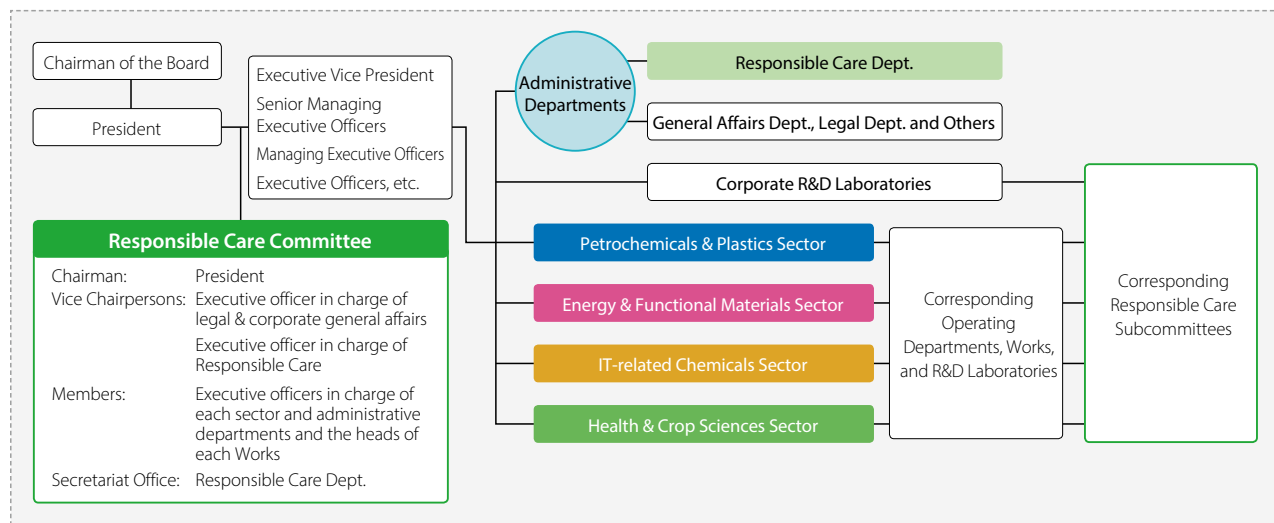
1. We will achieve zero-accident, zero-disaster targets to ensure safe and stable operations.
2. We will conduct risk management throughout the life cycle of our products, from the stages of development to manufacturing, logistics, use, and disposal and strive to ensure the safety of our employees, those involved in logistics, customers, and general consumers as well as the local community while also preserving the environment.
3. We will strive to develop safe and environmentally friendly products and manufacturing processes.
4. We will promote energy and resource conservation and waste reduction, thereby easing the environmental burden.
5. We will comply with all domestic and international laws, regulations, and ordinances related to safety, the environment, and product quality, and further enhance our related voluntary initiatives.
6. We will implement the requisite education and training related to safety, the environment, and product quality.
7. We will disclose information on Responsible Care Activities and engage in dialogue with society to ensure we meet society's expectations, respond to its interests, and remain accountable to the same.
8. We will continuously improve Responsible Care Activities based on Responsible Care auditing and third-party verification.
9. We will support the Responsible Care Activities of Group companies, contractors, and other business partners and help them carry out initiatives to enhance the same both at home and abroad.

Revised: July 15, 2013 (Established: January 1995)

Organization of Responsible Care Activities

Sumitomo Chemical's RC activities are classified into the fields of occupational safety and health, industrial safety and disaster prevention, environmental protection and climate change, product responsibility and product stewardship, Responsible Care audits, and logistics. As the highest body for deliberating and approving RC activities, the Responsible Care Committee is chaired by the president and comprises executive officers supervising the administrative departments and the four business sectors of the Company, and the General Manager of each Works. The Committee puts in place annual policies on activities, medium-term plans, and specific measures as they relate to Responsible Care. The Committee also analyzes and assesses the results of Responsible Care activities.

■ Organization of Responsible Care Activities





Responsible Care Management

Implementing Sumitomo Chemical's Medium-term Plan for Responsible Care Activities

	Medium-term Plan (for Fiscal 2016 to 2018)
Occupational Safety and Health	Improve the Group's culture of safety by strictly following safety requirements
Industrial Safety and Disaster Prevention	Bolster safety assurance capabilities by improving process risk assessment and promoting safety measures
Environmental Protection	Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations
Addressing Climate Change	Work to improve unit CO ₂ emissions and energy consumption Establish an internal certification system for products that help address climate change and promote the development and adoption of said products
Product Stewardship, Product Safety, and Quality Assurance	Further promote voluntary product quality control by actively using the comprehensive chemical management system (SuCCESS) and encourage the use of product safety risk assessments, including at Group companies
RC Audits	Reduce risks by expanding the scope of RC audits
Logistics	Reduce the number of logistics safety- and quality-related incidents

Note: More details on the key activities for each field can be found in the following sections.

Promoting Responsible Care Activities as a Unified Group

Sumitomo Chemical shares policies and targets regarding RC across the entire Group. We are working to maintain safe and stable operations, which is one of the basic policies outlined in the Corporate Business Plan. We are also striving to ensure safety, environmental friendliness, and health throughout the life cycle of products as well as to improve the quality of chemical products the Company manufactures.

At present, we have stationed Responsible Care specialists at regional headquarters in Europe and the Americas as well as China and the wider Asia Pacific region. This has enabled us to develop RC activities rooted in each area. We established the Sumitomo Chemical Group's Safety Ground Rules in 2016 as a measure to further secure safety at all Group locations. We have since been working to promote awareness of the rules among all Group employees while further raising the level of Group-wide safety activities and eliminating work-related accidents. Moreover, we strive to ensure the safety of community residents and protect their environment while promoting mutual understanding by providing residents with information concerning our initiatives and engaging in dialogue.

Also, we continually work to develop human resources that are capable of implementing Responsible Care, for example, through training and practice at each production site as well as global meetings attended by the Responsible Care managers of Group companies in Japan and overseas. In addition, we formed a team to support the RC activities of Group companies. The team holds regular face-to-face meetings and publishes a newsletter that covers various topics and information on accidents and disasters that have occurred within the Group in the hope of preventing similar occurrences. The team also promotes various kinds of RC activities through RC awards for excellent RC activities of Group companies.



Responsible Care Management

Progress in Fulfilling Eco-First Commitments

Sumitomo Chemical has participated in the Eco-First Program of Japan's Ministry of the Environment since November 2008. As a leading company in the chemical industry, Sumitomo Chemical is committed to fulfilling its Eco-First commitments to the Japanese Minister of the Environment while ensuring legal compliance and enhancing RC activities.



Results ● Very favorable/ ○ Generally favorable

Management of Chemical Substances and the Promotion of Risk Communication

Reviewing Safety Information on Chemicals and Conducting Risk Assessments

- Completed hazard assessments for all substances included in the initial plan, performed risk assessments for 537 products, and publicly released 41 safety summaries (<http://icca.cefic.org/>)



LRI*¹ Initiatives

- Promoted research by actively participating in the LRI program implemented by the Japan Chemical Industry Association as a member of the steering committee, planning and management task force, and research promotion panel*²

Enhancing Information Disclosure and Risk Communication

- Published the *Annual Report*, *Sustainability Data Book*, the *Report on the Environment and Safety* (at all worksites), local PR newsletters, etc., made information publicly available on the official website, made school visits, accepted student interns, and engaged in dialogue with local residents

Realizing Safe and Secure Water Treatment by Developing and Applying Management Technology that Helps Reduce Environmental Impact

Considering Appropriate Water Treatment Methods and Standardizing Methods for Assessing Various Process Waste Water Expelled from Works

- In light of current operating conditions, we considered the necessary standardization and optimization of each Works' methods for assessing and treating effluent from new manufacturing processes



Using Microbiota Analysis, Microbial Immobilization, and Other Proprietary Technology to Increase the Sophistication of Activated Sludge Treatment

- We use the latest genetic analysis methods to assess the biota comprising the activated sludge, which is processed at each Works independently. We are considering tying the operating requirements for activated sludge treatment to the biota that comprises the sludge. In addition, in the area of process wastewater, which has long been used on an industrial scale, we are working on determining the relevant issues and responses with regard to activated sludge treatment using microbial immobilization technology.

Helping Create a Sustainable Society

Starting Sumika Sustainable Solutions

- We launched initiatives to internally designate products and technologies that contribute to global warming countermeasures and environmental impact reduction. A total of 44 products and technologies have been designated, with combined sales of ¥335.7 billion in fiscal 2017 (consolidated). They are projected to contribute to a collective 53 million tonne CO₂ equivalent reduction in greenhouse gases throughout their life cycles in fiscal 2020.*³



Improving Energy Efficiency

- As a result of working to improve energy efficiency, the Company-wide unit energy consumption in fiscal 2017 improved 4.0% year on year, and unit CO₂ emissions from energy improved around 20.4% compared with fiscal 2005.

Holding Dialogues with Internal and External Stakeholders

- Explained to internal and external stakeholders the importance of the Company helping to create a sustainable society and the Company's related measures, thereby deepening mutual understanding through dialogue.

*1 Long-range Research Initiative:
Long-term support for research into the effects of chemical substances on human health and the environment

*2 Research Promotion Panel:
Commissioned expert research into the development of new risk methods, assessments, and related activities; held a meeting to report on the results of the research

*3 This value represents the amount contributed to the reduction of greenhouse gases over the life cycles of designated products expected to be sold in fiscal 2020, based on the guidelines of the Japan Chemical Industry Association and the ICCA.



Responsible Care Management

The Role of Responsible Care (RC) Audits

The RC audit is a management system to verify that the RC activities such as ensuring safety and the environment, and maintaining and improving the quality of chemical products are properly implemented. It also promotes process enhancement if areas for improvements are found in those activities.

To promote the Sumitomo Chemical Group's RC global management, RC audit activities fulfill the functions of improving management and building, maintaining, and improving the internal control system through the following four-step approaches.

Step 1: Sharing Sumitomo's Business Principles and Philosophy

Step 2: Promoting an understanding of and sharing in the Corporate Policy on Safety, the Environment and Product Quality; Policy on Responsible Care Activities; RC management systems; and Group Responsible Care Standards

Step 3: Establishing and developing RC management systems at each Group company

Step 4: Carrying out modifications to the direction and adjusting levels of RC activities by undergoing RC audits

Through face-to-face communication through each of the aforementioned steps, we have successfully provided assistance so that the RC management system is set in place by taking the scale, type of business, and attributes of each Group company into consideration. Relationships with Group companies that have been nurtured through these RC audits are utilized in various initiatives including individual support and the lively exchange of opinions aimed at resolving a wide range of issues at the Group companies.



Responsible Care Management

Responsible Care Auditing Framework

Sumitomo Chemical has an independent RC audit team. The RC auditors, who have a wealth of knowledge, experience, and technical expertise, take the lead in directly visiting internal Works as well as Group companies and conducting audits. In addition, RC audits of internal Works and research labs are conducted from a management perspective by Sumitomo Chemical's executive officers in charge of RC.

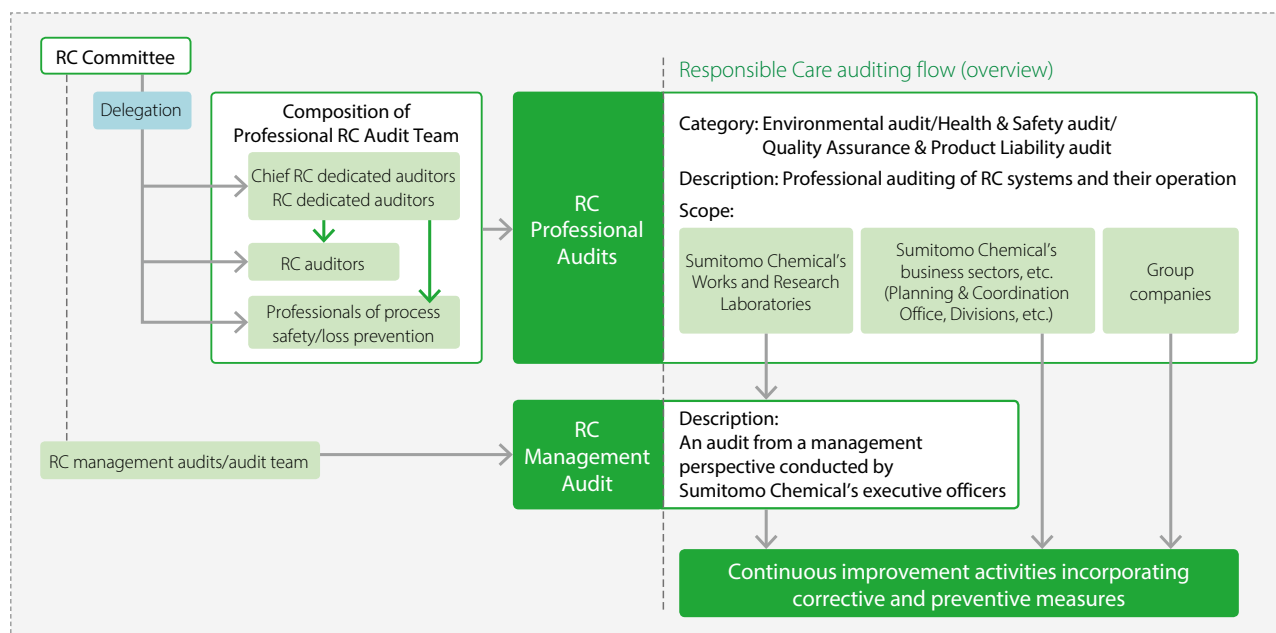
Features of Sumitomo Chemical's RC audits:

- Support is provided in the form of advice and proposals to ensure improvement at Group companies.
- Throughout RC audits, human resource development programs are incorporated to train Manufacturing Section Heads of Sumitomo Chemical and RC staff of Group companies.
- Local consultants are engaged to ensure the thoroughgoing and comprehensive check of compliance at overseas Group companies.

The Scope and Cycle

In principle, RC audits are conducted every one or two years at Sumitomo Chemical's Works and business sectors, and every three years at Group companies.

Responsible Care Auditing Framework



Looking Ahead

We continually work to prevent compliance violations, corruption, and errors as well as to improve the management of both Sumitomo Chemical and Group companies while building, maintaining, and improving their internal control systems as needed.

Occupational Safety and Health / Industrial Safety and Disaster Prevention

★: Assured by an independent assurance provider

Basic Stance on Occupational Safety and Health

Reflecting the principle of “Making safety our first priority,” Sumitomo Chemical has formulated five fundamental and personal safety principles that each employee is expected to follow as well as guidelines based on the core principle. All Sumitomo Chemical employees and all involved parties, including partner companies, are thus united in promoting safety activities with the goal of eliminating all accidents.

Sumitomo Chemical has acquired OSHMS* certification at its worksites. In addition, the Company implements PDCA cycles that support a host of measures on the path to realizing improvements based on risk assessments. These safety-related measures and their results are reviewed at the end of each fiscal year by the Responsible Care Committee, which is headed by the President. The reviews ensure a continuous connection between past and future fiscal years' cycles, thereby strengthening safety and health activities that prevent accidents.

* By introducing and deploying JISHA (Japan Industrial Safety and Health Association) OSHMS (Occupational Health and Safety Assessment Series) Standards equivalent to OHSAS 18001, the Company conducts sound corporate management and risk management from the perspective of occupational safety and health.

Core Principle: Making Safety Our First Priority

Raison D'être for the Core Principle

1. Line management is fundamental to Safety and Health.
2. Each person is responsible for Safety and Health.
3. Sumitomo Chemical is united with partner companies on Safety and Health.

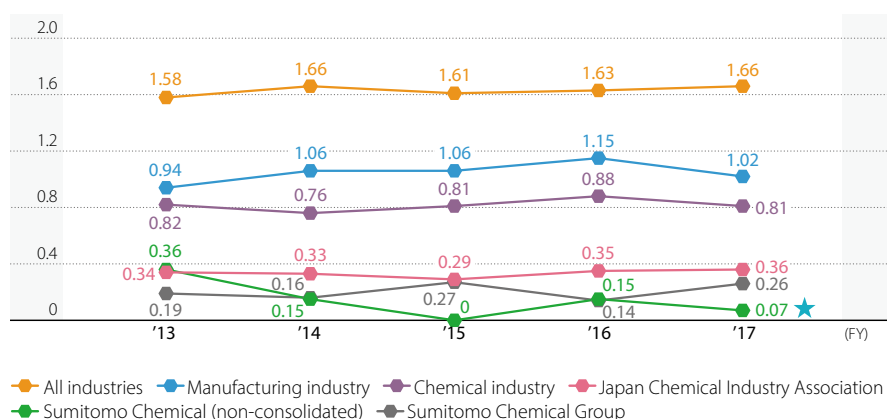
Five Fundamental and Personal Safety Principles that Each Employee is Expected to Follow.

- I will give safety and health the top priority in every aspect of business.
- I will identify and resolve safety and health issues at the source.
- I will comply with rules and instructions.
- I will act with safety in mind 24 hours a day, not just during working hours.
- I will cooperate with all involved parties, including partner companies, to ensure safety and health.

Fiscal 2017 Occupational Accidents

The Sumitomo Chemical Group targets a frequency rate of lost-workday injuries of under 0.1, but its rate was 0.26 in fiscal 2017. Although this was a favorable result compared to Japan's chemical industry as a whole (0.81), it still fell short of our goal and was 0.12 higher than in the previous fiscal year. Moreover, while the Group has set a goal of zero major accidents, it recorded two, up two from the previous fiscal year. In fiscal 2017, the number of lost-workday injuries increased by eight year on year.

Frequency Rate of Lost-workday Injuries (Sumitomo Chemical)





Occupational Safety and Health / Industrial Safety and Disaster Prevention

■ Lost-workday Injuries (Sumitomo Chemical Group*)

	FY2013	FY2014	FY2015	FY2016	FY2017
Number of lost-workday injuries	12	10	17	9	17

Note: Data for previous fiscal years has been retroactively adjusted to enhance accuracy.

* Employees of Sumitomo Chemical, its partner companies, and its Group companies in Japan and overseas

Initiatives to Prevent Occupational Accidents

Sumitomo Chemical thoroughly investigates the causes of each accident and works to prevent accidents by taking such measures as ensuring strict adherence to safety rules, providing hazard prediction training, also known as Kiken Yochi Training (KYT), and sharing accident information. In addition, we are working to raise safety awareness among construction partner companies that enter our Works by distributing pocket-size booklets and entrance certificates that feature the ground rules and core principles of safety as we promote our initiative of "Making safety our first priority."

Ensuring Thorough Compliance with the Sumitomo Chemical Group's Basic Safety Rules (Ground Rules)

In light of trends in the causes of accidents, the Group has established the following ground rules and is working to ingrain safe behavior.

1. Think Before You Act!
2. Help each other to be more aware of unsafe actions
3. Do not place hands in or around areas of working machinery/equipment

Improving Hazard Prediction Abilities

We are working to improve employees' hazard prevention ability—their ability to perceive and avoid danger—through, for example, behavior-based safety training and workplace discussions using illustrations.

Sharing and Using Accident Data

The Group shares information about all accidents mainly for use in safety education and comprehensive on-site investigations. When an accident occurs, we conduct a thorough examination of the causes and organize studies on how to prevent recurrences through on-site inspections with the top management of the affected workplace and safety managers.

Awards for Safety

Safety awards are given to workplaces that achieve zero lost-workday injuries. The President's Award for workplace safety is presented to workplaces with both a solid safety track record and good practices for safety and health, which could be an example to other workplaces. The President's Award was given to seven workplaces in fiscal 2017.

Safety Promotion through In-house Magazine, Slogan and Poster

In our in-house magazine, we have introduced examples of accidents that tend to happen at work and their preventive measures in a series of articles on enhancing safety since fiscal 2013. We also collect ideas each year for a slogan and a poster for safety and health, and make a poster using the best ideas and display it at each workplace to raise safety awareness.



Occupational Safety and Health / Industrial Safety and Disaster Prevention

Basic Stance on Industrial Safety and Disaster Prevention Management

The foremost mission of industrial safety and disaster prevention management is to prevent unforeseen industrial accidents, including fires, explosions, and the leakage of hazardous substances. At the same time, every effort must be made to minimize damage in the event of a natural disaster such as a major earthquake. Through these means, the Company is committed to securing the safety and peace of mind of employees and local communities. With this in mind, Sumitomo Chemical takes voluntary steps to put in place a safety management structure, undertakes stringent risk assessments of manufacturing plants and R&D projects, and works tirelessly to strengthen safety measures based on its evaluation of risks.

Fiscal 2017 Industrial Accidents

The Sumitomo Chemical Group achieved the target of “no severe industrial accidents”* in fiscal 2017.

However, there were three industrial accidents, which are minor accidents whose scale does not reach that of a severe industrial accident, in fiscal 2017. We will work to enhance safety management and quickly share the causes of the industrial accidents and the lessons learned across the entire Sumitomo Chemical Group.

* “Severe industrial accidents” refers to any of the following workplace incidents:

- Accidents that cause injuries to local residents requiring outpatient/hospital treatment
- Accidents that result in lost-workday injuries to workers on the site
- Accidents that result in equipment and facility damage exceeding ¥10 million

Safety Education

Sumitomo Chemical has a variety of industrial safety educational programs that reflect the operational roles of employees throughout the Company. The programs are aimed at bolstering the ability of employees to acquire knowledge and skills in order to ensure process safety. In addition, we provide safety education to Group companies in Japan suited to each company's needs.

■ Examples of Safety Education

Name	Type	Purpose
In-house Safety Management System Education	e-learning	Fostering a deep understanding of the basic rules of safety management (the “Safety Management Guidelines”) (FY2017 participants: 2,498 from Sumitomo Chemical)
Disaster Prevention Theory	Group training	Promoting the acquisition of basic knowledge regarding safety and disaster prevention for fires, explosions, reaction hazards, static electricity, etc. (FY2017 participants: 112 from Sumitomo Chemical and 12 from Group companies)
Fire and Explosion Training	Group training and self-study	Promoting the acquisition of knowledge to prevent accidents and perceive hidden dangers in the workplace through hands-on training related to fires and explosions (FY2017 participants: 166 from Sumitomo Chemical and 60 from Group companies)
Company-wide Safety Education	Group training	Training that covers the latest topics each fiscal year (The training in fiscal 2017 involved case studies of explosive accidents in the United States.) (FY2017 participants: 623 from Sumitomo Chemical and 75 from Group companies and partner companies)

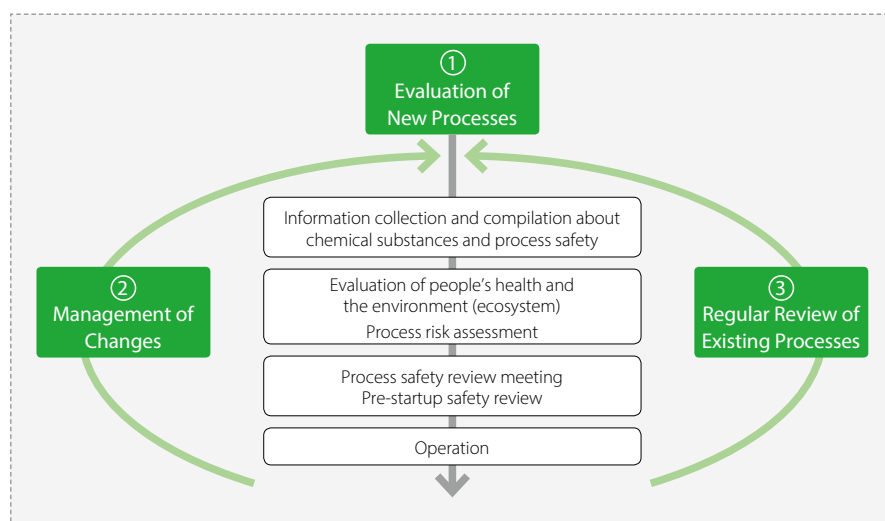


Occupational Safety and Health / Industrial Safety and Disaster Prevention

Safety Management

Based on the Corporate Policy on Safety, the Environment and Product Quality, Sumitomo Chemical performs safety and environmental risk assessments at each stage from new chemical process R&D through the commercialization process to plant design, construction, operation, maintenance, and even demolition. The items and procedures essential to risk assessment are specifically outlined in the Development and Commercialization Regulations, the Chemical Safety Management Regulations, the Safety Management Guidelines, and other similar documents that provide the standards for the Company.

■ Process Risk Management (Three Routes)



① Evaluation of New Processes

The Process Safety Review Meeting (levels 1 to 5) convenes at every step, from R&D through to industrial-scale production. These meetings are held to review process safety assessment results and the lineup of chemical substances handled by the Company as well as to determine whether safety countermeasures are appropriate. This mechanism ensures that processes do not proceed to the next step unless adequate safety has been confirmed.

② Management of Changes

When certain changes are made to, for example, improve plant facilities or modify operating conditions, the Company conducts all necessary safety assessments before such changes are made to ensure process safety levels are maintained after each change has been completed. As this system is utilized within the Company, it is well-known among Group companies and ensures risk management throughout the organization.

③ Regular Review of Existing Processes

Even when there is no change in the process, Sumitomo Chemical conducts regular reviews to catch up with the latest information on industrial safety technologies and to check whether there will be a significant impact from the long-term use of a plant.

Furthermore, Sumitomo Chemical does not just identify potential risks in regular operations, it also shines a light on irregular operations, such as emergency shutdowns of plant operations and subsequent restarts. Since 2012, we have been working to strengthen our capabilities to comprehensively identify process risks. These efforts are not focused on achieving short-term goals. We incorporate lessons learned through our activities and achievements into the "Safety Management Guidelines" (revised in March 2017) to strengthen our capabilities of process safety assessment.



Occupational Safety and Health / Industrial Safety and Disaster Prevention

Earthquake Countermeasures

Sumitomo Chemical drew up a basic plan on earthquake countermeasures in 2004 taking the initiative to improve the earthquake resistance features of equipment and structures that were especially susceptible to the risk of damage. Furthermore, in accordance with recent directives by government authorities to improve the seismic adequacy of existing facilities, we made a plan to obtain required earthquake-resistant features of critical high-pressure gas equipment and are carrying out reinforcements and reconstruction in line with the plan. Before carrying out this work, we took measures to reduce risk and ensure safety, such as reducing the volume of gas held in equipment in order to decrease its weight and meet the earthquake resistance criteria.

Initiatives for Ensuring Safety in Logistics Operations

The Sumitomo Chemical Logistics Partnership Council was formed by Sumitomo Chemical and the logistics subcontractors (84 companies at 114 locations) for Sumitomo Chemical Group companies in Japan. The Council maintains committees for Works in each area as well as for logistical centers (transport and storage) and marine transport-related operations nationwide. The Council is expanding the Logistics Department's Responsible Care activities. With regard to the transport of hazardous substances in tanker trucks and other vehicles, the Council annually holds a nationwide competition for tanker truck drivers as well as nationwide training workshops for instructing drivers on the basics of unloading trucks and on what to do when problems arise. In fiscal 2017, we were able to achieve zero lost-workday injuries for the second year in a row. Going forward, we will continue taking various measures to improve the situation toward our goal of zero accidents.

■ Lost-workday Injuries in Logistics (in Japan)

	FY2013	FY2014	FY2015	FY2016	FY2017
Number of cases	1	1	3	0	0

Note: Lost-workday accidents caused by logistics subcontractors on the premises of Sumitomo Chemical workplaces and lost-workday accidents caused by major logistics subcontractors outside the premises of Sumitomo Chemical workplaces.



Occupational Safety and Health / Industrial Safety and Disaster Prevention

Industrial Safety Action Plan

Industry organizations came together with the Japan Petrochemical Industry Association and drew up an industrial safety action plan in July 2013 in a bid to step up efforts aimed at promoting industrial safety. Here we introduce the Company's initiatives based on the action plan.

(1) Commitment by Top Management to Industrial Safety

- Sumitomo Chemical has identified efforts to ensure full and strict compliance and maintain safe and stable operations as one of the Group's priority management issues under its Corporate Business Plan.
- The president issues a safety week message to all employees and Group companies in Japan and overseas to coincide with National Safety Week, which begins on July 1 each year.
- We have held the President's Awards for workplace safety on a continuous basis since fiscal 2012.

(2) Setting Industrial Safety Targets

- Each year, Sumitomo Chemical sets targets for a variety of key parameters, including the elimination of all accidents resulting in lost workdays as well as all severe industrial accidents. The Company engages in a broad spectrum of activities aimed at achieving these targets.

(3) Drawing Up an Action Plan to Secure Industrial Safety

- Sumitomo Chemical pursues activities aimed at thoroughly identifying industrial safety risks that encompass regular and irregular operations.

(4) Checking and Evaluating Progress toward Achieving Targets and Implementing Measures

- The Responsible Care Committee (see page 23 "Organization for Responsible Care Activities") reviews progress toward the achievement of targets and the implementation of measures. Findings under this review are reflected in the plan for the next fiscal year.

(5) Initiatives Aimed at Promoting Voluntary Safety Activities

- The Sumitomo Chemical Group established the ground rules related to safety and strives to foster a culture of safety.
- Sumitomo Chemical designates one day each month as a "safety day" in an effort to continuously focus the attention of the entire Group on the importance of industrial safety.
- Academic experts conduct seminars and undertake an evaluation of safety assurance capabilities by the Process Safety Competency Center of Japan Society for Safety Engineering.

Looking Ahead

Based on the core principle of "Making safety our first priority," all of the Sumitomo Chemical Group's employees will continue working hard to proactively and effectively carry out safety activities. In addition, Sumitomo Chemical will enhance measures to improve existing risk assessment methods and provide guidance and support to Group companies regarding risk assessment methods. We will continue working to further raise the level of safety management and promote greater awareness across the Group of the following matters: "managers of each level check the real situation to see whether instructions and countermeasures are firmly in place," "strengthen workers' thorough checking capability," "when on a team, being aware of each other's unsafe actions," and "building up basic knowledge and experience and honing skills."



Environmental Protection / Climate Change Action

Basic Stance

Everyone in the Sumitomo Chemical Group works together to realize environmental management, which helps the Company and society develop in a sustainable manner with due considerations to the environment. Our aim has always been to realize environmental management through our business operations. Thus, we constantly think about how to use the power of chemistry to help resolve global issues, including those related to energy and the environment.

Under the medium-term plan for climate change and environmental protection, which commenced in fiscal 2016, we are working to strengthen key initiatives concerning our production activities with the aim of further enhancing environmental management.

Priority Initiatives of the Medium-term Plan for Addressing Climate Change and Protecting the Environment (Fiscal 2016–Fiscal 2018)

(1) Addressing Climate Change

- Achieve the world's highest energy efficiency standards
- Develop processes and products that help build a low-carbon society
- Effectively implement the management of energy, CO₂, and fluorocarbons
- Respond to government policies on energy and global warming in Japan and overseas

(2) Protecting the Environment

- Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations
- Promote voluntary activities related to environmental protection
- Provide individual support to Group companies for responding to environmental regulations
- Provide guidance and support to formulate consolidated Group targets and to achieve said targets



Environmental Protection / Climate Change Action

Key Initiatives and Results in Fiscal 2017

Promote an Optimum Mix of Appropriate Legal and Regulatory Compliance Measures and Voluntary Activities

We respond to revisions of laws and regulations in a systematic and timely manner. We revise environmental risks in various fields and take measures to reduce risks while weighing the costs and benefits.

Standardize Environmental Protection Management Methods and Reduce Environmental Treatment Expenses

Sumitomo Chemical completed the introduction of a data management system that uses a cloud system in order to ensure the accurate and prompt collection of a wide range of performance data related to energy and the environment for each Works of the Company and all Group companies in Japan. Going forward, we will roll the system out to Group companies overseas. Meanwhile, we are continuing to carry out the trial evaluation of a waste management system designed to strengthen compliance and increase efficiency by providing the visualization of waste management data from major plants. The entire Group regularly works to efficiently reduce its environmental processing costs for gas emissions, water emissions, and waste materials.

Strive to Achieve the New Common Energy and Environmental Protection Targets

In fiscal 2016, we recalculated the base value of net sales for each Sumitomo Chemical Group company and selected major consolidated subsidiaries possessing manufacturing plants for inclusion in the scope of calculation. We decided that we would take on the targets outlined below. Going forward, we will assemble the results of every fiscal year, then follow up on the results of each company and continue striving to improve the performance of the entire Group.

Common Goals for Group Companies in Japan and Overseas

	Group Companies in Japan	Group Companies Overseas
Improve unit energy consumption	●	●
Improve unit CO ₂ emissions from energy use	●	●
Maintain overall emission levels into the air and water	●	
Maintain industrial waste landfill levels	●	
Improve unit water consumption		●

Note: We used fiscal 2015 (in Japan: fiscal-year basis; overseas: calendar-year basis) as the base fiscal year.



Environmental Protection / Climate Change Action

Addressing Climate Change

The extreme weather events and other adverse effects of climate change will have a major impact on people's lives around the world. Addressing these changes will require a two-pronged effort focusing on mitigation (reducing and absorbing greenhouse gases) and adaptation (working to stem or lessen the current effects of climate change as well as harnessing the new climatic conditions). One of the most important issues will be carrying out these efforts and simultaneously realizing a sustainable society that supports economic development. The Sumitomo Chemical Group is working hard from various perspectives on Goal 13 of the SDGs—climate action.

To this end, in June 2017, Sumitomo Chemical joined over 100 other global business leaders in supporting the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which was founded by the Financial Stability Board (FSB).^{*} Through our support of these recommendations, we will reassess the impact of climate change on the Group and continue to promote disclosures, beginning with those related to our action on climate change, as we work to develop a sustainable society and spur the shift toward a low-carbon economy.

^{*} FSB:

An international organization whose members include central banks, financial regulatory authorities, and ministries of finance from 25 major countries.



President Tokura's statement support of the TCFD recommendation

Management System

Sumitomo Chemical is addressing climate change as one of its Responsible Care activities (see page 23 "Organization of Responsible Care Activities"). Although final decisions on key matters are the purview of the Responsible Care Committee, information on pertinent issues is also shared at the Board of Directors meetings, Management Meetings, Works GM Meetings, Group Company President Meetings, and other venues, bringing more depth to the discussions.

A wide range of specific issues related to energy and greenhouse gases are taken up for detailed discussion at Department GM Meetings, Energy Manager Meetings, Department Liaison Meetings on Global Warming, Group Company Information Exchange Meetings, and other gatherings. Through the establishment of these various meetings, we have created a system capable of steadily and swiftly sharing important information in addition to managing energy and greenhouse gases for Works, research laboratories, and business sectors. Information is also shared via Liaison Meetings of Corporate Departments, which hold discussions related to the ESG issue of climate change action.

Measures to Reduce Greenhouse Gas Emissions

Each Sumitomo Chemical worksite helps reduce greenhouse gas emissions, including in the following ways: installing the latest highly efficient equipment; introducing rationalization and energy-saving measures in production processes; switching to lower-carbon fuels and other forms of energy; installing LED lighting; and soliciting employee suggestions on how to further improve our energy-saving efforts. Furthermore, regarding cleanrooms and other facilities where finding ways to save energy is difficult and requires a high level of expertise, we have launched initiatives in cooperation with experts. Information on the state of these activities is exchanged at Energy Manager Meetings, at which representatives from each worksite gather in one location to work on reducing the greenhouse gas emissions of the Company as a whole. In fiscal 2017, we made steady progress toward our targets for the unit energy consumption index and unit CO₂ emission index through a reduction in the amount of steam used and introduction of cogeneration facilities as well as other efforts.



Environmental Protection / Climate Change Action

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Energy Consumption and Greenhouse Gas Emissions

The Group's greenhouse gas emissions for fiscal 2017 onward are calculated in accordance with the GHG Protocol.

Greenhouse Gas Emissions

(Thousands of tonnes of CO₂e)

	Sumitomo Chemical and Group Companies in Japan★	Overseas Group Companies	Total
Scope 1	6,107	571	6,678
Scope 2	326	755	1,080
Total	6,432	1,326	7,758

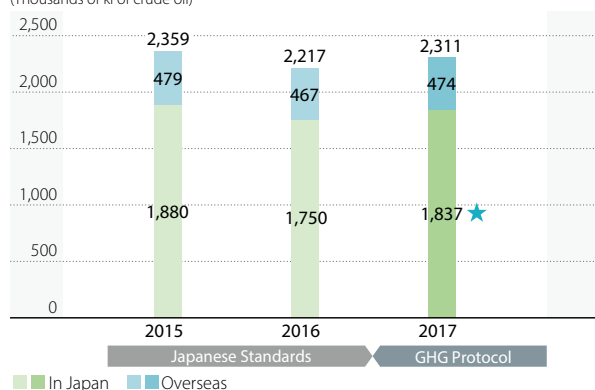
Note: When adding the results of one overseas Group company to the results of Sumitomo Chemical and Group companies in Japan,

Scope 1 emissions total 6,232 thousand tonnes of CO₂e★ and Scope 2 emissions total 638 thousand tonnes of CO₂e★

Going forward, we will continue to expand the scope of overseas Group companies assured by an independent assurance provider.

Energy Consumption

(Thousands of kl of crude oil)

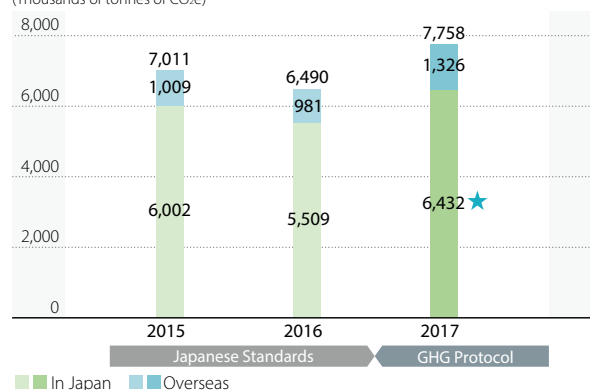


Notes: • Japanese Standards: Calculated based on the Act on the Rational Use of Energy.

• Having adopted the GHG Protocol standards for our GHG emission disclosures, we now include the following data previously excluded from calculations: amount of energy used to produce power and steam sold to external parties by Sumitomo Chemical Group (the portion attributable to energy provider subsidiaries was included in years prior to fiscal 2016). In addition, the amount of energy used by Sumitomo Chemical's non-production sites is included from fiscal 2017. In addition, the amount of energy used by Sumitomo Chemical's non-production sites is included from fiscal 2017.

Greenhouse Gas Emissions

(Thousands of tonnes of CO₂e)

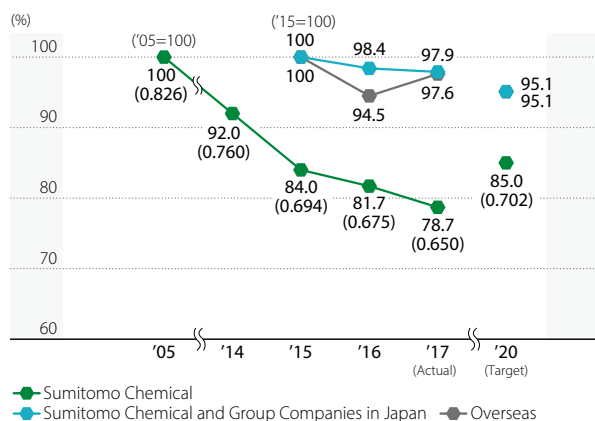


Notes: • Japanese Standards: Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

• Having adopted the GHG Protocol standards for our GHG emission disclosures, we now include the following data that was not included in previous calculations: CO₂ emissions from energy sold to external parties by the Group (the portion attributable to energy provider subsidiaries was included prior to fiscal 2016); CO₂ emissions from energy use attributable to Sumitomo Chemical's non-production sites; CO₂ emissions from non-energy sources not included in the scope of the Act on Promotion of Global Warming Countermeasures.

Unit Energy Consumption and Unit CO₂ Emissions (Production Bases)

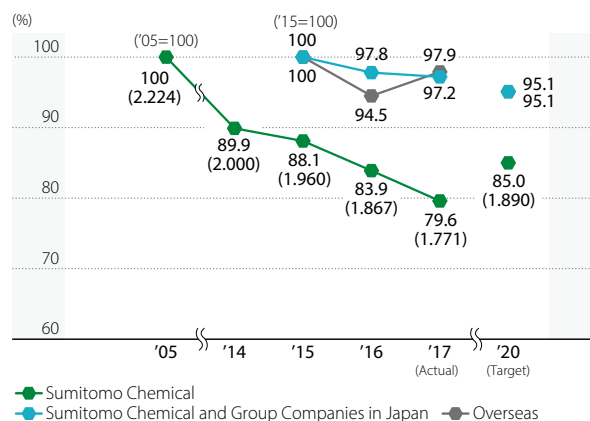
Unit Energy Consumption Index



Notes: • The figures are indexed to energy consumption (kl) at production bases per production volume (tonnes).

• Values in parentheses are unit figures based on Sumitomo Chemical's results.
• Calculated based on the Act on Rational Use of Energy in order to show the Common Energy and Environmental Protection Targets of Sumitomo Chemical Group.

Unit CO₂ Emissions Index



Notes: • The figures are indexed to CO₂ emissions from energy use (tonnes) at production bases per production volume (tonnes).

• Values in parentheses are unit figures based on Sumitomo Chemical's results.
• Calculated based on the Act on Promotion of Global Warming Countermeasures in order to show the Common Energy and Environmental Protection Targets of Sumitomo Chemical Group.



Environmental Protection / Climate Change Action

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Status of Scope 3 GHG Emissions

Category	Emissions (Thousands of Tonnes of CO ₂ e)
1. Purchased goods and services ★	1,985
2. Capital goods	111
3. Fuel- and energy-related activities not included in Scopes 1 and 2 ★	290
4. Upstream transportation and distribution ★	57
5. Waste generated in operations ★	28
6. Business travel	7
7. Employee commuting	8
8. Upstream leased assets	<1
9. Downstream transportation and distribution	<1
10. Processing of sold products	—
11. Use of sold products ★	44
12. End-of-life treatment of sold products	945
13. Downstream leased assets	—
14. Franchises	—
15. Investments	—
Total	3,475

Notes: • For Scope 3 data, indirect greenhouse gas emissions from business activities throughout the supply chain are calculated separately by category and then added together.

• Calculated for Sumitomo Chemical and Group companies listed on stock indices in Japan (Sumitomo Dainippon Pharma Co., Ltd.; Koei Chemical Co., Ltd.; and Taoka Chemical Co., Ltd.).

• Category 4 does not include Taoka Chemical Co., Ltd.

The BioCarbon Fund

Sumitomo Chemical finances afforestation projects in developing countries and poverty-stricken countries through the World Bank's BioCarbon Fund.* These projects are geared to contribute to the restoration of abandoned land, the conservation of water resources, biodiversity conservation, and the reduction of greenhouse gases. Since participating for the first time in 2005, Sumitomo Chemical has been involved in multiple afforestation projects, which have led to a combined total of 175,000 tonnes in reductions in CO₂ emissions.

* BioCarbon Fund:

This fund was established by the World Bank to finance projects to plant trees and preserve forests with the objective of acquiring CO₂ credits (emissions rights issued based on the volume of CO₂ reduced or absorbed as a result of projects designed to reduce greenhouse gases).



Environmental Protection / Climate Change Action

Measures for Adaptation

Understanding that climate change must be addressed, people are paying more attention to the development of products and technologies that can facilitate adaptation to the changes. Under the banner of Sumika Sustainable Solutions, the Sumitomo Chemical Group has certified many of its products and technologies that promote adaptation. These include vector control products (to ward off infectious disease-carrying pests whose spread correlates with climate change), mycorrhizal fungi for use as a soil amendment product (to extend growing periods during droughts by 30% and improve crop yields), and clear acrylic windows for seawalls that protect against high tides and tsunami.

Sumika Sustainable Solutions

https://www.sumitomo-chem.co.jp/english/csr/process_product/

Of these products, the Company's malaria prevention mosquito net Olyset™ Net was introduced as a tool for helping prevent a rise in malarial infections due to climate change at COP22, which was held in Morocco in November 2016, and COP23, which was held in Germany in November 2017. It was also introduced at Japan's Ministry of the Environment's Climate Change Adaptation Platform, Japan's Ministry of Economy, Trade and Industry's Climate Change Adaptation Good Practices by Japanese Private Sector, and other venues.

The website for Japan's Ministry of the Environment's Climate Change Adaptation Platform (Sumitomo Chemical's page)

<http://www.adaptation-platform.nies.go.jp/en/lets/adaptationbiz/sumitomokagaku.html>

The website for Japan's Ministry of Economy, Trade and Industry's Climate Change Adaptation Good Practices by Japanese Private Sector (Sumitomo Chemical is featured in Area 13, Health & Sanitation)

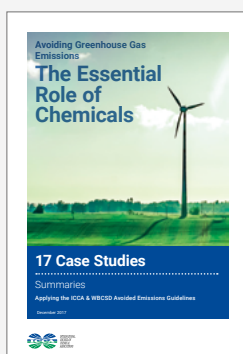
<http://www.sc.mufg.jp/english/company/news/000014701.pdf>

Measures for the Risks and Opportunities of Climate Change

By analyzing the physical impacts of climate change and the risks associated with adjusting social systems, we are studying the possible effects climate change could have on our businesses. We are also looking to determine promising new business opportunities based on the analysis of various scenarios. Looking ahead, we plan to publicly release our findings on our website, in the *Annual Report*, and via other media.

Working with Global Chemical Companies

Sumitomo Chemical served as the chair of the Global Working Group on Energy and Climate Change of the International Council of Chemical Associations (ICCA) between June 2016 and June 2018. During this time, we led joint international research surveys related to helping reduce GHG emissions through chemical products and technologies. We also worked to promote the spread of the results of the research surveys.





Environmental Protection / Climate Change Action

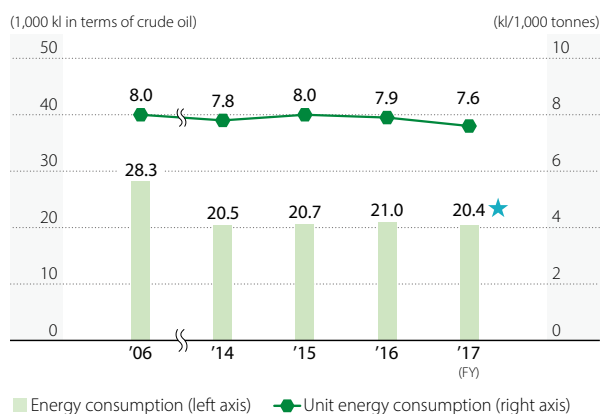
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Logistics Initiatives

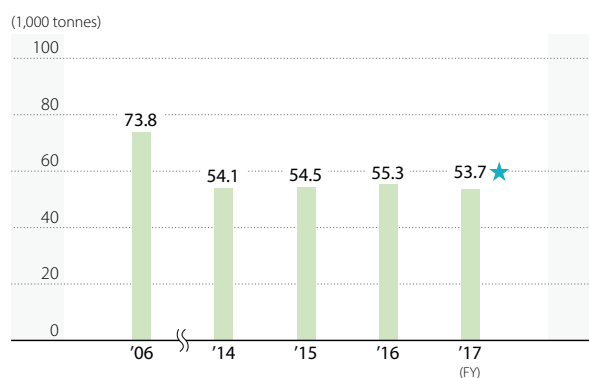
Sumitomo Chemical continues to promote modal shift, or transportation by more efficient and environmentally friendly modes, such as rail and ship instead of trucks. In fiscal 2017, unit energy consumption fell (improved) by 3.4% compared with fiscal 2016. We will continue to improve unit energy consumption by our target of 1% or more.

■ Reduction of Environmental Impact in Logistics Operations (Sumitomo Chemical)

Energy Consumption



CO2 Emissions



Note: Data (energy consumption, CO2 emissions) for previous fiscal years has been retroactively adjusted to enhance accuracy.

Promoting the Effective Use of Water

The Sumitomo Chemical Group recognizes that the importance of water as a limited natural resource is a global issue. We strive to reduce the amount of water we use by examining more effective ways to use water by application, while continuing to maintain and improve the quality of water released from our business sites into public water resources such as the ocean and waterways.

■ Water Usage (Sumitomo Chemical Group)

	(Millions of tonnes)		
	FY2015	FY2016	FY2017
Sumitomo Chemical★	282	243	253
Sumitomo Chemical and Group companies in Japan★	1,043	975	1,017
Overseas Group companies	6.48	7.09	7.19

Notes: • Including seawater

• Data for previous fiscal years has been retroactively adjusted to enhance accuracy.



Environmental Protection / Climate Change Action

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Effective Procurement of Raw Materials

To maximize production efficiency for such chemical raw materials as ethylene and propylene, Sumitomo Chemical suspended operations at its ethylene plant in 2015 and consolidated production at Keiyo Ethylene Co., Ltd., which is a joint venture between Maruzen Petrochemical Co., Ltd. and Sumitomo Chemical.

■ Raw Material Use (Group, Sumitomo Chemical)

(Thousand tonnes)

	2015		2016		2017	
	Group	Sumitomo Chemical	Group	Sumitomo Chemical	Group	Sumitomo Chemical
Hydrocarbon compounds	1,940	1,553	1,779	1,525	1,835	1,593
Metals (excluding minor metals)	123	117	116	111	120	115
Minor metals	0.08	0.02	0.17	0.05	10.17	0.02

Note: Tanaka Chemical Corporation and SCIOCS COMPANY LIMITED are included in Group companies from 2017.

Thorough Waste Management and the Reduction of Landfill Waste ★

Sumitomo Chemical and Group companies in Japan work in unison to make industrial waste treatment more transparent and to properly manage it. We have worked to help achieve the goals of the Japan Business Federation's voluntary environmental action plan, a major industry initiative. Among these goals was to reduce the amount of industrial waste sent to landfills to 70% below the fiscal 2000 level by fiscal 2020. In addition, we set in-house reduction targets and work to reduce the amount of waste generated and promote recycling. In fiscal 2017, landfill waste was 1 thousand tonnes on a non-consolidated basis and 21 thousand tonnes for Sumitomo Chemical and Group companies in Japan, representing reductions well beyond the targets of the above-mentioned action plans. From fiscal 2017 onwards, we will continue to properly manage waste and reduce landfill waste with the target of reducing landfill waste 80% compared with fiscal 2000.

Processing PCB Waste

As for both high- and low-concentration PCB-containing waste, the entire Group is stepping up its equipment surveys, seeking to identify PCB-containing devices currently in use, including condensers, transformers, and stabilizers. In addition, we are disposing of waste in line with the regulations stipulated in the Act on Special Measures against PCB Wastes.



Environmental Protection / Climate Change Action

Protecting the Atmosphere, Water, and Soil

Sumitomo Chemical and Group companies in Japan work to identify major environmental risks in each field in line with the latest laws and regulations, including the Air Pollution Control Act, Water Pollution Control Act, and Soil Contamination Countermeasures Act. We take measures to systematically reduce risks related to highly important and urgent matters.

Protecting the Atmosphere

Reining in PM2.5* Emissions

We conduct detailed surveys of boilers, gas turbines, heating furnaces, dry furnaces, cracking furnaces, waste incinerators, and other such equipment, testing for emissions of VOCs and other gaseous atmospheric pollutants, soot, SO_x, NO_x, and hydrogen chloride, which are also the source of secondary particles and PM2.5. We strive to further reduce emissions for each source.

* Particulate matter of up to 2.5 µm in diameter

Enhancing Fluorocarbon Management

We are executing a plan with a definitive deadline to completely phase out refrigeration equipment that uses CFCs and HCFCs as refrigerants. With regard to refrigeration equipment that uses HFCs as well, we have begun considering systematically switching over to equipment that uses HFCs with a low global warming potential or to non-CFC equipment. We aim to dutifully adhere to this plan, which, in line with the Act for Rationalized Use and Proper Management of Fluorocarbons, includes devising ways of minimizing leaks when industrial refrigeration and air conditioning equipment is in use as well as taking thorough, swift action once problems related to equipment installation are uncovered.

Emissions of Mercury into the Atmosphere from Waste Incinerators

We measured concentrations of mercury (both gas and particles) emitted into the atmosphere by our waste incinerators, which we own as assets, and completed a study of the impact of these emissions. The results have confirmed that mercury is being effectively removed by emission gas removal equipment, including bag filters and scrapers installed at incinerators, and that the concentration of mercury released into the atmosphere from any of our incinerators does not exceed the emission guidelines set under the Air Pollution Control Act.

Protecting Aquatic Environments

Regulations for Reducing Total Water Emissions

We are continually working to reduce the impact of water emissions from our plants on Tokyo Bay and other closed coastal waters where regulations are in place for reducing the total water emissions of COD, nitrogen, and phosphorus. To help achieve the goals of the eighth basic policy on reducing total water emissions, which has a target fiscal year of 2020 and covers all prefectures in Japan, we will continue to work to treat water emitted by our Works.

Promoting Safer and More Reliable Water Treatment

We have developed water treatment management technology that helps reduce our impact on the environment and are employing this technology to realize safe and reliable water treatment at all our plants.

Protecting the Soil Environment

Based on soil management conditions at Sumitomo Chemical business sites, we have established targets to prevent harmful substances (oil, heavy metals) from spreading beyond the boundaries of these sites. To this end, we have continued surveys and evaluations of soil contamination as well as remediation work on Group-owned land. We have also monitored groundwater close to our boundaries on a regular basis to confirm that levels of hazardous materials, including heavy metals and oils, are below those stipulated by environmental standards.



Environmental Protection / Climate Change Action

Biodiversity Preservation Initiatives

Taking biodiversity into consideration is one of Sumitomo Chemical's most important pillars as it strives toward building a sustainable society. We actively participate in a private-sector biodiversity partnership while giving considerable thought to what we should be mindful of as a chemical company. We are also expanding individual activities at Group companies.

Example Activities

- Promoting "Sumika Sustainable Solutions"
- Improving energy efficiency, recycling resources, promoting the 3Rs, encouraging CSR procurement
- Undertaking environmental impact assessments at the planning stage for new plant construction and implementing countermeasures
- Implementing environmental protection projects jointly with NGOs
- Complying with internal safety management regulations pertaining to the use of genetically modified organisms
- Undertaking proper management of chemical substances

Sumitomo Chemical's Commitment to the Conservation of Biodiversity

1. We position the conservation of biodiversity as one of our most important management issues and strive to help protect the global environment.
2. We work to continuously reduce environmental impact in our production operations and our development and supply of products and services and in cooperation with third parties in the supply chain and thereby contribute to the conservation of biodiversity.
3. By regularly implementing education programs, we ensure that employees fully recognize and understand the importance of biodiversity and promote our commitment to its conservation.
4. We continuously engage in corporate social responsibility activities that contribute to environmental protection and lead to greater trust and confidence from society.
5. We disclose the results of these efforts and maintain effective communication with the general public.

Looking Ahead

To effectively use the earth's limited resources and shift to a sustainable society, we must fulfill our ever expanding role in the field of environmental conservation. The Sumitomo Chemical Group aims to further reduce environmental risks through measures intended to address environmental conservation issues. These measures are centered on ongoing strict risk management, adherence to domestic and overseas regulations, careful monitoring of environmental trends, and promoting proactive and effective voluntary activities.



Environmental Protection / Climate Change Action

★: Assured by an independent assurance provider

Environmental Performance

Sumitomo Chemical collates and totals environmental data for the Company and Group companies in Japan, including data on energy and resource consumption, production quantities, and environmental impact (e.g., release of pollutants into the air and water).

■ Primary Environmental Performance (Fiscal 2017)

Figures in black: Sumitomo Chemical and Group companies in Japan
Figures in green: Sumitomo Chemical

INPUT Energy and Resources			OUTPUT Product Manufacturing and Environmental Impact		
 Water ★	(Millions of tonnes)				
	Industrial water	68.8 63.3			
	Drinking water, etc.	0.9 0.4			
	Seawater	926.9 171.8			
	Groundwater	17.6 15.0			
	Other water	2.5 2.5			
 Energy ★ Calculated as kl of crude oil	(Thousands of kl)				
	Fuel, heat, and electricity*1	1,837 979			
 Exhaustible Resources	(Thousands of tonnes)				
	Hydrocarbon compounds	1,835 1,593			
	Metals (excluding minor metals)*2	120 115			
	Minor metals*3	10.17 0.02			
PCB/CFCs under Secure Storage					
No. of electrical devices containing high concentrations of PCBs*4		58 units 18 units			
PCB volume*4		1.0 kl 0.1 kl			
No. of refrigeration units using specified CFCs as a coolant		48 units 12 units			
No. of refrigeration units using HCFCs as a coolant		262 units 102 units			
 Products ★	(Thousands of tonnes)				
	(Calculated on the basis of ethylene production)*5	2,602 1,371			
 Water Pollutant Emissions ★	(Tonnes)				
	COD	998 918			
	Phosphorus	234 115			
	Nitrogen	32 29			
	Substances subject to the PRTR Act*6	6 6			
 Waste Materials ★	(Thousands of tonnes)				
	Waste emissions*7	261 50			
	Landfill*7	21 1.4			
	(Breakdown)				
 Atmospheric Emissions ★					
	On-site landfill	0 0			
	External landfill	21*7 1.4			
 Atmospheric Emissions ★	(Thousands of tonnes of CO2)				
	Greenhouse gases (seven gases)*1	6,432 3,279			
	Emissions from energy use (CO2)	5,611 2,621			
	CO2 emissions from other than energy use	711 623			
	N2O	110 35			
	HFC, PFC	— —			
	CH4, SF6	— —			
	NF3	— —			
	(Tonnes)				
	Others				
	NOx	4,703 1,778			
	SOx	5,023 1,189			
	Soot and dust	247 88			
	Substances subject to the PRTR Act*6	438 225			

*1 From fiscal 2017, the energy (calculated as kl of crude oil) and greenhouse gases (all seven gases) indices were calculated in accordance with the GHG Protocol.

• Having adopted the GHG Protocol standards for our GHG emission disclosures, we now include the following data that was not included in previous calculations: amount of energy used to produce electricity and steam sold to external parties by the Group and the resultant CO2 emissions; amount of energy used by Sumitomo Chemical's non-production sites and the resultant CO2 emissions; CO2 emissions from non-energy sources not included in the scope of the Act on Promotion of Global Warming Countermeasures.

*2 Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

*3 Calculations include the following seven rare metals: nickel, chromium, tungsten, cobalt, molybdenum, manganese, and vanadium. The supply structure for each of these rare metals is extremely fragile. These rare metals are subject to national stockpiling.

*4 Fluorescent lamps and mercury lamp ballast as well as contaminated substances (wastepaper, etc.), including PCB waste, are not included in unit and volume data.

*5 Certain assumptions were made in calculations due to the difficulty of obtaining weight-based figures for some products.

*6 Calculated based on the amount released into water/the air of each substance subject to the Order for Enforcement of the PRTR Act (promulgated on November 21, 2008).

*7 The amount of coal ash generated at Sumitomo Joint Electric Power, which is included in "Waste emissions" and "Landfill" (Sumitomo Chemical and Group companies in Japan) is calculated on a dry-weight basis.

In addition, although the amount of waste generated at Group companies in Japan and reduced at Sumitomo Chemical's facilities is included in "Waste emissions" (Sumitomo Chemical and Group companies in Japan), the amount is insignificant.

*8 In reference to the Act on Promotion of Global Warming Countermeasures, companies that emit less than 3,000 tonnes of CO2-equivalent per year for each type of greenhouse gas are outside the scope of calculation.



Product Stewardship / Product Safety / Quality Assurance

Basic Stance

Product Stewardship at Sumitomo Chemical

Under its Corporate Policy on the Environment, Health, Safety, and Product Quality Assurance, Sumitomo Chemical promotes product stewardship*¹ and works to provide products and services that satisfy customers and can be used with peace of mind.

To achieve the 2020 goal*² proposed at the World Summit on Sustainable Development (WSSD) in 2002, it is now time for chemical management to be risk-based in regard to laws and regulations as well as company efforts to promote product stewardship on a global basis.

To achieve the 2020 goal, Sumitomo Chemical promotes voluntary initiatives to enhance product stewardship, including the Global Product Strategy (GPS)/Japan Initiative of Product Stewardship (JIPS)*³ put forward by chemical industry associations, including the International Council of Chemical Associations (ICCA) and the Japan Chemical Industry Association. We actively participate in capacity-building activities, conduct risk assessments of our products, and perform risk-based management.

*¹ Product stewardship: The assessment of risks and protecting people's health and the environment from those risks throughout the product life cycle, which encompasses the entire supply chain from the development of chemical products to manufacture as well as sale, use/consumption, and disposal.

*² 2020 goal: Ensure that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.

*³ GPS/JIPS: Initiatives that call on companies to conduct risk assessments of their products and to engage in appropriate chemical management based on risk in order to minimize risks throughout the supply chain. Under GPS/JIPS, toxicological information on chemical products is disclosed to the general public, including customers.

Ensuring thorough Compliance

Sumitomo Chemical Group conscientiously adheres to various laws and regulations related to the manufacture, import, export, and sale of goods. We are working to ensure thorough compliance throughout our entire globally expanding group of companies.

Quality Assurance

To supply products and services of stable quality to our customers, the Group maintains its commitment to further improving product quality and is continually enhancing its global quality assurance system, which is tailored to each product.



Product Stewardship / Product Safety / Quality Assurance

Overview of Initiatives and Fiscal 2017 Results

Risk Assessment and Management throughout the Entire Product Life Cycle

With regard to the chemicals (products) that it uses and sells, Sumitomo Chemical conducts risk assessments that span the entire product life cycle and all that could be affected, including internal operators, neighboring residents, the surrounding environment, customers, and consumers. The Company supports the Ministry of the Environment's Eco-First program, having pledged to systematically conduct appropriate risk assessments for its products manufactured or sold in annual amounts of one tonne or more by fiscal 2020 in line with the voluntary initiatives (GPS/JIPS) adopted by chemical industry associations. The results of the assessment are compiled into a safety summary and made publicly available online, including on the International Council of Chemical Associations (ICCA)'s portal website <http://icca.cefic.org/>. In fiscal 2017, 20 new summaries were released, bringing the total publicly available safety summaries to date up to 41.

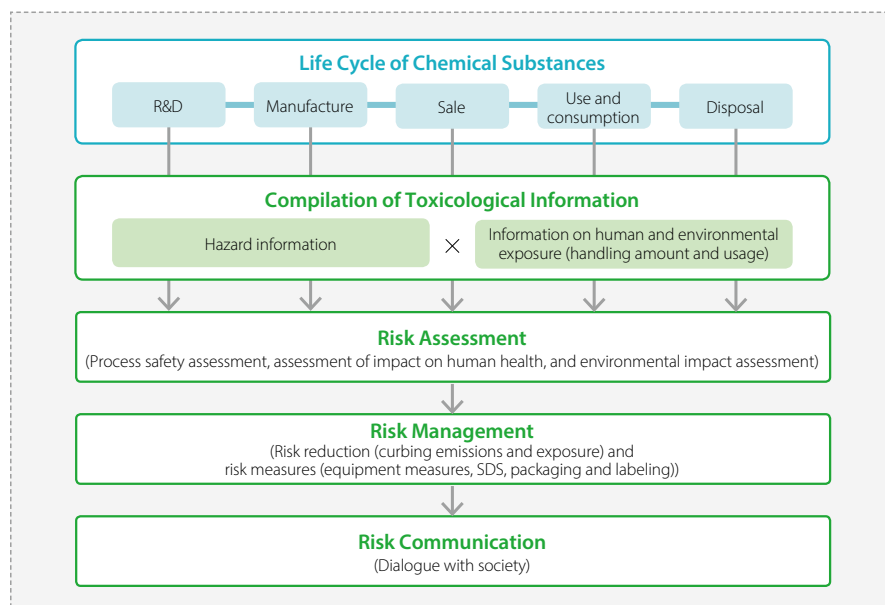
In conducting chemical risk assessments, it is necessary to collect information regarding the hazards associated with each product and the levels of human and environmental exposure when products are handled. Based on the information needed for these risk assessments, we work to ensure that customers and employees handle chemical substances safely. To this end, we have created a collaborative framework centering on the Responsible Care Department and encompassing the frontlines of production and our internal research laboratories, which possess specialized technologies in risk assessment and safety engineering. To estimate exposure levels, the Company draws on projection models and expert insights in Japan and overseas and has developed its own simulation program. We also use the latest technology to efficiently conduct highly precise risk assessments. In line with our internal rules, during the development of new products, we collect data regarding risks and hazards for all handled substances before entering the production stage and survey and respond to all relevant laws and regulations.

As for risk assessments of product safety, it is necessary to assess the risks of chemical substances in products as well as the risks associated with product applications and uses. Taking into consideration not only their use by our direct customers but also the use and disposal of such products by their end-users as well, we conduct risk assessments of applications and uses using failure mode and effects analysis (FMEA)*¹ and other methods in addition to the above-mentioned chemical substance risk assessments. Sumitomo Chemical conducts rigorous risk assessments of new products and reassesses items already on the market. In fiscal 2017, we performed 134 risk assessments and completed reassessments of all high-risk products.*² Going forward, we will continue to conduct rigorous risk assessments of new products and steadily proceed with reassessments of products already on the market. By fiscal 2020, we plan to complete risk reassessments of all our products. In addition, we are supporting Group companies in conducting similar product risk assessments and countermeasures.

*1 FMEA: A systematic method of analysis for detecting potential malfunctions and defects with the objective of their prevention.

*2 High-risk products: Products likely to have relatively high risks due to the nature of the chemical substances the product contains and the product's application.

Risk-Based Chemical Management throughout the Entire Life Cycle





Product Stewardship / Product Safety / Quality Assurance

The Information Sharing System and Ensuring thorough Compliance

The governments of Europe, the Americas, China, and the Asia Pacific region hold considerable sway over trends in global laws and regulations. To ensure thorough compliance, we post product stewardship specialists at our regional headquarters in these areas and are constructing a system to swiftly collect information related to regulatory trends. As for China, South Korea, Taiwan, Southeast Asia, and India, all of which have recently seen rapid and major changes in the legislative environment, together with Group companies we have been responding appropriately to the chemical regulations of each country.

As a response to the REACH regulation in Europe, which is a world leader in terms of laws and regulations, we are moving forward with appropriate legal registration, managing our supply chain, and properly transferring data. In addition, our local Group company Sumitomo Chemical Europe is drawing up letters about its registration status in response to its customers' wishes as well as a declaration of conformity, which states the status of compliance and certificate acquisition with regard to various regulations.

In fiscal 2017, there were no reports of violations of regulations or self-imposed restrictions for Sumitomo Chemical products and services at any stage of their life cycles. There were no reports of violations of regulations or self-imposed restrictions regarding information or labeling for products or services.

Effective Use of SuCESS

In order to appropriately manage and effectively use information on chemicals handled by the Company, such as their composition, toxicological information (risks and hazards), and regulatory requirements, Sumitomo Chemical has developed the comprehensive chemical management system (SuCESS).^{*1} This system is used in order to respond to inquiries from customers concerning substances contained in our products and precisely comply with laws and regulations in Japan and around the world. We also use this system to create SDS^{*3} in around 40 languages to comply with GHS^{*2} and accurately and efficiently communicate hazard information throughout the supply chain. This system is also being proactively rolled out to Group companies. We had installed the system at 10 Group companies in Japan and overseas as of fiscal 2017.

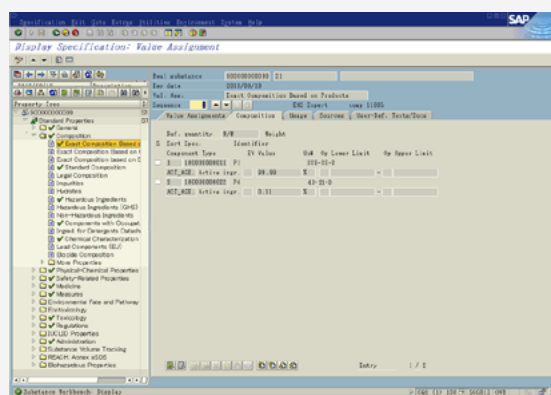
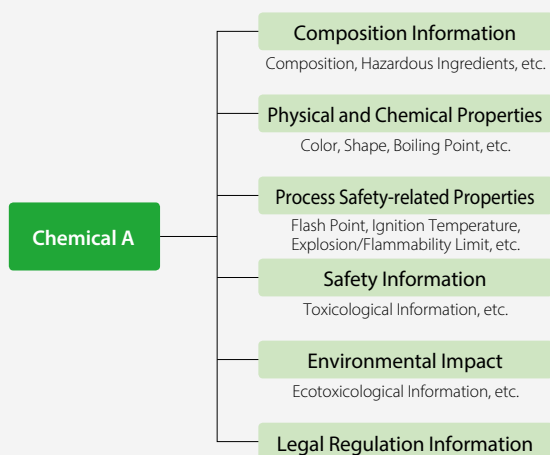
^{*1} Sumitomo Chemical Comprehensive Environmental, Health & Safety Management System (SuCESS)

^{*2} Globally Harmonized System of Classification and Labeling of Chemicals (GHS): In 2003, the United Nations established these global rules for how to convey information about the classification and degree of hazards for chemical substances.

^{*3} Safety Data Sheets (SDS): SDSs include information on the safe handling of chemical products (properties, handling methods, safety measures, etc.) and should be created in compliance with the Japanese Industrial Standards (JIS) and the standards set by the International Organization for Standardization (ISO).

SuCESS Comprehensive Chemical Management System

Management of chemical composition, toxicological, and regulatory information based on a tree-shaped structure





Product Stewardship / Product Safety / Quality Assurance

Providing Toxicological Information

To ensure its products are handled safely, Sumitomo Chemical uses SDSs and labels to provide customers with toxicological and regulatory information about the chemical substances they contain and the hazard data consolidated in SuCCESS. Furthermore, especially regarding products requiring warnings about their handling, we create yellow cards that are a simplified version of their SDSs. This provides logistics operators with the information they need to ensure they can respond appropriately to an emergency situation during transportation.

Providing Products and Services of Stable Quality

The Sumitomo Chemical Group is proud to provide its customers with products and services from a variety of fields centered on chemicals. In order to continue to supply its customers stable quality for all our products and services, we have established quality assurance systems based on quality management systems and manufacturing and quality management guidelines, such as ISO 9001*¹ and GMP,*² appropriate for each product and service. In addition to maintaining thorough day-to-day product quality control, we are committed to further improving product quality.

Unfortunately in fiscal 2017, there were three major product quality problems recorded by Sumitomo Chemical and three by consolidated Group companies. Working to determine the causes of each of these problems, we are promoting strict preventive measures.

In order to continue supplying products and services of stable quality worldwide while addressing growing supply chain diversification accompanying its business expansion and the increasingly sophisticated needs of customers, the Group is enhancing its global quality assurance system through measures that include strengthening management of overseas suppliers and contractors. We are also improving quality assurance at all Group companies by developing countermeasures to quality problems based on relevant information about incidents occurring within the Group and sharing information on the state of product quality and safety at Group companies.

*1 ISO 9001: The international standards on quality management systems issued by the International Organization for Standardization (ISO).

*2 Good Manufacturing Practice (GMP): Guidelines relating to manufacturing and quality management of pharmaceuticals.

Laboratory Animal Welfare

In the process of developing useful chemical substances, a large variety of safety assessments are required. With this in mind, Sumitomo Chemical is actively developing new assessment methods, including structure-activity relationship approaches, and minimizing the use of laboratory animals for safety assessments. However, assessments of impact on humans, animals, and the environment cannot be completed without conducting experiments using laboratory animals. Sumitomo Chemical therefore advocates the humane treatment of laboratory animals and applies the 3Rs* of replacement, reduction, and refinement to conduct animal studies appropriately with due consideration for animal welfare.

* The 3Rs: From the Law for the Humane Treatment and Management of Animals

Replacement: To the greatest extent possible, replace methods that involve animals with those that do not.

Reduction: To the greatest extent possible, reduce the number of animals used.

Refinement: To the greatest extent possible, refine methods to minimize the suffering of animals.

Latest Emergency Issue

Microplastics and marine plastic pollution have become a global problem in recent years. Recognizing the importance of this issue, Sumitomo Chemical quickly agreed to the measures of the Japan Plastics Industry Federation and bolstered its internal education system. We also participate in the International Council of Chemical Associations (ICCA) and Japan Chemical Industry Association's task force and are working to keep abreast of the latest information.



Product Stewardship / Product Safety / Quality Assurance

Looking Ahead

Sumitomo Chemical promotes appropriate risk-based chemical management and is working to achieve its goal of completing product safety risk assessments of all Group products and confirming the effectiveness of related strategies and measures by fiscal 2020.

In response to strong social demand for the proper management of chemicals, the pace of establishment and revision of laws and regulations relating to chemical management is expected to pick up in even more countries and regions in the near future. Closely collaborating with Group companies in Japan and overseas, Sumitomo Chemical consistently undertakes thorough compliance initiatives that involve carefully studying information on the regulatory trends as well as enhancing the functions of its comprehensive chemical management system (SuCCESS).

In addition, to improve customer satisfaction, the entire Group will continue to work to sustain its product and service quality improvements and to achieve an optimal product quality assurance system amid changing business conditions.



Responsible Care Activities: Supplementary Data

1 Responsible Care Management

Environmental Management System

Between 1997 and 2001, ISO 14001:1996 certification was obtained at all Works and continually maintained thereafter. ISO 14001:2004 certification was obtained later and all Works have been inspected on a continual basis to ensure the certification does not expire.

■ Acquisition of ISO 14001 Certification (Sumitomo Chemical (Target: All Works))

Works	Certificate Number	Certification Date
Ehime Works (including Ohe Works)	JCQA-E-018	April 1998
Chiba Works (including the SCIOCS Chiba Facility)	KHK-97ER • 004	June 1997
Osaka Works	JQA-E-90072	November 1997
Oita Works (Gifu Plant)	JCQA-E-0206	December 2000
Oita Works (Okayama Plant)	JCQA-E-0218	January 2001
Oita Works	JQA-E-90152	March 1998
Misawa Works	JQA-EM0355	March 1999

Quality Management System

■ Acquisition of ISO 9001 Certification (Sumitomo Chemical (Target: All Works))

Works	Certificate Number	Certification Date
Ehime Works	JCQA-0019 YKA-4004422/J	October 1994 August 2009
Chiba Works	JQA-0829	March 1995
Osaka Works	JQA-0721	December 1994
Oita Works*	JQA-1069	December 1995
Misawa Works	JQA-0752	December 1994
Ohe Works	JET-0829 JCQA-1720	April 1998 January 2010

* The Oita Works (Okayama Plant) and the Oita Works (Gifu Plant) have been pursuing Good Manufacturing Practice (GMP) management.



Responsible Care Activities: Supplementary Data

Occupational Safety and Health Management System

By fiscal 2009, Sumitomo Chemical acquired OSHMS certification from the Japan Industrial Safety and Health Association (JISHA) at four of its Works and two of its Research Laboratories. (JISHA's OSHMS includes the same requirements as OHSAS18001.)

JISHA's Official Websites

Japanese: <https://www.jisha.or.jp/about/index.html>

English: <https://www.jisha.or.jp/english/index.html>

■ Acquisition of OSHMS Certification (Sumitomo Chemical (Target: Works and Research Laboratories))

Facilities	Certificate Number	Certification Date
Chiba Works	03-12-1	May 2003
Osaka Works	05-27-3	February 2005
Oita Works (Utajima)	09-27-14	January 2009
Oita Works (Gifu Plant)	09-21-6	February 2009
Oita Works (Okayama Plant)	09-33-7	February 2009
Oita Works	06-44-1	July 2006
Ohe Works	10-38-4	March 2010
Health & Crop Sciences Research Laboratory	07-28-9	January 2007
Tsukuba Regional Research Laboratory*	05-8-3	December 2005

* The Tsukuba Regional Research Laboratory was reorganized into the Advanced Materials Research Laboratory, IT-related Chemicals Research Laboratory (Tsukuba), and Energy & Functional Materials Research Laboratory (Tsukuba).

Voluntary Safety Management of High-Pressure Gas Based on Certification by the Minister

Sumitomo Chemical continually renews the Accreditation of Completion and Safety Inspection, as stipulated in the High Pressure Gas Safety Act, for the Chiba Works and the Ehime Works. Certification is given to facilities that have achieved excellent safety, management, and technological levels and that are recognized as having met legally mandated requirements for safety management systems. Certified plants are allowed to conduct Completion Inspections and Safety Inspections of their own facilities in place of national, prefectural, and other governmental organizations.

■ Number of Accreditations of Completion and Safety Inspection Given for Sumitomo Chemical Facilities

Works	Area	Year of Certification	Year and Month Renewed	Number of Facilities Given Accreditation
Ehime Works	Niihama	2002	March 2018	13
	Kikumoto	2002	March 2018	4
Chiba Works	Anesaki	1987	May 2014	11
	Sodegaura	1987	May 2014	17

Note: Number of facilities given accreditation data as of the time of certification renewal.



Responsible Care Activities: Supplementary Data

Responsible Care Audit Results

■ Responsible Care Audit Results (Sumitomo Chemical Group)

Facilities		FY2015	FY2016	FY2017
Professional audits*1	Works	8	9	11
	Research laboratories	1	3	0
	Logistics centers	0	0	0
	Business sectors	4	6	5
	Group companies in Japan	15	18	10
	Group companies overseas	6	7	10
Management audits*2	Works and research laboratories	7	6	6
Total		41	49	42

Note: Refer to Responsible Care Auditing Framework on page 27 for more details.

*1 Audits of systems and operations by specialists in each field

*2 Audits from a management perspective by Sumitomo Chemical officers

■ Professional Audits for Facilities and Business Sectors (FY2017 Results)

Area	Facilities (Works, Research Laboratories)	Business Sectors (Head Office Business Sectors)	Total
Good	33	3	36
Needs improvement	55	5	60
Needs to be examined	119	9	128
Total	207	17	224



Responsible Care Activities: Supplementary Data

Eco-First Commitments

In March 2012, Sumitomo Chemical reported the progress and results of its efforts to fulfill the Eco-First Commitments to the Japanese Minister of the Environment while announcing its Eco-First Commitments, Updated Version.

Note: The content was updated in November 2016. From fiscal 2016, measures are being taken in line with the updated content.





Eco-First Commitments

Updated Version

November 30, 2016

To Koichi Yamamoto
Minister of the Environment

President of
Sumitomo Chemical Co., Ltd.
Masakazu Tokura

As a leader in the chemical industry, Sumitomo Chemical Co., Ltd. considers the appropriate management of chemical substances to be fundamental and not only observes strict compliance with all relevant laws and regulations, but also works to ensure safety, environmental protection, health and product quality throughout the lifecycle of chemical products. The Company also strives to gain the further trust of society through continuous dialogue and undertakes voluntary initiatives (Responsible Care activities) to contribute to the sustainable development of society.

- 1 We will promote the management of chemical substances and the risk communication in an appropriate and proactive manner using proprietary technology.**
 - ◆ We will review the information on the safety for all our products manufactured and sold in annual amounts of one tonne or more by fiscal 2016, and we will conduct the appropriate risk assessments based on the results by fiscal 2020 using our proprietary technology. In addition we will make the results available to the general public as Safety Summaries.
 - ◆ We will collaborate with chemical companies in the world on studies of the impact of chemical substances on human health and the environment (Long-range Research Initiative) in order to improve the safety of chemical substances.
 - ◆ All the offices and facilities at Sumitomo Chemical will strive to communicate effectively with and promote information disclosure to local residents and other stakeholders in creative and voluntary ways that suit the needs of the local community.
- 2 We will develop and apply management technologies that help reduce environmental impacts to realize safe and secure water treatment.**
 - ◆ To make it easier to select the more appropriate water treatment method (either activated sludge or incineration), we will work to more uniformly standardize methods for evaluating the various kinds of process water expelled from plants.
 - ◆ We will use microbiota analysis, microbial immobilization and other proprietary technology to increase the sophistication of activated sludge treatment and thereby achieve the following goals:
 1. Ensure stable water treatment by checking and managing the health of the sludge biota
 2. Improve our treatment capabilities
 3. Switch over a portion of the treatment of wastewater for which activated sludge treatment had been deemed too difficult from incineration to such treatment
- 3 We will proactively contribute to build a sustainable society.**
 - ◆ To contribute to society through the power of chemistry (and related businesses) and encourage reductions in CO₂ emissions through the widespread adoption of low-carbon products and technologies, we internally designate products and technologies that help address climate change, actively promote the development and widespread adoption of these products and technologies, and make available to the public quantitative information on emission reductions.
 - ◆ We strive to improve the unit energy consumption of all plants by an annual average of 1%. We will switch to energy sources with low emission factors, introduce cogeneration systems and promote the installation of LED lighting at worksites. Through these and other efforts, we will improve CO₂ emission intensity from energy sources 15% relative to fiscal 2005 by fiscal 2020. As a result, total CO₂ emissions in fiscal 2020 will be 15%, or around 3.2 million tonnes, lower than those in fiscal 2005.
 - ◆ We promote internal education and environmental education activities in different regions to deepen understanding of the importance of environmental protection.

The Company will monitor the progress made in the above initiatives, make the results publicly available, and report them to the Ministry of the Environment on a regular basis.


SUMITOMO CHEMICAL



Responsible Care Activities: Supplementary Data

2 Occupational Safety and Health / Industrial Safety and Disaster Prevention

Criteria and Results of the President's Safety Award for Zero Lost-Workday Operations (As of May 31, 2018)

Sumitomo Chemical has set facility-specific criteria for the achievement of continuous periods of zero lost-workday operations for employees as well as contractors. The President's Safety Award is presented to facilities in recognition of their satisfaction of the above-mentioned criteria.

■ Sumitomo Chemical Employees

Facilities	Criteria for the President's Safety Award*1	Results
Ehime Works	3 million hours	Working to reach the target of 12 million work hours.
Ohe Works*2	3 million hours	Working to reach the target of 12 million work hours.
Chiba Works	3 million hours	Reached 12 million work hours in November 2017. Working to reach the target of 15 million work hours.
Osaka Works	3 million hours	Reached 12 million work hours in April 2018. Working to reach the target of 15 million work hours.
Oita Works*3	1.5 million hours	Reached 3 million work hours in March 2018. Working to reach the target of 4.5 million work hours.
Misawa Works	30 months	Working to reach the target of 180 months.
Health & Crop Sciences Research Laboratory	30 months	Working to reach the target of 30 months.
Tsukuba Regional Research Laboratory*4	30 months	Working to reach the target of 360 months.

*1 Continuous periods of zero lost-workday operations.

*2 Ohe Works includes Sumika Assembly Techno Co., Ltd.

*3 Oita Works includes the Utajima Pilot Production Department, Gifu Plant, and Okayama Plant.

*4 The Tsukuba Regional Research Laboratory was reorganized into the Advanced Materials Development Research Laboratory, IT-related Chemicals Research Laboratory (Tsukuba), and Energy & Functional Materials Research Laboratory (Tsukuba).

■ Contractors / Affiliated Company Employees

Facilities	Criteria for the President's Safety Award	Results
Ehime Association (Plant maintenance)	24 months	Reached 24 months in March 2018. Working to reach the target of 48 months.
Ehime Logistics Association (Logistics)	24 months	Reached 24 months in January 2018. Working to reach the target of 48 months.
Ohe Association (Plant maintenance)	48 months	Working to reach the target of 144 months.
Ohe Logistics Association (Logistics)	48 months	Working to reach the target of 144 months.
Chiba Association (Plant maintenance)	24 months	Working to reach the target of 24 months.
Chiba Logistics Association (Logistics)	24 months	Reached 24 months in February 2018. Working to reach the target of 48 months.
Osaka Association	24 months	Working to reach the target of 24 months.
Oita Association	24 months	Working to reach the target of 96 months.
Okayama Association	48 months	Working to reach the target of 144 months.
Gifu Association	48 months	Reached 96 months in September 2017. Working to reach the target of 144 months.
Misawa Works	48 months	Working to reach the target of 96 months.
Health & Crop Sciences Research Laboratory	48 months	Working to reach the target of 240 months.
Tsukuba Regional Research Laboratory	48 months	Working to reach the target of 96 months.



Responsible Care Activities: Supplementary Data

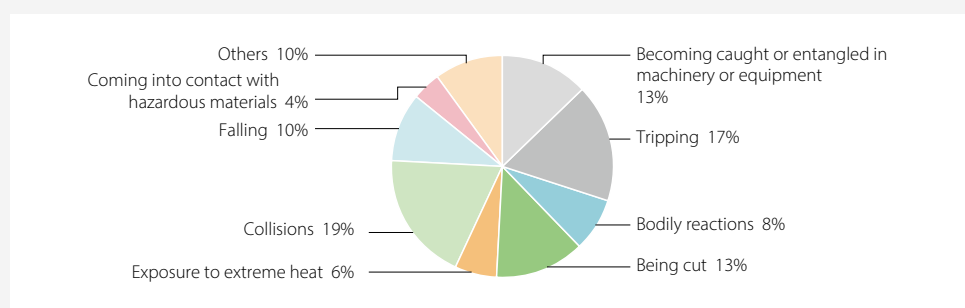
Safety Achievements

■ Lost-Workday Injuries (Sumitomo Chemical Group*)

	FY2014	FY2015	FY2016	FY2017
Number of lost-workday injuries	10	17	9	17
Frequency rate of lost-workday injuries	0.16	0.27	0.14	0.26
Number of fatal accidents (including employees and contractors)	1	0	0	2
Number of fatal accidents (contract employees)	0	0	0	0

Note: Data for previous fiscal years has been retroactively adjusted to enhance accuracy.

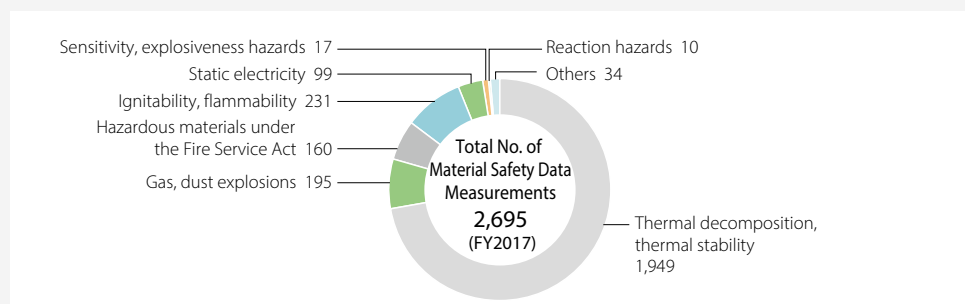
■ Breakdown of Causes of Injury by Type (Sumitomo Chemical Group*)



* Employees of Sumitomo Chemical, Sumitomo Chemical contractors, and Group companies in Japan and overseas.

Industrial Safety and Disaster Prevention Results

■ Results of Material Safety Data Measurements



The Safety Engineering Group at the Production & Safety Fundamental Technology Center studies and assesses process safety, researches safety measures, measures and evaluates material safety data, compiles a database on safety technologies, and undertakes training for safety engineers in its efforts to enhance process safety management and to prevent accidents such as fires and explosions. A total of 2,512 material safety data measurements were taken in fiscal 2017 (2,736 measurements in fiscal 2016) from within Sumitomo Chemical. In addition, 183 measurements were taken in fiscal 2017 (228 measurements in fiscal 2016) from Group companies. Total measurements undertaken were 2,695 in fiscal 2017 (2,964 measurements in fiscal 2016).



Responsible Care Activities: Supplementary Data

■ The Launch of Several Process Safety Review Committees (Sumitomo Chemical)

Fiscal Year	R&D stages		Industrialization stage		
	Level 1	Level 2	Level 3	Level 4	Level 5
2014	17	40	44	112	31
2015	22	29	41	131	26
2016	14	33	37	81	17
2017	25	19	27	88	47

When new processes are developed at Sumitomo Chemical, the Process Safety Review Committee (levels 1 to 5) convenes at every step, from R&D through to industrial-scale production. In essence, this Committee focuses on process safety assessment results and confirms whether safety counter-measures are appropriate.

■ Safety Information Database (Sumitomo Chemical)

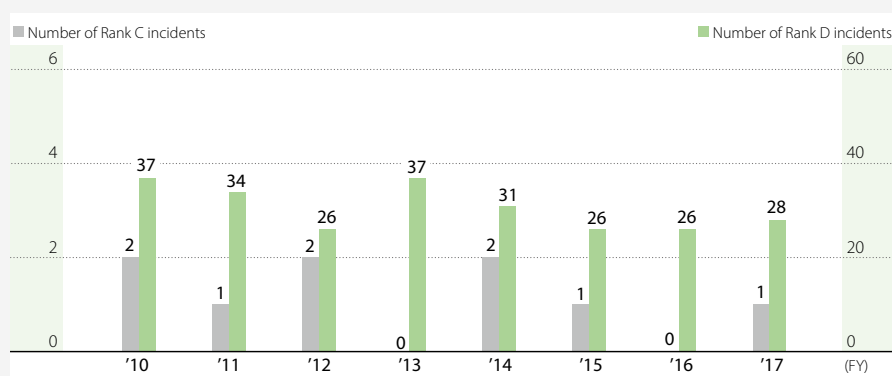
	Number of Data Sets	(Year-on-Year Comparison)
Accident prevention technology information	18,964	(Increased by 545)
Accident cause investigations	2,371	(Increased by 60)
Accident information	20,382	(Increased by 299)
As of March 31, 2018	41,717	(Increased by 904)

A safety information database has been created by collecting information on accidents in Japan and overseas and compiling abstracts of said data. As of the end of March 2018, 41,717 sets of data were stored in the database (40,813 sets of data as of March 31, 2017). This system allows all employees at each Works or Research Laboratory to search stored data using individual terminals. This data is also used in process hazard evaluations and case study examinations to prevent similar accidents. In addition, accident data is also disclosed to Group companies as necessary.

Logistics Quality Assurance

In fiscal 2017, the Company reported one incident of rank C or above and 28 incidents of rank D. However, 16 of these incidents involved errors in shipment and delivery, which can cause significant problems in the quality of customers' products. Going forward, we will continue to promote measures to reduce the number of these incidents.

■ Logistics Issues Having an Impact on Our Customers (Sumitomo Chemical)



Note: Ranks reflect Sumitomo Chemical's standard, which classifies incidents into Ranks A, B, C, and D in descending order of severity. There were no occurrences of Rank A or Rank B (the most severe) incidents. Incidents within the scope of logistics operations are consigned to Sumitomo Chemical.



Responsible Care Activities: Supplementary Data

3 Environmental Protection / Climate Change Action

Evaluation of Environmental Protection Costs and Economic Effects through Environmental Accounting

Sumitomo Chemical continuously gathers and evaluates data on environmental protection-related expenses, investments, and economic results in line with the Company's environmental accounting system introduced in fiscal 2000.

◆ Items Pertaining to Environmental Accounting

- ① Period: April 1, 2017 to March 31, 2018
- ② Boundary: Sumitomo Chemical and 23 major consolidated subsidiaries (18 in Japan and 5 overseas)*
- ③ Composition (Classification): Based on Ministry of the Environment (Japan) guidelines
- ④ Outline of the results (investment and expenses): Consolidated investment decreased year on year by 1.7 billion yen, and consolidated expenses decreased by 1.3 billion yen.

* Sumitomo Dainippon Pharma Co., Ltd.; Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Tanaka Chemical Corporation; Asahi Chemical Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Sumika Color Co., Ltd.; Nihon Medi-Physics Co., Ltd.; Nippon A&L Inc.; SanTerra Co., Ltd.; Sumika-Kakoushi Co., Ltd.; Sumika Agrotech Co., Ltd.; Ceratec Co., Ltd.; SC Environmental Science Co., Ltd.; SN Kasei Co., Ltd.; Sumika Agro Manufacturing Co., Ltd.; Sumika Plastech Co., Ltd.; SCIOCS Co., Ltd.; Dongwoo Fine-Chem Co., Ltd.; Sumitomo Chemical Asia Pte Ltd; The Polyolefin Company (Singapore) Pte. Ltd.; Sumika Technology Co., Ltd.; and Sumika Electronic Materials (Wuxi) Co., Ltd.

■ Environmental Protection Cost

(Billion yen)

Classification	Details of Major Initiatives	FY2016				FY2017			
		Non-consolidated		Consolidated		Non-consolidated		Consolidated	
		Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses
Facility area costs		4.0	16.0	5.2	26.6	1.6	16.8	3.5	28.2
Breakdown	Pollution prevention costs	(2.5)	(10.9)	(3.5)	(15.2)	(1.2)	(11.8)	(2.6)	(16.5)
	Global environmental protection costs	(1.3)	(0.3)	(1.5)	(3.4)	(0.1)	(0.2)	(0.4)	(3.4)
	Resource recycling costs	(0.2)	(4.9)	(0.2)	(8.1)	(0.3)	(4.8)	(0.5)	(8.3)
Upstream / Downstream costs	Green purchasing, recycling, recovery, remanufacturing and appropriate treatment of products, recycling costs associated with containers and packaging, environmentally friendly products and services, etc.	0	0	0	0.3	0	0	0	0.3
Administrative costs	Costs associated with environmental education, environmental management systems, the monitoring and measuring of the environmental impact of business activities and products, environmental organization operations, etc.	0	0.8	0	1.3	0	0.7	0	1.3
R&D costs	Development of products with attention to environmental safety, research into energy-saving processes, etc.	0	6.8	0	6.8	0.1	3.9	0.1	4.0
Administrative costs	Protection of the natural environment and enhancement of its scenic beauty and greenery, support for community initiatives aimed at environmental protection, support for environmental preservation groups, environment-related paid contributions and surcharges, etc.	0	0.5	0	0.8	0	0.5	0	0.8
Environmental remediation costs	Environmental rehabilitation of contaminated environments and other environmental damage, reserve funds to cover environmental recovery, etc.	0	0	0	0	0	0	0	0
Total		4.0	24.0	5.3	35.9	1.7	21.9	3.6	34.6



Responsible Care Activities: Supplementary Data

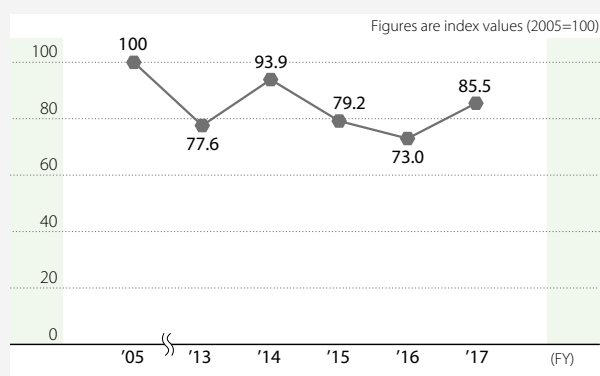
Economic Effects

(Billion yen)

Results	FY2016		FY2017	
	Non-consolidated	Consolidated	Non-consolidated	Consolidated
Reduced costs through energy saving	0.5	1.5	2.2	3.7
Reduced costs through resource saving	0.4	4.0	0.5	6.7
Reduced costs through recycling activities	2.0	3.3	0.6	1.7
Total	2.9	8.8	3.3	12.1

Economic effects are the rationalization value of per-unit improvement in such areas as energy and resource saving. In fiscal 2017, economic effects improved year on year ¥0.4 billion on a non-consolidated basis and ¥3.3 billion on a consolidated basis.

Cost Efficiency of Environmental Protection Measures (Sumitomo Chemical)



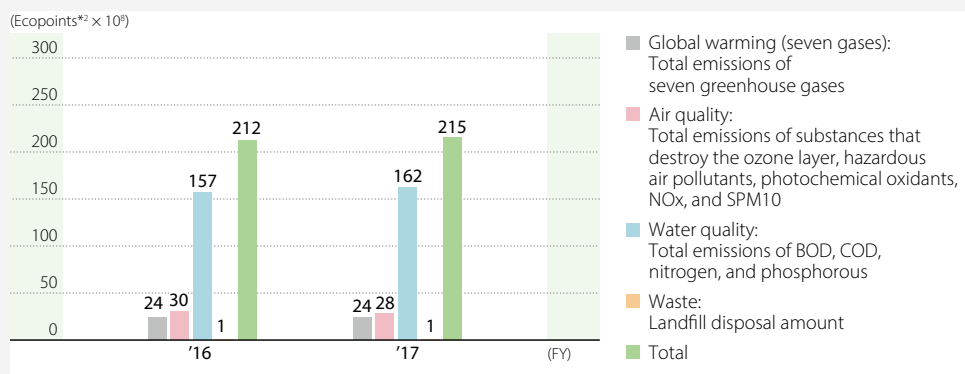
In fiscal 2009, we began implementing measures to improve the cost efficiency of our environmental protection measures by making sure that all activities were as cost effective as possible. We will implement more effective measures by analyzing and studying the breakdown of our environmental protection costs and reviewing each item to determine its importance. We calculate the cost efficiency of our environmental protection as the ratio of annual total production value to total environmental protection costs, in order to better reflect actual production activities in the calculation.



Responsible Care Activities: Supplementary Data

Examining the Practical Use of Environmental Efficiency Indicators and Environmental Management Accounting Methods

Breakdown of Aggregate Values for Environmental Impact (Sumitomo Chemical) by JEPIX*¹



Assessing the Environmental Impact of Each Group Company Using JEPIX

In fiscal 2017, as in the previous fiscal year, we undertook environmental impact assessments using JEPIX, in order to evaluate the effectiveness of this index as a strategic management indicator, and continued with relevant analyses.

Assessing the Environmental Impact of Each Product by LIME*³

For more practical use of LCA*⁴ data both internally and externally, we use LCA software (MiLCA) from the Japan Environmental Management Association for Industry to undertake environmental impact assessments of our major products using the LIME method.

Trial Evaluation of Material Flow Cost Accounting (MFCA)*⁵

We are continuing to evaluate the effectiveness of this tool and also are performing examinations for the simplification and standardization of the method and procedures in order to foster their use. MFCA, which focuses on the loss of energy and resources, helps minimize loss and cost and reduces environmental impact.

*1 Environmental Policy Priorities Index for Japan (JEPIX):

This method, which employs a uniform single indicator called "Ecopoints" to evaluate environmental impact, is derived from the Swiss LCIA Eco Scarcity methodology. The current method evaluates the discrepancy between targets (e.g., laws and environmental policies) and actual conditions based on material flow data.

*2 Ecopoints:

An indicator for total environmental impact—the smaller the value, the lower the environmental impact.

*3 Life-cycle Impact assessment Method based on Endpoint modeling (LIME)

A life-cycle impact assessment method developed in Japan as a cornerstone for measuring Japan's environmental conditions.

*4 Life Cycle Assessment (LCA):

A method for evaluating the environmental impact of products and services throughout their life cycles.

*5 Material Flow Cost Accounting (MFCA):

An environmental cost accounting method that identifies input costs of materials, processing, electricity, fuel, and others, and compares them with the energy and resources lost in manufacturing processes.



Responsible Care Activities: Supplementary Data

Reducing Greenhouse Gas Emissions

Greenhouse Gas Emissions (All Seven Gases) (Sumitomo Chemical (Target: All Facilities))

(Thousands of tonnes of CO₂e)

		FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
CO ₂	Energy sources	3,134	3,190	3,357	3,347	2,559	2,405	2,454
	From other than energy use	98	62	63	65	55	50	93
Methane (CH ₄)		—	—	—	—	—	—	—
Nitrous oxide (N ₂ O)		58	67	63	76	65	45	35
Hydrofluorocarbon (HFC)		—	—	—	—	—	—	—
Perfluorocarbon (PFC)		—	—	—	—	—	—	—
Sulfur hexafluoride (SF ₆)		—	—	—	—	—	—	—
Nitrogen trifluoride (NF ₃)		—	—	—	—	—	—	—

Note: • CH₄, HFC, PFC, SF₆, and NF₃ are outside the scope of reporting.

• Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

Energy Saving

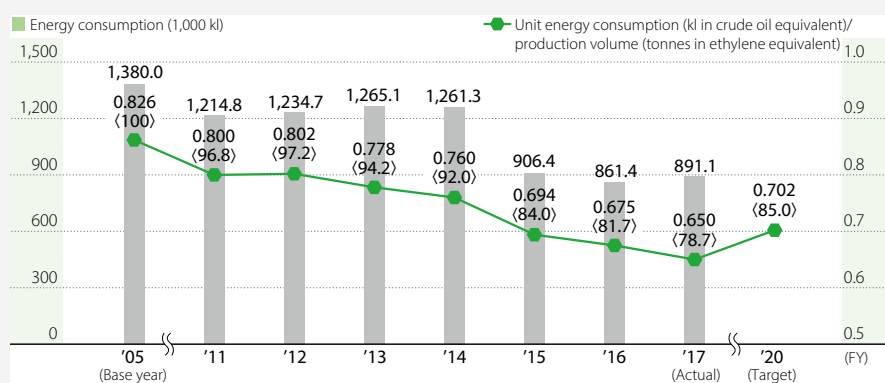
Breakdown of Unit Energy Consumption (Sumitomo Chemical (Target: All Works))

	(a) Energy Consumption (1,000 kl in Crude Oil Equivalent)	(b) Production (1,000 tonnes in Ethylene Equivalent)	(a/b) Unit Energy Consumption
Ehime Works	409.7	680.8	0.602
Chiba Works	355.0	458.6	0.774
Osaka Works	23.7	18.9	1.254
Oita Works*	57.2	52.9	1.081
Misawa Works	10.4	7.5	1.387
Ohe Works	35.1	152.9	0.230
Total	891.1	1,371.6	0.650

Note: Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

* Data for the Oita Works includes data for the Gifu and Okayama plants.

Energy Consumption and Unit Energy Consumption (Sumitomo Chemical (Target: All Works))



Note: Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

Target

Improve unit energy consumption for fiscal 2020 by 15% compared with fiscal 2005.

Results

Energy consumption totaled 891 thousand kl in crude oil equivalent in fiscal 2017.
In fiscal 2017, unit energy consumption improved 3.7% compared with fiscal 2016 and 21.3% compared with fiscal 2005.



Responsible Care Activities: Supplementary Data

■ Energy Consumption and CO₂ Emissions

(Sumitomo Chemical and Group Companies in Japan (Target: All Facilities))

	Energy Consumption (1,000 kl in Crude Oil Equivalent)	CO ₂ Emissions from Energy Use (1,000 tonnes)
Sumitomo Chemical	903	2,454
Works	891	2,430
Non-manufacturing sites, including the Head Offices and Research Laboratories	12	25
Sumitomo Chemical and Group companies in Japan	1,815	5,452
Works*	1,788	5,396
Non-manufacturing sites, including the Head Offices and Research Laboratories	27	56

Note: • Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

• The boundary of calculation covers the same participating companies listed on page 3.

* Includes sales outside the Group by Sumitomo Joint Electric Power Co., Ltd.

■ Initiatives for Energy Saving and CO₂ Emissions Reduction in the Logistics Division

Energy Consumption and CO₂ Emissions for Group Companies in Japan ("Specified Consigners")

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Energy consumption (1,000 kl in crude oil)	4.1	3.9	3.9	3.9	1.6	1.6	1.8
CO ₂ emissions (1,000 tonnes)	10.9	10.3	10.3	10.3	3.9	4.0	4.6

Note: • Figures between fiscal 2011 and 2014 are totals for Nippon A&L Inc. and Nihon Oxirane Co., Ltd.

• Since fiscal 2015, the figures are only for Nippon A&L Inc.



Responsible Care Activities: Supplementary Data

Industrial Waste Reduction

■ PCB Waste (Sumitomo Chemical and Group Companies in Japan (Target: All Works))

Storage and Control of High Concentrations of PCB Waste (As of the End of Fiscal 2017)

	Number of Units of PCB Waste			Volume of PCBs (kl)
	Total	Storage	Usage	
Sumitomo Chemical	18	18	0	0.06
Sumitomo Chemical and Group companies in Japan	58	58	0	1.0

Note: The volume of PCBs does not include minute amounts of PCB waste in the PCB net conversion amount. High concentrations of PCBs in such classes of materials as fluorescent lamps, mercury lamp ballast, and contaminated substances (wastepaper, etc.) fall outside the scope of collation.

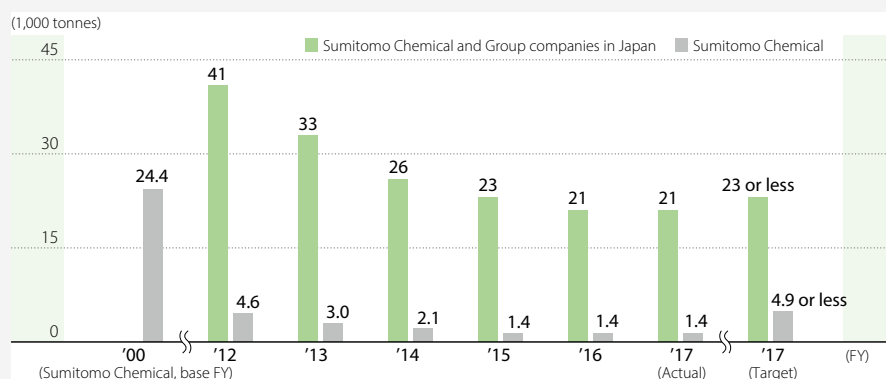
Target

Properly collect and store high-concentration PCB-containing waste and complete treatment of this waste at an early date.

In accordance with the Act on Special Measures against PCB Waste, Sumitomo Chemical properly collects high-concentration polychlorinated biphenyl (PCB)-containing waste.* The Company then stores this industrial waste, which is subject to special controls, in specified areas within the Company's waste storage facilities, subsequently ensuring strict control of this waste. Sumitomo Chemical plans to treat all PCB waste ahead of the deadline specified under the Act.

* Transformers, capacitors, and other electronic devices that contain PCB insulating oil.

■ Landfill Disposal Amount



■ Digitization of Manifests to Be Prepared Pursuant to the Waste Management and Public Cleansing Act

(Sumitomo Chemical (Target: All Works))

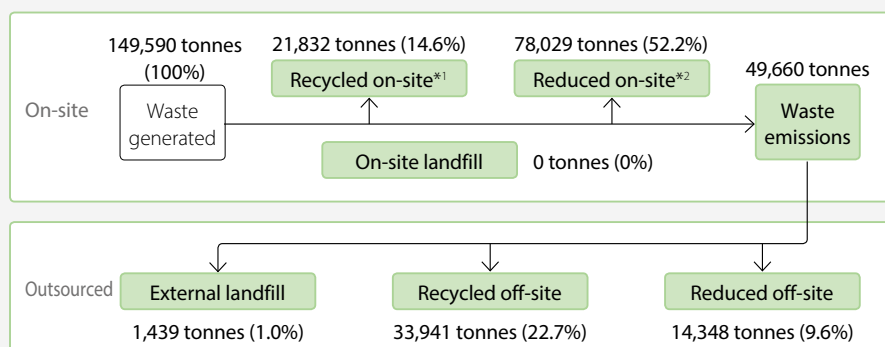
	Number of Manifests Issued	Number of Manifests Digitized	Digitization Rate (%)
FY2012	17,502	13,259	76
FY2013	19,389	15,329	79
FY2014	18,662	14,930	80
FY2015	18,973	16,337	86
FY2016	19,868	19,594	99
FY2017	19,858	19,585	99

Sumitomo Chemical has been fostering the digitization of manifests to improve operational efficiency and ensure compliance with the law and transparency of data.

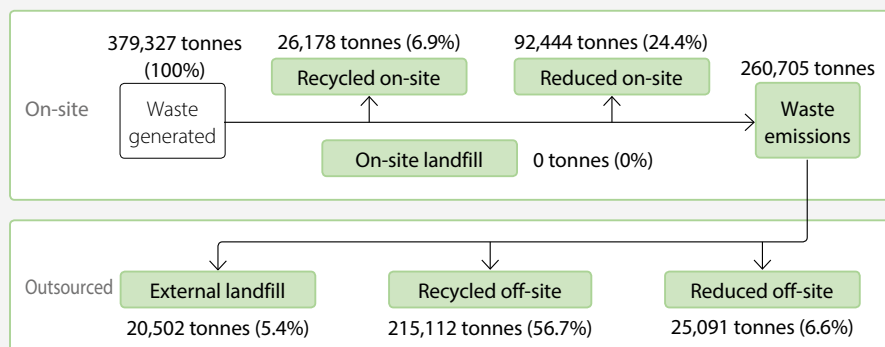


Responsible Care Activities: Supplementary Data

Waste Disposal Flow Chart and Results (Sumitomo Chemical (Target: All Works))



(Sumitomo Chemical and Group Companies in Japan (Target: All Works))



Note: Although the amount of waste emissions from Sumitomo Chemical and Group companies in Japan includes the amount of waste reduced at Sumitomo Chemical's facilities, the reduced amount is insignificant.

*1 Recycled waste: Total amount of waste that was reused, recycled, or thermally recycled

*2 Reduced waste: Total amount of waste reduced through incineration, etc.

List of Results by Item in Connection with the Disposal of Waste (Sumitomo Chemical (Target: All Works))

(Tonnes)

Type	Waste	Recycled On-site		Reduced On-site		Waste Emissions	On-site Landfill	Reduced Off-site	Recycled Off-site		External Landfill
	Generated	Reused, Recycled	Thermally	Incineration	Other				Reused, Recycled	Thermally Recycled	
Burnt residue	3,701.7					3,701.7			3,532.7		169.0
Sludge	47,519.2		7,474.3	21,466.9	2,893.1	15,616.7		2,083.4	13,327.3	3.3	292.2
Oil waste	34,690.4	4,509.6	9,566.4	10,750.6		9,863.7		3,502.1	5,280.2	1,049.4	31.9
Waste acid	8,456.2		14.6	6,142.4	815.8	1,483.4		1,036.0	425.7	8.8	4.9
Waste alkali	45,288.4	10.1	9.6	33,727.7	81.4	11,459.6		6,301.1	4,007.3	1,082.3	53.4
Waste plastic	5,810.0		157.4	1,211.9		4,440.8		438.8	3,273.7	140.5	588.8
Waste paper	1,141.7		66.5	822.7		252.5		28.0	224.3		0.2
Wood waste	915.7			81.5		834.3		54.4	639.2	131.7	9.0
Textile waste	46.1			35.0		11.1		9.5	1.7		0.0
Animal and plant residues	11.1					11.1		11.1			
Metal waste	858.5			0.4		858.0		457.5	385.0		15.5
Glass and pottery waste	335.9					335.9		18.9	270.9		46.2
Slag	31.0					31.0			31.0		
Debris	729.0	18.0				711.0		406.8	122.0		182.3
Soot and dust	55.1		5.7			49.4			3.8		45.6
Total	149,590	4,538	17,294	74,239	3,790	49,660	0	14,348	31,525	2,416	1,439

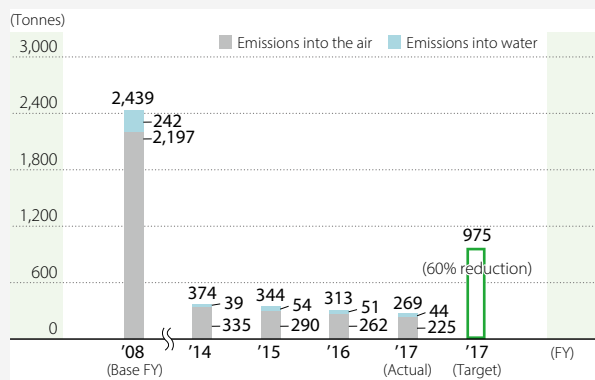


Responsible Care Activities: Supplementary Data

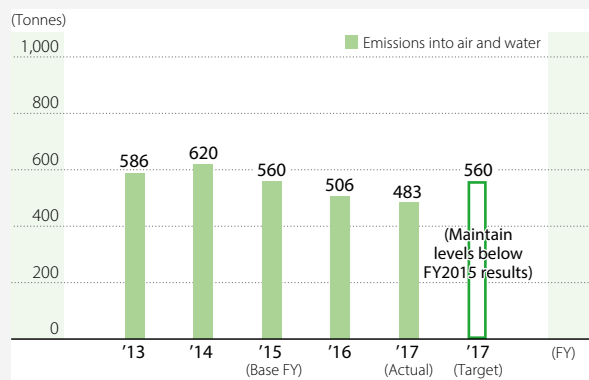
Addressing PRTR and VOCs

Trends in Emissions of Substances Subject to the PRTR Act

Sumitomo Chemical



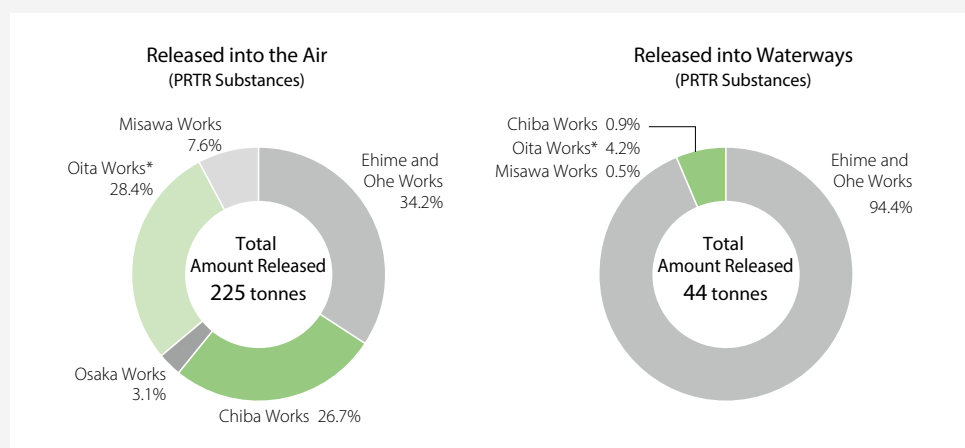
Sumitomo Chemical and Group Companies in Japan



Release and Transfer of PRTR Substances (Sumitomo Chemical and Group Companies in Japan)

	Released			Transferred		
	Air	Water	Subtotal	Sewage	Waste	Subtotal
PRTR substances						
Sumitomo Chemical (96 substances)	225	44	269	5	4,201	4,207
Sumitomo Chemical and Group companies in Japan	438	45	483	11	7,478	7,490

PRTR Substances Released by Works (Sumitomo Chemical)



* Data for the Oita Works includes data for the Gifu and Okayama plants.

Target

Reduce the total release of PRTR substances by 60% compared with fiscal 2008 by fiscal 2017.

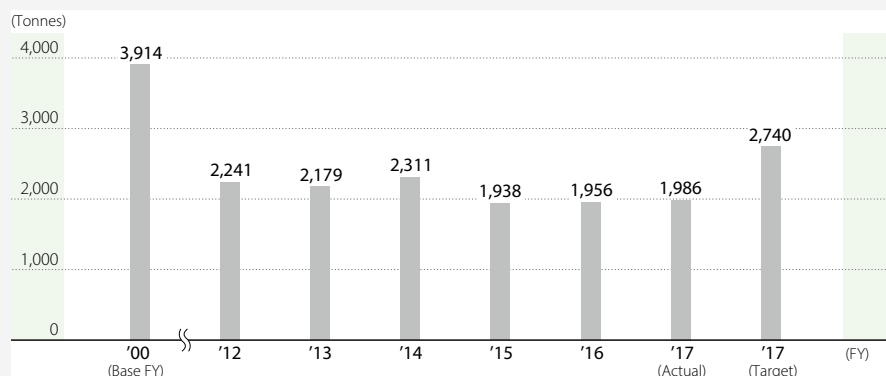
Results

Reduced the total release of PRTR substances by 269 tonnes, or 89.0%, compared with fiscal 2008 by fiscal 2017, achieving the target.



Responsible Care Activities: Supplementary Data

■ Initiatives to Reduce Emissions of Volatile Organic Compounds (VOCs) (Sumitomo Chemical)



Target

Maintain a 30% reduction in VOC emissions compared with fiscal 2000.

Results

Reduced emissions by 1,986 tonnes, or 49.3%, compared with fiscal 2000 by fiscal 2017, achieving the target.

Prevention of Ozone Layer Depletion

■ Number of Refrigeration Units That Use Specified CFCs and HCFCs as Coolants (As of the End of Fiscal 2017)

(Number of units)

	Sumitomo Chemical	Sumitomo Chemical and Group Companies in Japan
CFC11	11	11
CFC12	1	35
CFC113	0	0
CFC114	0	0
CFC115	0	2
HCFC22	76	227
HCFC123	26	31
HCFC142b	0	3

Target

- Eliminate the use of refrigeration units that use specified CFCs as coolants by fiscal 2025.
- Eliminate the use of refrigeration units that use HCFCs as coolants by fiscal 2045.



Responsible Care Activities: Supplementary Data

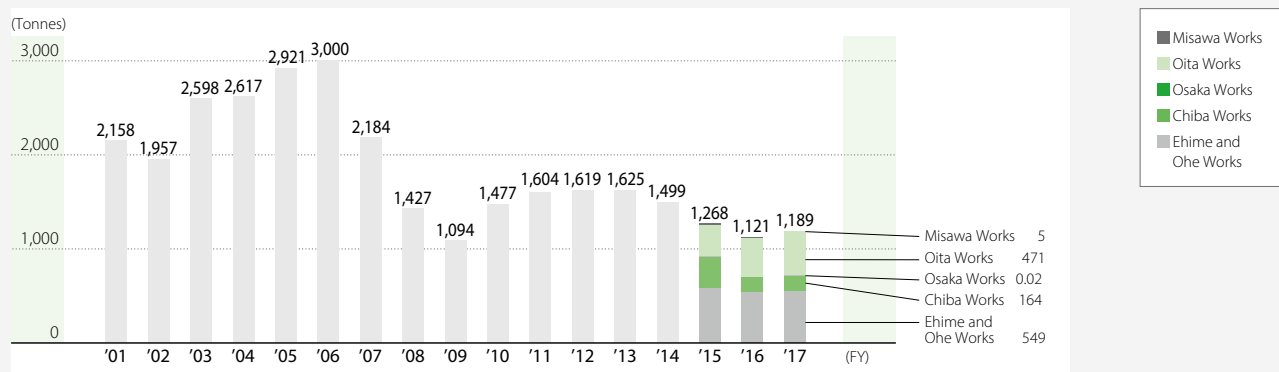
Preventing Pollution: Atmospheric Emissions of SOx, NOx, Soot, and Dust

In 1970, Sumitomo Chemical achieved a marked reduction in the release of SOx, NOx, soot, and dust into the atmosphere, and continued to maintain low levels of emissions from 1980 to the present. Furthermore, the Company has concluded cooperative agreements with local municipal governments at each of its Works, establishing voluntary control levels that are stricter than the standards given under applicable laws and regulations.

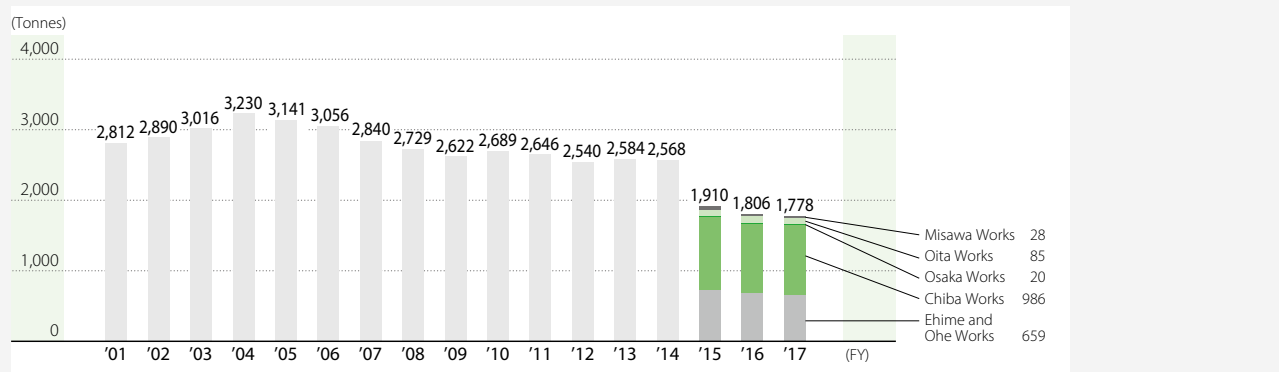
Note: Data for the Gifu Plant and Okayama Plant from fiscal 2004 to fiscal 2012 is included in Osaka Works.

Data for the Gifu Plant and Okayama Plant from fiscal 2013 is included in Oita Works.

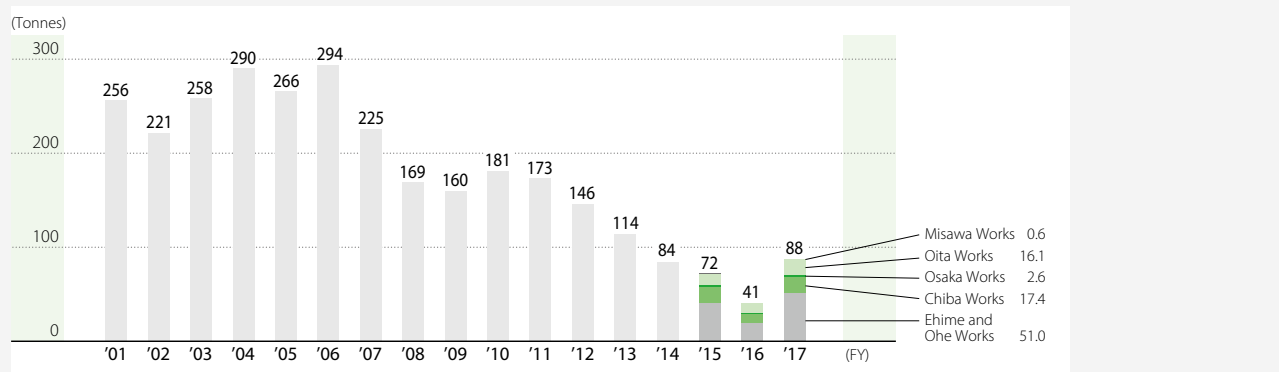
SOx Emissions (Sumitomo Chemical)



NOx Emissions (Sumitomo Chemical)



Soot and Dust Emissions (Sumitomo Chemical)



Target

Continue to sustain levels below voluntary control standard values.



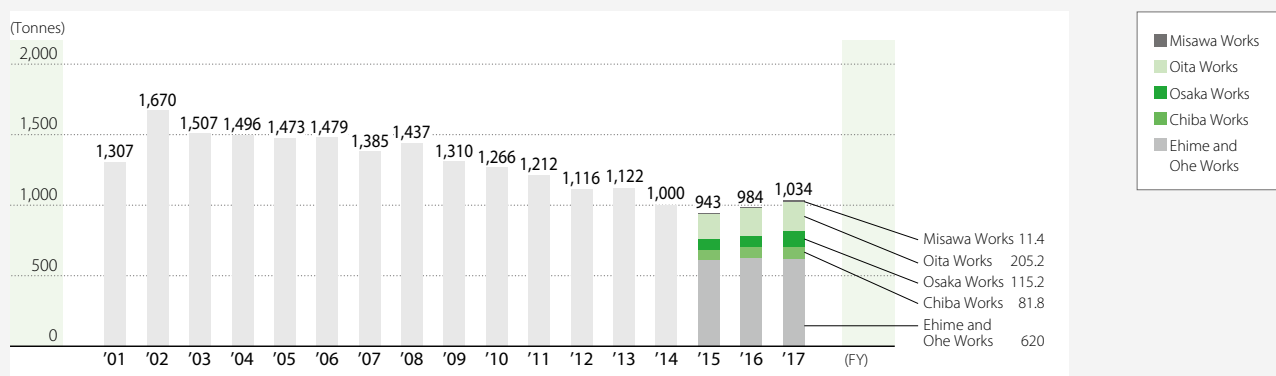
Responsible Care Activities: Supplementary Data

Preventing Pollution: Water Emissions of COD, Nitrogen, and Phosphorus

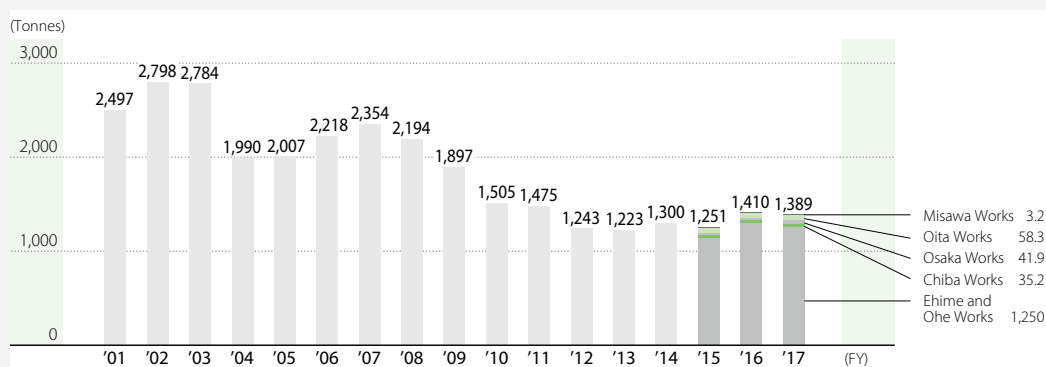
A number of measures have been implemented to cut emissions, in line with fifth-generation Water Quality Standards, and emissions of COD, nitrogen, and phosphorus into waterways have been significantly reduced since fiscal 2004. Sumitomo Chemical has also concluded cooperative agreements with local municipal governments to establish voluntary control levels for COD, nitrogen, and phosphorus released into waterways at each Works. These standards are also stricter than those established under applicable laws and regulations.

Note: Data for the Gifu Plant and Okayama Plant from fiscal 2004 to fiscal 2012 is included in Osaka Works.
Data for the Gifu Plant and Okayama Plant from fiscal 2013 is included in Oita Works.

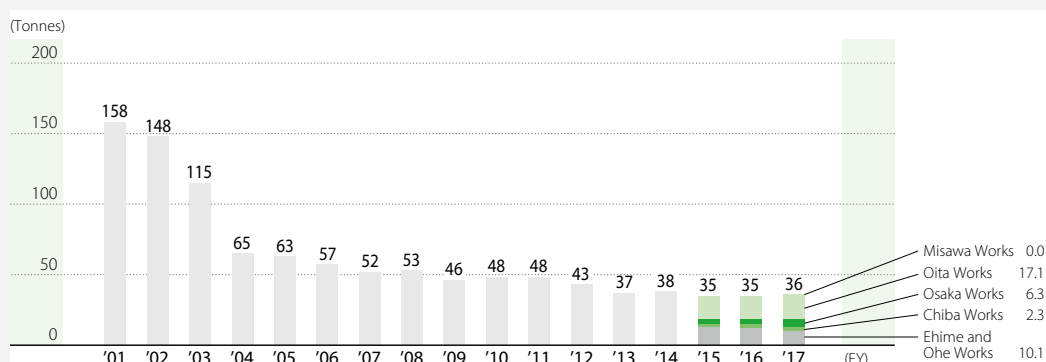
COD Emissions (Water Emissions include Water Discharge to Sewage Systems) (Sumitomo Chemical)



Nitrogen Emissions (Sumitomo Chemical)



Phosphorus Emissions (Sumitomo Chemical)



Target

Continue to sustain levels below voluntary control standard values.



Responsible Care Activities: Supplementary Data

Response to the Pollutant Release and Transfer Register Ordinance (Issued on November 21, 2008)

■ Release and Transfer of PRTR Substances in Fiscal 2017 (Sumitomo Chemical (Target: All Works))

(Tonnes, except where noted)

No. Name of Chemical Compound		Amount Released					Amount Transferred		
		Air	Water	Soil	Landfill	Total	Sewage	Waste	Total
1	Zinc compounds (water-soluble)	0.0	3.6	0.0	0.0	3.6	0.0	110.5	110.5
2	Acrylic acid and its water-soluble salts	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
3	Methyl acrylate	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0
4	Acrylonitrile	4.5	<0.1	0.0	0.0	4.5	0.0	0.0	0.0
5	Acrolein	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1
6	Acetaldehyde	0.3	<0.1	0.0	0.0	0.3	0.0	0.0	0.0
7	Acetonitrile	<0.1	0.0	0.0	0.0	<0.1	0.0	26.7	26.7
8	o-Anisidine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Aniline	0.7	0.0	0.0	0.0	0.7	0.0	31.8	31.8
10	2-Aminoethanol	<0.1	0.2	0.0	0.0	0.2	0.0	22.4	22.4
11	m-Aminophenol	0.0	<0.1	0.0	0.0	<0.1	0.0	4.1	4.1
12	Allyl alcohol	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
13	Antimony and its compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Isobutyraldehyde	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0
15	O-ethyl O-6-nitro-meta-tolyl-sec- butylphosphoramidothioate (Butamifos)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	Ethylbenzene	2.4	<0.1	0.0	0.0	2.5	<0.1	72.3	72.3
17	Epichlorohydrin	0.6	<0.1	0.0	0.0	0.6	0.0	0.0	0.0
18	1,2-Epoxypropane (also known as propylene oxide)	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
19	ε-Caprolactam	0.2	0.9	0.0	0.0	1.1	0.0	0.0	0.0
20	Xylene	3.6	<0.1	0.0	0.0	3.6	<0.1	55.0	55.1
21	Quinoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Cumene	21.2	<0.1	0.0	0.0	21.2	0.0	0.0	0.0
23	Cresol	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
24	Chloroacetic acid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	3-Chloropropene (also known as allyl chloride)	1.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0
26	Chlorobenzene	3.6	<0.1	0.0	0.0	3.6	0.0	108.7	108.7
27	Chloroform	<0.1	0.0	0.0	0.0	<0.1	<0.1	122.4	122.4
28	Cobalt and its compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	Vinyl acetate	17.0	<0.1	0.0	0.0	17.0	0.0	8.1	8.1
30	Salicyl aldehyde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	Inorganic cyanide compounds (excluding complex salts and cyanates)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	1,4-Dioxane	<0.1	0.0	0.0	0.0	<0.1	<0.1	135.7	135.8
33	Cyclohexylamine	0.0	<0.1	0.0	0.0	<0.1	0.0	1.3	1.3
34	2,2-Dichloro-1,1,1- trifluoroethane (HCFC-123)	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0
35	1,2-Dichloropropane	<0.1	0.0	0.0	0.0	<0.1	0.0	339.4	339.4
36	1,3-Dichloropropene (also known as D-D)	0.6	0.0	0.0	0.0	0.6	0.0	220.6	220.6
37	Dichlorobenzene	0.0	0.0	0.0	0.0	0.0	0.0	139.2	139.2
38	Dichloromethane (also known as methylene chloride)	3.5	0.0	0.0	0.0	3.5	0.0	8.2	8.2
39	Dicyclopentadiene	<0.1	0.0	0.0	0.0	<0.1	0.0	4.4	4.4
40	2,4-Dinitrophenol	0.0	0.0	0.0	0.0	0.0	0.0	40.4	40.4
41	1,3-Diphenylguanidine	0.0	0.5	0.0	0.0	0.5	0.0	10.3	10.3
42	2,6-Di-tert-butyl-4-cresol	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
43	2,4-Di-tert-butylphenol	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
44	N,N-Dimethylacetamide	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0
45	N,N-Dimethylaniline	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1
46	Dimethylamine	0.0	5.5	0.0	0.0	5.5	0.0	0.6	0.6
47	N,N-Dimethylformamide	<0.1	<0.1	0.0	0.0	<0.1	0.0	104.3	104.3
48	Styrene	2.3	0.0	0.0	0.0	2.3	0.0	2.0	2.0
49	Dioxins (in mg-TEG)	<0.1	<0.1	0.0	0.0	<0.1	<0.1	<0.1	<0.1
50	Thiourea	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7



Responsible Care Activities: Supplementary Data

(Tonnes, except where noted)

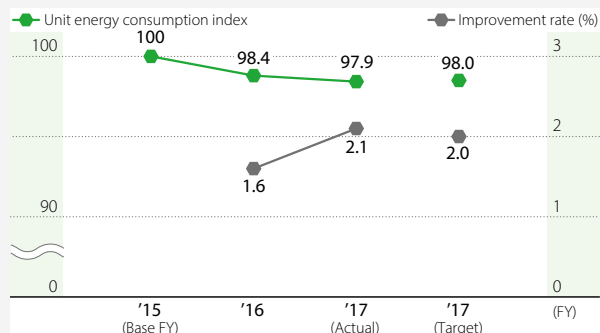
No.	Name of Chemical Compound	Amount Released					Amount Transferred		
		Air	Water	Soil	Landfill	Total	Sewage	Waste	Total
51	O,O-Dimethyl O-(3-methyl-4-nitrophenyl) phosphorothioate (Fenitrothion or MEP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	2,3,5,6-Tetrachloro-para-benzoquinone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Terephthalic acid	0.0	0.0	0.0	0.0	0.0	0.0	423.1	423.1
54	Water-soluble copper salts (excluding complex salts)	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
55	Sodium dodecyl sulfate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Triethylamine	1.0	29.6	0.0	0.0	30.6	0.8	53.9	54.7
57	2,4,6-Trichloro-1,3,5-triazine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Trichlorofluoromethane (also known as CFC-11)	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
59	1,2,3-Trichloropropane	<0.1	0.0	0.0	0.0	<0.1	0.0	16.8	16.8
60	1,2,4-Trimethylbenzene	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0
61	Toluidine	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9
62	Toluene	108.5	0.2	0.0	0.0	108.7	1.3	1,836.3	1,837.6
63	Naphthalene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64	Nickel compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
65	Nitrobenzene	0.6	0.5	0.0	0.0	1.1	0.0	47.2	47.2
66	Vanadium compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67	Arsenic and its inorganic compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	Hydrazine	<0.1	0.3	0.0	0.0	0.3	0.0	53.3	53.3
69	Hydroquinone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	Biphenyl	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
71	Pyridine	0.0	<0.1	0.0	0.0	<0.1	0.0	1.4	1.4
72	Phenylenediamine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73	1,3-Butadiene	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9
74	tert-Butyl hydroperoxide	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	2-tert-Butyl-5-methylphenol	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
76	2-Propyn-1-ol	<0.1	0.0	0.0	0.0	<0.1	0.0	<0.1	<0.1
77	2-Bromopropane	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7
78	Hexadecyltrimethylammonium chloride	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
79	n-Hexane	34.8	<0.1	0.0	0.0	34.9	0.0	141.2	141.2
80	Water-soluble salts of peroxydisulfuric acid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81	Benzyl chloride	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
82	Benzaldehyde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83	Benzene	0.3	0.2	0.0	0.0	0.5	0.0	0.0	0.0
84	Boron compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	Polyoxyethylene alkyl ether (alkyl C=12–15) and its mixture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86	Formaldehyde	0.2	0.2	0.0	0.0	0.4	2.7	0.0	2.7
87	Phthalic anhydride	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88	Maleic anhydride	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1
89	2,3-Epoxypropyl methacrylate	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
90	Methyl methacrylate	9.0	0.0	0.0	0.0	9.0	0.0	40.9	40.9
91	(Z)-2'-Methylacetophenone=4,6-dimethyl-2-pyrimidinyl hydrazone (Ferimzone)	0.0	1.7	0.0	0.0	1.7	0.0	0.0	0.0
92	Methylamine	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
93	3-Methylsulfanylpropanal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94	Methylnaphthalene	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
95	Morpholine	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
96	Triphenyl phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		225.0	43.8	0.0	0.0	268.8	5.0	4,201.4	4,206.5



Responsible Care Activities: Supplementary Data

Sharing Environmental Protection and Management Targets (Japan)

Unit Energy Consumption Indices (2015 = 100)



Improvement in Unit Energy Consumption

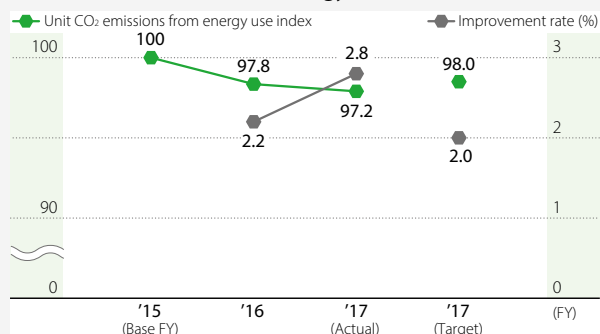
Target

Improve unit energy consumption by at least 1% annually on average.

Results

Unit energy consumption in fiscal 2017 improved by 2.1% compared with fiscal 2015, achieving the target.

Unit CO₂ Emissions from Energy Use Indices (2015 = 100)



Improvement in Unit CO₂ Emissions from Energy Use

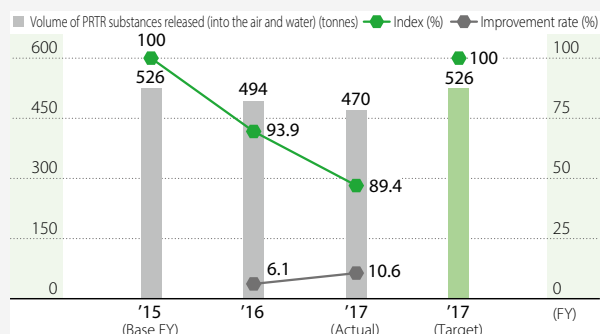
Target

Improve unit CO₂ emissions by at least 1% annually on average.

Results

Unit CO₂ emissions in fiscal 2017 improved by 2.8% compared with fiscal 2015, achieving the target.

Volume of PRTR Substances Released (into the Air and Water) and PRTR Substance Emissions Indices (2015 = 100)



Reduction of Volume of PRTR Substances Released

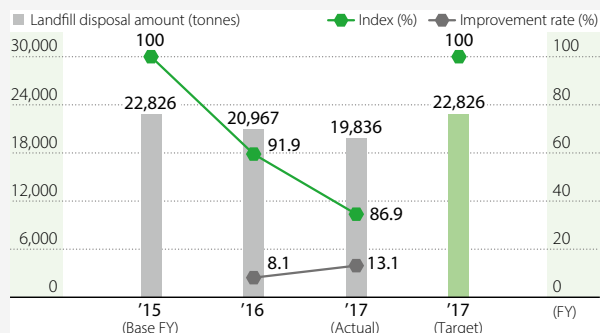
Target

Maintain the total volume of PRTR substances released (into the air and water) at or below fiscal 2015 levels.

Results

The total volume in fiscal 2017 was reduced by 10.6% compared with fiscal 2015, achieving the target.

Landfill Disposal Amount and Landfill Disposal Indices (2015 = 100)



Reduction of Landfill Disposal Amount

Target

Maintain landfill disposal amount at or below fiscal 2015 levels.

Results

The amount in fiscal 2017 was reduced by 13.1% compared with fiscal 2015, achieving the target.

Note: Sumitomo Chemical and the 15 Group companies listed below are included in the boundary of calculation.

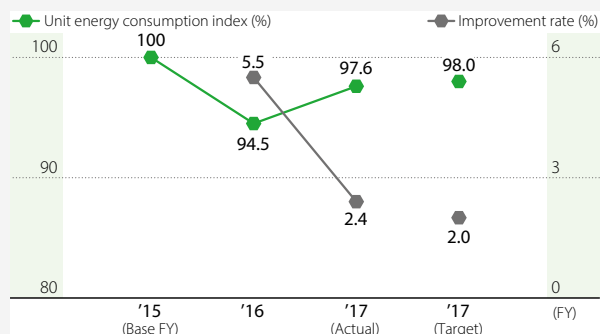
Sumika-Kakoushi Co., Ltd.; Sumika Color Co., Ltd.; Sumika Plastech Co., Ltd.; Nippon A&L Inc.; Nihon Methacryl Monomer Co., Ltd.; Asahi Chemical Co., Ltd.; Ceratec Co., Ltd.; Sumika Assembly Techno Co., Ltd.; SanTerra Co., Ltd.; Sumika Agro Manufacturing Co., Ltd.; SC Environmental Science Co., Ltd.; Sumika Agrotech Co., Ltd.; Sumitomo Chemical Garden Products Inc.; Nihon Medi-Physics Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.



Responsible Care Activities: Supplementary Data

Sharing Environmental Protection and Management Targets (Overseas)

Unit Energy Consumption Indices (2015 = 100)



Improvement in Unit Energy Consumption

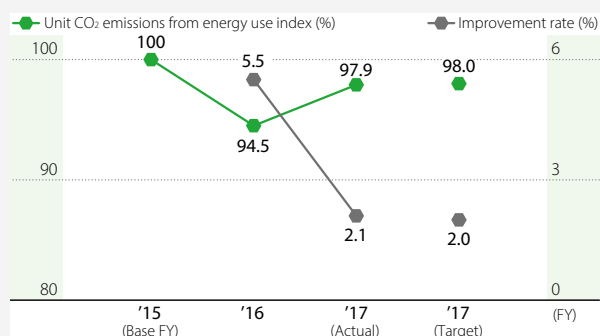
Target

Improve unit energy consumption by at least 1% annually on average.

Results

Consumption in fiscal 2017 improved by 2.4% compared with fiscal 2015, achieving the target.

Unit CO₂ Emissions from Energy Use Indices (2015 = 100)



Improvement in Unit CO₂ Emissions from Energy Use

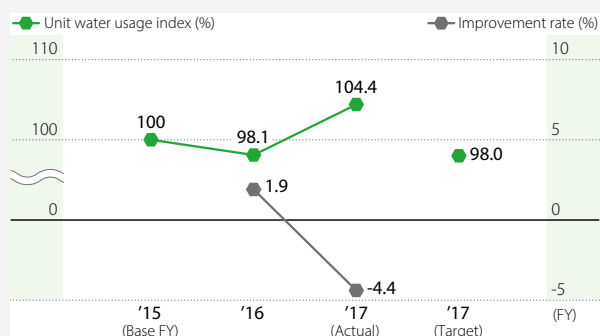
Target

Improve unit CO₂ emissions by at least 1% annually on average.

Results

Emissions in fiscal 2017 improved by 2.1% compared with fiscal 2015, achieving the target.

Unit Water Usage Indices (2015 = 100)



Improvement in Unit Water Usage

Target

Improve unit water usage by at least 1% annually on average.

Results

Usage in fiscal 2017 worsened by 4.4% compared with fiscal 2015, failing to achieve the target.

Note: • Data for previous fiscal years has been retroactively adjusted to enhance accuracy.

• The following 20 Group companies overseas are included in the boundary of calculation:

- | | | |
|---------------|--|--|
| Singapore | • The Polyolefin Company (Singapore) Pte.Ltd. | • Sumitomo Chemical Asia Pte Ltd |
| Thailand | • Sumipex (Thailand) Co., Ltd. | • Bara Chemical Co., Ltd. |
| China | • Dalian Sumika Chemphy Chemical Co., Ltd. | • Sumika Electronic Materials (Wuxi) Co., Ltd. |
| | • Sumika Electronic Materials (Hefei) Co., Ltd. | • Sumika Huabei Electronic Materials (Beijing) Co., Ltd. |
| | • Sumika Electronic Materials (Shanghai) Co., Ltd. | • Sumika Electronic Materials (Xi'an) Co., Ltd. |
| | • Sumika Polymer Compounds Dalian Co., Ltd. | • Zhuhai Sumika Polymer Compounds Co., Ltd. |
| | • Dalian Sumika Jingang Chemicals Co., Ltd. | |
| Taiwan | • Sumika Technology Co., Ltd. | • Sumipex Techsheet Co., Ltd. |
| India | • Sumitomo Chemical India Private Limited | |
| South Korea | • Dongwoo Fine-Chem Co., Ltd. | • SSLM Co., Ltd. |
| United States | • Sumitomo Chemical Advanced Technologies LLC | |



Responsible Care Activities: Supplementary Data

★: Assured by an independent assurance provider

4 Additional Data: Pollution and Resources

Environmental Performance

Sumitomo Chemical collates and totals environmental data for the Company and Group companies in Japan and overseas, including data on energy and resource consumption, production quantities, and environmental impact (e.g., release of pollutants into the air and water).

■ Environmental Performance (Fiscal 2015–2017), Boundary: Sumitomo Chemical and Group Companies in Japan

INPUT Energy and Resources



Water

	(Millions of tonnes)		
	FY2015	FY2016	FY2017★
Industrial water	67.5	66.1	68.8
Drinking water	0.9	0.8	0.9
Seawater	949.8	888.4	926.9
Groundwater	22.0	16.7	17.6
Other water	2.3	2.7	2.5



Energy
Calculated as kl
of crude oil

	(Thousands of kl)		
	FY2015	FY2016	FY2017★
Fuel, heat, and electricity*1	1,880	1,750	1,837



Exhaustible
Resources

	(Thousands of tonnes)		
	FY2015	FY2016	FY2017
Hydrocarbon compounds	1,940	1,779	1,835
Metals (excluding minor metals)*2	123	116	120
Minor metals*3	0.08	0.17	10.17

PCB/CFCs under Secure Storage

	FY2015	FY2016	FY2017
No. of electrical devices containing high concentrations of PCBs*4	51	61	58
PCB volume*4	1.0	1.0	1.0
No. of refrigeration units using specified CFCs as a coolant	47	45	48
No. of refrigeration units using HCFCs as a coolant	340	235	262

Note: The number of companies included in the boundary of calculation for the environmental performance data on page 72 is as follows for each year.

2015: Sumitomo Chemical and Group companies in Japan: 14 companies

2016: Sumitomo Chemical and Group companies in Japan: 19 companies

2017: Sumitomo Chemical and Group companies in Japan: 21 companies

*1 From fiscal 2017, the energy (calculated as kl of crude oil) indices were calculated in accordance with the GHG Protocol.

• Having adopted the GHG Protocol standards for our GHG emission disclosures, we now include the following data previously excluded from calculations: amount of energy used to produce power and steam sold to external parties by Sumitomo Chemical and Group companies in Japan (the portion attributable to energy provider subsidiaries was included in years prior to fiscal 2016). In addition, the amount of energy used by Sumitomo Chemical's non-production sites is included from fiscal 2017.

*2 Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

*3 Calculations include the following seven minor metals: nickel, chromium, tungsten, cobalt, molybdenum, manganese, and vanadium. The supply structure for each of these minor metals is extremely fragile. These minor metals are subject to national stockpiling.

*4 Fluorescent lamps and mercury lamp ballast as well as contaminated substances (wastepaper, etc.), including PCB waste, are not included in unit and volume data.



Responsible Care Activities: Supplementary Data

★: Assured by an independent assurance provider

OUTPUT Product Manufacturing and Environmental Impact



Products

		(Thousands of tonnes)		
		FY2015	FY2016	FY2017★
(Calculated on the basis of ethylene production)*1		1,582	1,517	2,602



Water
Pollutant
Emissions

		(Tonnes)		
		FY2015	FY2016	FY2017★
COD	Coastal waters/waterways	945	977	998
	Sewer systems	200	185	234
Phosphorus	Coastal waters/waterways	34	34	32
	Sewer systems	4	5	6
Nitrogen	Coastal waters/waterways	1,318	1,478	1,442
	Sewer systems	28	36	72
Substances subject to the PRTR Act*2		55	52	45



Water
Discharge

		(Millions of tonnes)		
		FY2015	FY2016	FY2017
Total amount of water discharge		270	232	234

Note: The total amount of water discharge does not include used seawater emitted by Sumitomo Joint Electric Power Co., Ltd.



Waste
Materials

		(Thousands of tonnes)		
		FY2015	FY2016	FY2017★
Waste emission*3		261	255	261
Landfill*3		23	21	21
(Breakdown)				
On-site landfill		0	0	0
External landfill		23	21	21

Note: The number of companies included in the boundary of calculation for the environmental performance data on page 73 is as follows for each year.

2015: Sumitomo Chemical and Group companies in Japan: 14 companies

2016: Sumitomo Chemical and Group companies in Japan: 19 companies

2017: Sumitomo Chemical and Group companies in Japan: 21 companies

*1 Certain assumptions were made in calculations due to the difficulty of obtaining weight-based figures for some products.

*2 Calculated based on the amount released into water/the air of each substance subject to the PRTR Act.

*3 The amount of coal ash generated at Sumitomo Joint Electric Power, which is included in "Waste emissions" and "Landfill" (Sumitomo Chemical and Group companies in Japan) is calculated on a dry-weight basis. Moreover, although the amount of waste emissions from Sumitomo Chemical and Group companies in Japan includes the amount of waste reduced at Sumitomo Chemical's facilities, the reduced amount is insignificant.



Responsible Care Activities: Supplementary Data

★: Assured by an independent assurance provider



(Thousands of tonnes of CO₂)

	FY2015	FY2016	FY2017★
Greenhouse gases (seven gases)* ¹	6,062	5,509	6,432
CO ₂ Emissions from energy use (CO ₂)	5,786	5,323	5,611* ²
CO ₂ emissions from other than energy use	66	61	711
N ₂ O	150	125	110
HFC* ³	—	—	—
PFC* ³	—	—	—
CH ₄ * ³	—	—	—
SF ₆ * ³	—	—	—
NF ₃ * ³	—	—	—

(Tonnes)

	FY2015	FY2016	FY2017
Others			
NO _x	4,896	4,736	4,703
SO _x	5,281	4,920	5,023
Soot and dust	209	166	247
Substances subject to the PRTR Act* ⁴	505	454	438

Note: The number of companies included in the boundary of calculation for the environmental performance data on page 74 is as follows for each year.

2015: Sumitomo Chemical and Group companies in Japan: 14 companies

2016: Sumitomo Chemical and Group companies in Japan: 19 companies

2017: Sumitomo Chemical and Group companies in Japan: 21 companies

*¹ From fiscal 2017, the greenhouse gas (all seven gases) indices were calculated using the GHG Protocol for greenhouse gas emissions.

• Having adopted the GHG Protocol standards for our GHG emission disclosures, we now include the following data that was previously excluded from calculations: CO₂ emissions from energy sold to external parties by Sumitomo Chemical and Group companies in Japan (the portion attributable to energy provider subsidiaries was included in years prior to fiscal 2016); CO₂ emissions from energy use attributable to Sumitomo Chemical's non-production sites; and CO₂ emissions from non-energy sources not included in the scope of the Act on Promotion of Global Warming Countermeasures. In addition, from fiscal 2017, we include energy use attributable to Sumitomo Chemical's non-production sites.

*² Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

*³ Outside the scope of reporting under the Act on Promotion of Global Warming Countermeasures.

*⁴ Calculated based on the amount released into water/the air of each substance subject to the PRTR Act.

Compliance with Environmental Laws and Regulations

Status of Compliance with Environmental Laws and Regulations

(Yen)

	FY2015	FY2016	FY2017
Total fines	0	0	0

Note: Sumitomo Chemical and Group companies in Japan are included in the boundary of calculation.

The production sites of the 21 Group companies in the boundary are listed below.

Sumika-Kakoushi Co., Ltd.; Sumika Color Co., Ltd.; Sumika Plastech Co., Ltd.; Nippon A&L Inc.; Nihon Methacryl Monomer Co., Ltd.; Asahi Chemical Co., Ltd.; Ceratec Co., Ltd.; Sumika Assembly Techno Co., Ltd.; SanTerra Co., Ltd.; Sumika Agro Manufacturing Co., Ltd.; SC Environmental Science Co., Ltd.; Sumika Agrotech Co., Ltd.; Sumitomo Chemical Garden Products Inc.; Nihon Medi-Physics Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Tanaka Chemical Corporation; SCIOCS Co., Ltd.; Sumitomo Dainippon Pharma Co., Ltd.; and SN Kasei Co., Ltd.



Social Activities

The Sumitomo Chemical Group is proactively fostering communications with customers, suppliers, local communities, and employees. In addition, the Group conducts a wide range of social activities as part of its efforts to build good relationships with these groups.

Contents

76	Social Activity Goals and Results
77	Hand in Hand with Customers
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100	1 Data regarding Employees
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Contributing to the SDGs through Social Activities





Social Activity Goals and Results

Goal achieved or steadily progressing: ○ Goal not achieved: △

Items	Fiscal 2017 Goals	Fiscal 2017 Results	Evaluation	Fiscal 2018 Goals	Page
Hand in Hand with Customers	<ul style="list-style-type: none"> ● Improve the level of service provided by customer service personnel (including Group companies) ● Improve the dissemination of information, including through the Company's website 	<ul style="list-style-type: none"> ● Improved the level of service provided by customer service personnel ● Improved the dissemination of information, including through the Company's website 	<p>○</p> <p>○</p>	<ul style="list-style-type: none"> ● Improve the level of service provided by customer service personnel (including Group companies) ● Improve the dissemination of information, including through the Company's website 	pp. 77–79
Hand in Hand with Business Partners	<ul style="list-style-type: none"> ● Thoroughly ensure compliance ● Promote CSR procurement by strengthening collaboration with business partners through CSR surveys related to raw materials and packaging materials 	<ul style="list-style-type: none"> ● Thoroughly ensured compliance ● Promoted CSR procurement by strengthening collaboration with business partners through monitoring and feedback 	<p>○</p> <p>○</p>	<ul style="list-style-type: none"> ● Thoroughly ensure compliance ● Promote CSR procurement by strengthening collaboration with business partners through CSR surveys related to raw materials and packaging materials 	pp. 80–82
Hand in Hand with Employees	<ul style="list-style-type: none"> ● Further promote global HR initiatives and talent development ● Work on workforce management that is responsive to business expansion ● Implement fair and objective system operations in line with the aim of the new HR system ● Promote diversity and work-life balance 	<ul style="list-style-type: none"> ● Held global manager meetings, systematically conducted global talent development ● Secured personnel by revising the hiring system and appropriately placed personnel in response to business expansion ● Built and ran HR systems that encourage employee growth and development ● Held meetings about highly productive working styles, formulated an action plan to reform working styles, acquired certification as a 2018 Health & Productivity Management Outstanding Company (White 500), acquired same certification for special subsidiaries 	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<ul style="list-style-type: none"> ● Further promote global HR initiatives and talent development ● Secure personnel and work on workforce management that is responsive to business expansion ● Develop personnel and run HR systems to promote employee growth and development ● Promote diversity and work-life balance 	pp. 83–94
Hand in Hand with Local Communities and Society	<ul style="list-style-type: none"> ● Provide support to achieve the United Nations Sustainable Development Goals ● Provide prompt and precise support in response to emergencies and disasters in Japan and overseas ● Promote social contribution activities distinctive to the Sumitomo Chemical Group by leveraging the strengths of each workplace ● Continue to expand information disclosure using SDGs and promote interactive dialogue 	<ul style="list-style-type: none"> ● Created employment opportunities and supported education in Africa through Olyset™ Net ● Provided prompt support to those affected by natural disasters ● Participated in and cooperated with local events, held science workshop classes ● Continued to expand information disclosure using SDGs and promote interactive dialogue 	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<ul style="list-style-type: none"> ● Provide support to achieve the United Nations Sustainable Development Goals ● Provide prompt and precise support in response to emergencies and disasters in Japan and overseas ● Promote social contribution activities distinctive to the Sumitomo Chemical Group by leveraging the strengths of each workplace ● Continue to expand information disclosure using SDGs and promote interactive dialogue 	pp. 95–99

Note: More details are available in the supplementary data section between pages 100 and 103.



Hand in Hand with Customers

Basic Stance

Throughout the Group, Sumitomo Chemical is working to supply high-quality products and services that satisfy customers' needs and ensure safety in their use, and sales managers and customer consultation offices provide support tailored to products and specific details.

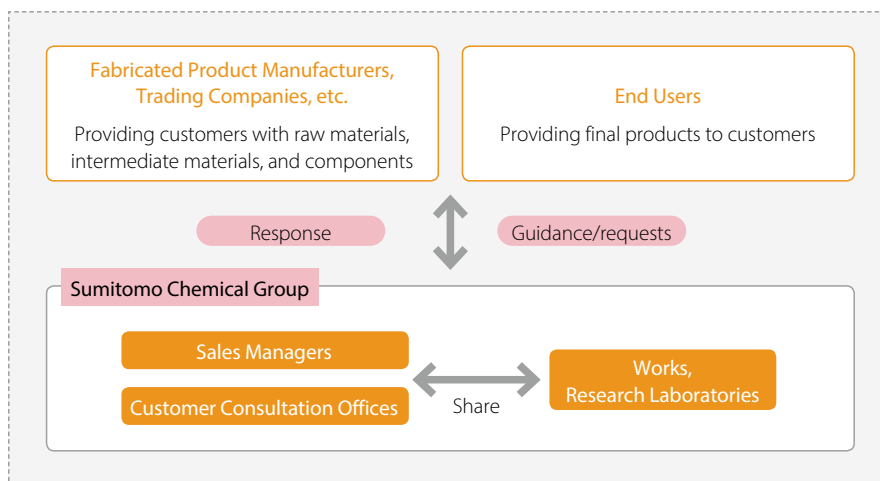
Business & Products

<https://www.sumitomo-chem.co.jp/english/products/>

Framework for Initiatives

Sumitomo Chemical works to accurately and rapidly reflect customers' requests in product development and improvement by sharing this information among Works, Research Laboratories, and sales personnel. In addition, data on customer complaints and requests for improvements in product quality are stored on an internal database to prevent similar issues from occurring.

Customer Communication System





Hand in Hand with Customers

Examples of Initiatives

Supporting Development of Resin Products

Sumitomo Chemical conducts research into the structure and composition of resin materials in line with customer requests to offer comprehensive support of their efforts to develop resin products.

In the automotive component field, for example, we offer resin materials primarily aimed at rationalizing production and creating lighter, stronger products with a wider range of functions. In addition, we use plastic computer-aided engineering (CAE) technology to offer information about the formation and processing characteristics of resin materials and predictions about the practical applications of certain resin products.

Going forward, we will work to swiftly develop resin materials in line with customer requests and continue creating new value demanded by the market with our customers.

Initiatives of the AgroSolutions Division-Japan

The AgroSolutions Division-Japan established a customer consultation office related to Sumitomo Chemical's crop protection chemical products and fertilizers. The division promotes business operations based on a spirit of compliance and prompt, appropriate, sincere service provided with an awareness of the customer's perspective.

We receive a wide range of questions from customers regarding crop protection chemicals and fertilizers, from how to appropriately use them to the safety of products grown using them. The consultation office works diligently to find the latest information, including registrations, regarding these chemicals to enable the provision of accurate, easy-to-understand information in line with Japan's Agricultural Chemicals Control Act and other related laws. The office's consultants are in constant contact with customers, striving to enable them to correctly and effectively use Sumitomo Chemical's crop protection chemicals and fertilizers.

In addition, the AgroSolutions Division-Japan maintains an agricultural support website entitled Sumitomo Chemical i-nouryoku. Through this site, the division delivers a range of information, including introductions of new crop protection products and fertilizers. The division also issues the i-nouryoku newsletter to members of the site with the aim of enhancing communication with customers.

Sumitomo Chemical i-nouryoku

 <https://www.i-nouryoku.com/> (Japanese only) 

Initiatives in the Rice Business

In autumn of 2014, Sumitomo Chemical started a business that handles everything from providing rice producers with original varieties of rice seed, crop protection chemicals, and fertilizers; supporting cultivation management; and buying and selling harvested rice. We have teamed up with a range of business partners in agricultural regions, including producers; wholesalers of crop protection chemicals and fertilizers; agricultural cooperatives; and collection businesses. We've also joined with distribution partners, including rice wholesalers. Taking advantage of the unique characteristics of different rice varieties with regard to flavor and yield, we have been engaged in producing commercial-grade rice seed, which is in high demand. We will continue to contribute to the development of Japan's agriculture through new rice production proposals.



Hand in Hand with Customers

Pharmaceutical Business Measures

Sumitomo Chemical started its pharmaceuticals business as the first Japanese company to manufacture synthetic pharmaceuticals based on its advanced organic synthesis technology. Our affiliate Sumitomo Dainippon Pharma Co., Ltd. considers the below listed items to be part of its duty to its customers in the pharmaceutical business.

Conduct Responsible Advertising and Marketing

(Refer to section 11. Promotional Activities of Sumitomo Dainippon Pharma's Compliance Standard for more details.)

https://www.ds-pharma.com/profile/compliance/pdf/eco_gl1_rev2.pdf

Initiative for Access to Healthcare

https://www.ds-pharma.com/csr/customer/improved_access.html

Transparency in Partnerships with Patients and Medical Institutions

https://www.ds-pharma.com/csr/fair/app_relationship.html

Looking Ahead

Collecting information through close consultation with internal and external partners, and maintaining a proactive attitude when listening to our customers' opinions, Sumitomo Chemical remains committed to continuously providing products that satisfy the needs of its customers. Moreover, the Company is expanding information disclosure as a matter of policy in order to provide our customers with vital information in the most appropriate manner.



Hand in Hand with Business Partners



Basic Stance

The Sumitomo Chemical Group is committed to building mutually beneficial and sound relationships with business partners. In addition to ensuring fairness, equitability, and transparency in our transactions with business partners, we are promoting responsible procurement activities throughout the supply chain with an emphasis on compliance and respecting human rights, which will encourage our partners to also engage in CSR activities. Furthermore, Sumitomo Chemical's stance toward and policy on responsible procurement is clarified in the Basic Procurement Principles and the Group Business Standards of Procurement, which provide guidelines for procurement operating activities for Group companies in Japan and overseas.

Basic Procurement Principles (Outline)

1. The Procurement Section shall strive to conduct procurement transactions on the basis of fair, equitable, transparent and free competition without involving personal interests or arbitrary considerations.
2. The Procurement Section shall strive to select suppliers to transact with in accordance with the most appropriate and economically rational methods and shall pursue the maintenance of sound business relationships with suppliers, aiming for mutual growth and development.
3. The Procurement Section shall strive to provide corporate services globally throughout the entire Group.
4. In its procurement, the Procurement Section shall give preference to those suppliers that are active in CSR initiatives, with the aim of fulfilling its corporate social responsibilities and building sound relationships with suppliers.
5. The Procurement Section shall strive always to meet the quality requirements of Sumitomo Chemical's internal sections that request purchases of Goods and Services.
6. In performing Procurement Operations, the highest priority shall be given to safe and stable operations in order to realize zero-accident and zero-injury operations.
7. In performing Procurement Operations, the highest consideration shall be given to customer satisfaction.
8. The Procurement Section shall ensure the transparency of Procurement Operations.

Detailed Information

 <https://www.sumitomo-chem.co.jp/english/company/purchasing/principles.html> 



Hand in Hand with Business Partners

Responsible Procurement Activities

Sumitomo Chemical has added a webpage about CSR procurement to its Procurement Information page on its official website to inform more stakeholders of our responsible procurement initiatives. The webpage features the Sumitomo Chemical Supply-Chain CSR Deployment Guidebook, which explains those CSR promotion items that the Company asks suppliers to follow. Moreover, Sumitomo Chemical has formulated the Sumitomo Chemical Supply-Chain CSR Deployment Check Sheets to enable suppliers to conduct self-evaluations regarding all items. Suppliers can now download the guidebook and check sheets and report the results of their self-evaluations.

Sumitomo Chemical Supply-Chain CSR Deployment Check Sheets (CSR Criteria Explanation)

0 Overall Promotion of Corporate Social Responsibility (CSR)

The questionnaire begins with a confirmation of the company's performance regarding: clearly declaring the importance of CSR as a business policy; designating an organization and manager responsible for CSR promotion; publicly announcing the status of its CSR promotion efforts; having a system in place; and deploying its own CSR program to suppliers.

I Compliance with Laws and Ethics

Questions in this chapter focus on whether the company properly: ensures compliance with various business laws (including laws and regulations in Japan and overseas, such as REACH); prohibits impediments to free competition; prohibits abuse of a superior position; prohibits corruption and bribery; prohibits the offering and receiving of inappropriate profits and advantages; ensures respect for intellectual property; detects and prevents injustice promptly; and prevents the leakage of personal information, customer and third-party confidential information.

II Human Rights and Labor

Questions in this chapter focus on whether the company properly: ensures respect for human rights; prohibits discrimination; regulates working hours; respects the rights to freedom of association; prohibits forced labor; prohibits child labor; and pays appropriate wages.

III Accident Prevention and Occupational Health and Safety

Questions in this chapter focus on whether the company properly: ensures proper disaster and accident management; applies safety measures for equipment and instruments; promotes safety in the workplace; promotes hygiene in the workplace; and promotes health maintenance programs for employees.

IV Environmental Conservation

Questions in this chapter focus on whether the company properly: establishes and implements an environmental management system; controls hazardous chemicals in manufacturing; obtains environmental and government permits; minimizes environmental pollution (water, soil, air); promotes waste reduction; and promotes resource and energy saving by reducing, reusing, and recycling (3Rs).

V Product Quality and Safety

Questions in this chapter focus on whether the company properly: establishes and implements a quality management system; controls hazardous chemicals in products; provides accurate information on products and services; and furnishes prior consultation on manufacturing process change and compliance with standards and specifications.

Procurement Information, "CSR Deployment Guidebook and Check Sheets"

https://www.sumitomo-chem.co.jp/english/company/purchasing/csr_procurement.html

Refer to the Topics Columns Presented on page 92 of the Compliance Section in *Annual Report 2018*.

https://www.sumitomo-chem.co.jp/english/ir/library/annual_report/



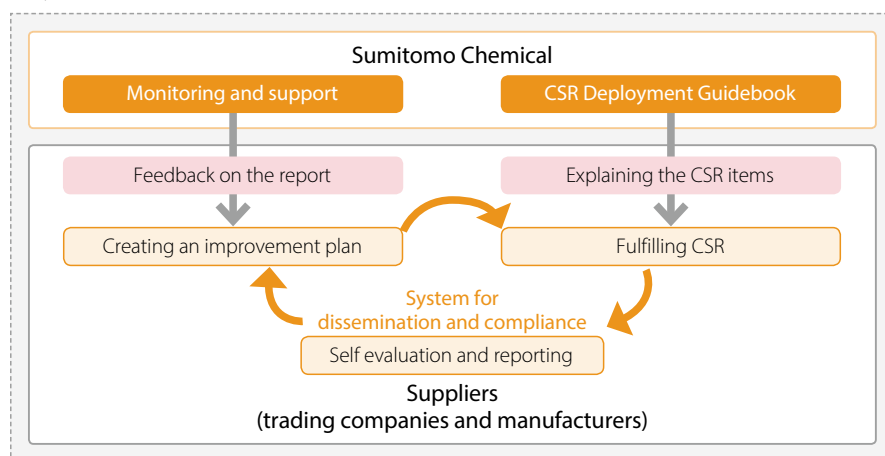
Hand in Hand with Business Partners

Using the CSR Deployment Guidebook and Check Sheets

Sumitomo Chemical promotes responsible procurement while strengthening cooperation with business partners in part by collecting Sumitomo Chemical Supply-Chain CSR Deployment Check Sheets from suppliers of raw materials.

We collect CSR Check Sheets from all new suppliers and only enter into business with those given good evaluations. Current suppliers are also subject to monitoring via check sheets as well as quality assurance audits. We manage the data from the check sheets submitted by suppliers and periodically assess the content. For suppliers who need to follow-up on problems revealed by the monitoring, we furnish feedback, including point-by-point requests for improvement, to raise awareness of and cooperation in ensuring responsible procurement.

System for Responsible Procurement



Conflict-Free Procurement Policy

In an environment in which the social responsibilities of corporations are growing, if a given commitment relates to a social problem for which there is significant interest and there is a social expectation of compliance, as is the case with a U.S. rule* on conflict minerals, for example, Sumitomo Chemical works with its suppliers to ensure the responsible procurement of raw materials.

* Rule on conflict minerals: A final rule applying to companies that are publicly listed in the United States that was adopted by the U.S. government in August 2012 pursuant to Section 1502 of the Dodd Frank Wall Street Reform and Consumer Protection Act, which is known as the Conflict Minerals provision. The rule requires companies to disclose and report to the U.S. Securities and Exchange Commission the use in their products or production processes of conflict minerals, including tantalum, tin, gold, or tungsten, originating from the Democratic Republic of Congo or adjoining countries.

Conflict-Free Procurement Policy

https://www.sumitomo-chem.co.jp/english/company/purchasing/csr_procurement_policy.html

Promoting Responsible Procurement throughout the Group

We periodically hold Group purchasing information exchange meetings that gather together responsible purchasing representatives from each Group company. Through these information exchange meetings, Sumitomo Chemical is able to promote responsible procurement throughout the Group by actively sharing necessary information on the Company's responsible procurement activities.

Looking Ahead

Under our current responsible procurement measures, we will continue to strengthen cooperation with business partners and provide support for responsible procurement.



Hand in Hand with Employees

★: Assured by an independent assurance provider

Basic Stance

Sumitomo Chemical's basic policy for HR measures is to enable the Group to achieve sustainable growth as a global chemical company through the development and growth of all employees through the fulfillment of duties with a sense of pride and motivation.

In addition, Sumitomo Chemical is taking steps to further bolster its Global HR initiatives in order to strengthen its global management endeavors from a human resource perspective. The Company is also undertaking proper workforce planning based on business expansion.

■ Number of Employees (Sumitomo Chemical Group)

	FY2016	FY2017★
Male	24,232	24,015
Female	8,304	7,822
Total	32,536	31,837

Note: Although the methodology used for counting employees has changed slightly since fiscal 2017, the effect has been minor.

Human Resources System Initiatives

Sumitomo Chemical has introduced a job- and results-based HR system, wherein the compensation provided is based on results achieved, work content and volume, and level of responsibility. Because compensation is based on actual work performance, employees with drive and ability can quickly take on higher roles. This system encourages self-motivated employees who want to grow.

In addition, to encourage development and growth amid the current climate of diversifying ideas about career trajectories, we have incorporated Career Development Fields (CDF) (professional categories) into our HR systems. We decided to do this because we understand the importance of determining the details of medium- to long-term placements and training in line with each employee's ability and suitability as well as based on their career goals. Planned placements and training are conducted in line with each employee's career goals, and employees' experience of their own development and growth serves to further encourage them to take the reins when thinking about their careers.

Moreover, with regard to specialist careers, we offer more than the conventional path, which assumes a largely vertical progression in rank from manager to general manager, and so on. To reflect the increasingly advanced and complex nature of operational and R&D fields, we have introduced a mechanism that provides appropriate compensation so that personnel with sophisticated abilities in their specialization can unleash their full potential and rack up accomplishments.

Accordingly, our evaluation system is not limited to evaluating how well each employee is able to perform the duties their position and role entails; it evaluates how well said employee demonstrates their ability to deliver real results and acquire the knowledge and skills needed to do so. The system thus encourages individual development and growth without overly focusing on short-term achievements.

Managers talk with their subordinates on a regular basis to help increase their motivation and abilities with feedback on their performance, objectives, behavioral advantages, and areas for improvement. In the interviews, they also discuss workplace policies, job expectations, and career paths. Furthermore, we have adopted the same performance evaluation system for managers at overseas Group companies as for Sumitomo Chemical's managerial employees.



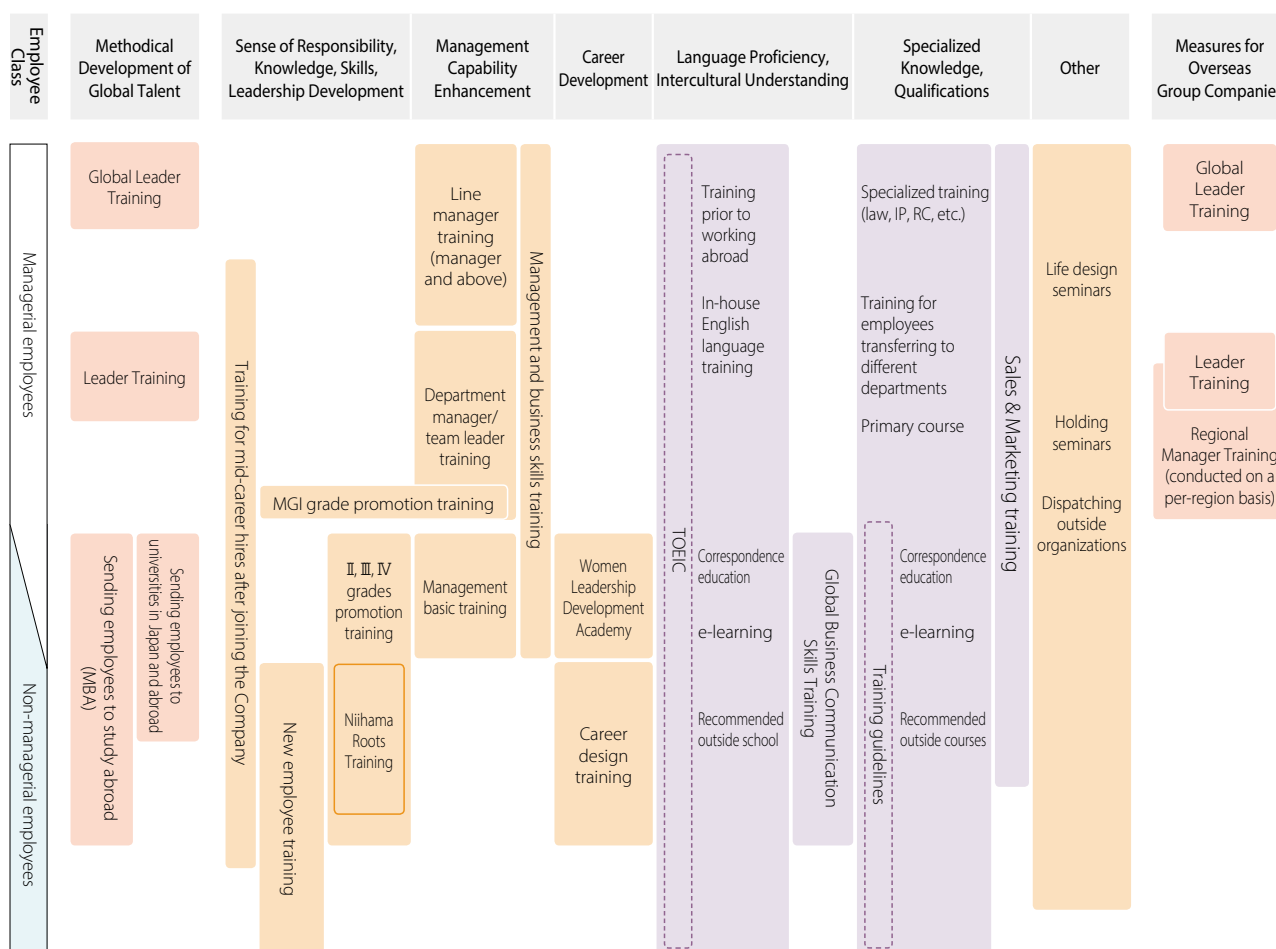
Hand in Hand with Employees

Human Resources Development

Sumitomo Chemical strives to develop human resources and enhance the abilities of its employees. In order to nurture professional human resources who can excel on the world stage, the Company has introduced a variety of measures, training programs, and educational rotations that enable motivated personnel to fully demonstrate their abilities.

Reflecting the fiscal 2017 revision of the HR system, we revised our training systems and programs to help develop leadership, enhance management capabilities, and foster employees' awareness of the need to take charge of their own growth as well as an awareness of their responsibility to train their subordinates.

Human Resources Development



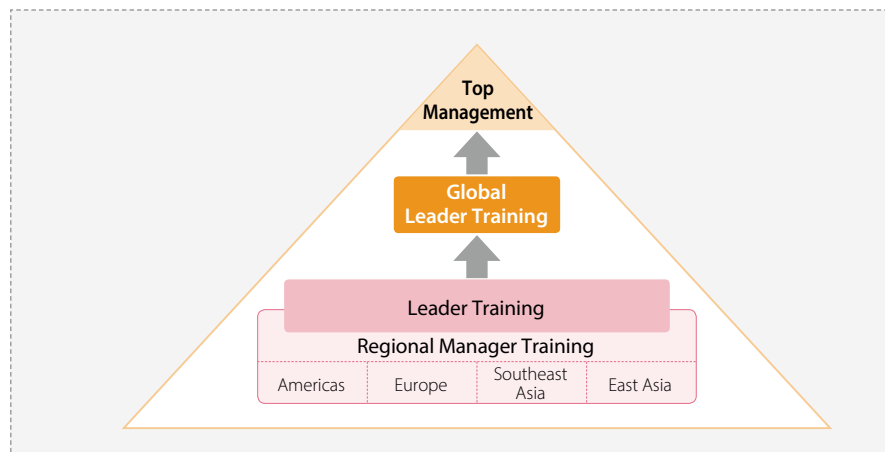
Note: The Company conducts in-house training courses in the areas of compliance, human rights, CSR, and health maintenance and improvement



Hand in Hand with Employees

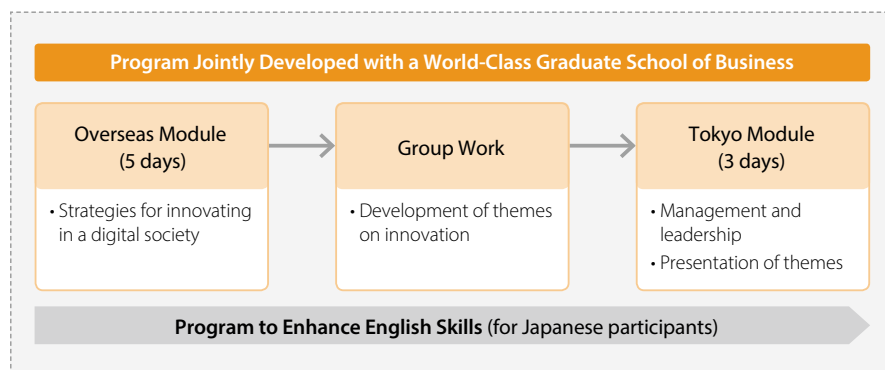
In addition, Sumitomo Chemical is carrying out a staged training program in human resource development for employees both in Japan and at overseas Group companies, in order to discover and develop next-generation leaders in a systematic way, emphasizing the creation of Global Leaders who can take on the role of core management.

Next-Generation Leader Development System



In Sumitomo Chemical's Leader Training for management-level employees both inside and outside of Japan, Sumitomo Chemical has worked with an overseas graduate school of business to carry out a program in both Singapore and Japan, held completely in English, with the goal of developing the employees' conceptual strength and abilities to propose strategies for the creation of new value.

Leader Training Program





Hand in Hand with Employees

Recruitment, Human Resources Development, and Human Resources System

(No. of people)

Name	Approach	FY2017 Results
Career Development System (CDS)	To ensure that individuals are active in the field to which they are most suited, non-managerial employees and some managers are rotated through job assignments linked to the development plans made by their managers based on stated preferences and an interview to help plan and develop their ideal careers.	679
Trainer System	Highly skilled employees who have an aptitude for teaching provide instruction and advice to younger employees to facilitate their development.	65
Full-time Instructor System	We provide supervisors and potential supervisors with on-the-job training to develop core talent for manufacturing departments.	5
Development of Global Talent	In order to create global leaders who will play a central role in management and to develop talent that supports our global business operations, we systematically conduct various training programs.	
① Global Leader Training	Our global leader training program focuses on action learning.	23
② Leader Training	Held in Singapore and Japan since fiscal 2014 to develop the next generation of leaders, we conduct training programs in English.	28
③ Regional Manager Training	We provide training for local managers at overseas Sumitomo Chemical Group companies. This training is mainly to help participants better understand and practice Sumitomo Chemical's Business Philosophy and corporate value.	78
④ Global Business Communication Skills Training	Younger employees who are expected to become global talent attend a training seminar conducted in English to develop and improve their business communication skills.	57
Evaluation system for managers	A common evaluation system is applied to managers of overseas Group companies.	368 (Local managers)

Note: As of April 1, 2018

Global Personnel Training

FY2017 Results

Participants

186

Average time

58 hours per person



Hand in Hand with Employees

★: Assured by an independent assurance provider

Diversity Initiatives

To promote diversity, Sumitomo Chemical considers it essential to provide all employees with motivating workplaces where they can fully demonstrate their skills and abilities in a variety of situations. As a part of that effort, the Company is focusing on the active advancement of women and promoting priority measures aimed at creating an environment in which as many women as possible can excel.

Initiatives to Promote Diversity (Sumitomo Chemical)

Name	Concept	Results		
		FY2015	FY2016	FY2017
Number of Female Managers*1★	In order to promote the success of female employees, Sumitomo Chemical sets quantitative targets regarding the ratio of female managers and systematically promotes female employees to management positions.	80	80	85
Percentage of Female Managers (%)*1★		4.3	4.2	4.5
Employment Rate for People with Disabilities (%)*2★	Sumitomo Chemical is undertaking initiatives to encourage the employment of people with disabilities to a greater extent than before by taking steps to create workplaces that allow these employees to make the most of their abilities.	2.23	2.07	2.09
Number of Retirees	Sumitomo Chemical has been implementing a system to reemploy retirees to provide them with opportunities to demonstrate the skills and expertise they have gained to date.	118	190	38
Number of Reemployed		99	175	35
Reemployment Rate (%)		83.9	92.1	92.1

Note: Figures include Sumitomo Chemical employees on temporary transfer to other companies but do not include employees from other companies on temporary transfer to Sumitomo Chemical.

*1 Number and percentage of employees holding positions equivalent to sectional manager or above (Following the revision of the HR system, the scope of managerial employees has been changed, which has been retroactively reflected in previous year figures.); as of April 1 of each fiscal year

*2 Average for each fiscal year

Promoting the Active Advancement of Women

Sumitomo Chemical has outlined the following targets to further promote the active advancement of women in line with the Act on Promotion of Women's Participation and Advancement in the Workplace.

Target 1 Women accounting for at least 10% of positions equivalent to manager or above by 2020.
(FY2017 results: 4.5%)

Related measures

- Continue to provide training for women holding positions equivalent to assistant manager through the Women Leadership Development Academy
- Continue to provide training for workplace managers to promote understanding and raise awareness about promoting the active advancement of women
- Continue to send employees for outside training to sharpen their skills and expand their knowledge

Target 2 At least 50% of male employees taking childcare leave by 2020.
(FY2017 results: 18.7%)

Related measures

- Put out press releases and otherwise raise awareness about programs that enable employees to flexibly respond to life events
- Work to establish an environment that enables flexible workstyles and improves productivity by promoting a better work-life balance
- Draft and implement measures to promote the use of these programs mainly through the Labor-Management Committee for Work-Life Balance



Hand in Hand with Employees

Measures to Improve Productivity

Sumitomo Chemicals takes various measures to improve productivity that helps ensure the Company's sustained growth.

◇ Formulation of the Action Plan to Reform Workstyles

In March 2018, Sumitomo Chemical formulated an action plan to reform workstyles. In this action plan, we established key performance indicators (KPIs) along with three main targets: ① correcting long working hours, ② encouraging employees to take paid annual leave, and ③ promoting flexible workstyles. We then set out measures to achieve these targets. The details are as follows.

■ Action Plan to Reform Workstyles

	KPI	Measures
① Correct Long Working Hours	Reduce the annual percentage of people working long hours* to below 10% by fiscal 2020.	<p>A. Employ the Internet of Things (IoT) to reform workstyles and revolutionize operations Digitize plant-related operational processes and data, make office operations more efficient by actively using cloud sourcing and the latest technologies (including AI and sensors), etc.</p> <p>B. Improve productivity by promoting a better work-life balance Regularly convene the Labor-Management Committee for Work-Life Balance with labor and management representatives, take various measures to improve productivity in each workplace, hold lectures to promote better work-life balance, etc.</p>
② Encourage Employees to Take Paid Annual Leave	Realize an average of 70% of paid leave taken annually by 2020.	<p>A. Create an annual leave chart that covers several fiscal years Every year create an annual leave chart that covers several fiscal years to make it easier to plan far into the future and help encourage employees to take paid leave</p> <p>B. Encourage employees to take paid leave</p> <ul style="list-style-type: none"> • Encourage employees to take paid leave during Golden Week and other similar periods • Encourage employees to create four-day weekends by adding days of paid leave to either side of weekends and promote taking time off in the September–November period • Encourage senior employees to take paid leave <p>C. Continue to systematically provide paid leave Systematically provide around five paid-leave days every year (does not include statutory leave)</p>
③ Promote Flexible Workstyles	<p>○ Realize 50% of male employees taking childcare leave by 2020.</p> <p>○ Regarding the below questions in the employee awareness survey, achieve the target figures by the time of the next survey.</p> <ul style="list-style-type: none"> • Realize at least 60% affirmative responses to the question: "Is the general consensus in your workplace that both men and women can easily take paid or unpaid leave for childcare or caregiving and use the reduced working-hour system?" • Realize at least 75% affirmative responses to the question: "Are the programs and working environment at the Company conducive to easily working after giving birth, raising children, or caregiving?" 	<p>A. Issue PRs and raise awareness about programs Continually issue PRs and raise awareness about various programs that enable employees to flexibly adjust for their individual needs, including those related to life events involving childcare and caregiving. In addition, encourage male employees with newborns to take childcare leave.</p> <p>B. Foster an environment that allows the realization of flexible workstyles By taking the measures outlined above for correcting long working hours, create an environment where it is easy to improve the productivity of employees and their workplaces and to realize flexible workstyles.</p> <p>C. Encourage use of programs Through the Labor-Management Committee for Work-Life Balance and other such meetings, identify the specific usage needs and improvement requests for the various programs. Use this information to help draft and implement measures to encourage wider use of programs.</p>

* People who work at least a total of 35 hours of overtime per month, including both time worked after regular hours and on weekends and holidays.



Hand in Hand with Employees

Sumitomo Chemical is taking the following actions with regard to the target of correcting long working hours as outlined in the action plan on the previous page.

- ① From April 2017, we reduced the upper limit on overtime work to 80 hours per month and 720 hours per year.
- ② Regarding the obligatory physician interviews for people working long hours mandated by the Industrial Safety and Health Act, we established and are enforcing our own guidelines, which are harsher than the law, requiring interviews for people who work 70 hours or more of overtime in one month or 150 hours or more in a three-month period
- ③ From March 2018, we established an even more appropriate work management system by displaying computer logon and logoff times when reporting work hours in addition to the existing system for reporting work hours.



Hand in Hand with Employees

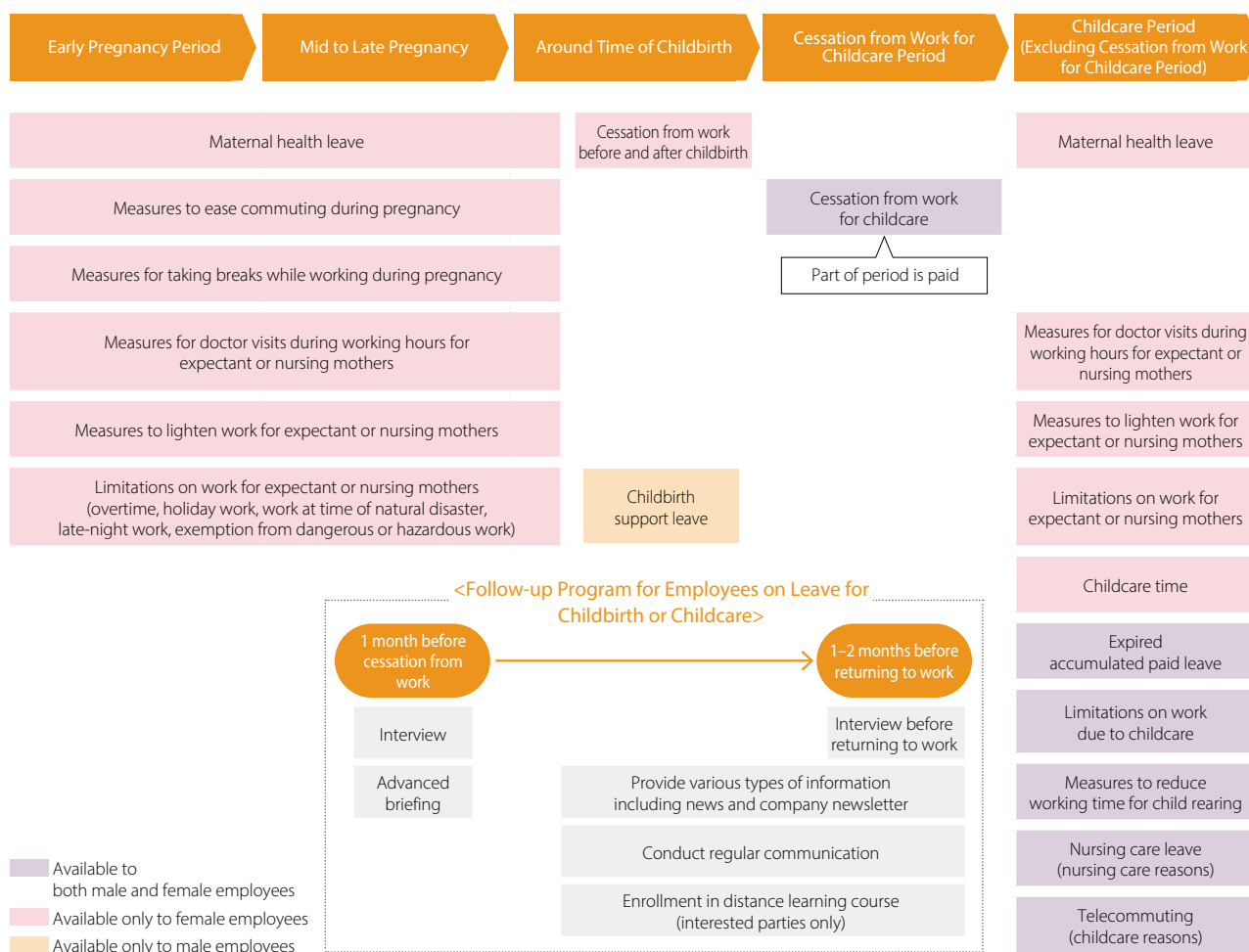
Measures to Improve Work-life Balance

By regularly convening the Labor-Management Committee for Work-Life Balance with labor and management representatives to gain a clear understanding of employee needs, Sumitomo Chemical has carried out various measures to promote a better work-life balance.

Every year, we designate May and November as “work-life balance promotion months,” during which the Company and labor organizations work together to promote various measures related to promoting work-life balance. For Sumitomo Chemical to continue to develop further, the Company needs to raise the productivity of its employees while ensuring they feel greater motivation and a deeper sense of fulfillment than ever. From this perspective, during the promotion month of November in 2017, we held meetings at each workplace under the theme of “how to make your workstyle highly productive.”

Going forward, Sumitomo Chemical aims to improve productivity and realize a better work-life balance through free and active debate, as is the proud tradition of the Company.

Systems and Measures for Better Work-life Balance and for Use at Time of Pregnancy, Childbirth, and Childcare





Hand in Hand with Employees

★: Assured by an independent assurance provider

Results of Systems for Work-life Balance (Non-consolidated)

System/Measure		FY2015	FY2016	FY2017
Childcare/Nursing Support	Cessation from work for childcare★	185	248	304
	Male	101	142	175
	Female	84	106	129
	Cessation from work for nursing care	3	3	3
	Nursing care leave	132	134	153
	Childbirth support leave	167	204	237
	Maternal health leave	58	55	48
	Expired accumulated paid leave*1	59	62	72
	Reduced working hours system	114	118	134
	Telecommuting*2	13	15	16
	Reemployment system*3	11	12	8
	In-house childcare facilities*4	156 (101)	161 (108)	167 (118)
Other	Mutual aid association support money for childcare*5	175	195	211
	Suspension from work for special reasons for employees accompanying spouses going on overseas transfer*6	6	7	9
	Employee survey*7	—	Conducted in August	—

Note: Employee numbers do not include temporary employees, part-time staff, or dispatch employees.

*1 Only for childcare and nursing care

*2 Number certified at the end of each fiscal year

*3 Number registered as of the end of each fiscal year

*4 Number of users on April 1 each fiscal year.

Includes users other than Sumitomo Chemical.

The figures in parentheses are the number of Sumitomo Chemical users.

*5 Aggregate number of people at end of each fiscal year

*6 Number of applicants as of the end of each fiscal year

*7 Conducted once every three years

Kurumin Mark

In September 2015, Sumitomo Chemical was certified for the third time as a company that supports childcare and received the next-generation Kurumin certification mark. Under this system, business operators who successfully carry out action plans based on the Act on Advancement of Measures to Support Raising Next-Generation Children and meet all the certification criteria receive certification from the Minister of Health, Labour and Welfare.

This certification was in recognition of our third round of initiatives covering the period between June 2012 and March 2015. The first certification covered the period between April 2005 and May 2007, and the second one covered the period between June 2007 and May 2012. The Company was commended for its initiatives to help promote work-life balance, such as expanding in-house childcare facilities and encouraging employees to take various forms of leave.



Next-generation
Kurumin
certification mark



Hand in Hand with Employees

Protection of Human Rights

Sumitomo Chemical has outlined in its Compliance Manual (the Sumitomo Chemical Code of Business Conduct) the following basic policy: The Company respects the fundamental human rights of all people and will not impugn the dignity of a person through unfair discrimination or harassment based on social standing, employment type, age, gender, birthplace, ancestry, nationality, race, disability, religion, beliefs, marital status, or other such attribute. We are raising awareness of this policy through the internal intranet.

Under this policy, we make it clear that, in line with the principle of respect for human rights, we have completely rooted out speech and behavior that manifests as harassment and bullying, such as that which disparages another's character based on personal opinions or values without respecting their human rights. We prohibit all forms of harassment, including power harassment and sexual harassment (including LGBT-related and that directed at people of the same gender), and do not permit any kind of forced labor or child labor.

Regarding the prohibition of unfair discrimination, the Company does not conduct any discriminatory acts that impugn people's dignity based on employment type, age, gender, birthplace, ancestry, nationality, race, disability, religion, beliefs, marital status, or other such attribute. We also prohibit discrimination based on a person's physical gender or perceived gender due to a difference in gender identity or sexual orientation. We also prohibit discrimination against people with disabilities.

In addition, we regularly hold compliance-related training to deepen employees' understanding and raise their awareness. In fiscal 2017, as in the past, there were no cases recognized as discrimination within the Group.

Moreover, we believe that it is important for not only Sumitomo Chemical but also each Group company in Japan and overseas to implement the basic policy detailed above. We are therefore working hard to ensure thorough compliance across the entire Group, including for measures to protect human rights. Overseas, through the regional headquarters established in the United States, Belgium, Singapore, and China, we have set up compliance systems based on each country's legal system and are working to ensure compliance.

Note: Regarding child labor and forced labor in the supply chain, refer to the Responsible Procurement Activities section on page 81 under "Hand in Hand with Business Partners."

Raising Employees' Awareness of Human Rights

To educate employees on human rights issues, we incorporate human rights-related education into not only the introductory training all employees take after joining the Company but also all internal training programs, including those for newly promoted employees. Sumitomo Chemical holds a committee on human rights every year that formulates annual policies on human rights and implements training and other measures at each workplace to protect human rights. In fiscal 2017, we held a total of 159 seminars and lectures on human rights in which a total of 4,058 employees, or 68% of the total, participated.

Consultation Office

Aiming to establish a system wherein employees are able to receive counseling for various kinds of harassment, including sexual harassment, power harassment, and maternity harassment, Sumitomo Chemical has set up a harassment consultation office staffed with counselors.



Hand in Hand with Employees

Communication with Employees

Dialogue with Labor

Sumitomo Chemical has been partnering with its labor union in addressing various challenges in management based on long-standing mutual understanding and trust.

At Sumitomo Chemical, central labor-management meetings and regional labor-management meetings are held semiannually for parties to exchange opinions. The Labor-Management Committee for Diversity and Work-Life Balance was established in fiscal 2010. Every effort is being made to promote opinion exchanges and a uniform understanding of current measures and future challenges.

In addition, we have established a Safety and Health Committee at each worksite based on a collective labor agreement as we strive to ensure and improve the safety and health of union members.

Furthermore, Sumitomo Chemical and its labor union have concluded a union-shop contract, and 100% of the non-managerial employees of the Company are enrolled in the union.

Social Contribution Activities Promoted through Labor-Management Cooperation

As for social contribution activities promoted through labor-management cooperation, the Company and its labor union are working together to continue encouraging employees to each make a difference in fiscal 2017.

■ Social Contribution Activities Promoted through Labor-Management Cooperation

Name	Overview
Matching Gift Program	In this program, donations are made by executives and employees, and Sumitomo Chemical matches the amount collected.
Mangrove Planting Project in Thailand (Sumitomo Chemical Forest)	This is one project supported by donations to our Matching Gift program. Employees volunteer to plant trees at the afforestation site in Ranong Province, Thailand.
Coastal Woodland Rejuvenation Project to Support Recovery from the Great East Japan Earthquake	This is one program supported by donations from the matching gift program. Employee volunteers nurture saplings to rejuvenate coastal woodlands in Natori, Miyagi Prefecture, that were damaged by the tsunami that followed the Great East Japan Earthquake.
Sumitomo Chemical Group Global Project	Provides opportunities for Sumitomo Chemical Group employees to consider and take actions together to address issues both in Japan and abroad.



Hand in Hand with Employees

Managing Physical and Mental Health

Sumitomo Chemical is implementing a range of measures to help maintain and promote physical and mental health with the assistance of the Company's chief occupational health physician, beginning with medical staff providing health-related guidance to employees.

Mental Health

We have been cooperating with medical staff to properly implement the stress checks required by law for companies. We are working to prevent mental health problems by encouraging employees to take care of themselves and encouraging superiors to look after their subordinates. Employees are able to receive counseling from the Company's medical staff.

Seminars on maintaining mental health are held for new employees and newly promoted employees, and training seminars on looking after subordinates and providing feedback on stress check results are also organized for new sectional managers and team leaders. In addition, in order to help employees who have been absent from work for extended periods due to mental health problems return to work, we introduced a rehabilitation work system. Under this system, an on-site occupational health physician, an HR staff member, and the employee's manager cooperate in helping the employee start working again by determining the working days, hours, and other details for the employee.

Physical Health

The health insurance associations of companies have been required by law to have all employees and their dependents aged 40 or older undergo specified health checkups and receive specified guidance for lifestyle disease. Sumitomo Chemical works with its health insurance association to ensure that all employees and their dependents undergo both regular and specified health checkups, regardless of age, and employees and their dependents aged 35 or older receive guidance with regard to lifestyle diseases, thereby helping employees with the early diagnosis and prevention of such diseases.

In addition, the Company dispatches its chief occupational health physician to provide overseas medical counseling and evaluate medical service environments to support employees working overseas and their accompanying families. In fiscal 2017, medical counseling and environmental evaluations were implemented three times in Saudi Arabia, three times in China, and once each in Europe, South Korea, Taiwan, and Singapore.

Sumitomo Chemical collaborates with its health insurance association on various measures, including health and productivity management undertaken by the Company and health data compiled by the health insurance association.

Logo for Health & Productivity Management Outstanding Organization

In February 2018, Sumitomo Chemical was certified as a Health & Productivity Management Outstanding Organization (White 500). The Certified Health & Productivity Management Outstanding Organization Recognition Program was created in 2016 by the Ministry of the Economy, Trade and Industry. The program recognizes companies that practice outstanding health and productivity management based on the health promotion efforts of the Japan Health Council. The Company's various measures and systems related to health and productivity management received a positive evaluation.



2018
Health & Productivity Management
Outstanding Organization
White 500

Looking Ahead

In line with its basic stance, Sumitomo Chemical will continue to promote global HR initiatives, train personnel, secure personnel, and engage in proper workforce management that reflects optimal business operations, run HR systems that spur employee growth and development, and build HR systems that respond to revisions to relevant laws and regulations as well as changes in conditions.



Hand in Hand with Local Communities and Society

Basic Stance

Based on the concept of contributing to the sustainable development of society through its businesses, the Sumitomo Chemical Group is committed to social contribution activities undertaken from the perspectives of solving global problems and coexistence with local communities.

Sumitomo Chemical, its worksite in Japan and overseas, and Group companies engage in a variety of activities to meet the needs of local communities in order to build good relations with them.

Sumitomo Chemical's Social Contribution Activities

	Community Contribution	Global Contribution
Securing Safety and Health, and Protecting the Environment	<ul style="list-style-type: none"> Work and research laboratory tours RC dialogues and distribution of local newsletters 	<ul style="list-style-type: none"> Malaria prevention campaign, Donating Olyset™ Nets Investment in the World Bank's BioCarbon Fund TABLE FOR TWO program Matching Gift program (support for tree-planting activities) Cooperation with U.N. activities
Raising Children who will Lead the Next Generation	<ul style="list-style-type: none"> Establishment of in-house childcare facilities Launch of Young Inventors' Club, Science Workshops, etc. Sponsorship of community sports events for children Cooperation on civic and university courses Acceptance of student interns Matching Gift program (educational and developmental support for children) 	<ul style="list-style-type: none"> Educational support in Africa University scholarship programs
Assisting in Natural Disaster Relief	<ul style="list-style-type: none"> Relief activities after typhoons, earthquakes, and other disasters, Offering facilities for Public use after major disasters 	<ul style="list-style-type: none"> Relief donations for victims of hurricanes, earthquakes, etc.

Securing Safety, a Sound Environment, and Health

Communication with Society

Sumitomo Chemical has put in place Group-wide policies regarding communication with society and is endeavoring to promote its activities in these fields. Among a host of initiatives, the Company is focusing on enhancing its information disclosure while engaging in interactive dialogue. Each worksite formulates annual activity plans and conducts specific activities based on the aforementioned Group-wide policies. Taking into consideration feedback and requests received, the Company also strives to improve the aesthetic appeal of worksites.



Hand in Hand with Local Communities and Society

Localized Information Disclosure and the Practice of Wide-ranging Interactive Dialogue

At Sumitomo Chemical, each worksite publishes the *Report on the Environment and Safety* (at all worksites) every year to report on its local activities in detail. The reports complement the Company's own *Sustainability Data Book* (this publication). In addition, the Ehime, Osaka, and Oita worksites each publish local newsletters for the proactive distribution of area-specific information. These are often delivered to residents as newspaper inserts.

Moreover, each worksite engages in a variety of risk communication and dialogue activities for various purposes. These include risk communication model projects carried out jointly with local governments, environment and safety support projects for domestic and overseas governments and businesses, regular meetings with local residents, and dialogues with the community based on cooperation with the chemical industry. At the Company's head office, Sumitomo Chemical participates in a range of committee activities conducted by the national government and industrial associations as well as in industry-government-academia seminars and lectures to disseminate relevant information and exchange opinions in a timely manner. The overall aim is to help people deepen their understanding of Sumitomo Chemical and to secure the society's trust in us.

Information about the *Report on the Environment and Safety* (at all worksites)

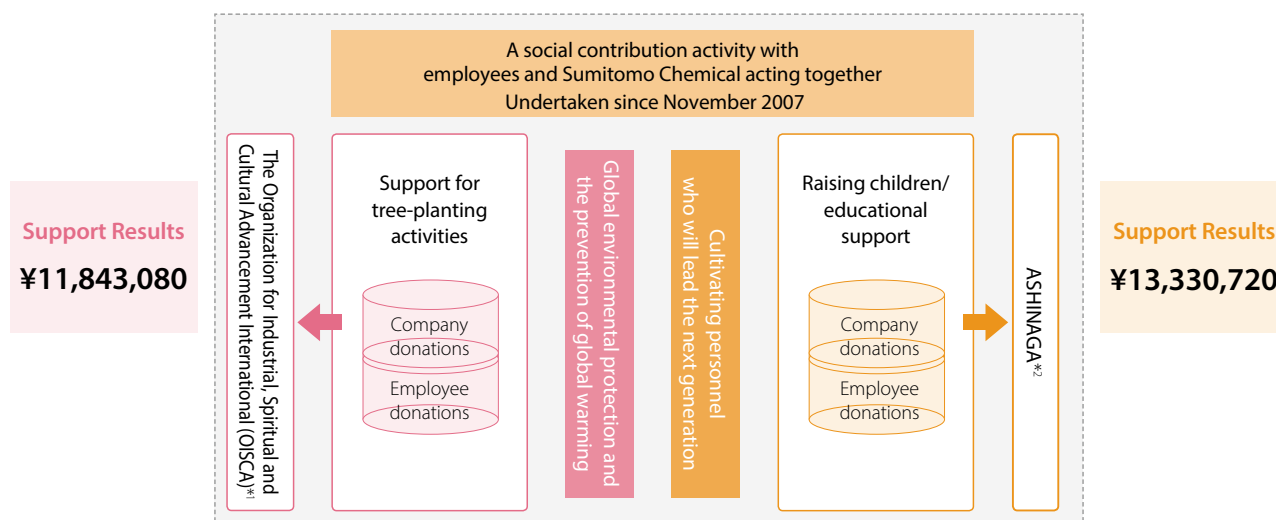
https://www.sumitomo-chem.co.jp/csr/report/facilities_report.html (Japanese only)

Matching Gift Program

As a social contribution activity with employees and the Sumitomo Chemical Group acting together since fiscal 2007, the matching gift program, which is run in collaboration with the labor union, collects donations from executives and employees working at Sumitomo Chemical and Group companies. Sumitomo Chemical then matches their donations.

One of the beneficiaries of the donations from the matching gift program is the Organization for Industrial, Spiritual and Cultural Advancement International (OISCA), with whom we work on various tree-planting projects. In collaboration with the labor union, we have been dispatching employee volunteers to help with these projects since 2008.

■ Matching Gift Program



*1 The Organization for Industrial, Spiritual and Cultural Advancement International (OISCA) is a global NGO engaged in rural development and environmental protection mainly in the Asia-Pacific region. The money donated by Sumitomo Chemical to this organization is used for its Children's Forest Program, the Sumitomo Chemical Forest mangrove planting project in Ranong Province, Thailand, and Japan's Coastal Forest Restoration Project following the Great East Japan Earthquake.

*2 ASHINAGA is an NPO established to provide physical and mental support for children who have lost their parents because of illness, accidents, or for other reasons. The money donated to this organization is used to provide a scholarship fund for these orphans.

<Sumitomo Chemical Forest>

Running total* of forested area

245 hectares

Total trees planted

748,000

Running total* of participants

179

(Tree-Planting Project in Thailand)

* Running totals figures are as of February 2018 for a period dating back to 2008



Hand in Hand with Local Communities and Society

TABLE FOR TWO Activities

Since May 2008, each of Sumitomo Chemical's worksites has participated in the TABLE FOR TWO (TFT) initiative. Participating companies in this matching gift-style program donate an amount of money equal to the total donated by employees.

When employees choose to eat any of the healthy TFT menu options available at the Company's cafeterias, 20 yen per meal is donated to help fight starvation in developing countries as well as obesity and lifestyle diseases in advanced nations. Through these types of social contribution activities originating in Japan, we are working to eliminate food disparity.

In fiscal 2017, Sumitomo Chemical ranked 12th of 578 participating companies in terms of amount of money donated. In May 2018, we received a letter of appreciation as a Platinum Supporter from the TFT secretariat.

FY2017 Results

¥2,392,880 **59,822** meals

(matching type with executives, employees, and the Company)

Nurturing the Children of the Next Generation

Supporting Education through Science Workshops

Sumitomo Chemical's Group companies and worksites hold general classes and science workshops at local schools and events. We hold science workshops at our bases for children to conduct experiments and make crafts with our products, enabling them to experience the wonders and appeal of science with their own hands, in order to convey in a manner that children can easily understand how everyday products are linked to chemicals.

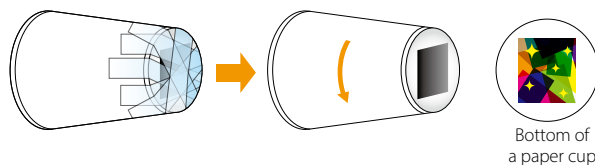
In fiscal 2017, we held science workshops entitled, "Let's Make a Glittery Kaleidoscope!" at the Tokyo Head Office and Misawa Works for visiting children with the aim of helping them understand the inspiring nature of the chemical industry. Going forward, we will continue holding science workshops in each region and at each worksite to pique an interest in chemistry among as many children as possible.

Example: Let's Make a Glittery Kaleidoscope!

Materials Paper cups, polarizers, cellophane adhesive tape

- Directions**
- ① Punch holes in the bottoms of two paper cups and affix polarizers over the holes
 - ② Affix overlapping pieces of cellophane adhesive tape on to the polarizer of one cup in various angles and place the other cup over the top
 - ③ Point the overlapping paper cups toward a bright light, and rotate one cup to make it possible to see vivid, sparkling colors just like a real kaleidoscope

Purpose Utilize the Company's polarizers used in TVs and other LCD products to enable children to learn about the properties of light and, in turn, show how science is used in their everyday lives



Bottom of a paper cup



Hand in Hand with Local Communities and Society

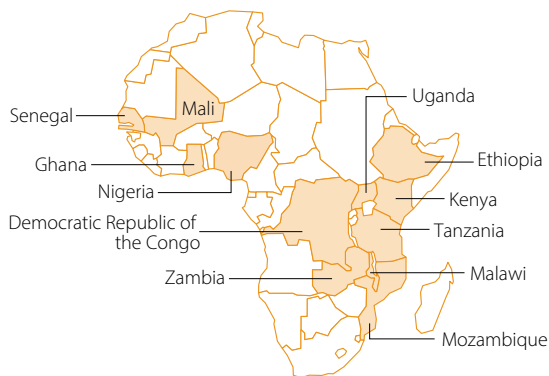
Support for Education in Africa

We believe that in order to break free from poverty and achieve sustainable economic development, Africa needs to build a better educational environment for children. Since 2005, Sumitomo Chemical has been conducting educational support activities centered on the construction of primary and secondary school buildings and related facilities in Africa to support children, on whom the continent's future rests.

As a result of a new collaboration with the Nigerian Oando Foundation begun in fiscal 2017 as well as activities undertaken with the World Vision Japan and Plan International Japan, we have to date completed 25 projects in 12 African nations and improved the educational environments of more than 15,000 children.

In fiscal 2017, in the Democratic Republic of the Congo, we supplied math and science teaching materials, raised awareness of malaria, and offered preventive healthcare training in addition to building classrooms for elementary schools. Also, in the Republic of Senegal, we built classrooms and restrooms for middle schools, built science laboratories, and strengthened science classes for female students. In Nigeria, we improved learning environments by providing aid to build Information and Communications Technology (ICT) centers at three elementary schools as well as teacher training and computer peripheral equipment and other devices for ICT-related education and science, technology, engineering, and math (STEM) education.

Support for Education in Africa



Results

Beneficiaries over **15,000** people

Supported countries: 12
(25 projects completed, 3* under way)

* The three projects under way are in the Democratic Republic of the Congo, Senegal, and Nigeria (as of May 2018)



Hand in Hand with Local Communities and Society

Assisting in Natural Disaster Relief

The Sumitomo Chemical Group supports areas affected by natural disasters in a variety of ways.

In 2017, northern Kyushu was inundated with torrential rain and floods. We provided donations to the affected people through the Central Community Chest of Japan. Furthermore, we joined with Sumitomo Dainippon Pharma to dispatch employee volunteers from our shared Oita Works to help with recovery efforts.

Since the Great East Japan Earthquake of 2011, we have been promoting initiatives involving employee participation to keep the memory of the disaster fresh in people's minds. We have also been providing donations collected through the sale of "Disaster Hit Area Support Meals" served in our cafeterias since April 2011. Under this scheme, a portion of sales is donated to a business that aids orphans in areas hit by the disaster, and the companies match that amount.

Since fiscal 2013, through the matching gift program, we have participated in the OISCA coastal woodland rejuvenation project aimed at rejuvenating black pine coastal woodlands in Natori, Miyagi Prefecture. These woodlands were damaged by the tsunami caused by the Great East Japan Earthquake. Since fiscal 2015, we have dispatched employee volunteers to the area. In fiscal 2017, we dispatched 20 volunteers who provided black pine saplings, planted trees, and weeded and fertilized areas where trees were planted with the aim of rejuvenating about 100 hectares of coastal woodland.

Looking ahead, we will support the recovery of disaster-affected areas through a wide variety of activities.

Support Results

Disaster Hit Area Support Meals

¥1,267,520 **31,688** meals

September:

The Great East Japan Earthquake Fukushima Children's Fund: **¥650,000**
(the portion used between March 2017 and August 2017)

March:

The Great East Japan Earthquake the Iwate Learning Hope Fund: **¥617,520**
(the portion used between September 2017 and February 2018)

Looking Ahead

In order to maintain the trust of local communities, Sumitomo Chemical will promote its social responsibilities by making various social contributions distinctive to the Sumitomo Chemical Group from three perspectives: securing safety, a sound environment, and health; nurturing the children of the next generation; and assisting in natural disaster relief.



Social Activities: Supplementary Data

★: Assured by an independent assurance provider

1 Data Regarding Employees

Basic Data

■ Number of Employees, Average Age, Length of Service, Average Compensation

Item		FY2015	FY2016	FY2017
Number of employees (Sumitomo Chemical Group) ★	Total	31,094	32,536	31,837
	Male	—	24,232	24,015
	Female	—	8,304	7,822
Sumitomo Chemical ★	Total	5,895	5,867	6,005
	Male	5,021	4,982	5,107
	Female	874	885	898
Consolidated in Japan ★	Total	11,916	11,827	11,801
	Male	—	—	9,165
	Female	—	—	2,636
Consolidated overseas ★	Total	13,283	14,842	14,031
	Male	—	—	9,743
	Female	—	—	4,288
Number of non-Japanese employees (Sumitomo Chemical)		110	108	93
Average age (Sumitomo Chemical)		40.0	40.0	40.3
	Male	40.1	40.0	40.4
	Female	39.1	39.5	40.0
Average length of service (years; Sumitomo Chemical)		14.2	14.1	14.4
	Male	14.4	14.2	14.5
	Female	13.4	13.7	14.4
Average annual compensation (yen; Sumitomo Chemical)		8,444,331	8,542,320	8,715,094
Average monthly wages (yen; Sumitomo Chemical)		305,006	308,508	310,600
	Male	304,822	308,020	309,740
	Female	305,858	310,713	314,554

Notes: • The above figures are as of March 31, 2018. Employee numbers do not include temporary employees, part-time staff, dispatch employees, and staff assigned to other companies not included in the scope of consolidation, but do include staff assigned from other companies not included in the scope of consolidation.
 • Although the methodology used for counting employees has changed slightly since fiscal 2017, the effect has been minor.
 • Average wages are for non-managerial employees (as of August of each year).

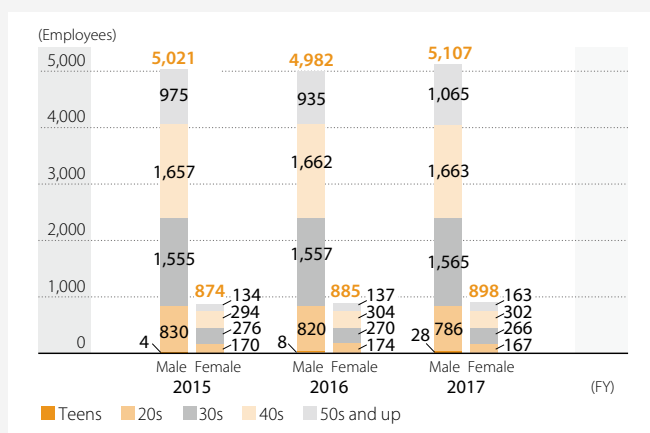
■ Number of Employees by Region and Gender (as of March 31, 2018)

Region	Male	Female	Total
Japan	14,271	3,534	17,805
(The rest of) Asia	7,506	2,754	10,260
North America	1,609	1,277	2,886
Central and South America	104	47	151
Europe	346	172	518
Middle East and Africa	98	34	132
Oceania	81	4	85
Total	24,015	7,822	31,837



Social Activities: Supplementary Data

Employee Age Composition and Distribution (Sumitomo Chemical)



Number of New Graduate and Mid-career Hires (Sumitomo Chemical)

Results		FY2015	FY2016	FY2017
New graduate hires	Male	79	117	140
	Female	26	32	22
	Total	105	149	162
Mid-career hires	Male	51	65	48
	Female	7	6	0
	Total	58	71	48

Number of Internships (Sumitomo Chemical)

Results	FY2015	FY2016	FY2017
University students in Japan	184	160	474
University students overseas	37	25	14

Number of People who Left the Company (Sumitomo Chemical)

	FY2015			FY2016			FY2017		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Retired early	0	0	0	0	0	0	0	0	0
Resigned	92	63	29	73	58	15	103	92	11
Dismissed	0	0	0	0	0	0	0	0	0
Transfer	3	3	0	3	3	0	0	0	0
Other reason	2	2	0	5	5	0	4	4	0
Total	97	68	29	81	66	15	107	96	11
Attrition rate (%)	1.65	1.35	3.32	1.38	1.32	1.69	1.78	1.88	1.22

Retention of New Graduate Hires (Sumitomo Chemical)

	Male	Female
New graduate hires in April 2015	76	24
Number of those remaining as of April 2018	75	23
Retention rate of new graduates after three years (%)	99	96



Social Activities: Supplementary Data

Diversity

Promotions of Executives and Employees (As of April 1, 2017; Sumitomo Chemical)

	Female	Male	Non-Japanese	Percentage of Women
Managerial Employees* (Those ranked general manager or above)	85 (9)	1,785 (488)	34 (3)	4.5 (1.8)
Directors and senior management (Those ranked executive officer or above)	1 (1)	45 (36)	3 (3)	2.2 (2.7)

* All employees equivalent to managers or above

Work-Life Balance

Paid Vacation Use Rate (Sumitomo Chemical)

	FY2015	FY2016	FY2017
Number of days provided	20	20	20
Number of days used	13.8	12.9	13.4
Use rate (%)	68.9	64.7	67.2

Average Overtime Hours (Sumitomo Chemical)

	FY2015	FY2016	FY2017
Average Overtime Hours (Hours/Month)	18.7	20.0	20.2

Return Rate of Female Employees who Take Childcare Leave (Sumitomo Chemical)

	FY2015	FY2016	FY2017
Of employees who finished childcare leave within the fiscal year, percentage of employees who returned to work	97.8	93.9	100.0



Social Activities: Supplementary Data

2 Data Regarding Social Contributions

Donation Activities

Amount used in donation activities: a total of ¥276.7 million

Major Donations (Sumitomo Chemical)

(Million yen)	
Item	Amount
To support education in Africa	18.9
To support the development and education of children through ASHINAGA (Matching Gift program)	6.9
To support OISCA's tree planting activities (Matching Gift program)	6.2
To support areas affected by the 2017 northern Kyushu floods	3.0
TABLE FOR TWO (Matching Gift program)	1.2
To support recovery from the Great East Japan Earthquake	0.6

Number of donations: a total of 393

Number of Major Donations (Sumitomo Chemical)

Item	Number of cases
Local community activities	159
International exchange and cooperation	31
Sports	26
Social welfare	17
Culture and art	17
Academic study and research	15
Education and social education	12
The environment	9
Support to areas devastated by disasters	5

Number of Employees Using the System for Taking Vacations for Volunteering (Sumitomo Chemical)

	FY2015	FY2016	FY2017
Vacations for volunteering	26	35	27

3 Additional Data: Tax Transparency

The Sumitomo Chemical Group considers paying taxes one of the most fundamental and important social responsibilities of a company. We comply with the tax laws applicable to each country and properly pay taxes in accord with that spirit.

Calculation Standards for Environmental and Social Data Indicators

1. Period: April 2017 to March 2018
2. Boundary: Refer to Boundary of This Report on page 3 of the *Sustainability Data Book 2018*.
3. Calculation Method:

Environmental Data Indicator		Unit	Calculation Method
Energy	Energy consumption	Thousand kl of crude oil	$\{(\text{Amount of electricity purchased} \times \text{Per-unit heating value} + \text{Amount of heat purchased} \times \text{Per-unit heating value}) + \sum (\text{Amount of each fuel used} \times \text{Per-unit heating value for each fuel})\} \times 0.0258$ <p>The per-unit heating value of electricity, per-unit heating value for each fuel, and the types of fuel included in the scope of calculation are based on the values and calculation methods outlined in the Act on the Rational Use of Energy.</p> <p>Because we calculated GHG emissions in accordance with the GHG Protocol from fiscal 2017, the energy usage amount includes the energy used to produce electricity and steam sold to external parties by the Group.</p> <p>The heating value used overseas is based on standard heating values used in the formulation of Japanese laws.</p>
Amount of Exhaustible Resources Used	Hydrocarbon compounds	Thousand tonnes	Total amount of hydrocarbon compounds used as raw materials (only raw materials purchased from outside the Sumitomo Chemical Group).
	Metals (excluding minor metals)	Thousand tonnes	Total amount of metals, excluding minor metals, used as raw materials: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium (only raw materials purchased from outside the Sumitomo Chemical Group).
	Minor metals	Thousand tonnes	Total amount of minor metals used as raw materials: nickel, chromium, tungsten, cobalt, molybdenum, manganese, and vanadium (only raw materials purchased from outside the Sumitomo Chemical Group).
Water	Industrial water, drinking water, seawater, groundwater, and other water	Million tonnes	Amount of industrial water, drinking water, seawater, groundwater, and other water used.
PCBs/CFCs in Use or under Secure Storage	No. of electrical devices containing high concentrations of PCBs	Units	The number of electrical devices containing high concentrations of PCBs, such as condensers and transformers, that are currently in use or under secure storage. Does not include fluorescent lamps and mercury lamp ballasts or contaminated substances (wastepaper, etc.).
	PCB volume	kl	The total amount of PCBs in electrical devices containing PCBs, calculated as the net PCB content by volume. Does not include fluorescent lamps and mercury lamp ballasts or contaminated substances (wastepaper, etc.).
	No. of refrigeration units using specified CFCs as a coolant	Units	The number of refrigerator units currently using specified CFCs as a coolant.
	No. of refrigeration units using specified HCFCs as a coolant	Units	The number of refrigerator units currently using specified HCFCs as a coolant.
Products	Calculated on the basis of ethylene production	Thousand tonnes	The production volume of products is calculated on the basis of ethylene production, using the amount of energy necessary to manufacture the products by weight and the amount of energy necessary for ethylene production by weight. Some assumptions were made in calculations due to the difficulty of obtaining weight-based figures for certain products.
Water Pollutant Emissions	COD	Tonnes	The total amount of COD emitted into public water bodies (coastal waters/waterways) and sewer systems. Calculated as: The COD concentration at drains included in the scope of calculation \times The amount of water drained into public water bodies and sewer systems from each drain.
	Phosphorus	Tonnes	The total amount of phosphorus emitted into public water bodies (coastal waters/waterways) and sewer systems. Calculated as: The phosphorus concentration at drains included in the scope of calculation \times The amount of water drained into public water bodies and sewer systems from each drain.
	Nitrogen	Tonnes	The total amount of nitrogen emitted into public water bodies (coastal waters/waterways) and sewer systems. Calculated as: The nitrogen concentration at drains included in the scope of calculation \times The amount of water drained into public water bodies and sewer systems from each drain.
Waste Materials	Waste emission amount	Thousand tonnes	The total amount of waste discharged from business sites. The amount of coal ash generated at Sumitomo Joint Electric Power Co., Ltd., which is included in the waste discharge amount, is calculated on a dry-weight basis.
	Landfill disposal amount: – On-site landfill – External landfill	Thousand tonnes	<p>The total amount of waste disposed of in landfills. The amount of coal ash generated at Sumitomo Joint Electric Power Co., Ltd., which is included in the landfill disposal amount, is calculated on a dry-weight basis.</p> <p>* Landfill disposal amount for Sumitomo Chemical: Of the waste remaining after external reduction processing, the entire amount disposed of in landfills (not recycled) is calculated as the external landfill disposal amount.</p> <p>** Landfill disposal amount for Group companies in Japan: At some companies' factories, the waste remaining after the external reduction processing of waste is not included.</p>
	Total landfill	Thousand tonnes	<p>Sumitomo Chemical: The total amount of waste disposed of in landfills.</p> <p>Group companies in Japan: The total amount of waste disposed of in landfills.</p>

Calculation Standards for Environmental and Social Data Indicators

Environmental Data Indicator	Unit	Calculation Method
Atmospheric Emissions	Greenhouse gas emissions	<p>CO₂ emissions from energy use: Amount of electricity purchased × CO₂ emission coefficient for electricity + Amount of steam purchased × CO₂ emission coefficient for steam + \sum(Amount of each fuel used × Per-unit heating value for each fuel × CO₂ emission coefficient for each fuel)</p> <p>The CO₂ emission coefficient for steam, per-unit heating value for each fuel, and CO₂ emission coefficient for each fuel are based on the values outlined in the Greenhouse Gas Emissions Accounting, Reporting, and Disclosure System of the Act on Promotion of Global Warming Countermeasures. The CO₂ emission coefficient for electricity in Japan uses the values for each fiscal year by electric power company and overseas uses the IEA's fiscal 2014 efficiency indicators for each country. From fiscal 2017, results include the energy used to produce the power and steam sold to external parties in accordance with the GHG Protocol.</p> <p>CO₂ emissions from other than energy use and non-CO₂ GHG emissions: In Japan, results are based on the calculation method outlined in the Greenhouse Gas Emissions Accounting, Reporting, and Disclosure System of the Act on Promotion of Global Warming Countermeasures. From fiscal 2017, results include CO₂ emissions generated by processes not subject to reporting under the Act on Promotion of Global Warming Countermeasures but that emit 3,000 or more tonnes of CO₂. Overseas, of the companies that emitted over 7,000 tonnes of CO₂ from energy use in fiscal 2016, four reported emissions of CO₂ and other GHGs from other than energy use and calculated their figures in accordance with the laws and regulations of their respective countries.</p>
	NO _x	The total amount of nitrogen oxides originating from facilities specified in the Air Pollution Control Act. Calculated as: Each facility's dry gas emission volume × NO _x (N ₂ O) concentration.
	SO _x	The total amount of sulfur oxides originating from facilities specified in the Air Pollution Control Act. Calculated as: Amount of sulfur in fuel used by each facility × Amount of fuel used. Or calculated as: Each facility's dry gas emission volume × SO _x (SO ₂) concentration.
	Soot and dust	The total amount of soot and dust originating from facilities specified in the Air Pollution Control Act. Calculated as: Each facility's dry gas emission volume × Soot and dust concentration.
Substances Subject to the PRTR Act	Atmospheric emissions, water pollutant emission	Calculated based on the amended Order for Enforcement of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (amended Order for Enforcement of the PRTR Act), executed on April 1, 2010.
Logistics	Usage amount (Boundary: Sumitomo Chemical)	Thousand kl of crude oil The energy usage amount is calculated as 10 GJ = 0.258 kl of crude oil, based on the Energy Saving Act Guide Book for Shippers written and edited by Japan's Agency for Natural Resources and Energy.
	CO ₂ emissions (Boundary: Sumitomo Chemical)	Thousand tonnes of CO ₂ Calculated based on the Manual for Calculation and Report of Greenhouse Gas Emissions (Ver. 4.1) from Japan's Ministry of the Environment and Ministry of Economy, Trade and Industry using the energy usage amount calculated above in GJ.
Scope 3 Greenhouse Gas Emissions (Sumitomo Chemical and Group companies listed in Japan)	Category 1: Purchased goods and services	Tonnes of CO ₂ \sum ((Volume and monetary amount of goods and services purchased and acquired × Emission intensity)) Values used for emission intensity (volume) are based on the values outlined in the Basic Database for Carbon Footprint Communication Programs Version 1.01. Values used for emission intensity (monetary amount) are based on the values outlined in the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 2.5 March 2018.
	Category 2: Capital goods	Tonnes of CO ₂ \sum ((Value of capital goods) × (Emission intensity)) Values used for emission intensity are based on the values outlined in the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 2.5 March 2018.
	Category 3: Fuels and energy-related activities not included in Scope 1 or 2	Tonnes of CO ₂ \sum ((Amount of electricity purchased) × (Emissions intensity)) + \sum ((Amount of heat purchased) × (Emissions intensity)) + \sum ((Amount of each fuel used) × (Emissions intensity for each fuel)) Values used for emission intensity are based on the values outlined in the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 2.5 March 2018 and the Basic Database for Carbon Footprint Communication Programs Version 1.01.
	Category 4: Upstream transportation and distribution	Tonnes of CO ₂ Refer to the calculation method for CO ₂ emissions under logistics.
	Category 5: Waste generated in operations	Tonnes of CO ₂ \sum ((Amount of waste by type and processing method (incinerating, disposing of in landfills, recycling, disposing of in landfills) × CO ₂ emissions intensity of waste by type and processing method)) Waste by type and Unit CO ₂ emissions intensity by processing method are based on the values outlined in the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 2.5 March 2018.
	Category 6: Business travel	Tonnes of CO ₂ By mode of travel: \sum (Expenses paid for transportation × Emission intensity) Values used for emission intensity are based on the values outlined in the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 2.5 March 2018.
	Category 7: Employee commuting	Tonnes of CO ₂ By mode of commuting: \sum (Expenses paid for transportation × Emission intensity) Values used for emission intensity are based on the values outlined in the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 2.5 March 2018.

Calculation Standards for Environmental and Social Data Indicators

Environmental Data Indicator		Unit	Calculation Method
Scope 3 Greenhouse Gas Emissions (Sumitomo Chemical and Group companies listed in Japan)	Category 8: Upstream leased assets	Tonnes of CO ₂	Calculations of emissions from leased vehicles: $\Sigma(\text{Amount of gasoline consumed annually per vehicle} \times \text{Emission intensity})$ The amount of gasoline consumed annually per vehicle is calculated using the Annual Report on Automobile Transportation Statistics. Values used for emission intensity are based on the efficiency indicators outlined in the Accounting, Reporting, and Disclosure System of the Act on Promotion of Global Warming Countermeasures.
	Category 9: Downstream transportation and distribution	Tonnes of CO ₂	Refer to the calculation method used for CO ₂ emissions in the logistics section above. Calculations are for fertilizer products for which the suppliers are known and that are sold to consumers as final products.
	Category 10: Processing of sold products	Tonnes of CO ₂	Exempted: The Group's products are mainly materials and components used for various applications, which makes it difficult to know such details as the nature of the processing products undergo after delivery. Based on the calculation guidelines for the chemical industry created by the WBCSD, the Group is exempted from this category.
	Category 11: Use of sold products	Tonnes of CO ₂	Calculations are for the pharmaceutical product fixed-dose mist inhalers as well as fertilizer products for which GHG emissions levels are known and that are sold to consumers as final products. $\Sigma(\text{Fertilizer sales volume by type} \times \text{Percentage of nitrogen in fertilizers by type} \times \text{N}_2\text{O efficiency indicator by type} \times 298 (\text{GWP}))$ $\Sigma(\text{HFC volume in fixed-dose mist inhalers} \times \text{GWP})$ Values for GWP are based on efficiency indicators listed in Appendix 15 under the Calculation Method and Efficiency Indicator Chart in the Accounting, Reporting, and Disclosure System of the Act on Promotion of Global Warming Countermeasures.
	Category 12: End-of-life treatment of sold products	Tonnes of CO ₂	Calculations are for the Group's main resin-related products. $\Sigma[(\text{Production volume of resin-related products}) \times (\text{Emission intensity})]$ Values used for emission intensity are based on the values outlined in the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 2.5 March 2018.
	Category 13: Downstream leased assets	Tonnes of CO ₂	Exempted: There are no relevant leased assets.
	Category 14: Franchises	Tonnes of CO ₂	Exempted: There are no relevant operations.
	Category 15: Investments	Tonnes of CO ₂	Exempted: Because Sumitomo Chemical changed its approach to financial control consolidation for disclosure purposes from fiscal 2017, the Group is now exempted from this category.

Social and Economic Data Indicator		Unit	Calculation Method
Occupational Safety and Health	Frequency rate of lost-workday injuries	—	$(\text{Number of lost-workday injuries and casualties} \div \text{Cumulative total of hours worked}) \times 1,000,000$

Environmental Accounting Indicators		Unit	Calculation Method
Environmental Protection Costs		100 million yen	Costs include depreciation.
Economic Effects	Reduced costs through energy saving	100 million yen	Reduced costs of energy through energy-saving activities.
	Reduced costs through resource saving	100 million yen	Reduced costs of waste processing attributable to resource-saving activities.
	Reduced costs through recycling activities	100 million yen	Reduced costs in the previous fiscal year of waste processing expenses through waste reduction attributable to recycling activities and gains on sales of valuable resources obtained from recycling, etc.



Independent Assurance Report

To the Representative Director & President of Sumitomo Chemical Company, Limited

We were engaged by Sumitomo Chemical Company, Limited (the "Company") to undertake a limited assurance engagement of the environmental and social performance indicators marked with "★" (the "Indicators") for the period from April 1, 2017 to March 31, 2018 included in its Sustainability Data Book 2018 (the "Data Book") for the fiscal year ended March 31, 2018.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Data Book.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Data Book, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Data Book and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting a factory and a subsidiary of the Company selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Data Book are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Data Book.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.

Osaka, Japan

October 15, 2018

GRI standards reference table

This report references GRI Standards issued in 2016.

Universal standards

NO.	Disclosure	Reporting requirements	2018 Applicable item
102 : General Disclosures			
Organizational profile			
102-1	Name of the organization	a. Name of the organization.	Corporate Profile
102-2	Activities, brands, products, and services	a. A description of the organization’s activities. b. Primary brands, products, and services, including an explanation of any products or services that are banned in certain markets.	Business & Products Creating Value through Business(Annual Reports p40-41)
102-3	Location of headquarters	a. Location of the organization’s headquarters.	Corporate Profile
102-4	Location of operations	a. Number of countries where the organization operates, and the names of countries where it has significant operations and/or that are relevant to the topics covered in the report.	Business Locations & Group Companies
102-5	Ownership and legal form	a. Nature of ownership and legal form.	Corporate Profile
102-6	Markets served	a. Markets served, including: i. geographic locations where products and services are offered; ii. sectors served; iii. types of customers and beneficiaries.	Corporate Data Annual Reports P94-99
102-7	Scale of the organization	a.Scale of the organization, including: i. total number of employees; ii. total number of operations; iii. net sales (for private sector organizations) or net revenues (for public sector organizations); iv. total capitalization (for private sector organizations) broken down in terms of debt and equity; v. quantity of products or services provided.	Corporate Profile
102-8	Information on employees and other workers	a. Total number of employees by employment contract (permanent and temporary), by gender. b. Total number of employees by employment contract (permanent and temporary), by region. c. Total number of employees by employment type (full-time and part-time), by gender. d. Whether a significant portion of the organization’s activities are performed by workers who are not employees. If applicable, a description of the nature and scale of work performed by workers who are not employees. e. Any significant variations in the numbers reported in Disclosures 102-8-a, 102-8-b, and 102-8-c (such as seasonal variations in the tourism or agricultural industries). f. An explanation of how the data have been compiled, including any assumptions made.	Social Activities (Hand in Hand with Employees) Social Activities Supplementary Data (Information on employees)
102-9	Supply chain	a. A description of the organization’s supply chain, including its main elements as they relate to the organization’s activities, primary brands, products, and services.	Production Flow Charts (Investors' Handbook P80-87)
102-10	Significant changes to the organization and its supply chain	a. Significant changes to the organization’s size, structure, ownership, or supply chain, including: i. Changes in the location of, or changes in, operations, including facility openings, closings, and expansions; ii. Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations): iii. Changes in the location of suppliers, the structure of the supply chain, or relationships with suppliers, including selection and termination.	–
102-11	Precautionary Principle or approach	a. Whether and how the organization applies the Precautionary Principle or approach.	Management for Sustainability Value Creation Platform (Annual Reports P80-89)
102-12	External initiatives	a. A list of externally-developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes, or which it endorses.	Management for Sustainability (Participation in Initiatives)
102-13	Membership of associations	a. A list of the main memberships of industry or other associations, and national or international advocacy organizations.	Management for Sustainability (Participation in Initiatives)
Strategy			
102-14	Statement from senior decision-maker	a. A statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy for addressing sustainability.	Management for Sustainability (President's Message)
102-15	Key impacts, risks, and opportunities	a. A description of key impacts, risks, and opportunities.	Management for Sustainability (President's Message) Value Creation Platform (Annual Reports P80-89)

NO.	Disclosure	Reporting requirements	2018 Applicable item
Ethics and integrity			
102-16	Values, principles, standards, and norms of behavior	a. A description of the organization’s values, principles, standards, and norms of behavior.	Corporate Philosophy
102-17	Mechanisms for advice and concerns about ethics	a. A description of internal and external mechanisms for: i. seeking advice about ethical and lawful behavior, and organizational integrity; ii. reporting concerns about unethical or unlawful behavior, and organizational integrity.	Value Creation Platform (Annual Reports P80-89)
Governance			
102-18	Governance structure	a. Governance structure of the organization, including committees of the highest governance body. b. Committees responsible for decision-making on economic, environmental, and social topics.	Value Creation Platform (Annual Reports P80-89)
102-19	Delegating authority	a. Process for delegating authority for economic, environmental, and social topics from the highest governance body to senior executives and other employees.	Management for Sustainability (Sustainability Promotion System and Activities)
102-20	Executive-level responsibility for economic, environmental, and social topics	a. Whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental, and social topics. b. Whether post holders report directly to the highest governance body.	Management for Sustainability (Sustainability Promotion System and Activities)
102-21	Consulting stakeholders on economic, environmental, and social topics	a. Processes for consultation between stakeholders and the highest governance body on economic, environmental, and social topics. b. If consultation is delegated, describe to whom it is delegated and how the resulting feedback is provided to the highest governance body.	Management for Sustainability (Communication with Stakeholders) Value Creation Platform (Annual Reports P80-89)
102-22	Composition of the highest governance body and its committees	a. Composition of the highest governance body and its committees by: i . executive or non-executive; ii . independence; iii . tenure on the governance body; iv . number of each individual’s other significant positions and commitments, and the nature of the commitments; v . gender; vi . membership of under-represented social groups; vii . competencies relating to economic, environmental, and social topics; viii . stakeholder representation.	Value Creation Platform (Annual Reports P80-89)
102-23	Chair of the highest governance body	a. Whether the chair of the highest governance body is also an executive officer in the organization b. If the chair is also an executive officer, describe his or her function within the organization’s management and the reasons for this arrangement.	Value Creation Platform (Annual Reports P80-89)
102-24	Nominating and selecting the highest governance body	a. Nomination and selection processes for the highest governance body and its committees. b. Criteria used for nominating and selecting highest governance body members, including whether and how: i. stakeholders (including shareholders) are involved; ii. diversity is considered; iii. independence is considered; iv. expertise and experience relating to economic, environmental, and social topics are considered.	Value Creation Platform (Annual Reports P80-89)
102-25	Conflicts of interest	a. Processes for the highest governance body to ensure conflicts of interest are avoided and managed. b. Whether conflicts of interest are disclosed to stakeholders, including, as a minimum: i. Cross-board membership; ii. Cross-shareholding with suppliers and other stakeholders; iii. Existence of controlling shareholder; iv. Related party disclosures.	Value Creation Platform (Annual Reports P80-89)
102-26	Role of highest governance body in setting purpose, values, and strategy	a. Highest governance body’s and senior executives’ roles in the development, approval, and updating of the organization’s purpose, value or mission statements, strategies, policies, and goals related to economic, environmental, and social topics.	Management for Sustainability Value Creation Platform (Annual Reports P80-89)
102-27	Collective knowledge of highest governance body	a. Measures taken to develop and enhance the highest governance body’s collective knowledge of economic, environmental, and social topics.	Management for Sustainability Value Creation Platform (Annual Reports P80-89)
102-28	Evaluating the highest governance body’s performance	a. Processes for evaluating the highest governance body’s performance with respect to governance of economic, environmental, and social topics. b. Whether such evaluation is independent or not, and its frequency. c. Whether such evaluation is a self-assessment. d. Actions taken in response to evaluation of the highest governance body’s performance with respect to governance of economic, environmental, and social topics, including, as a minimum, changes in membership and organizational practice.	Management for Sustainability (Sustainability Promotion System and Activities) Value Creation Platform (Annual Reports P80-89)

NO.	Disclosure	Reporting requirements	2018 Applicable item
102-29	Identifying and managing economic, environmental, and social impacts	<p>a. Highest governance body's role in identifying and managing economic, environmental, and social topics and their impacts, risks, and opportunities – including its role in the implementation of due diligence processes.</p> <p>b. Whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental, and social topics and their impacts, risks, and opportunities.</p>	Management for Sustainability (Sustainability Promotion System and Activities) Responsible Care Activities (Responsible Care Management) Value Creation Platform (Annual Reports P80-89)
102-30	Effectiveness of risk management processes	a. Highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental, and social topics.	Value Creation Platform (Annual Reports P80-89)
102-31	Review of economic, environmental, and social topics	a. Frequency of the highest governance body's review of economic, environmental, and social topics and their impacts, risks, and opportunities.	Value Creation Platform (Annual Reports P80-89)
102-32	Highest governance body's role in sustainability reporting	a. The highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material topics are covered.	Management for Sustainability (Sustainability Promotion System and Activities)
102-33	Communicating critical concerns	a. Process for communicating critical concerns to the highest governance body.	Value Creation Platform (Annual Reports P80-89)
102-34	Nature and total number of critical concerns	<p>a. Total number and nature of critical concerns that were communicated to the highest governance body.</p> <p>b. Mechanism(s) used to address and resolve critical concerns.</p>	–
102-35	Remuneration policies	<p>a. Remuneration policies for the highest governance body and senior executives for the following types of remuneration:</p> <p>i. Fixed pay and variable pay, including performance-based pay, equity-based pay, bonuses, and deferred or vested shares;</p> <p>ii. Sign-on bonuses or recruitment incentive payments;</p> <p>iii. Termination payments;</p> <p>iv. Clawbacks;</p> <p>v. Retirement benefits, including the difference between benefit schemes and contribution rates for the highest governance body, senior executives, and all other employees.</p> <p>b. How performance criteria in the remuneration policies relate to the highest governance body's and senior executives' objectives for economic, environmental, and social topics</p>	Value Creation Platform (Annual Reports P80-89)
102-36	Process for determining remuneration	<p>a. Process for determining remuneration.</p> <p>b. Whether remuneration consultants are involved in determining remuneration and whether they are independent of management.</p> <p>c. Any other relationships that the remuneration consultants have with the organization.</p>	Value Creation Platform (Annual Reports P80-89)
102-37	Stakeholders' involvement in remuneration	<p>a. How stakeholders' views are sought and taken into account regarding remuneration.</p> <p>b. If applicable, the results of votes on remuneration policies and proposals.</p>	Value Creation Platform (Annual Reports P80-89)
102-38	Annual total compensation ratio	a. Ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country.	–
102-39	Percentage increase in annual total compensation ratio	a. Ratio of the percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country.	–
Stakeholder engagement			
102-40	List of stakeholder groups	a. A list of stakeholder groups engaged by the organization.	Management for Sustainability (Communication with Stakeholders)
102-41	Collective bargaining agreements	a. Percentage of total employees covered by collective bargaining agreements.	Social Activities (Hand in Hand with Employees Dialogue with Labor)
102-42	Identifying and selecting stakeholders	a. The basis for identifying and selecting stakeholders with whom to engage.	Management for Sustainability (Communication with Stakeholders)
102-43	Approach to stakeholder engagement	a. The organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	Management for Sustainability (Communication with Stakeholders) Social Activities (Hand in Hand with Local Communities and Society) Social Activities (Hand in Hand with Employees) Value Creation Platform (Annual Reports P80-89)
102-44	Key topics and concerns raised	<p>a. Key topics and concerns that have been raised through stakeholder engagement,</p> <p>ii. the stakeholder groups that raised each of the key topics and concerns.</p>	Management for Sustainability Value Creation Platform (Annual Reports P80-89)

NO.	Disclosure	Reporting requirements	2018 Applicable item
Reporting practice			
102-45	Entities included in the consolidated financial statements	a. A list of all entities included in the organization’s consolidated financial statements or equivalent documents. b. Whether any entity included in the organization’s consolidated financial statements or equivalent documents is not covered by the report.	Report Profile Business Locations & Group Companies
102-46	Defining report content and topic Boundaries	a. An explanation of the process for defining the report content and the topic Boundaries. b. An explanation of how the organization has implemented the Reporting Principles for defining report content.	Report Profile Management for Sustainability
102-47	List of material topics	a. A list of the material topics identified in the process for defining report content.	Management for Sustainability (Priorities and Performance of the Sumitomo Chemical Group)
102-48	Restatements of information	a. The effect of any restatements of information given in previous reports, and the reasons for such restatements.	Not applicable
102-49	Changes in reporting	a. Significant changes from previous reporting periods in the list of material topics and topic Boundaries.	Not applicable
102-50	Reporting period	a. Reporting period for the information provided.	Report Profile
102-51	Date of most recent report	a. If applicable, the date of the most recent previous report.	Report Profile
102-52	Reporting cycle	a. Reporting cycle.	Report Profile
102-53	Contact point for questions regarding the report	a. The contact point for questions regarding the report or its contents.	Report Profile Contact
102-54	Claims of reporting in accordance with the GRI Standards	a. The claim made by the organization, if it has prepared a report in accordance with the GRI Standards, either: i. ‘This report has been prepared in accordance with the GRI Standards: Core option’; ii. ‘This report has been prepared in accordance with the GRI Standards: Comprehensive option’.	Report Profile the GRI guidelines standard reference table
102-55	GRI content index	a. The GRI content index, which specifies each of the GRI Standards used and lists all disclosures included in the report. b. For each disclosure, the content index shall include: i. the number of the disclosure (for disclosures covered by the GRI Standards); ii. the page number(s) or URL(s) where the information can be found, either within the report or in other published materials; iii. if applicable, and where permitted, the reason(s) for omission when a required disclosure cannot be made.	the GRI guidelines standard reference table
102-56	External assurance	a. A description of the organization’s policy and current practice with regard to seeking external assurance for the report. b. If the report has been externally assured: i. A reference to the external assurance report, statements, or opinions. If not included in the assurance report accompanying the sustainability report, a description of what has and what has not been assured and on what basis, including the assurance standards used, the level of assurance obtained, and any limitations of the assurance process; ii. The relationship between the organization and the assurance provider; iii. Whether and how the highest governance body or senior executives are involved in seeking external assurance for the organization’s sustainability report.	Report Profile
103 : Management Approach			
103-1	Explanation of the material topic and its Boundary	For each material topic, the reporting organization shall report the following information: a. An explanation of why the topic is material. b. The Boundary for the material topic, which includes a description of: i. where the impacts occur; ii. the organization’s involvement with the impacts. For example, whether the organization has caused or contributed to the impacts, or is directly linked to the impacts through its business relationships. c. Any specific limitation regarding the topic Boundary.	–
103-2	The management approach and its component	For each material topic, the reporting organization shall report the following information: a. An explanation of how the organization manages the topic. b. A statement of the purpose of the management approach. c. A description of the following, if the management approach includes that component: i. Policies ii. Commitments iii. Goals and targets iv. Responsibilities v. Resources vi. Grievance mechanisms vii. Specific actions, such as processes, projects, programs and initiatives	–
103-3	Evaluation of the management approach	For each material topic, the reporting organization shall report the following information: a. An explanation of how the organization evaluates the management approach, including: i . the mechanisms for evaluating the effectiveness of the management approach; ii . the results of the evaluation of the management approach; iii . any related adjustments to the management approach.	–

NO.	Disclosure	Reporting requirements	2018 Applicable item
Topic-specific Standards			
NO.	Disclosure	Reporting requirements	2018 Applicable item
ECONOMIC			
201 : Economic Performance			
201-1	Direct economic value generated and distributed	a. Direct economic value generated and distributed (EVG&D) on an accruals basis, including the basic components for the organization’s global operations as listed below. If data are presented on a cash basis, report the justification for this decision in addition to reporting the following basic components: <ul style="list-style-type: none"> i. Direct economic value generated: revenues; ii. Economic value distributed: operating costs, employee wages and benefits, payments to providers of capital, payments to government by country, and community investments; iii. Economic value retained: ‘direct economic value generated’ less ‘economic value distributed’. b. Where significant, report EVG&D separately at country, regional, or market levels, and the criteria used for defining significance.	–
201-2	Financial implications and other risks and opportunities due to climate change	a. Risks and opportunities posed by climate change that have the potential to generate substantive changes in operations, revenue, or expenditure, including: <ul style="list-style-type: none"> i. a description of the risk or opportunity and its classification as either physical, regulatory, or other; ii. a description of the impact associated with the risk or opportunity; iii. the financial implications of the risk or opportunity before action is taken; iv. the methods used to manage the risk or opportunity; v. the costs of actions taken to manage the risk or opportunity. 	Responsible Care Activities (Environmental Protection / Climate Change Action) Creating Value through Business (Annual Reports p40-62)
201-3	Defined benefit plan obligations and other retirement plans	a. If the plan’s liabilities are met by the organization’s general resources, the estimated value of those liabilities. b. If a separate fund exists to pay the plan’s pension liabilities: <ul style="list-style-type: none"> i. the extent to which the scheme’s liabilities are estimated to be covered by the assets that have been set aside to meet them; ii. the basis on which that estimate has been arrived at; iii. when that estimate was made. c. If a fund set up to pay the plan’s pension liabilities is not fully covered, explain the strategy, if any, adopted by the employer to work towards full coverage, and the timescale, if any, by which the employer hopes to achieve full coverage. d. Percentage of salary contributed by employee or employer e. Level of participation in retirement plans, such as participation in mandatory or voluntary schemes, regional, or country-based schemes, or those with financial impact.	–
201-4	Financial assistance received from government	a. Total monetary value of financial assistance received by the organization from any government during the reporting period, including: <ul style="list-style-type: none"> i. tax relief and tax credits; ii. subsidies; iii. investment grants, research and development grants, and other relevant types of grant; iv. awards; v. royalty holidays; vi. financial assistance from Export Credit Agencies (ECAs); vii. financial incentives; viii. other financial benefits received or receivable from any government for any operation. b. The information in 201-4-a by country. c. Whether, and the extent to which, any government is present in the shareholding	–
202 : Market Presence			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	a. When a significant proportion of employees are compensated based on wages subject to minimum wage rules, report the relevant ratio of the entry level wage by gender at significant locations of operation to the minimum wage. b. When a significant proportion of other workers (excluding employees) performing the organization’s activities are compensated based on wages subject to minimum wage rules, describe the actions taken to determine whether these workers are paid above the minimum wage. c. Whether a local minimum wage is absent or variable at significant locations of operation, by gender. In circumstances in which different minimums can be used as a reference, report which minimum wage is being used. d. The definition used for ‘significant locations of operation’.	–
202-2	Proportion of senior management hired from the local community	a. Percentage of senior management at significant locations of operation that are hired from the local community. b. The definition used for ‘senior management’. c. The organization’s geographical definition of ‘local’. d. The definition used for ‘significant locations of operation’.	Social Activities: Supplementary Data

NO.	Disclosure	Reporting requirements	2018 Applicable item
203 : Indirect Economic Impacts			
203-1	Infrastructure investments and services supported	a. Extent of development of significant infrastructure investments and services supported. b. Current or expected impacts on communities and local economies, including positive and negative impacts where relevant. c. Whether these investments and services are commercial, in-kind, or pro bono engagements.	Social Activities (Hand in Hand with Local Communities and Society) Social Activities: Supplementary Data
203-2	Significant indirect economic impacts	a. Examples of significant identified indirect economic impacts of the organization, including positive and negative impacts. b. Significance of the indirect economic impacts in the context of external benchmarks and stakeholder priorities, such as national and international standards, protocols, and policy agendas.	Social Activities (Hand in Hand with Local Communities and Society) Social Activities: Supplementary Data
204 : Procurement Practices			
204-1	Proportion of spending on local suppliers	a. Percentage of the procurement budget used for significant locations of operation that is spent on suppliers local to that operation (such as percentage of products and services purchased locally). b. The organization’s geographical definition of ‘local’. c. The definition used for ‘significant locations of operation’.	–
205 : Anti-corruption			
205-1	Operations assessed for risks related to corruption	a. Total number and percentage of operations assessed for risks related to corruption. b. Significant risks related to corruption identified through the risk assessment.	Value Creation Platform (Annual Reports P90-92)
205-2	Communication and training about anti-corruption policies and procedures	a. Total number and percentage of governance body members that the organization’s anti-corruption policies and procedures have been communicated to, broken down by region. b. Total number and percentage of employees that the organization’s anti-corruption policies and procedures have been communicated to, broken down by employee category and region. c. Total number and percentage of business partners that the organization’s anti-corruption policies and procedures have been communicated to, broken down by type of business partner and region. Describe if the organization’s anti-corruption policies and procedures have been communicated to any other persons or ganizations. d. Total number and percentage of governance body members that have received training on anti-corruption, broken down by region. e. Total number and percentage of employees that have received training on anti-corruption, broken down by employee category and region.	Value Creation Platform (Annual Reports P82-92) Social Activities (Hand in Hand with Business Partners)
205-3	Confirmed incidents of corruption and actions taken	a. Total number and nature of confirmed incidents of corruption. b. Total number of confirmed incidents in which employees were dismissed or disciplined for corruption. c. Total number of confirmed incidents when contracts with business partners were terminated or not renewed due to violations related to corruption. d. Public legal cases regarding corruption brought against the organization or its employees during the reporting period and the outcomes of such cases.	–
206 : Anti-competitive Behavior			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	a. Number of legal actions pending or completed during the reporting period regarding anti-competitive behavior and violations of anti-trust and monopoly legislation in which the organization has been identified as a participant. b. Main outcomes of completed legal actions, including any decisions or judgments.	–
ENVIRONMENTAL			
301 : Materials			
301-1	Materials used by weight or volume	a. Total weight or volume of materials that are used to produce and package the organization’s primary products and services during the reporting period, by: <ul style="list-style-type: none"> i. non-renewable materials used; ii. renewable materials used. 	Responsible Care Activities (Environmental Protection / Climate Change Action) Responsible Care Activities: Supplementary Data
301-2	Recycled input materials used	a. Percentage of recycled input materials used to manufacture the organization’s primary products and services.	–
301-3	Reclaimed products and their packaging materials	a. Percentage of reclaimed products and their packaging materials for each product category. b. How the data for this disclosure have been collected.	–

NO.	Disclosure	Reporting requirements	2018 Applicable item
302 : Energy			
302-1	Energy consumption within the organization	a. Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used. b. Total fuel consumption within the organization from renewable sources, in joules or multiples, and including fuel types used. c. In joules, watt-hours or multiples, the total: i. electricity consumption ii. heating consumption iii. cooling consumption iv. steam consumption d. In joules, watt-hours or multiples, the total: i. electricity sold ii. heating sold iii. cooling sold iv. steam sold e. Total energy consumption within the organization, in joules or multiples. f. Standards, methodologies, assumptions, and/or calculation tools used. g. Source of the conversion factors used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
302-2	Energy consumption outside of the organization	a. Energy consumption outside of the organization, in joules or multiples. b. Standards, methodologies, assumptions, and/or calculation tools used. c. Source of the conversion factors used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
302-3	Energy intensity	a. Energy intensity ratio for the organization. b. Organization-specific metric (the denominator) chosen to calculate the ratio. c. Types of energy included in the intensity ratio; whether fuel, electricity, heating, cooling, steam, or all. d. Whether the ratio uses energy consumption within the organization, outside of it, or both.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
302-4	Reduction of energy consumption	a. Amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives, in joules or multiples. b. Types of energy included in the reductions; whether fuel, electricity, heating, cooling, steam, or all. c. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it. d. Standards, methodologies, assumptions, and/or calculation tools used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
302-5	Reductions in energy requirements of products and services	a. Reductions in energy requirements of sold products and services achieved during the reporting period, in joules or multiples. b. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it. c. Standards, methodologies, assumptions, and/or calculation tools used.	Sumika Sustainable Solutions
303 : Water			
303-1	Water withdrawal by source	a. Total volume of water withdrawn, with a breakdown by the following sources: i. Surface water, including water from wetlands, rivers, lakes, and oceans; ii. Ground water; iii. Rainwater collected directly and stored by the organization iv. Waste water from another organization; v. Municipal water supplies or other public or private water utilities. b. Standards, methodologies, and assumptions used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
303-2	Water sources significantly affected by withdrawal of water	a. Total number of water sources significantly affected by withdrawal by type: i. Size of the water source; ii. Whether the source is designated as a nationally or internationally protected area; iii. Biodiversity value (such as species diversity and endemism, and total number of protected species); iv. Value or importance of the water source to local communities and indigenous peoples. b. Standards, methodologies, and assumptions used.	–
303-3	Water recycled and reused	a. Total volume of water recycled and reused by the organization. b. Total volume of water recycled and reused as a percentage of the total water withdrawal as specified in Disclosure 303-1. c. Standards, methodologies, and assumptions used.	–

NO.	Disclosure	Reporting requirements	2018 Applicable item
304 : Biodiversity			
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	a. For each operational site owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas, the following information: <ul style="list-style-type: none"> i. Geographic location; ii. Subsurface and underground land that may be owned, leased, or managed by the organization; iii. Position in relation to the protected area (in the area, adjacent to, or containing portions of the protected area) or the high biodiversity value area outside protected areas; iv. Type of operation (office, manufacturing or production, or extractive); v. Size of operational site in km2 (or another unit, if appropriate) vi. Biodiversity value characterized by the attribute of the protected area or area of high biodiversity value outside the protected area (terrestrial, freshwater, or maritime ecosystem); vii. Biodiversity value characterized by listing of protected status (such as IUCN Protected Area Management Categories, Ramsar Convention, national legislation). 	–
304-2	Significant impacts of activities, products, and services on biodiversity	a. Nature of significant direct and indirect impacts on biodiversity with reference to one or more of the following: <ul style="list-style-type: none"> i. Construction or use of manufacturing plants, mines, and transport infrastructure; ii. Pollution (introduction of substances that do not naturally occur in the habitat from point and non-point sources); iii. Introduction of invasive species, pests, and pathogens; iv. Reduction of species; v. Habitat conversion; vi. Changes in ecological processes outside the natural range of variation (such as salinity or changes in groundwater level). b. Significant direct and indirect positive and negative impacts with reference to the following: <ul style="list-style-type: none"> i. Species affected; ii. Extent of areas impacted; iii. Duration of impacts; iv. Reversibility or irreversibility of the impacts. 	–
304-3	Habitats protected or restored	a. Size and location of all habitat areas protected or restored, and whether the success of the restoration measure was or is approved by independent external professionals. b. Whether partnerships exist with third parties to protect or restore habitat areas distinct from where the organization has overseen and implemented restoration or protection measures. c. Status of each area based on its condition at the close of the reporting period. d. Standards, methodologies, and assumptions used.	–
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	a. Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk: <ul style="list-style-type: none"> i. Critically endangered (CR) ii. Endangered (EN) iii. Vulnerable (VU) iv. Near threatened (NT) v. Least concern 	–
305 : Emissions			
305-1	Direct (Scope 1) GHG emissions	a. Gross direct (Scope 1) GHG emissions in metric tons of CO2 equivalent. b. Gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. c. Biogenic CO2 emissions in metric tons of CO2 equivalent. d. Base year for the calculation, if applicable, including: <ul style="list-style-type: none"> i. the rationale for choosing it; ii. emissions in the base year; iii. the context for any significant changes in emissions that triggered recalculations of base year emissions. e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source. f. Consolidation approach for emissions; whether equity share, financial control, or operational control. g. Standards, methodologies, assumptions, and/or calculation tools used.	Responsible Care Activities (Environmental Protection / Climate Change Action)_ Calculation Standards for Environmental and Social Data Indicators

NO.	Disclosure	Reporting requirements	2018 Applicable item
305-2	Energy indirect (Scope 2) GHG emissions	a. Gross location-based energy indirect (Scope 2) GHG emissions in metric tons of CO2 equivalent. b. If applicable, gross market-based energy indirect (Scope 2) GHG emissions in metric tons of CO2 equivalent. c. If available, the gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. d. Base year for the calculation, if applicable, including: i. the rationale for choosing it; ii. emissions in the base year; iii. the context for any significant changes in emissions that triggered recalculations of base year emissions. e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source. f. Consolidation approach for emissions; whether equity share, financial control, or operational control. g. Standards, methodologies, assumptions, and/or calculation tools used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
305-3	Other indirect (Scope 3) GHG emissions	a. Gross other indirect (Scope 3) GHG emissions in metric tons of CO2 equivalent. b.If available, the gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. c. Biogenic CO2 emissions in metric tons of CO2 equivalent. d. Other indirect (Scope 3) GHG emissions categories and activities included in the calculation. e. Base year for the calculation, if applicable, including: i. the rationale for choosing it; ii. emissions in the base year; iii. the context for any significant changes in emissions that triggered recalculations of base year emissions. f. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source. g. Standards, methodologies, assumptions, and/or calculation tools used.	Responsible Care Activities (Environmental Protection / Climate Change Action)
305-4	GHG emissions intensity	a. GHG emissions intensity ratio for the organization. b. Organization-specific metric (the denominator) chosen to calculate the ratio. c. Types of GHG emissions included in the intensity ratio; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3). d. Gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
305-5	Reduction of GHG emissions	a. GHG emissions reduced as a direct result of reduction initiatives, in metric tons of CO2 equivalent. b. Gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. c. Base year or baseline, including the rationale for choosing it. d. Scopes in which reductions took place; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3). e. Standards, methodologies, assumptions, and/or calculation tools used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Calculation Standards for Environmental and Social Data Indicators
305-6	Emissions of ozone-depleting substances (ODS)	a. Production, imports, and exports of ODS in metric tons of CFC-11 (trichlorofluoromethane) equivalent. b. Substances included in the calculation. c. Source of the emission factors used. d. Standards, methodologies, assumptions, and/or calculation tools used.	Responsible Care Activities (Environmental Protection / Climate Change Action)
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	a. Significant air emissions, in kilograms or multiples, for each of the following: i. NOx ii. SOx iii. Persistent organic pollutants (POP) iv.Volatile organic compounds (VOC) v. Hazardous air pollutants (HAP) vi. Particulate matter (PM) vii. Other standard categories of air emissions identified in relevant regulations b. Source of the emission factors used. c. Standards, methodologies, assumptions, and/or calculation tools used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Responsible Care Activities: Supplementary Data Calculation Standards for Environmental and Social Data Indicators
306 : Effluents and Waste			
306-1	Water discharge by quality and destination	a. Total volume of planned and unplanned water discharges by: i. destination; ii. quality of the water, including treatment method; iii. whether the water was reused by another organization. b. Standards, methodologies, and assumptions used.	Responsible Care Activities (Environmental Protection / Climate Change Action) Responsible Care Activities: Supplementary Data Calculation Standards for Environmental and Social Data Indicators

NO.	Disclosure	Reporting requirements	2018 Applicable item
306-2	Waste by type and disposal method	a. Total weight of hazardous waste, with a breakdown by the following disposal methods where applicable: i. Reuse ii. Recycling iii. Composting iv. Recovery, including energy recovery v. Incineration (mass burn) vi. Deep well injection vii. Landfill viii. On-site storage ix. Other (to be specified by the organization) b. Total weight of non-hazardous waste, with a breakdown by the following disposal methods where applicable: i. Reuse ii. Recycling iii. Composting iv. Recovery, including energy recovery v. Incineration (mass burn) vi. Deep well injection vii. Landfill viii. On-site storage ix. Other (to be specified by the organization) c. How the waste disposal method has been determined: i. Disposed of directly by the organization, or otherwise directly confirmed ii. Information provided by the waste disposal contractor iii. Organizational defaults of the waste disposal contractor	Responsible Care Activities: Supplementary Data
306-3	Significant spills	a. Total number and total volume of recorded significant spills. b. The following additional information for each spill that was reported in the organization's financial statements: i. Location of spill; ii. Volume of spill; iii. Material of spill, categorized by: oil spills (soil or water surfaces), fuel spills (soil or water surfaces), spills of wastes (soil or water surfaces), spills of chemicals (mostly soil or water surfaces), and other (to be specified by the organization). c. Impacts of significant spills.	Responsible Care Activities (Environmental Protection / Climate Change Action)
306-4	Transport of hazardous waste	a. Total weight for each of the following: i. Hazardous waste transported ii. Hazardous waste imported iii. Hazardous waste exported iv. Hazardous waste treated b. Percentage of hazardous waste shipped internationally c. Standards, methodologies, and assumptions used.	–
306-5	Water bodies affected by water discharges and/or runoff	a. Water bodies and related habitats that are significantly affected by water discharges and/or runoff, including information on: i. the size of the water body and related habitat; ii. whether the water body and related habitat is designated as a nationally or internationally protected area; iii. the biodiversity value, such as total number of protected species.	–
307 : Environmental Compliance			
307-1	Non-compliance with environmental laws and regulations	a. Significant fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations in terms of: i. total monetary value of significant fines; ii. total number of non-monetary sanctions; iii. cases brought through dispute resolution mechanisms. b. If the organization has not identified any non-compliance with environmental laws and/or regulations, a brief statement of this fact is sufficient.	Responsible Care Activities (Environmental Protection / Climate Change Action)
308 : Supplier Environmental Assessment			
308-1	New suppliers that were screened using environmental criteria	a. Percentage of new suppliers that were screened using environmental criteria.	Social Activities (Hand in Hand with Business Partners)
308-2	Negative environmental impacts in the supply chain and actions taken	a. Number of suppliers assessed for environmental impacts. b. Number of suppliers identified as having significant actual and potential negative environmental impacts. c. Significant actual and potential negative environmental impacts identified in the supply chain. d. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which improvements were agreed upon as a result of assessment. e. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which relationships were terminated as a result of assessment, and why.	Social Activities (Hand in Hand with Business Partners)

NO.	Disclosure	Reporting requirements	2018 Applicable item
SOCIAL			
401 : Employment			
401-1	New employee hires and employee turnover	a. Total number and rate of new employee hires during the reporting period, by age group, gender and region. b. Total number and rate of employee turnover during the reporting period, by age group, gender and region.	Social Activities: Supplementary Data (Information on employees)
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	a. Benefits which are standard for full-time employees of the organization but are not provided to temporary or part-time employees, by significant locations of operation. These include, as a minimum: i. life insurance; ii. health care; iii. disability and invalidity coverage; iv. parental leave; v. retirement provision; vi. stock ownership; vii. others. b. The definition used for 'significant locations of operation'.	Social Activities (Hand in Hand with Employees Diversity Initiatives)
401-3	Parental leave	a. Total number of employees that were entitled to parental leave, by gender. b. Total number of employees that took parental leave, by gender. c. Total number of employees that returned to work in the reporting period after parental d. Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work, by gender. e. Return to work and retention rates of employees that took parental leave, by gender.	Social Activities (Hand in Hand with Employees Diversity Initiatives)
402 : Labor/Management Relations			
402-1	Minimum notice periods regarding operational changes	a. Minimum number of weeks' notice typically provided to employees and their representatives prior to the implementation of significant operational changes that could substantially affect them. b. For organizations with collective bargaining agreements, report whether the notice period and provisions for consultation and negotiation are specified in collective agreements.	–
403 : Occupational Health and Safety			
403-1	Workers representation in formal joint management-worker health and safety committees	a. The level at which each formal joint management-worker health and safety committee typically operates within the organization. b. Percentage of workers whose work, or workplace, is controlled by the organization, that are represented by formal joint management-worker health and safety committees.	Social Activities (Hand in Hand with Employees)
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	a. Types of injury, injury rate (IR), occupational disease rate (ODR), lost day rate (LDR), absentee rate (AR), and work-related fatalities, for all employees, with a breakdown by: i. region; ii. gender. b. Types of injury, injury rate (IR), and work-related fatalities, for all workers (excluding employees) whose work, or workplace, is controlled by the organization, with a breakdown by: i. region; ii. gender. c. The system of rules applied in recording and reporting accident statistics.	Responsible Care Activities (Occupational Safety and Health / Industrial Safety and Disaster Prevention)
403-3	Workers with high incidence or high risk of diseases related to their occupation	a. Whether there are workers whose work, or workplace, is controlled by the organization, involved in occupational activities who have a high incidence or high risk of specific diseases.	Responsible Care Activities (Occupational Safety and Health / Industrial Safety and Disaster Prevention)
403-4	Health and safety topics covered in formal agreements with trade unions	a. Whether formal agreements (either local or global) with trade unions cover health and safety. b.If so, the extent, as a percentage, to which various health and safety topics are covered by these agreements.	Social Activities (Hand in Hand with Employees)
404 : Training and Education			
404-1	Average hours of training per year per employee	a. Average hours of training that the organization's employees have undertaken during the reporting period, by: i. gender; ii. employee category.	Social Activities (Hand in Hand with Employees)
404-2	Programs for upgrading employee skills and transition assistance programs	a. Type and scope of programs implemented and assistance provided to upgrade employee skills. b. Transition assistance programs provided to facilitate continued employability and the management of career endings resulting from retirement or termination of employment.	Social Activities (Hand in Hand with Employees)
404-3	Percentage of employees receiving regular performance and career development reviews	a. Percentage of total employees by gender and by employee category who received a regular performance and career development review during the reporting period.	Social Activities (Hand in Hand with Employees)

NO.	Disclosure	Reporting requirements	2018 Applicable item
405 : Diversity and Equal Opportunity			
405-1	Diversity of governance bodies and employees	a. Percentage of individuals within the organization’s governance bodies in each of the following diversity categories: i. Gender; ii. Age group: under 30 years old, 30-50 years old, over 50 years old; iii. Other indicators of diversity where relevant (such as minority or vulnerable groups). b. Percentage of employees per employee category in each of the following diversity categories: i. Gender; ii. Age group: under 30 years old, 30-50 years old, over 50 years old; iii. Other indicators of diversity where relevant (such as minority or vulnerable groups).	Social Activities: Supplementary Data (Information on employees) Value Creation Platform (Annual Reports P80-89)
405-2	Ratio of basic salary and remuneration of women to men	a. Ratio of the basic salary and remuneration of women to men for each employee category, by significant locations of operation. b. The definition used for ‘significant locations of operation’.	Social Activities: Supplementary Data (Information on employees)
406 : Non-discrimination			
406-1	Incidents of discrimination and corrective actions taken	a. Total number of incidents of discrimination during the reporting period. b. Status of the incidents and actions taken with reference to the following: i. Incident reviewed by the organization; ii. Remediation plans being implemented; iii. Remediation plans that have been implemented, with results reviewed through routine internal management review processes; iv. Incident no longer subject to action.	–
407 : Freedom of Association and Collective Bargaining			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	a. Operations and suppliers in which workers’ rights to exercise freedom of association or collective bargaining may be violated or at significant risk either in terms of: i. type of operation (such as manufacturing plant) and supplier; ii. countries or geographic areas with operations and suppliers considered at risk. b. Measures taken by the organization in the reporting period intended to support rights to exercise freedom of association and collective bargaining.	–
408 : Child Labor			
408-1	Operations and suppliers at significant risk for incidents of child labor	a. Operations and suppliers considered to have significant risk for incidents of: i. child labor; ii. young workers exposed to hazardous work. b. Operations and suppliers considered to have significant risk for incidents of child labor either in terms of: i. type of operation (such as manufacturing plant) and supplier; ii. countries or geographic areas with operations and suppliers considered at risk. c. Measures taken by the organization in the reporting period intended to contribute to the effective abolition of child labor.	Compliance (Annual Reports p90-92)
409 : Forced or Compulsory Labor			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	a. Operations and suppliers considered to have significant risk for incidents of forced or compulsory labor either in terms of: i. type of operation (such as manufacturing plant) and supplier; ii. countries or geographic areas with operations and suppliers considered at risk. b. Measures taken by the organization in the reporting period intended to contribute to the elimination of all forms of forced or compulsory labor.	Compliance (Annual Reports p90-92)
410 : Security Practices			
410-1	Security personnel trained in human rights policies or procedures	a. Percentage of security personnel who have received formal training in the organization’s human rights policies or specific procedures and their application to security. b. Whether training requirements also apply to third-party organizations providing security personnel.	–
411 : Rights of Indigenous Peoples			
411-1	Incidents of violations involving rights of indigenous peoples	a. Total number of identified incidents of violations involving the rights of indigenous peoples during the reporting period. b. Status of the incidents and actions taken with reference to the following: i. Incident reviewed by the organization; ii. Remediation plans being implemented; iii. Remediation plans that have been implemented, with results reviewed through routine internal management review processes; iv. Incident no longer subject to action	Not applicable
412 : Human Rights Assessment			
412-1	Operations that have been subject to human rights reviews or impact assessments	a. Total number and percentage of operations that have been subject to human rights reviews or human rights impact assessments, by country.	–
412-2	Employee training on human rights policies or procedures	a. Total number of hours in the reporting period devoted to training on human rights policies or procedures concerning aspects of human rights that are relevant to operations. b. Percentage of employees trained during the reporting period in human rights policies or procedures concerning aspects of human rights that are relevant to operations.	Social Activities (Hand in Hand with Employees)

NO.	Disclosure	Reporting requirements	2018 Applicable item
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	a. Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening. b. The definition used for 'significant investment agreements'.	Social Activities (Hand in Hand with Employees) Value Creation Platform (Annual Reports P90-92)
413 : Local Communities			
413-1	Operations with local community engagement, impact assessments, and development programs	a. Percentage of operations with implemented local community engagement, impact assessments, and/or development programs, including the use of: <ul style="list-style-type: none"> i. social impact assessments, including gender impact assessments, based on participatory processes; ii. environmental impact assessments and ongoing monitoring; iii. public disclosure of results of environmental and social impact assessments; iv. local community development programs based on local communities' needs; v. stakeholder engagement plans based on stakeholder mapping; vi. broad based local community consultation committees and processes that include vulnerable groups; vii. works councils, occupational health and safety committees and other worker representation bodies to deal with impacts; viii. formal local community grievance processes 	–
413-2	Operations with significant actual and potential negative impacts on local communities	a. Operations with significant actual and potential negative impacts on local communities, including: <ul style="list-style-type: none"> i. the location of the operations; ii. the significant actual and potential negative impacts of operations. 	–
414 : Supplier Social Assessment			
414-1	New suppliers that were screened using social criteria	a. Percentage of new suppliers that were screened using social criteria.	Social Activities (Hand in Hand with Business Partners)
414-2	Negative social impacts in the supply chain and actions taken	a. Number of suppliers assessed for social impacts. b. Number of suppliers identified as having significant actual and potential negative social impacts. c. Significant actual and potential negative social impacts identified in the supply chain. d. Percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of assessment. e. Percentage of suppliers identified as having significant actual and potential negative social impacts with which relationships were terminated as a result of assessment, and why.	Social Activities (Hand in Hand with Business Partners)
415 : Public Policy			
415-1	Political contributions	a. Total monetary value of financial and in-kind political contributions made directly and indirectly by the organization by country and recipient/beneficiary. b. If applicable, how the monetary value of in-kind contributions was estimated.	–
416 : Customer Health and Safety			
416-1	Assessment of the health and safety impacts of product and service categories	a. Percentage of significant product and service categories for which health and safety impacts are assessed for improvement.	Responsible Care Activities (Product Stewardship / Product Safety / Quality Assurance)
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of products and services within the reporting period, by: <ul style="list-style-type: none"> i. incidents of non-compliance with regulations resulting in a fine or penalty; ii. incidents of non-compliance with regulations resulting in a warning; iii. incidents of non-compliance with voluntary codes. b. If the organization has not identified any non-compliance with regulations and/or voluntary codes, a brief statement of this fact is sufficient.	Responsible Care Activities (Product Stewardship / Product Safety / Quality Assurance)
417 : Marketing and Labeling			
417-1	Requirements for product and service information and labeling	a. Whether each of the following types of information is required by the organization's procedures for product and service information and labeling: <ul style="list-style-type: none"> i. The sourcing of components of the product or service; ii. Content, particularly with regard to substances that might produce an nvironmental or social impact; iii. Safe use of the product or service; iv. Disposal of the product and environmental or social impacts; v. Other (explain). b. Percentage of significant product or service categories covered by and assessed for compliance with such procedures.	Responsible Care Activities (Product Stewardship / Product Safety / Quality Assurance)

NO.	Disclosure	Reporting requirements	2018 Applicable item
417-2	Incidents of non-compliance concerning product and service information and labeling	a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning product and service information and labeling, by: <ul style="list-style-type: none"> i. incidents of non-compliance with regulations resulting in a fine or penalty; ii. incidents of non-compliance with regulations resulting in a warning; iii. incidents of non-compliance with voluntary codes. b. If the organization has not identified any non-compliance with regulations and/or voluntary codes, a brief statement of this fact is sufficient.	Responsible Care Activities (Product Stewardship / Product Safety / Quality Assurance)
417-3	Incidents of non-compliance concerning marketing communications	a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by: <ul style="list-style-type: none"> i. incidents of non-compliance with regulations resulting in a fine or penalty; ii. incidents of non-compliance with regulations resulting in a warning; iii. incidents of non-compliance with voluntary codes. b. If the organization has not identified any non-compliance with regulations and/or voluntary codes, a brief statement of this fact is sufficient.	–
418 : Customer Privacy			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	a. Total number of substantiated complaints received concerning breaches of customer privacy, categorized by: <ul style="list-style-type: none"> i. complaints received from outside parties and substantiated by the organization; ii. complaints from regulatory bodies. b. Total number of identified leaks, thefts, or losses of customer data. c. If the organization has not identified any substantiated complaints, a brief statement of this fact is sufficient	–
419 : Socioeconomic Compliance			
419-1	Non-compliance with laws and regulations in the social and economic area	a. Significant fines and non-monetary sanctions for non-compliance with laws and/or regulations in the social and economic area in terms of: <ul style="list-style-type: none"> i. total monetary value of significant fines; ii. total number of non-monetary sanctions; iii. cases brought through dispute resolution mechanisms. b. If the organization has not identified any non-compliance with laws and/or regulations, a brief statement of this fact is sufficient. c. The context against which significant fines and non-monetary sanctions were incurred.	–