

Mitsui Chemicals Group ESG Report 2020

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Sustainability News

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- 2020.10.15 Annual update has been made to our Sustainability site.
- 2020.09.08 Mitsui Chemicals' implementation of End Plastic Waste activities
- 2020.07.21 Mitsui Chemicals Included on GPIF-Approved Sustainable Investment Indices for Fourth Consecutive Year

Deepening our triple bottom line management approach based on the three axes of economy, environment, and society, we will embark on new reforms in anticipation of a post-COVID society.


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- Sustainability Management
- The 2025 Long-term Business Plan Environmental and Social Targets
- Key Issues (Materiality)
- Climate Change and Problems with Plastic
- Blue Value™ / Rose Value™


[Risk and Compliance](#)

- Risk and Compliance Management
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[Responsible Care](#)

- Responsible Care Management
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- Respect for Human Rights
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- Social Activities

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Related Information



10th ANNIVERSARY



Renewable Energy-related Business



Human Resources Management



Safety Summary Sheet



Message from the CEO

Deepening our triple bottom line management approach based on the three axes of economy, environment, and society, we will embark on new reforms in anticipation of a post-COVID society.

HASHIMOTO Osamu
Representative Director,
President & CEO



Toward new beginnings

An opportunity to think deeply about our “ideal vision.”

Striving toward the targets set in our Long-Term Business Plan, VISION 2025, the Mitsui Chemicals Group is working to deepen our triple bottom line management approach based on the three axes of economy, environment, and society, pursuing initiatives aimed at solving the challenges faced by society as well as the transformation of our business portfolio. Formulated in 2016, VISION 2025 is now drawing close to its halfway point.

In these four years, the social environment surrounding our Group has changed enormously. Awareness of sustainability, including issues such as plastic waste and climate change, has further increased, and innovations in areas such as digital technology and biotechnology have advanced at a pace that is beyond anything we expected. Today, the world is facing an unprecedented crisis in the form of the COVID-19 pandemic.

I assumed the position of President & CEO right in the middle of this crisis, in April 2020. Our business environment has entered a difficult phase, but I am taking a more positive view of the situation. As we approach the halfway mark of our Long-Term Business Plan, I see it as an opportunity to explore what our business and organization should look like and re-examine what we need to do to achieve sustainable growth. We will redefine ourselves as we move toward our future goal to become a sustainable corporate group with a global presence.

Progress in Long-Term Business Plan

Portfolio transformation steadily yielding results under our Long-Term Business Plan.

On the economy axis, we have engaged in the transformation of our business portfolio and created a stronger financial position. On the environment and society axes, although we need to incorporate new perspectives, we have

produced a number of results. In fiscal 2019, our operating income was down on the previous year, due in part to the impact of the global economic downturn. Nevertheless, I believe we have made steady progress in our Long-Term Business Plan.

Based on that Plan, we have identified three target domains, namely Mobility, Health Care, and Food & Packaging, and we are making active investments in these areas.

In the **Mobility** domain, fiscal 2019 saw a global downturn in automobile production and stagnation of demand, and the severe business climate is expected to continue in fiscal 2020 due to the impact of the pandemic. However, we also project an expansion of needs such as lightweighting and electrification in the automotive sector in the medium to long term. Along with our diverse lineup of functional polymeric materials, we will use our Group-wide capabilities in proposing solutions to meet our customers' needs. Further, the decision has already been made to increase our capacity to produce performance polymers, where we have an advantage in ICT applications, so we will hasten to set up that increased production and turn it into a profit.

In the **Health Care** domain, we anticipate firm growth in ophthalmic lens materials, an area in which we boast technological prowess and a robust customer base, and we are moving toward a decision to increase capacity in this field as well. In terms of nonwovens, in addition to nonwoven fabrics for hygiene materials, we foresee increased demand in the 5G and automotive sectors, and we will also expand into industrial applications. Regarding dental materials, with the rapid acceleration of digitalization in mind, we will devote Group-wide resources to strengthening cooperation to increase our presence in Japan and Asia.

In the **Food & Packaging** domain, demand for industrial films is increasing for a number of reasons, including the growing popularity of 5G. The Group's proactive response to this increased demand includes completing construction of a new plant in Taiwan and increasing our supply capacity by 50%. We will now move to make a return on our investments. With demand for TENEBENAL™, our next generation active ingredient for insecticides, expected in diverse sectors, we are considering a further increase in production.

In the **Basic Materials** domain, where we are aiming for the stabilization of earnings, the structural reforms we have been working on have resulted in a steady reduction in volatility, which has been a challenge for us. Even so, low profitability cannot be denied, so we will engage in further structural reforms in this domain. In the belief that we can restructure this segment by further strengthening our local production for local consumption approach and downstream businesses, we will devise options from broad perspectives during fiscal 2020 and implement both immediate measures and measures that we will engage in over a longer period.



Review of Long-Term Business Plan

As we reach the halfway point of our Long-Term Business Plan, we will discuss anew our “ideal vision.”

As I mentioned earlier, the social environment has undergone enormous change since we first developed our current Long-Term Business Plan. With that in mind, we will take the opportunity presented by reaching the halfway point to undertake a review of the Plan.

We have re-set the Plan's end point to around 2030 and we are now in the process of debating what our ideal vision for the future as a company should look like. Setting our sights higher initially, we will envisage what society will look like in 2050 and backcast from there to re-set our targets.

Looking back on the last four years, one regret that I have is that we have been lacking in the ability to get things done. In the Long-Term Business Plan, we formulated a strategy of active investment in new business and R&D, but there are several areas that have not proceeded to plan. Coming up with a new plan is one thing, but we have lacked the ability to put that plan into action.

The same could be said for the transformation of our business portfolio. Until now, we have focused on B-to-B business based on chemical materials, but in the Long-Term Business Plan, we aim to go one step further and expand our B-to-C business. To put it simply, we are like a sportsman who is used to the rules of baseball now attempting to step foot on a soccer pitch. For such a massive transformation, we need strong resolve to take action. We are currently in the process of investigating the factors that are hampering action.

Our mid-ranking employees in their late thirties to their forties are playing a central role in the deliberation of our ideal vision. This is because they are the ones who will form the core of the Group around 2030, when the Plan ends, and they will be in the position to take action. Even if the picture being painted is somewhat rough with sharp edges, I believe that it is important that the actual people who will act on it be the ones to paint that picture.

Ultimately, in the development of the Plan, we will combine this kind of deductive approach with an inductive perspective that is rooted in the individual businesses. We will come up with the directions by the end of fiscal 2020, with the aim of formulating concrete measures in the first half of fiscal 2021. Re-setting the numerical targets declared in the current Long-Term Business Plan will also form part of these discussions.

Further, I want us to deepen our discussions to include the maximization of our intangible assets, including developing our corporate culture and organization to raise our employees' ability to get things done and their motivation.

In anticipation of a Post-COVID Society

As well as establishing a stable business platform, we will swiftly capture new business opportunities.

Many aspects of the COVID-19 pandemic that we are still in the midst of, as well as the social changes that will come after it, cannot be predicted. It is difficult to reach any clear answers about what impact the pandemic will have on our business. We are adopting a severe outlook in our plans for fiscal 2020, and we are taking all possible measures to ensure cash flow in the event of further downside risks. On the other hand, there are areas of the Health Care and Food & Packaging domains in which we anticipate expansion of demand, so we will be swift to go out and capture new business opportunities in those areas.

The keyword for the post-COVID society will likely be, first and foremost, digitalization. We have expanded the use of remote work in our Group, which has had a certain degree of success. However, there are many workplaces in which remote work cannot be fully implemented, such as manufacturing sites, so we will need to undertake other reforms,

such as finding new ways of working and new evaluation systems, including the promotion of digital transformation (DX).

The global pandemic has also brought challenges in supply chains to the surface. With the progress in globalization, our Group's supply chain has become increasingly diverse and complex. In light of the emergence of economic blocs and the growing trade friction between China and the United States, we will investigate the state of our local production for local consumption systems that we have advanced and, where necessary, consider their restructure.

Our response to COVID-19

Initiatives for risk management and business continuity

- Swift action to lower infection risk and ensure the safety of employees and business partners (such as implementation of teleworking, staggered working hours, and online training)
- Ensuring the maintenance of corporate functions and the safety and stable operations of plants
- Ensuring the solidity of the supply chain, including raw material procurement and product shipments
- Thorough management of inventory, accounts receivable, and accounts payable
- Strengthening cost management, expanding the credit line, and ensuring cash on hand

Initiatives for supporting society through our business

- Supporting healthcare providers
- Production and supply of nonwoven fabrics used as a raw material for medical gowns (isolation gowns)
- Supply of nonwoven fabrics for use in reusable 3D-printed masks
- Donation of masks, sanitizers, etc., to local medical institutions
- Running full production at all plants for TEKNOROTE™ for nose-clamps
- Supply of antibacterial and antiviral product lines (FASTAID™, YOHTOL™ DP-CD, etc.)

(based on data as of June 24, 2020)



Isolation gowns

An Enhanced Financial Position and Active Growth Investments

With our greatly strengthened financial position, our proactive stance toward growth investments and M&As will not change.

Our work on the strengthening of our financial position has continued in the Long-Term Business Plan, allowing us to build an enhanced foundation that can respond to sudden external changes. The current economic climate in the COVID-19 pandemic is often compared to the Global Financial Crisis, but our Group's earnings capacity has improved significantly compared to that time, and our net D/E and short-term liquidity are being maintained at healthy levels. Backed by this enhanced financial position, we will continue to invest for the future. Although some investments will be cut in fiscal 2020 as an emergency financial measure through careful selection and deferrals of projects, we do not intend to change our proactive stance. We will pursue active investment in growth domains such as ICT and Health Care.

In M&As as well, we will continue to watch out for new opportunities. However, I have no intention of considering only the economy axis in our pursuit of M&As, which would aim only for an increase in size. I will always incorporate the perspectives of the environment and society axes as well and pursue M&As that will achieve sustainable growth in our corporate value, so they will be accepted by all our stakeholders.



Transformation of Our Organizational Culture

Embarking on organizational reforms for the creation of a culture of open communication that connects people and technology organically.

The Mitsui Chemicals Group conducted a number of organizational reforms in April 2020. The aim of those changes was to strengthen our business structures in the three target domains and to accelerate next generation business. The key to our success in the three target domains lies in the total operation of our business. To that end, we must connect our assets, namely people and technology, organically to maximize our value. As such, we established cross-organizational CoEs* in the Mobility and Food & Packaging domains. In the Health Care domain as well, we established a Medical Business Strategy Department for the development and exploration of new businesses and the pursuit of M&As.

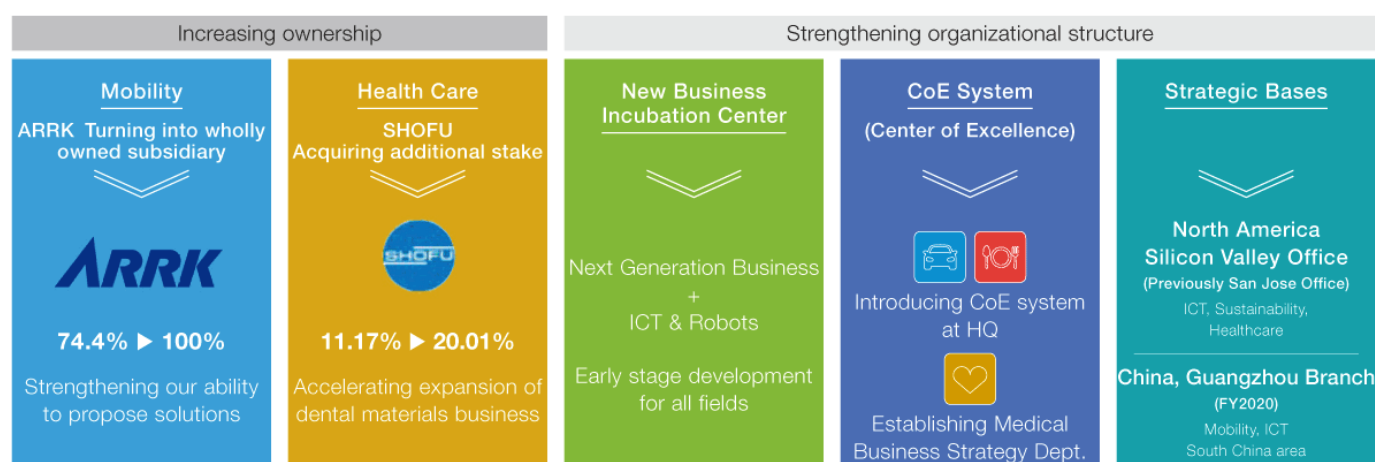
Further, we launched a New Business Incubation Center that will be responsible for the exploration and creation of next generation businesses, covering all fields from ICT to robots and energy.

The Group has adopted a business division structure for the pursuit of its business. Because of that structure, vertical lines tend to be stronger, and I sometimes feel that we are not making effective use of the Group's resources as a result. One aim of these reforms is to make our organization more open and communicative. We will devote even more effort to initiatives aimed at the transformation of our corporate and organizational culture.

* CoE : Center of Excellence

To prepare for social changes after COVID-19,

we are bolstering our marketing operations and functional relationships in a speedy manner



Sustainability Management

Sustainability initiatives with broad perspectives that encompass the entire value chain are vital.

With growing awareness of ESG concerns and the SDGs in recent years, society's values have changed significantly. Under such circumstances, companies need to be conscious of their role as public institutions in society and to pursue social and corporate sustainability. In those respects, I believe that our triple bottom line approach is truly clear. We will engage in management that places importance in the environment and society while emphasizing their balance with economic growth.

We have introduced Blue Value™ and Rose Value™ as a means of visualizing the results of our triple bottom line management and sharing and communicating those results to our stakeholders. They have also been set in the KPIs for the Long-Term Business Plan, and we will steadily expand our Blue Value™ and Rose Value™ products that help to solve environmental and social challenges. I also believe that these yardsticks are extremely effective as value standards for our employees in engaging in their work and I intend to make use of them for this purpose.

Two issues that we must address seriously as social challenges are climate change and plastic waste. Until now, we have largely focused on a linear business model involving the manufacture of products from raw materials. Going forward, however, unless we pursue those operations in tandem with businesses that create circular flows of resources, that is the recycling and reuse of products and their materials, it will be difficult to raise corporate value further. I want us to take an integrated approach to solving the problems of climate change and plastic waste as a single, inseparable challenge, from the over-arching perspective of transitioning to a circular economy.

For us, social challenges represent both risks and business opportunities. However, cooperation with others outside our own company is essential if we want to grasp those opportunities. Going forward, we will engage in initiatives with broad perspectives that incorporate the entire value chain, including collaborations with companies in other industries and cooperation that transcends national and regional borders.

For detail, please refer to Message from the Responsible Officer.

For detail, please refer to Sustainability in the Mitsui Chemicals Group.

Creating an Environment for Nurturing Positive Ambition

We will work on creating an organization in which every single employee can address their work with a high degree of motivation and a sense of reward.

For any company, its people are its greatest asset. This is true of any era. To nurture our people, we have introduced a range of different schemes, including training programs for management personnel and global personnel. I also want to put more effort into the more fundamental aspects, such as reforming work styles and creating an environment for raising motivation, to support a positive mindset in our employees.

One major change in recent times has been the ongoing change in the way young people work and the way they think about the company.

For a company to achieve sustainable growth, it must be attractive to these kinds of people of the new generation. We will aim to be a corporate group that offers a sense of reward for its people of all generations in all sectors, such as manufacturing, sales, and R&D. In our current project to review the Long-Term Business Plan as well, we are discussing our ideal vision for the future including the creation of this kind of culture. We will embark on new reforms on the basis of those discussions.

[For detail, please refer to Human Resources Management.](#)

Thorough Awareness of Safety

Recognizing anew the importance of safety through the unprecedented experience of the COVID-19 pandemic.

Safety is also an extremely important mission in the management of the Mitsui Chemicals Group. To uphold safety, we must never forget the explosion and fire that occurred in the resorcinol production facility at our Iwakuni-Ohtake Works in 2012. Since then, we have united with the manufacturing sites to make cumulative improvements. However, with the continued spate of problems in recent years, we are facing the challenge of a failure to instill a thorough awareness of safety.

To solve such a grave challenge, we will pursue initiatives from renewed fundamental perspectives. In addition to reforming our systems and introducing new technologies, we will go one step further to create an environment in which the employees who are responsible for safety at our manufacturing sites can address their work positively and with enthusiasm.

The pandemic we are currently facing has, I feel, also been an invaluable opportunity to re-examine what safety in the company should look like. I have been struck anew by the importance of the kinds of safety that protect the health of our employees. As a corporate group that fulfills its social responsibilities and ventures forward together with society, we will thoroughly instill an awareness of safety once more.

[For detail, please refer to Safety and Prevention.](#)

We will aim to be a “company that is both strong and good” and that, bringing together the strengths of every one of its employees, has the ability to get things done to achieve its goals.

I believe that the days have passed in which the value demanded of a company is assessed on its exceptional “strength” on the economy axis alone. Having said that, if we pay attention only to the environment and society axes, it will be difficult to raise sufficient profit and we will be unable to meet the expectations of our stakeholders, such as the shareholders and employees. It is for this very reason that our triple bottom line management approach, which seeks the right balance between the economic, environmental, and social dimensions, is so important.

The world is in the midst of a storm such as it has never before experienced in the form of the COVID-19 pandemic. We could certainly say that we are now navigating those rough seas. However, the time will come when the storm has passed, and those adverse winds will subside. I believe that the duty that I have been charged with in steering the Mitsui Chemicals Group is to create the best conditions so that the company can sprint full steam ahead when that time comes. It is precisely because this is the era we are in that we will set our gaze high as we look toward the future, bring together the strengths of every one of our employees, and aim to be a “company that is both strong and good,” a company that will achieve the goals it has set for itself with certainty and achieve sustainable growth together with society.

Message from the Responsible Officer

We are reflecting ESG elements into management to build a sustainable corporate group.

HIRAHARA Akio
Managing Executive Officer



Sustainability management requires companies to generate both social value and corporate value. To do so, it is important that companies accurately identify opportunities and risks from an ESG perspective and reflect them into management. The Mitsui Chemicals Group established the Corporate Sustainability Division in 2018 and has steered its course toward sustainability management with ESG elements at its core. By incorporating ESG elements into our management/strategies, and by improving ESG information disclosure to our stakeholders, we aim to create those two critical values.

Sustainability Management

Sustainability in the Mitsui Chemicals Group

In addressing global social challenges highlighted in the SDGs and other initiatives, we aim to achieve sustainable development in society and the Group by implementing the following:

- **Seek business opportunities and strive to solve challenges through business activities**
- **Recognize future risks for the Group and uphold our corporate social responsibility**

Challenges

Incorporation of ESG elements into management/strategies

- Reflect ESG considerations in management and strategy discussions at the Board of Directors, Company-wide Strategy Committee, and Corporate Sustainability Committee meetings
- Generate business involving business and R&D divisions and promote innovation

Improvement of ESG information disclosure

- Boost appeal to institutional investors, customers, and sustainability rating agencies
- Strengthen ESG dialogue

Creating social and corporate values through Blue Value™/Rose Value™

Blue Value™ and Rose Value™ help visualize our Group's efforts to address the challenges faced by society. We are working to expand the sales of our Blue Value™/Rose Value™ certified products as we believe that they provide a measure of how successful we are in achieving both social value and corporate value.

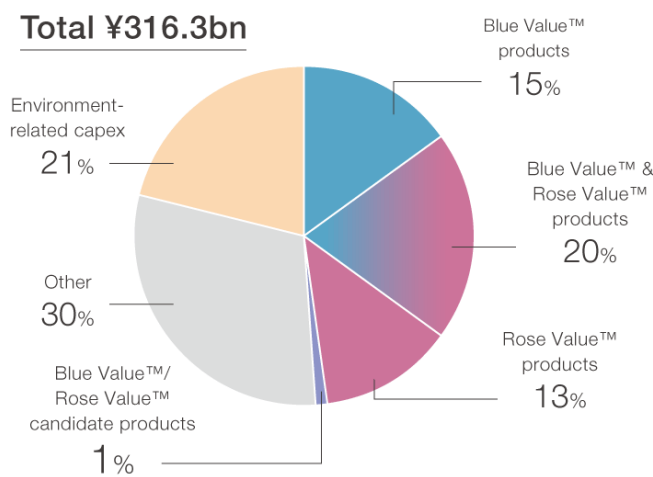
In order to encourage proactive investment that will lead to the growth of Blue Value™/Rose Value™ product sales, from fiscal 2019 we have made it mandatory that applications for large-scale investments include description of the opportunities and risks the project entails from the perspective of social challenges, such as by indicating the project's Blue Value™/Rose Value™ contributions and relevant SDG targets. This is a mechanism for reflecting ESG elements in investment decisions. It also provides an opportunity for our employees to think deeply about how they can contribute to solving these challenges. Starting in fiscal 2020, sales of Blue Value™/Rose Value™ certified products are being used as a management indicator for business divisions. By having each division incorporate medium- to long-term measures for expanding these products into their business strategies and even into their budgeting, it encourages each of them to take responsibility in this Group-wide effort. In addition, we are devoting our energy to developing future candidates of certified products by including Blue Value™/Rose Value™ perspectives from the stage of developing new research ideas and combining that with our stage management system.

Blue Value™ / Rose Value™

Investment planning form (Example)

Name of proposed project [_____]	
Name of div. [_____]	Applicant [_____]
Outline of investment plan	
Works [_____]	Plant [_____] Products [_____]
Purpose & details, total investment amount, execution plan [_____]	
Economic viability evaluation IRR [_____] % PP [_____] years	
Competitor analysis; business & marketing strategies; sales, profit, production, & headcount plans [_____]	
ESG elements	
◆ Related SDG Targets [_____] [_____] [_____]	
◆ Blue Value™/Rose Value™ contributions	
[_____] Reducing CO ₂	[_____] Enriching life and society
[_____] Conserving resources	[_____] Extending healthy life-span
[_____] Coexisting with nature	[_____] Protecting food
◆ Social challenges [_____]	
◆ GHG emissions CO ₂ increase or decrease [_____] ton/year	
Estimated carbon price [_____] yen	

FY2020 large-scale investments*



* Not including alliances, M&A, financial assistance, etc.
For FY2020–2022.

Addressing climate change and the problems with plastic with a view to transition to a circular economy

As we strive to realize a circular economy, we believe that climate change and the problems with plastic should be addressed together as a single, inseparable challenge. The creation of a new Climate Change/Plastics Strategy Department within the Corporate Sustainability Division in June 2020 was intended to embody that concept. This organization will play a leading role in gathering and analyzing the latest global trends and data and will reflect them in Company-wide strategies to accelerate our climate change policy and plastics strategy.

A range of discussions on promoting our sustainability strategy have been held in meetings of the Board of Directors and the Corporate Sustainability Committee. There was a debate, for example, between those, on the one hand, who feel that the difficulty in achieving short-term returns in businesses involving the recycling of resources and reducing environmental impact means that it cannot be left to individual divisions, and that instead we should allocate Company-wide budgets to speed up our efforts. On the other hand, others countered that if we shift them entirely to the Company-wide level, then it will weaken the sense of responsibility felt by each division. Based on this discussion, we have created a structure to promote our plastics strategy that allows us to oversee all related projects together. With this structure, we can monitor the progress of both projects by individual divisions and cross-organizational projects, and intend to speed up decisions such as on resource allocation and clarify the responsible divisions. With regard to climate change, the Corporate Sustainability Committee is discussing long-term policy with an eye to 2050 and beyond and is steadily disclosing information in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Also, from fiscal 2020, we began identifying climate change-related issues which are viewed as future opportunities and risks and setting targets in every division. As climate change responses are one of the key issues (materiality) of the Group, I think it is important that all divisions, not just certain ones, think about how those issues relate to themselves.

Climate Change and Problems with Plastic

Toward a review of key issues (materiality)

As seen in the table, the Group has selected 22 key issues. Since our review in 2016, when we were drafting the 2025 Long-Term Business Plan, there have been major changes in the environment, including a dramatic rise in the social demands related to climate change and the problems with plastic, the COVID-19 pandemic, and so on. Fiscal 2020 is also the year in which we plan to review the Long-Term Business Plan. Currently, as we look back on the past four years, we are discussing what should or should not be changed and what we want our company to look like in 2030 as we work toward 2050. We plan to revise the key issues to reflect such internal and external conditions and announce them together with the Long-Term Business Plan. I want us to tackle the selected key issues as an integrated part of our business strategy.

Key Issues (Materiality)

Issues for which the Group's business has an impact on society	Issues for which the Group's business can contribute to society
Climate change responses (reduction of GHG emissions)	Low environmental footprint products and services
Air environment preservation	Development of renewable energy
Water resource protection and control	Shift to urbanization and smart cities
Biodiversity	Declining birth rate and aging population
Industrial waste control	Advancement of medical and pharmaceutical fields
Efficient use of resources	Food problems
Stable supply of industrial materials	Underlying issues
Optimization of production	Sustainable procurement
Safety and prevention	Compliance
Product stewardship	
Quality of products and services	
Employment and human resources	
Labor conditions	
Stakeholder engagement	

Promoting sustainability strategy throughout the entire Company

Over the past two years, our management has focused on promoting our sustainability strategy throughout the Company and has achieved steady results. In addition to continuing top-down efforts to communicate this strategy, in fiscal 2020 we will also concentrate on gaining wider understanding among mid-career and worksite employees. Our goal is to create an environment where every employee is conscious of sustainability in their daily work so that it is naturally tied to their actions.

Sustainability in the Mitsui Chemicals Group



Sustainability Management

- Management System
- Stakeholders
- Support Initiatives

The 2025 Long-term Business Plan Environmental and Social Targets

Key Issues (Materiality)

- Process for Identifying Key Issues
- Key Issues and Initiatives

Climate Change and Problems with Plastic

- Management System
- Plastics Strategies
- Climate Change Policy
- Implementing the recommendations of the TCFD

Blue Value™ / Rose Value™

- Visualizing Contributions to the Environment and Society
- Blue Value™ — Environmental Contribution Value
- Rose Value™ — QOL Improvement Contribution Value
- Blue Value™ / Rose Value™ Products

Management System

Policy and Basic Approach

The SDGs and other initiatives that aim to solve the challenges faced by society continue to gain momentum worldwide and companies are increasingly being asked to take action. For a sustainable society to be realized, it is essential that companies themselves must achieve growth, but at the same time create social value by providing solutions. To this end, it is now even more important that companies accurately identify opportunities and risks from an ESG perspective and reflect them into management.

In deepening our triple bottom line (economy, environment, and society) management approach and committing to a management that places ESG elements at its core, the Group established the Corporate Sustainability Division in April 2018. We are now working to incorporate ESG elements into management/strategies and improve how we disclose ESG information to our stakeholders.

Please refer [here](#) for progress of incorporating ESG elements into management/strategies.

Sustainability in the Mitsui Chemicals Group

In addressing global social challenges highlighted in the SDGs and other initiatives, we aim to achieve sustainable development in society and the Group by implementing the following:

- ▶ Seek business opportunities and strive to solve challenges through business activities
- ▶ Recognize future risks for the Group and uphold our corporate social responsibility

Challenges

Incorporation of ESG elements into management/strategies

- Reflect ESG considerations in management and strategy discussions at the Board of Directors, Company-wide Strategy Committee, and Corporate Sustainability Committee meetings
- Generate business involving business and R&D divisions and promote innovation

Improvement of ESG information disclosure

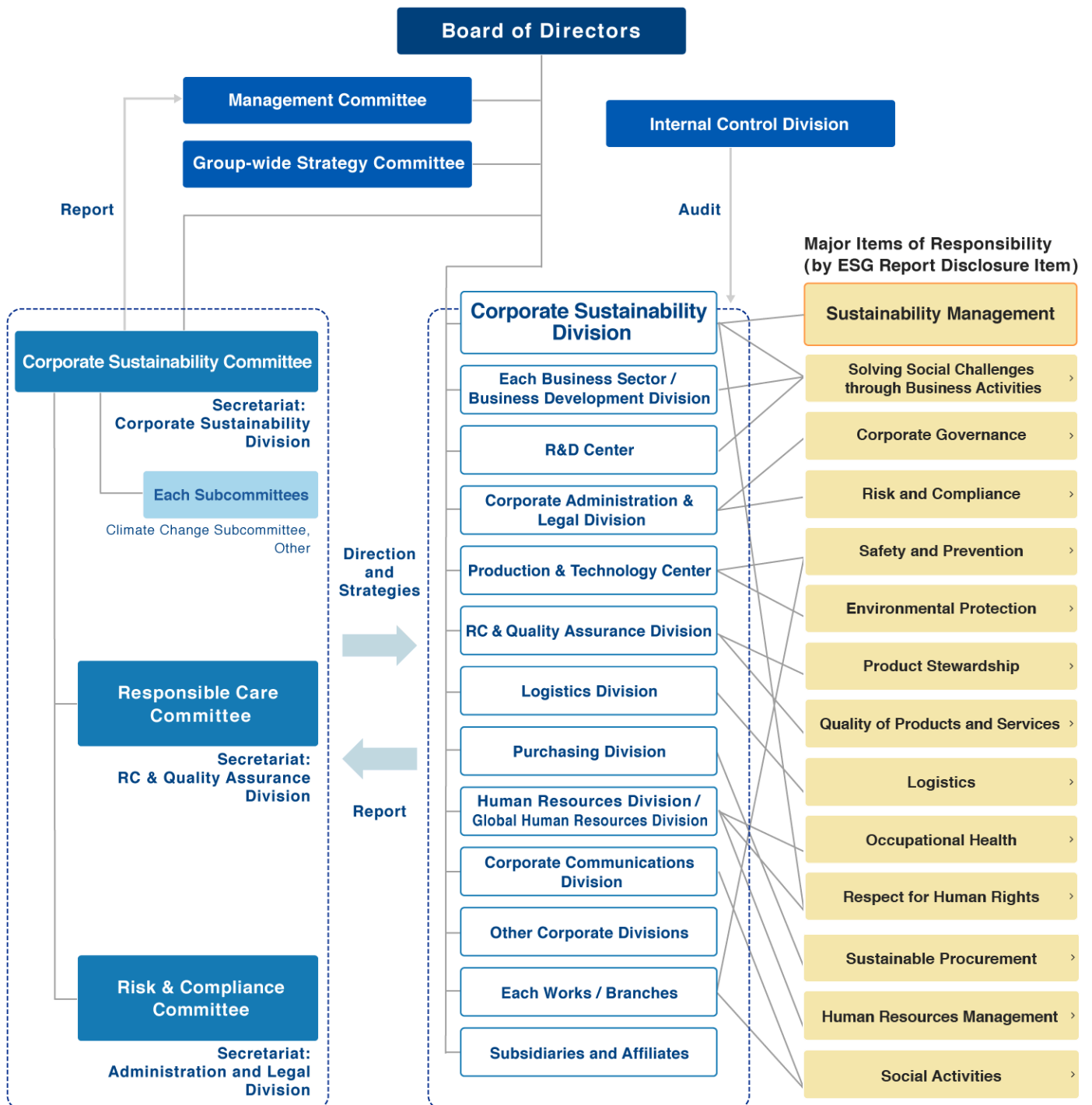
- Boost appeal to institutional investors, customers, and sustainability rating agencies
- Strengthen ESG dialogue

System and Responsible Officers

The person in charge is the responsible director in charge of Corporate Sustainability Committee.

With ESG concerns as a central feature of the Group's sustainability management, steps are being taking to discuss the Group's overall direction at various organizations including the Board of Directors and Corporate Sustainability Committee. In addition, the management of progress of environmental and social targets under the 2025 Long-term Business Plan as well as key issues (materiality) are also undertaken within this system.

Sustainability Management System



* Click to link to each page.

Corporate Sustainability Committee

The CSR Committee was reorganized as the Corporate Sustainability Committee in June 2018. This reorganization reflects the need to address the demands placed on the Company by society and to further bolster sustainability management initiatives from an ESG perspective. The roles of the committee are presented as follows.

- Deliberate on the Group's policies, strategies, plans, and measures as they relate to the promotion of ESG
- Clarify the important issues and direction of efforts to strengthen and improve initiatives of each committee (Responsible Care Committee, Risk & Compliance Committee)
- Conduct performance evaluations of the Group's ESG initiatives and oversee internal distribution of results
- Consider other important matters relating to ESG

In principle, this committee meets twice a year.

Should a critical matter arise, including the need to consider an important item relating to ESG or to put forward an initiative, the Chairperson of the Corporate Sustainability Committee establishes a subcommittee to assume responsibility for the item.

Details of the committee's deliberations and activity results are reported to the Management Committee. In addition, the Management Committee's authorization is obtained for matters of particular importance.

Composition of the Corporate Sustainability Committee

Chair	President
Vice Chair	Responsible director in charge of the Corporate Sustainability Committee
Members	Executive officers with specific titles, Business Sector presidents, Center Executive of the R&D Center, Center Executive of the Production & Technology Center, General Manager of the Corporate Planning Division, General Manager of the Human Resources Division, General Manager of the RC & Quality Assurance Division, General Manager of the Corporate Administration & Legal Division, General Manager of the Corporate Communications Division, General Manager of the Corporate Sustainability Division, other members appointed by the Chairperson
Secretariat	Corporate Sustainability Division

* Corporate auditors also attend committee meetings and are able to offer their opinions whenever necessary.

* The chairperson is able to call on the attendance of executive officers and general managers who have an interest in the matters being deliberated and ask for their explanation and opinion.

Stakeholders

The Mitsui Chemicals Group states “Contribute broadly to society” as its Corporate Mission over the five social contribution areas. We believe that we have to remain sensitive to society’s demands and expectations in order to realize this mission and sustainably develop our business with society. In line with this mission, we deepen communications with our stakeholders, on whom our business activities have an impact.

Corporate Mission

Contribute broadly to society by providing high-quality products and services to customers through innovation and the creation of materials, while keeping in harmony with the global environment.



Shareholders and Investors

The Mitsui Chemicals Group fulfills accountability by holding constructive dialogs with our shareholders and investors and discloses appropriate information in a fair, transparent, and timely manner. We examine the comments we welcome from shareholders and investors to improve our business management and information disclosure. We aim to enhance our corporate value through these efforts.

Priority issues	Major approaches
<ul style="list-style-type: none"> • Constructive dialogs • Disclosing appropriate information in a fair, transparent, and timely manner • Reflecting opinions from shareholders and investors in our business management 	<ul style="list-style-type: none"> • Shareholders' meeting (once per year) • Financial results briefing (4 times per year) • CEO Explanation business Result & Outlook (twice per year) • Small meetings (twice per year) • Individual meetings (approx. 400 times per year) • Briefings per area, such as ESG • Plant tour (2 to 4 times per year) • Mitsui Chemicals Report & Mitsui Chemicals Group ESG Report (each once per year) • Website (updated as required) • Contact point

Customers

Making the best use of the Group's comprehensive resources, we aim to offer optimum solutions to our customers through our technologies, products, and services. The quality management of our products and services ensures that we can meet our customers' expectations.

Priority issues	Major approaches
<ul style="list-style-type: none"> • Providing optimum solutions • Providing high-quality products and services • Providing appropriate information of products and services 	<ul style="list-style-type: none"> • Website (updated as required) • Product and technological presentations • Participating in exhibitions • Contact point

Suppliers

It is important to fulfill our environmental and social responsibilities across the entire supply chain from a global perspective. To achieve this, we need to form strong partnerships with our suppliers. Our collaborations should contribute to the sustainable development of both suppliers and the Mitsui Chemicals Group.

Priority issues	Major approaches
<ul style="list-style-type: none"> • Fair and honest transactions • Partnerships that aim at mutual sustainable development 	<ul style="list-style-type: none"> • Supplier sustainability evaluation and support for improvement

Local Communities

We would like to contribute to the sustainable development of local communities by operating our business in each site stably and safely. This cannot be attained without the trust of the community, and as part of this approach we create a number of opportunities to communicate with local residents.

Priority issues	Major approaches
<ul style="list-style-type: none">• Fulfilling social responsibilities• Gaining trust of local communities• Collaboration with NGOs and NPOs	<ul style="list-style-type: none">• Opinion exchange meetings• Business site tours• Local newsletters• Laboratory Classes on the Wonders of Chemistry program• Disaster relief• Website (updated as required)

Industry, Government and Academia

We operate our business globally, adhering to the laws and regulations in each region.

We also endeavor to take the initiative in collaborations among industry, government, and academia, aiming at the sustainable development of both society and the Mitsui Chemicals Group.

Priority issues	Major approaches
<ul style="list-style-type: none">• Appropriate payment of taxes• Compliance with laws and regulations• Understanding the latest regulation trends• Suggestions toward developing industrial organizations or governmental policies• Open innovation under collaborations among industry, government, and academia	<ul style="list-style-type: none">• Reports to industry, government, and academia• Participating in industry-government- academia projects• Participating in industrial and academic organizations• Joint research

Employees

The Mitsui Chemicals Group aims to attain both the “happiness and self-fulfillment of employees” and the “sustainable growth of the company.” To realize these aims, we are committed to creating working environments where diverse human resources can perform their roles dynamically, exerting their full capabilities.

Priority issues	Major approaches
<ul style="list-style-type: none"> • Human resources development • Appropriate evaluation and compensation • Employee-friendly working environment • Diversity • Safety and prevention • Occupational health 	<ul style="list-style-type: none"> • Intranet (updated as required) • Company newsletter (4 times per year) • Training sessions • Employee Engagement Survey (once every 2 to 3 years) • Labor-management discussion • Health and Safety Committee meetings

Support Initiatives

UN Global Compact

We signed up to [the UN Global Compact](#) in January 2008. In doing so, Mitsui Chemicals acknowledged its support and commitment to help tackle a wide range of global challenges and to promote sustainable growth as a responsible corporate citizen. In addition, Mitsui Chemicals participates in each of the subcommittees of the UN Global Compact Network Japan and is working to gather information. The Mitsui Chemicals Group will help resolve many of the challenges confronting the world today through its business activities while taking into consideration the 10 principles espoused under the United Nations Global Compact.



The 10 Principles of the UN Global Compact and Major Initiatives in the Mitsui Chemicals Group

Human Rights		
Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and	Respect for Human Rights Sustainable Procurement Human Resources Management
Principle 2	make sure that they are not complicit in human rights abuses.	
Labour		
Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	Respect for Human Rights Sustainable Procurement Human Resources Management
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	Blue Value™ / Rose Value™

	to environmental challenges;	Responsible Care Management
Principle 8	undertake initiatives to promote greater environmental responsibility; and	Environmental Protection
		Product Stewardship
Principle 9	encourage the development and diffusion of environmentally friendly technologies.	Sustainable Procurement
Anti-Corruption		
Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.	Action Guidelines
		Risk and Compliance

Task Force on Climate-related Financial Disclosures (TCFD)

Mitsui Chemicals, Inc. announced that its support of recommendations from [the Task Force on Climate-related Financial Disclosures \(TCFD\)](#). We state that Mitsui Chemicals continues to deepen its understanding of climate-related risks and opportunities, discloses its efforts.

[Mitsui Chemicals announced that it would endorse the recommendations issued by the Task Force on Climate-related Financial Disclosures \(TCFD\).](#)

[Implementing the recommendations of the TCFD](#)



Alliance to End Plastic Waste (AEPW)

As the founding member, Mitsui Chemicals Inc. joined [the Alliance to End Plastic Waste \(AEPW\)](#), established in January 2019. The Alliance is committed to the goal of investing \$1.5 billion over the next five years from its foundation to help end plastic waste and contribute to a sustainable society.

[Mitsui Chemicals Joins New Global Alliance Formed to Take on Plastic Waste in the Environment](#)
[Plastics Strategies](#)



ZERO by 40: Agriculture Industry Unites to Help Eradicate Malaria by 2040

At the London Commonwealth Heads of Government Meeting, the world's leading Crop Protection companies jointly announce their commitment to support the research, development and supply of innovative products to save lives and help eradicate malaria by 2040.



The World Economic Forum (WEF)

Mitsui Chemicals joined [the World Economic Forum \(WEF\)](#) in September 2020. The World Economic Forum is an international organization (not-for-profit foundation) for public-private cooperation to improve global issues. Through participation in the WEF, we are striving “to realize a sustainable corporate group with a global presence” by working to address critical global issues together with global leaders.

International Council of Chemical Associations (ICCA) and Chemical Industry Associations in Each Country

The Mitsui Chemicals Group is taking leadership in [the International Council of Chemical Associations \(ICCA\)](#) and Chemical Industry Association in each country*.

Our membership of the International Council of Chemical Associations (ICCA) includes the then Company president, who has continued as a director for the six years since 2014. Since 2016, the Company’s councilor has included the vice-chairperson of the Responsible Care Leadership Group (RC-LG) for four years and the chairman of the Asia-Pacific Responsible Care Organization (APRO). Our employees have also chaired the Joint Capacity Building Task Forces of each Leadership Group for the five years since 2015 and the Energy and Climate Change Leadership Group for the two years since 2018.

Our membership of the Japan Chemical Industry Association (JCIA) includes the general manager of the RC & Quality Assurance Division, who has been a JCIA board member since the 2010 establishment of a Responsible Care Committee and who has also worked as a member of the Chemical Management Committee since 2010.

Moreover, the Japan Initiative for Marine Environment (JaIME) was established by five chemical industry organizations such as JCIA in September 2018. We have been participated in JaIME since then.

* Chemical Industry Association in each country and region :

The Japan Chemical Industry Association (JCIA), the Association of International Chemical Manufacturers (AICM, China), the Taiwan Responsible Care Association (TRCA), the Singapore Chemical Industry Council (SCIC), the Federation of Thai Industries (FTI), the American Chemistry Council (ACC), and the European Chemical Industry Council (CEFIC)

Other Major Initiatives Supported by the Company; Major Organizations of which the Company is a Member

[Japan Business Federation \(Keidanren\)](#)

[Japan Petrochemical Industry Association \(JPCA\)](#)

The 2025 Long-term Business Plan

Environmental and Social Targets

The 2025 Long-term Business Plan embodies our strong commitment toward realizing sustainable growth and development along with society. We will make every effort to contribute to solving social challenges through our business activities and engage in management that not only emphasizes “economic concerns,” but also strikes a proper balance with the environment and society.

In formulating the 2025 Long-term Business Plan, we clarified our view of a targeted future society while revisiting our Corporate Mission and Corporate Target. This was after taking into consideration the requirements of society and other factors including mega trends and Sustainable Development Goals (SDGs).

Based on this, the Mitsui Chemicals Group has identified three environmental and social targets under its 2025 Long-term Business Plan after giving due consideration to its contribution to and impact on society through its business activities.

In addition, the Group took steps to reconsider key issues (materiality) when putting in place its 2025 Long-term Business Plan. Recognizing that efforts to promote key issues (materiality) will better allow us to resolve social challenges and achieve the targets set out under the 2025 Long-term Business Plan, we will continue to pursue key issues (materiality).

Going forward, we will continue to confirm the expectations of society and issues associated with SDGs, and will work to make meaningful progress toward our 2025 Long-term Business Plan.



**Maximize Products and Services to Achieve a Low-carbon,
 Recycling-oriented, and Cohesive Society in Harmony with
 the Environment**

The Mitsui Chemicals Group will make every effort to stimulate innovation across the entire product lifecycle from raw materials through processing to use and disposal in a bid to protect the global environment while at the same time promoting economic growth.

**Maximize Products and Services to Achieve Better Quality of
 Life (QOL) and a Smart Society**

The Mitsui Chemicals Group will help realize a healthy and happy society as well as a smart society in which all people can lead rich and convenient lives.

**Pursue thorough Safety, High Quality, and Fairness across
 the Entire Supply Chain**

The Mitsui Chemicals Group will work diligently to ensure the safety as well as high quality and fairness across the entire supply chain that is necessary to reform its business portfolio and expand globally.

Maximize Products and Services to Achieve a Low-carbon, Recycling-oriented, and Cohesive Society in Harmony with the Environment

Expand sales of environmentally oriented products and services

Expand products and services that help realize a low-carbon, recycling-oriented, and cohesive society in harmony with the environment across the entire value chain.

2025 Targets	Blue Value™ products sales ratio: 30% or more Blue Value™ — Environmental Contribution Value
FY 2019 Results	18%
FY 2020 Targets	New Blue Value™ and Rose Value™ certifications: 15 or more Pre-launch Blue Value™ and Rose Value™ candidate products: Identify 15 or more

Reduce environmental impact in production and logistics

Reduce Greenhouse Gas (GHG) and environmentally harmful substance emissions and efficiently utilize resources throughout the Group as a whole.

2025 Targets	GHG emissions reduction rate ^{*1} : 25.4% or more compared with FY 2005 (FY2030) Environmental Protection
FY 2019 Results	27.7%
FY 2020 Targets	GHG emissions reduction: 50 thousand tons or more compared with the previous fiscal year

2025 Targets	Energy intensity reduction ^{*2} : Continue at 1% or above (5-year annual reduction rate) Environmental Protection
FY 2019 Results	▲ 0.4%
FY 2020 Targets	Energy intensity reduction: 1% or more (5-year annual reduction rate), or 1% or more (annual reduction rate with FY2009 as base year)

^{*1} Mitsui Chemicals, Inc. and consolidated subsidiaries in Japan

^{*2} Mitsui Chemicals, Inc. only







Related SDGs	Related Key Issues
         	<p>Climate change responses (reduction of GHG emissions)</p> <p>Air environment preservation</p> <p>Water resource protection and control</p> <p>Biodiversity</p> <p>Industrial waste control</p> <p>Efficient use of resources</p> <p>Low environmental footprint products and services</p> <p>Development of renewable energy</p>

Maximize Products and Services to Achieve Better QOL and a Smart Society

Expand sales of products and services that contribute to a healthy and happy society

Expand products and services that can improve QOL by addressing such issues as the declining birth-rate and aging population, extending healthy life expectancy, and the food problem.

2025 Targets	Rose Value™ products sales ratio: 30% or more Rose Value™ — QOL Improvement Contribution Value
FY 2019 Results	16%
FY 2020 Targets	New Blue Value™ and Rose Value™ certifications: 15 or more Pre-launch Blue Value™ and Rose Value™ candidate products: Identify 15 or more

Related SDGs	Related Key Issues
        	Shift to urbanization and smart cities Declining birth-rate and aging population Advancement of medical and pharmaceutical fields Food problems

Pursue thorough Safety, High Quality, and Fairness across the Entire Supply Chain

Ensure safety

Maintain high levels of safety even in the face of diversifying human resources, facilities, and technologies associated with ongoing global growth and business portfolio transformation.

2025 Targets	Incidence of major accidents: Continue at zero Safety and Prevention
FY 2019 Results	0
FY 2020 Targets	0

2025 Targets	Significant occupational injury frequency: Continue at or below 0.15 Safety and Prevention
FY 2019 Results	0.31
FY 2020 Targets	0.15 or less

Provide high-quality products and services

Ensure the stable supply of products that satisfy customers' requirements at a high level.

2025 Targets	Incidence of customer non-conformance: 10 ppm or less Quality of Products and Services
FY 2019 Results	Number of complaints (Company-responsible) ^{*2} : Increased (compared with FY2017)
FY 2020 Targets	Number of complaints (Company-responsible) ^{*2} : Reduce by 10% or more (compared with FY2017)

^{*2} Mitsui Chemicals, Inc. only

Implement product stewardship

Implement risk management across the supply chain through the risk assessment of products and provision of safety information to customers and other stakeholders.

2025 Targets	Product risk assessment implementation rate^{*2} : 99% or more (FY2020) Product Stewardship
FY 2019 Results	99% or more
FY 2020 Targets	99% or more; formulate new assessment indicators

2025 Targets	Provision of latest product safety information^{*2} : Continue at 100% Product Stewardship
FY 2019 Results	100%
FY 2020 Targets	100%

^{*2} Mitsui Chemicals, Inc. only

Continue as a company that is fair and trusted by society

Thoroughly comply with all statutory and regulatory requirements and prevent misconduct in all global business activities.

2025 Targets	Incidence of major legal and regulatory violations : Continue at zero Risk and Compliance

FY 2019 Results	1
FY 2020 Targets	0

Encourage sustainability initiatives of business partners.

2025 Targets	Supplier sustainability assessments and improvement support (sustainable procurement ratio of 70% or more) Sustainable Procurement
FY 2019 Results	44% ^{*2}
FY 2020 Targets	Complete preparations on survey for sustainable procurement in FY2021











^{*2} Mitsui Chemicals, Inc. only

Enable Group employees to thrive at work and make the most of their potential.

2025 Targets	Ratio of women in management positions (manager-level or above) ^{*3} : 10% or more Human Resources Management
FY 2019 Results	3.0%
FY 2020 Targets	4.0%

2025 Targets	Increase employee engagement Human Resources Management
FY 2019 Results	Action plan registration rate 96%
FY 2020 Targets	Implement action plans

^{*3} Mitsui Chemicals, Inc. registered employees

Related SDGs	Related Key Issues
         	Safety and prevention Product stewardship Quality of products and services Employment and human resources Labor conditions Sustainable procurement Compliance

* Please access respective links to view progress toward each target.

Key Issues (Materiality)

Process for Identifying Key Issues

Key Issues and Initiatives

Process for Identifying Key Issues

We at the Mitsui Chemicals Group believe that chemistry must play a prominent role in addressing a variety of environmental and social challenges. In accordance with its Corporate Mission of "keeping in harmony with the global environment," the Mitsui Chemicals Group has contributed to solving social challenges through its business activities that emphasize striking a balance between economic, environmental and social considerations. We have further clarified our in-house initiatives that are related to these environmental and social considerations by formulating the 2025 Long-term Business Plan and are also based on the Paris Agreement*, Sustainable Development Goals (SDGs), and recent social trends. Moreover, we will address issues found throughout the supply chain and are a concern for our various stakeholders.

On the basis of these initiatives and with the aim of reaching the environmental and social targets raised in the 2025 Long-term Business Plan, the Mitsui Chemicals Group has reviewed these key issues while taking into consideration the opinions of its stakeholders, the qualities of its businesses and the characteristics of the regions in which it operates, and international guidelines to measure the impact of the Group's business activities. We will review as necessary these key issues in light of social trends and changes in its business activities.

* The Paris Agreement

The Paris Agreement was adopted at the 21st Conference of the Parties (COP21) of the United Nations Framework Convention on Climate Change held in December 2015. The agreement has set a target of keeping global average temperatures from rising 2°C compared to temperatures before the industrial revolution by the end of the century while also urging parties to "pursue efforts" to limit it to 1.5 degrees. Advanced and emerging countries alike have also earnestly agreed to address the implementation of those SDGs under the agreement.

Step 1: Identification

Pick out issues from the requirements of ISO 26000, the GRI, and other international guidelines, as well as through engagement with various stakeholders. Identify environmental and social issues the chemical industry must help resolve from the standpoint of contributing to society through business activities.

Step 2: Prioritization

For each issue, assess the degree of importance to both stakeholders and the Group. Itemize common items so that the perspectives of stakeholders can be cross-referenced with the level of importance to the Group, and consider what measures the Group needs to implement. Assess the degree of importance to the Group in light of the Group's Corporate Mission, Action Guidelines, and business strategies. Determine priority with a quantitative assessment and then identify the key issues.

Step 3: Validation

Solicit opinions from external experts and have the Corporate Sustainability Committee check the completeness that all the particular items are covered and confirm the validity of the identified issues.

Step 4: Review

Have the Corporate Sustainability Committee periodically review the process for identifying key issues.

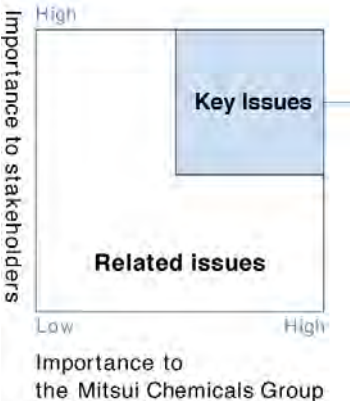
Key Issues (Materiality)

Process for Identifying Key Issues

Key Issues and Initiatives

Key Issues and Initiatives

The identified key issues were classified as "issues for which the Group's business has an impact on society," "issues for which the Group's business can contribute to society," and "underlying issues."



Issues for which the Group's business has an impact on society	Issues for which the Group's business can contribute to society
Climate change responses (reduction of GHG emissions)	Low environmental footprint products and services
Air environment preservation	Development of renewable energy
Water resource protection and control	Shift to urbanization and smart cities
Biodiversity	Declining birth-rate and aging population
Industrial waste control	Advancement of medical and pharmaceutical fields
Efficient use of resources	Food problems
Stable supply of industrial materials	
Optimization of production	
Safety and prevention	
Labor conditions	
Product stewardship	
Quality of products and services	
Employment and human resources	
Stakeholder engagement	
	Underlying issues
	Sustainable procurement
	Compliance

Issues for which the Group's business can contribute to society

Low environmental footprint products and services

The Mitsui Chemicals Group's Vision

Reducing environmental impact including addressing climate change, we are working to achieve a low-carbon, sound material-cycle society in harmony with nature over the long term that curbs environmental burdens to the greatest extent possible throughout the entire value chain.

The Mitsui Chemicals Group's initiatives

- **Reduce the use of raw materials**
- **Switch to non-fossil fuel resources and substances with lower environmental burdens**
- **Reduce environmental burdens mainly by lowering energy consumption in manufacturing and processing processes**
- **Develop lightweight materials for use mainly in automobiles**

[Climate Change and Problems with Plastic](#)

[Blue Value™ / Rose Value™](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Development of renewable energy

The Mitsui Chemicals Group's Vision

Meet the growing demand for energy accompanying the economic development of developing countries and emerging markets, reduce accompanying environment burdens, and realize a society that makes greater use of renewable energy.

The Mitsui Chemicals Group's initiatives

- **Develop components/materials for such items as power generation equipment and storage batteries to increase the use of renewable energy**
- **Improve photovoltaic power generation plant operational efficiency and assist with related investment decisions**

[Climate Change Policy](#)

[Renewable Energy-related Business](#)

[Blue Value™ / Rose Value™](#)

Shift to urbanization and smart cities

The Mitsui Chemicals Group's Vision

Enhancement of smart society and urban functions that bring people and various things together by leveraging the advantages found in concentrating social infrastructure amid progressive urbanization.

The Mitsui Chemicals Group's initiatives

- **Develop and provide solutions through technologies and products that contribute to the spread of automated driving and robots**

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

[Blue Value™ / Rose Value™](#)

Declining birth-rate and aging population

The Mitsui Chemicals Group's Vision

Realization of a society that provides abundant, high-quality lifestyles to children and the elderly amid changing demographics.

The Mitsui Chemicals Group's initiatives

- **Develop and provide products that contribute to comfortable lifestyles in such areas as materials used to make disposable diapers and underwear**
- **Develop and provide products that contribute to comfortable lifestyles including innovative packaging that makes food easier to eat**
- **Develop and provide products that support extensive family care**

[Blue Value™ / Rose Value™](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Advancement of medical and pharmaceutical fields

The Mitsui Chemicals Group's Vision

Realization of healthy and comfortable lifestyles in an aging society by improving the quality of medical treatments.

The Mitsui Chemicals Group's initiatives

- **Develop and provide products that help people use their entire bodies (head, neck, chest, hands, and feet) and five senses (sight, hearing, smell, taste, and touch)**
- **Develop and provide products that contribute to extend healthy life expectancy, including pharmaceutical packaging materials and infusion bags**
- **Develop and provide products that help prevent infectious diseases**
- **Develop diagnostic technologies that leverage an understanding of chemistry**

[Blue Value™ / Rose Value™](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Food problems

The Mitsui Chemicals Group's Vision

Provide sufficient nutrition to everyone and improve dietary habits throughout society by increasing food productivity and reducing food loss and waste.

The Mitsui Chemicals Group's initiatives

- **Develop and provide products that help increase food production**
- **Develop and provide products that extend expiry dates and reduce food loss**
- **Develop and provide products that help reduce food waste while contributing stable food distribution**

[Blue Value™ / Rose Value™](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Issues for which the Group's business has an impact on society

Climate change responses (reduction of GHG emissions)

The Mitsui Chemicals Group's Vision

In light of the impact of climate change, significantly reduce and mitigate the effect of greenhouse gases emitted during the course of our business activities.

The Mitsui Chemicals Group's initiatives

- **Address climate change**

[Climate Change and Problems with Plastic](#)

[Responsible Care Policy](#)

[Environmental Protection Management System](#)

[Environmental Protection GHG and Energy](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Air environment preservation

The Mitsui Chemicals Group's Vision

In addition to complying with the laws and regulations of individual countries, the Mitsui Chemicals Group controls gas emissions and reduces the impact of chemical substances leaking into the atmosphere.

The Mitsui Chemicals Group's initiatives

- **Manage substances subject to the PRTR Act**
- **Preserve the air environment**

[Responsible Care Policy](#)

[Environmental Protection Management System](#)

[Environmentally Hazardous Substances](#)

Water resource protection and control

The Mitsui Chemicals Group's Vision

Realization of environments that allow for the efficient use of water by complying with laws and regulations of individual countries, recycling, and appropriately managing and improving the handling of such water contaminants.

The Mitsui Chemicals Group's initiatives

- **Preserve water resources**

[Climate Change Policy](#)

[Responsible Care Policy](#)

[Environmental Protection Management System](#)

[Water](#)

[Environmentally Hazardous Substances](#)

Biodiversity

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group takes into consideration biodiversity in its business operations across the entire value chain and is contributing to sustainable environmental conservation.

The Mitsui Chemicals Group's initiatives

- **Preserve Biodiversity**

[Responsible Care Policy](#)

[Environmental Protection Management System](#)

[Biodiversity](#)

Industrial waste control

The Mitsui Chemicals Group's Vision

We continue to minimize the amount of industrial waste produced at all of our domestic and overseas manufacturing sites and reduce final landfill waste volume.

The Mitsui Chemicals Group's initiatives

- **Reduce industrial waste**

[Responsible Care Policy](#)

[Environmental Protection Management System](#)

[Industrial Waste](#)

Efficient use of resources

The Mitsui Chemicals Group's Vision

More efficiently use fuel and resources at domestic and overseas manufacturing sites (including product raw materials) and further undertake the creation of innovative process technologies.

The Mitsui Chemicals Group's initiatives

- **Develop environmentally friendly production technologies**

[Climate Change and Problems with Plastic](#)

[Responsible Care Policy](#)

[Environmental Protection Management System](#)

[Environmental Protection GHG and Energy](#)

Stable supply of industrial materials

The Mitsui Chemicals Group's Vision

Stably provide industrial materials throughout the wide-ranging global supply chain in order to achieve sustainable economic growth and an abundant society.

The Mitsui Chemicals Group's initiatives

- **Restructure to realize stable procurement and supply**

[Safety and Prevention](#)

[Sustainable Procurement](#)

Optimization of production

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group contributes to the sustainable development of regions by optimizing production systems and facilities that leverage its expertise throughout the global supply chain.

The Mitsui Chemicals Group's initiatives

- **Establish an optimal production system based on frontline capabilities**

[Safety and Prevention](#)

[Human Resources Development](#)

Safety and Prevention

The Mitsui Chemicals Group's Vision

Aim to be recognized by society as a company with an exemplary safety record.

The Mitsui Chemicals Group's initiatives

- **Safety and Prevention**

[Responsible Care Policy](#)

[Safety and Prevention](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Labor conditions

The Mitsui Chemicals Group's Vision

Engage in health management by enhancing tangible measures such as improving work environments and facilities to enable employees to continue contributing to business sustainability as well as pursuing intangible measures that focus on healthcare.

The Mitsui Chemicals Group's initiatives

- **Create an employee-friendly working environment**

[Human Resources Management Management System](#)

[Employee-friendly Working Environment](#)

[Responsible Care Policy](#)

[Occupational Health](#)

Product stewardship

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group strictly adheres to laws and regulations as well as its own voluntary standards throughout the entire supply chain. In addition, the Group will take steps to minimize the negative impact of chemicals on people's health and the environment by the year 2020 as part of its product stewardship activities.

The Mitsui Chemicals Group's initiatives

- **Engage in product stewardship**

[Responsible Care Policy](#)

[Product stewardship](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Quality of products and services

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group will improve quality control including upstream areas throughout the entire supply chain as well as increase customer satisfaction by winning their trust in the area of product quality.

The Mitsui Chemicals Group's initiatives

- Engage in quality management

[Responsible Care Policy](#)

[Quality of products and services](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Employment and human resources

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group is creating organizations that continue to drive innovation that takes into consideration equality, fairness, diversity, human rights, and living wages while giving our employees a sense of personal and professional motivation.

The Mitsui Chemicals Group's initiatives

- Develop human resources
- Ensure diversity

[Respect for Human Rights](#)

[Human Resources Management](#)

[The 2025 Long-term Business Plan Environmental and Social Targets](#)

Stakeholder engagement

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group meets the expectations of its stakeholders as a member of society while contributing to sustainable regional development by collaborating with our partners and the areas in which the Group operates to find solutions to social problems.

The Mitsui Chemicals Group's initiatives

- Dialog with shareholders and investors
- Dialog with industry, government, and academia
- Working in harmony with local communities
- Social activities

Underlying issues

Sustainable Procurement

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group will continue procurement activities throughout the supply chain that take into consideration its impact on society and the environment, fair and honest transactions, and respect for human rights.

The Mitsui Chemicals Group's initiatives

- Address conflict minerals
- Supplier sustainability evaluation and improvement support

Compliance

The Mitsui Chemicals Group's Vision

The Mitsui Chemicals Group will foster a corporate culture that encourages all employees to observe laws, regulations, and rules in individual countries, take actions in a transparent and appropriate manner, and make decisions and conduct themselves in an ethical manner.

The Mitsui Chemicals Group's initiatives

- Ensure legal compliance

Climate Change and Problems with Plastic

Management System

Plastics Strategies

Climate Change Policy

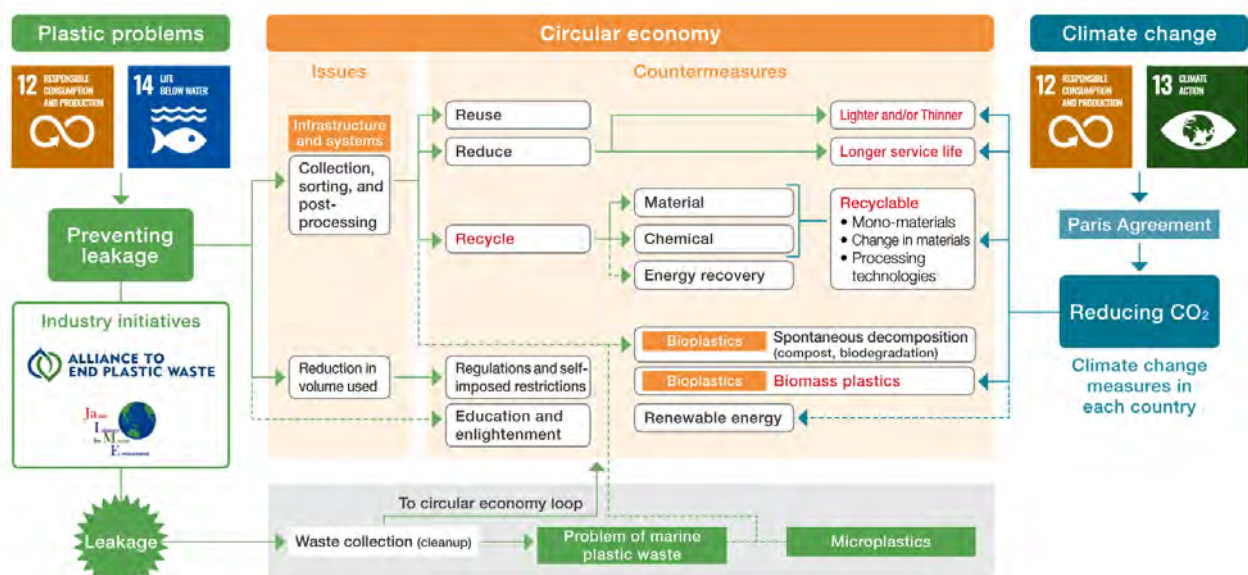
Implementing the recommendations of the
TCFD

Management System

Basic Approach

The Mitsui Chemicals Group is keenly aware that climate change and the problems pertaining to plastic waste are serious issues for society that must be earnestly addressed. Through our supply of chemicals and highly functional plastic products, we have contributed to improving convenience in people's lives and helped to solve challenges in society by, for example, reducing food loss and improving energy efficiency. At the same time, our business activities require the substantial use of fossil resources and energy, which emits large volumes of GHGs. Moreover, marine plastic waste has also become a problem that cannot be ignored in recent times. To resolve these issues, a transition is needed from a so-called one-way economy of consuming resources and disposing of products to a circular economy whereby resources are collected and products are recycled and reused. To that end, we believe an integrated approach is key to addressing climate change and the problems with plastic together. In June 2020, we established the Climate Change/Plastics Strategy Department within the Corporate Sustainability Division to strengthen our response.

We intend to introduce an LCA perspective and work towards realizing a circular economy from the angles of both climate change and problems with plastic.



System and Responsible Officers

The director in charge of the Corporate Sustainability Committee is the responsible officer.

[The Corporate Sustainability Committee](#) is responsible for deliberation on policy, strategy, planning, and countermeasures concerning climate change and plastic issues. The deliberation results are then reported to the Management Committee. The agendas are then, as necessary, discussed and deliberated also by the Group-wide Strategy Committee meetings and the Management Committee. The Board of Directors then finalizes the agendas and monitors them. The Corporate Sustainability Committee has formed subcommittees dedicated to climate change and plastic issues to discuss concrete actions.

[Sustainability Management > System and Responsible Officers](#)

Climate Change and Problems with Plastic

Management System

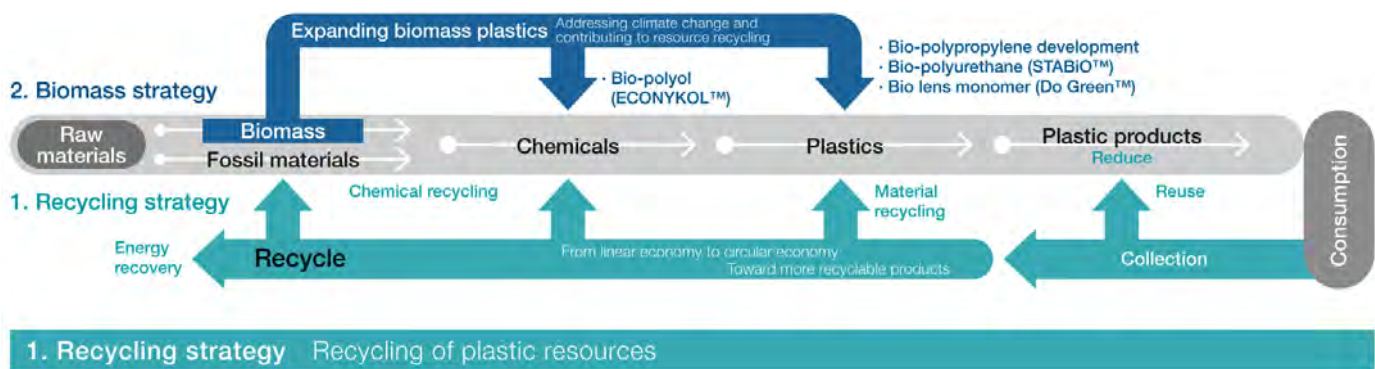
Plastics Strategies

Climate Change Policy

Implementing the recommendations of the
TCFD

Plastics Strategies

The Mitsui Chemicals Group has placed emphasis on (1) its recycling strategy and (2) its biomass strategy for its entire value chain in addressing issues involving plastic waste. By implementing these strategies and measures to address the problem of marine plastic waste, we aim to encourage the recycling of resources and promote a circular economy model.



Creation of Company-wide Structure to Promote Plastics Strategies

To accelerate our plastics strategies, we have built a Company-wide structure comprised of a working group and a steering committee. Under this structure, the working group gathers candidate projects that align with our plastics strategies from across the company, and works on firming up the details and conducting internal coordination of projects that would be difficult for one division to implement alone. The steering committee selects and approves projects from among those proposed by the working group, and decides on resource allocation in order to reach a swift decision.

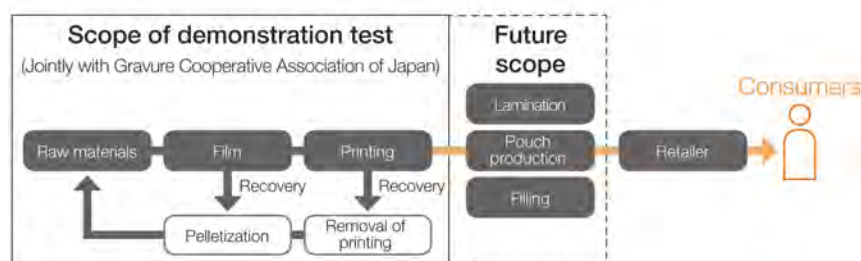


1. Recycling Strategy: Recycling of Plastic Resources

In the near future, policy incentives for products that contain recycled plastic and changing consumer attitudes may reduce sales opportunities for virgin plastic. Given this outlook, we intend to incorporate recycled materials into our business. We are exploring a broad range of possibilities, including chemical and material recycling of waste plastic, development of mono-material packaging, and support for startup businesses.

Start of materials recycling demonstration test for flexible packaging materials

We have begun demonstration testing for recycling waste plastic created from film processing and printing processes into film for flexible packaging materials. We are also testing a technology for cleaning and removing printing from printed film, and considering to broaden our scope to include waste plastic generated in post-printing processes.



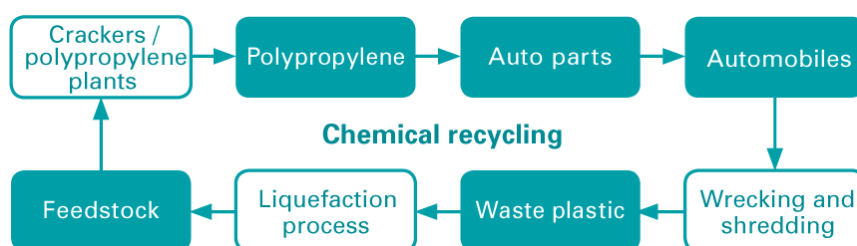
Partnering with the United Nations Environment Programme (UNEP) to support startups helping to reduce waste plastic

As a partner in the Asia Pacific Low Carbon Lifestyles Challenge initiative by UNEP, we have selected three innovative Asian startups. We will provide these companies with grants as well as technological guidance and management support in cooperation with UNEP.



Car-to-car recycling with technology to turn auto scrap plastic into oil

In Japan, pursuant to the Automobile Recycling Law, metal is recovered from discarded automobiles and then waste plastic is recovered from shredder dust. Waste plastic accounts for around 30% of shredder dust, most of which is used as a fuel. We are working together with automotive companies and the like to develop chemical recycling technology so as to break down waste plastic contained in shredder dust and turn it into chemical raw materials (feedstock recovery).



Pursuing ease of recycling with packaging materials made from mono-materials

Packaging film for food products poses the problem of being difficult to recycle because it is made by pasting together multiple materials with different characteristics in order to create a highly functional product that is hard to break and suitable for long-term storage. We are currently developing and proposing films and sheets made from mono-materials with the aim of realizing an easier recycling process.



2. Biomass Strategy: Expanding Lineup of Biomass Plastic Products

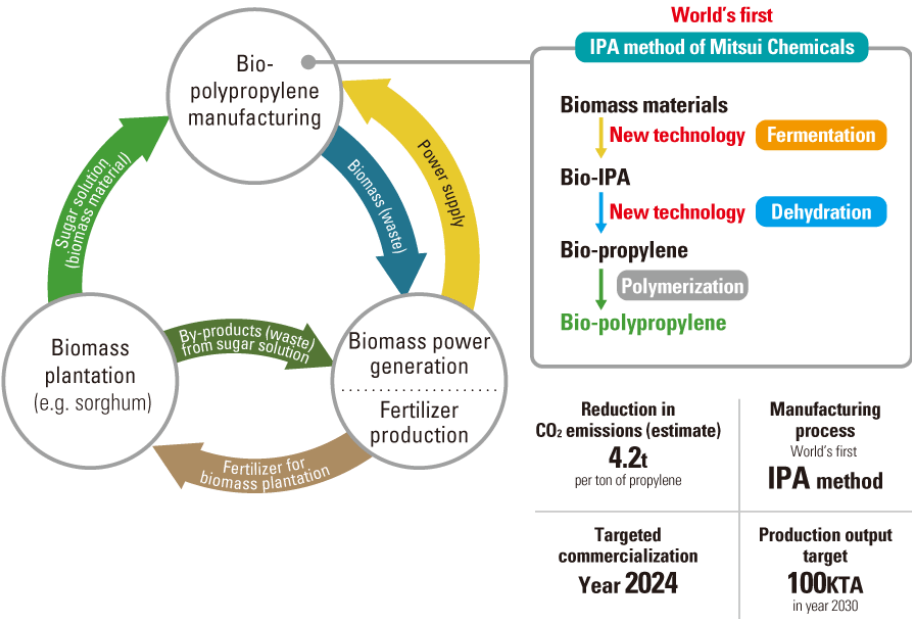
Biomass plastics made from plants—which grow by absorbing carbon dioxide—are expected to become widely available and more affordable up ahead. As we believe that a shift to biomass materials encourages the recycling of resources, curbs the use of new fossil fuels, and helps mitigate climate change, we aim to expand our lineup of biomass plastic products. In addition, we are taking on the challenge of establishing the world-first bio-polypropylene production process by harnessing our proprietary technology in which fermentation is a key reaction, with sights set on commercial application.

Sights set on world’s first bio-polypropylene commercial application

There are significant hurdles associated with manufacturing polypropylene from biomass materials and the technology has yet to be demonstrated on an industrial level. We are taking on the challenge of conducting world-first bio-polypropylene manufacturing trials by harnessing our new proprietary technology in which fermentation is a key reaction. By mainly using non-edible plants as the biomass raw material and converting the raw material residue to electricity, we aim to establish a sustainable technology that can be put to effective use.

Polypropylene

- ✓ Accounts for roughly 20% of global plastic production output. Demand expected to grow up ahead.
- ✓ Used for a broad range of applications, such as auto parts, consumer electronics, medical equipment, housing, and food packaging.



Problem of Marine Plastic Waste

The problem of marine plastic waste owes to plastics that have escaped from the process for recycling resources and ended up in marine environments due to inappropriate waste management. Stopping waste from flowing into rivers and the sea is of utmost importance, which requires a united effort by companies in the entire plastics value chain. We aim to tackle the issue of marine plastic waste by participating in global alliances such as the Alliance to End Plastic Waste (AEPW) and domestic alliances such as the Japan Initiative for Marine Environment (JaIME) and the Japan Clean Ocean Material Alliance (CLOMA).

Alliance to End Plastic Waste (AEPW)

Signatories to the AEPW include global companies involved in the plastic value chain, such as chemical and plastic manufacturers, retailers, and waste management companies. The Alliance is committed to the goal of investing \$1.5 billion until 2024 to help end plastic waste and contribute to a sustainable society by driving progress in four key areas: infrastructure development to manage waste, innovation, education & engagement activities and clean-up activities. (As of June 2020, the AEPW has 47 corporations actively participating.)



Mitsui Chemicals Joins New Global Alliance Formed to Take on Plastic Waste in the Environment

Japan Initiative for the Marine Environment (JaIME)

With the participation of Japanese corporations and organizations in the chemical industry, the Initiative communicates the findings on life cycle assessments (LCA) of the environmental impacts of various recycling methods. In February 2020, the activities it organized to support developing Asian countries in upgrading their plastic waste management capabilities included a training seminar that presented the knowledge and experience of the Japanese participants.



Clean Ocean Material Alliance (CLOMA)

The Alliance was established in 2019 as a platform for strengthening coordination among a broad range of interested parties across various industries. To date, the organization has engaged in technical information sharing among members and organized partner matching opportunities. In May 2020, the CLOMA Action Plan was released with the aim of achieving a package recycling rate of 60% by 2030 and a plastic product recycling rate of 100% by 2050. The activities it specifies include studying concrete measures and plans for demonstration tests.



Implementing the recommendations of the
TCFD

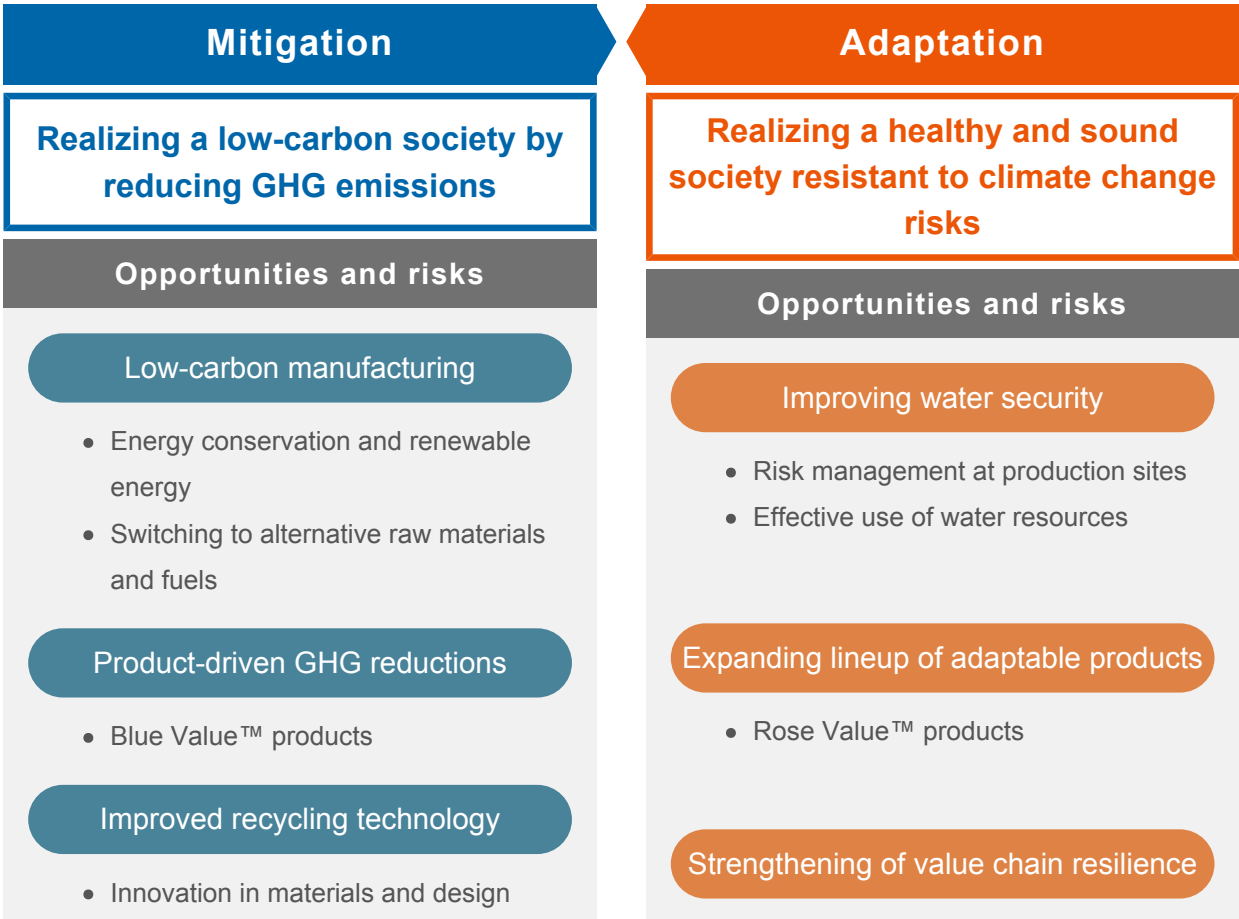
Climate Change Policy

We believe that priority must be afforded to solving climate change-related issues in order to realize an ideal future society.

The Mitsui Chemicals Group takes into account foreseeable opportunities and risks from a long-term perspective with a view to the year 2050 and tackles climate change issues with two approaches: mitigation and adaptation. With this in mind, we formulated a policy on addressing climate change that covers the entire global value chain.

Mitsui Chemicals Group Climate Change Policy

Taking climate change as a top priority issue, the Mitsui Chemicals Group will undertake initiatives for collaboration and co-creation in the global value chain.



Maximization of value chain contributions

Realizing a low-carbon society by reducing GHG emissions

Low-carbon manufacturing

Chemical products use raw materials derived from fossil resources. And they are manufactured through a number of processes in which fossil fuels are converted to steam or electricity. For these reasons, the chemical industry emits far more GHGs than other industries. We believe we can contribute to greatly reducing GHG emissions in the manufacturing of our chemical products up ahead by implementing various measures. For example, switching to low-carbon raw materials and fuels, cutting down on energy used in manufacturing by mainly using high-performance catalysts and installing energy-efficient equipment, and making active use of renewable energy.

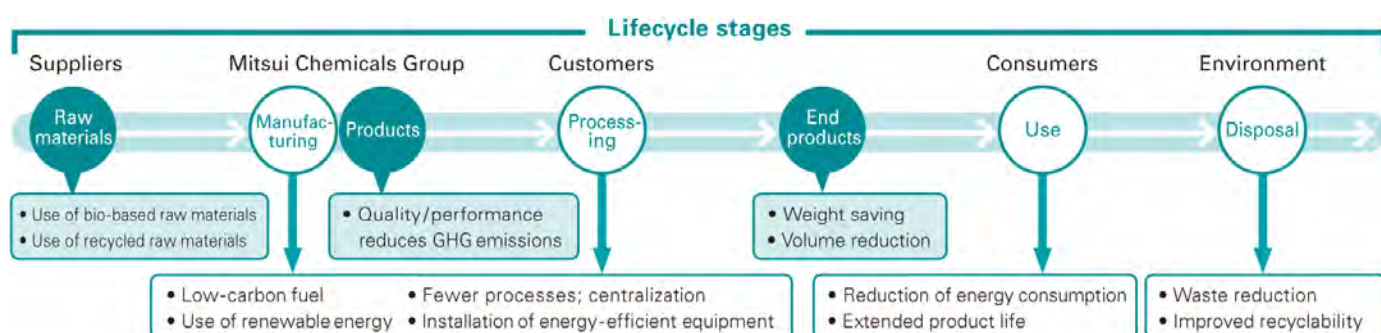
GHG reduction contributions by products

Chemical products are used in a broad range of end products and can contribute to reducing GHGs at each stage of the product lifecycle. Within the Mitsui Chemicals Group, we certify those products that are environmentally friendly as Blue Value™ products. One of the contribution categories used in our certification assessment is CO₂ reduction—we therefore evaluate how much a product reduces GHGs at each stage of its lifecycle. Furthermore, the sales ratio of Blue Value™ products is one KPI set in our 2025 Long-Term Business Plan. We intend to accelerate the development of products that fully reflect our Blue Value™ perspectives.

Improved recycling technology

We think promoting the recycling of resources is also an important challenge both in terms of reducing the use of fossil fuels and lowering GHG emissions. As outlined in our Plastics Strategies, we intend to work on designing products that can be easily recycled.

Contribution example of reduced GHG emissions throughout the lifecycle of chemical products



Realizing a healthy and sound society resistant to climate change risks

Improved water security

Damage from wind, floods, and drought are expected to increase as unrelenting global warming causes major changes in climate phenomena. Population increase and economic development are also expected to trigger large-scale water shortages. Owing to the fact that a lot of water is required in the manufacturing of chemical products—for example, for heating/cooling and product purification—changes in the available water supply or its quality could have a negative impact on our business activities. Given that the Mitsui Chemicals Group maintains production sites in multiple regions around the world, we believe that it is necessary to conduct risk assessments and take measures in accordance with local conditions.

Expanding lineup of adaptable products

It is expected that the rise in temperature increase associated with climate change will have a serious impact on health and the basic needs of humans, i.e., food, clothing, and shelter, as well as agricultural produce and ecosystems. Within the Mitsui Chemicals Group, we certify those products that help improve QOL, mainly in regards to extending healthy life expectancy and addressing food problems, as Rose Value™ products. As part of the certification process, we evaluate a product's contributions to preventing infectious diseases or minimizing food loss, for example. Moreover, the sales ratio of Rose Value™ products is one KPI set in our 2025 Long-Term Business Plan. We intend to accelerate development and expand our lineup of adaptable products that fully reflect our Rose Value™ perspectives.

Climate Change and Problems with Plastic

Management System

Plastics Strategies

Climate Change Policy

Implementing the recommendations of the
TCFD

Implementing the recommendations of the TCFD

In January 2019, the Mitsui Chemicals Group announced its support of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD*). As a chemical company, we intend to earnestly tackle climate change, deepen our understanding of the opportunities and risks that affect our businesses, and endeavor to actively disclose our initiatives.



* TCFD:

The TCFD was set up by the Financial Stability Board. In June 2017 it announced recommendations calling for financial institutions, corporations, and governments to disclose the business impacts of climate change in their financial reports. According to the TCFD, 1,027 institutions worldwide have expressed their support for the recommendations (as of February 2020).

The recommendations of the TCFD urge companies to disclose information about climate change-related governance, business strategy, risk management, and metrics and targets. In line with the TCFD's recommendations, the Group will take the following approach.

1. Assessing Materiality of Climate-related Risks

Qualitatively analyze risks and opportunities concerning climate change in our key businesses

2. Identifying and Defining Range of Scenarios

Forecast the changes in our business environment concerning climate change (scenarios) and examine their impacts

3. Quantifying business impacts

Quantify impacts on future business strategies and financials based on our scenarios and reflect them in strategies

4. Identifying potential responses

Determine the measures for climate change strategy and select management control indicators



1. Assessing Materiality of Climate-related Risks

As a first step, we assessed the impacts of climate change on the Group's businesses.

1) Assessment scope

Selected key business areas in the Group susceptible to the impacts of climate change.

(1) Mobility, (2) Petrochemical feedstocks, (3) Agriculture, (4) Health Care, (5) Electricals and electronics, (6) Packaging, (7) Energy solutions

2) Assessment method

1. Identification of climate change risks and opportunities

Identify risks (both physical and those pertaining to the transition to a low-carbon society) and opportunities based on the information disclosure framework presented in the TCFD's Final Report.

2. Picking out major risks and opportunities

Pick out the particularly major risks and opportunities from those identified above in light of their potential occurrence and impact on business (human loss, financial impacts, etc.). When doing so, take into account factors such as trends in international discussions, the Group's business regions, and case examples at other companies.

3) Assessment results (● denotes risks; ● denotes opportunities)

Assessment items		Group-wide	Specific business areas
Physical risks/ opportunities	Acute	● Heightened risk of wind or rain damage (floods/storms)	
	Chronic	<ul style="list-style-type: none"> ● Heightened risk of rising sea levels (high tides) ● Heightened risk of freshwater scarcity 	<ul style="list-style-type: none"> ●● Changes in arable land and development of new agricultural technology (3) ●● Wider distribution of pests, weeds, and bacteria (3) ●● Wider prevalence of infectious diseases caused by climate change (4)
Risks/opportunities related to transition to low- carbon economy	Policy and legal	<ul style="list-style-type: none"> ● Risks from introduction of, and increases in, carbon pricing ● Increase in litigation risks 	<ul style="list-style-type: none"> ●● Impacts on business from shift to EVs (1)(5) ● Restrictions on use of synthetic chemical fertilizers (3)
	Technology	<ul style="list-style-type: none"> ●● Uptake of renewable energies ●● Accelerated development of CCU technology and advanced recycling technology 	<ul style="list-style-type: none"> ●● Uptake of biomass plastics (1)(2)(6) ● Faster transition to low-GHG emissions technology (2)(5)(6)
	Market	<ul style="list-style-type: none"> ●● Transition to renewable raw materials ●● Transition to renewable raw materials ● Calls for manufacturers to use renewable energy ● Higher prices for scarce resources due to shift to EVs and transition to a hydrogen-fueled low-carbon society 	<ul style="list-style-type: none"> ● Decrease in auto manufacturing and sales volume owing mainly to increase in ridesharing and carsharing (1) ● Shortage of naphtha due to decline in oil production output (2) ●● Increased demand for renewable energy (7)

* External data used include IPCC RCP2.6, RCP8.5, IEA B2DS, and SDS.

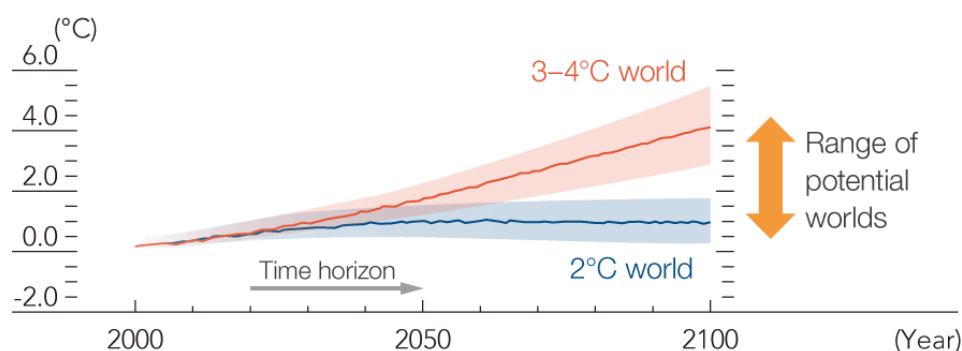
2. Identifying and Defining Range of Scenarios

We have begun scenario analysis based on our materiality assessment. Going forward, we plan to evaluate the impacts of potential key factors to pick out the key factors for our Group, and reflect them in our long-term strategy.

1) Scenarios used by the Mitsui Chemicals Group

Selected a “3–4°C world” scenario and a “2°C world” scenario. (The scenarios assume that the global average surface temperature in 2100 will increase by 3–4°C and 2°C, respectively, compared to the average between 1986 and 2005.)

Global Average Surface Temperature Change



Source: IPCC AR5 SYR Fig. SPM.6

Scope of scenario analysis

Business areas All business areas (priority on the following areas due to significant impact on finances and GHG emissions)

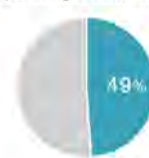
Mobility business

- ✓ Significant contribution to future sales and operating income
- ✓ Significant impact on climate change throughout product lifecycles

Mobility business sales ratio



Mobility business operating income ratio



Petrochemicals business

- ✓ Related to fossil fuel and energy (electric power) which is essential for manufacturing products
- ✓ In-house energy production and product manufacturing account for approximately 70% of our GHG emissions

GHG emissions ratio (Scope 1, 2)



Time horizon Present day to 2050 (references data through 2100 on physical risks and opportunities)

* External data used

Data on transition to low-carbon economy: IEA SDS, 2DS, B2DS, The Future of Petrochemicals

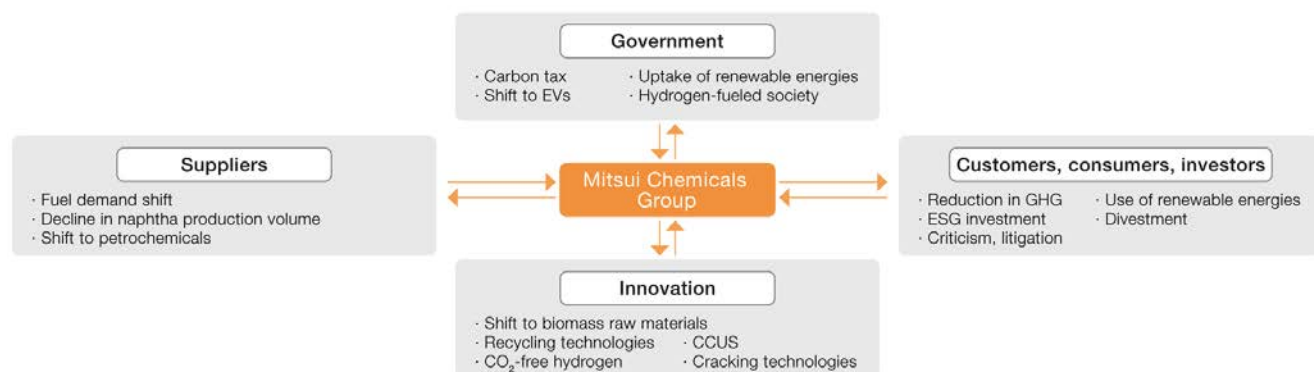
Data on physical aspects: IPCC RCP2.6, RCP8.5

Potential worlds

The 3–4°C world	The 2°C world
<p>Negative on decarbonation due to prioritizing of economic activity</p> <ul style="list-style-type: none"> ◆ Implementation of current climate change policies only <ul style="list-style-type: none"> • Introduction of carbon tax ◆ Expansion in demand for fossil energy and raw materials <ul style="list-style-type: none"> • Rise in prices of coal, gas, and oil • Rise in the price of fossil-fuel generated electric power ◆ Worsening in natural disasters caused by abnormal weather ◆ GHG emissions to rise around 1.3 times (2050) 	<p>Realization of carbon-free society being the top priority</p> <ul style="list-style-type: none"> ◆ Implementation of ambitious climate change policies <ul style="list-style-type: none"> • Large increase in carbon tax • ICE sales suspended, switch to EVs ◆ Shift to carbon-free energy and raw materials <ul style="list-style-type: none"> • Renewable energies become mainstream • Cut backs on chemical usage due to recycling • Production of chemicals from bio and CO₂ raw materials ◆ Gradual worsening in natural disasters ◆ Reduction in GHG emissions of around 50%(2050)

2) Key consideration

Use the results of environmental analysis based on external data to identify potential key factors under the world scenarios.



Blue Value™ / Rose Value™

Visualizing Contributions
to the Environment and Society

Blue Value™ — Environmental
Contribution Value

Rose Value™ — QOL Improvement
Contribution Value

Blue Value™ / Rose Value™ Products

Visualizing Contributions to the Environment and Society



Contribute to Efforts Aimed at Reducing
Environmental Load and Improving Quality of Life
Through our Products and Services



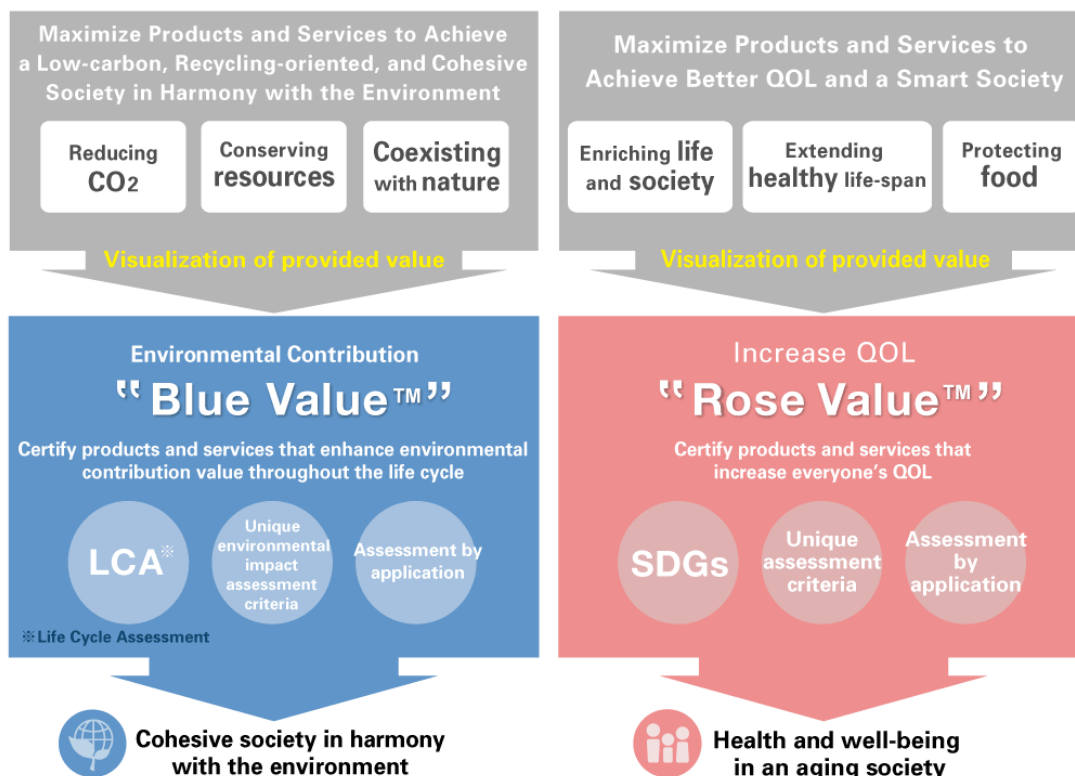
Our Blue Value™ and Rose Value™ help visualize the contributions our products and services make to the environment and society and enable us to share those values with stakeholders so we can realize [a future cohesive society in harmony with the environment and health and well-being in an aging society](#). We evaluate our products and services according to application using our own distinctive yardsticks: the Blue Value™ Index for assessing environmental impacts and the Rose Value™ Index for assessing improvement in quality of life (QOL). Those that make significant contributions to the environment or improvements to QOL are certified as Blue Value™ and Rose Value™ products, respectively.

Features

- Visualization of contributions to the environment and society through our business activities
- Ability to check application-specific contributions at each stage of the product lifecycle
- Developing and providing products and services with high contribution value and sharing it with stakeholders
- Aim to realize our ideal future society by building a Blue Value™ and Rose Value™ chain

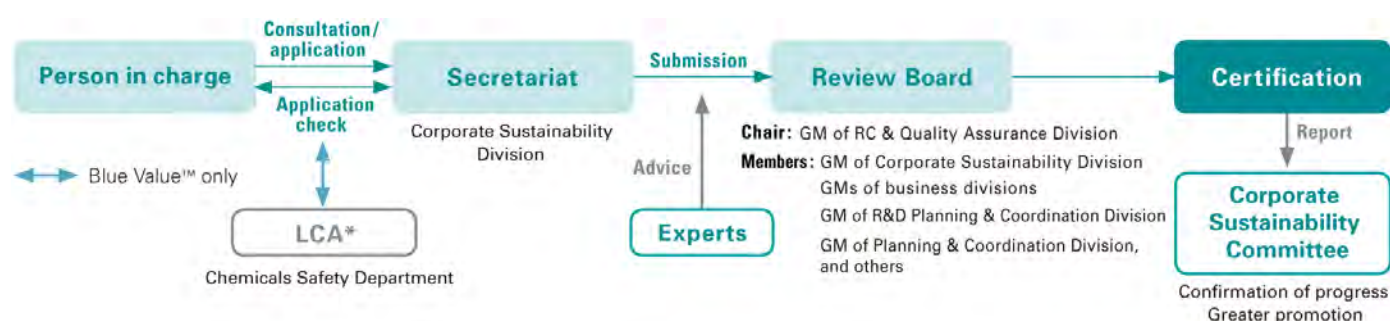
Providing Value Through the Blue Value™ and Rose Value™ Chain





Screening and Certification Process

The person in charge of sales and marketing first assesses the potential Blue Value™ or Rose Value™ product or service using the aforementioned indices and then consults with and submits an application to the secretariat. The review board deliberates on the supporting evidence and certifies the product or service if it satisfies the criteria. The deliberations focus on whether the product's concept and selling point are consistent with the area in which it offers contributions, as well as to check the level of those contributions. In order to certify products and services with an emphasis on appropriateness and objectivity, our assessment methods and screening criteria have been designed based on the advice of external experts. We also ask these experts to present their opinions prior to the review board regarding the candidate product's level of contribution.

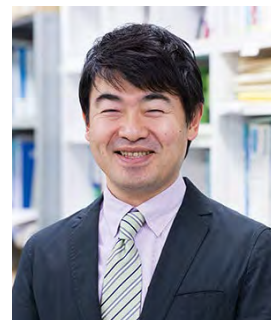


* Life cycle assessment:

A technique to quantitatively assess environmental impacts associated with all the stages of a product's life, such as development, manufacture, distribution, use, and disposal.

Expectations from Blue Value™ advisor

Environmental problems, social issues, and technological change are some of the challenges we now face as we enter an uncharted era of major transformation. I believe companies that can depict the future with an indefinite number of scenarios will adapt to a truly sustainable society and be the driving force behind it. By taking these problems into consideration, the Blue Value™ and Rose Value™ initiatives can be placed at the core of business and are groundbreaking at the forefront of ESG thanks to their active contributions to solving contemporary issues. I hope they will further grow in intensity, evolve, and demonstrate a new approach for Japanese companies.



Dr. ITSUBO Norihiro

Professor, Faculty of Environmental Studies
Dean, Graduate School of Environmental and Information Studies
Tokyo City University

Expectations from Rose Value™ advisor

In the past, companies were allowed to think that they were contributing to society by developing technologies and manufacturing products that serve a useful purpose. However, a once-in-a-century dramatic paradigm shift of seismic proportions is now taking place in numerous industries. I would like to see companies that engage exclusively in business-to-business operations once again reflect on what kinds of needs their own technologies, products, and services are addressing from the viewpoint of people's livelihoods. Having an exceptional level of sensitivity regarding society serves as a source of competitiveness. I believe that assessing products and services with the Rose Value™ Index for improving QOL will provide an important clue on how to go about this.



Mr. ADACHI Eiichiro

Counselor, Japan Research Institute, Limited

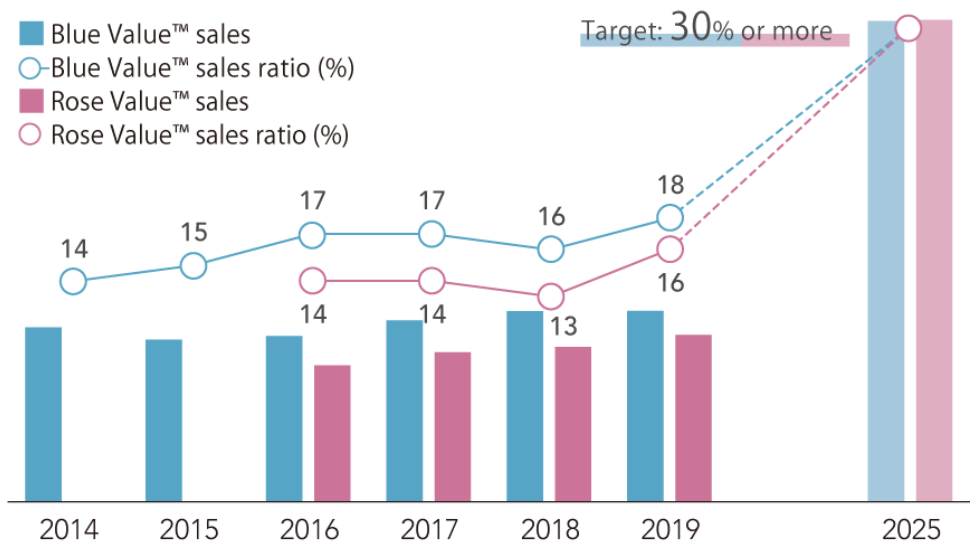
Setting KPIs

The sales ratio of Blue Value™ and Rose Value™ products is set as one of our KPIs in our 2025 Long-term Business Plan. Growth in the sales ratio for certified products demonstrates that we are making steady progress toward achieving our ideal future society. As an initiative for expanding sales, we are continuing to reflect them into our long-term business strategies and investment plans.

Beginning in fiscal 2020, we are setting expansion strategies as annual targets, with sales of Blue Value™ and Rose Value™ products as management control indicators for each business division. In addition, we set targets on a Group-wide basis for more than 15 pre-launch candidate products. By certifying them as candidate products and monitoring them from the product development stage, we aim to steadily expand certified products.

Message from the responsible officer

Blue Value™ Products / Rose Value™ Products Sales Ratio



Visualizing Contributions
to the Environment and Society

Blue Value™ — Environmental
Contribution Value

Rose Value™ — QOL Improvement
Contribution Value

Blue Value™ / Rose Value™ Products

Blue Value™ — Environmental Contribution Value



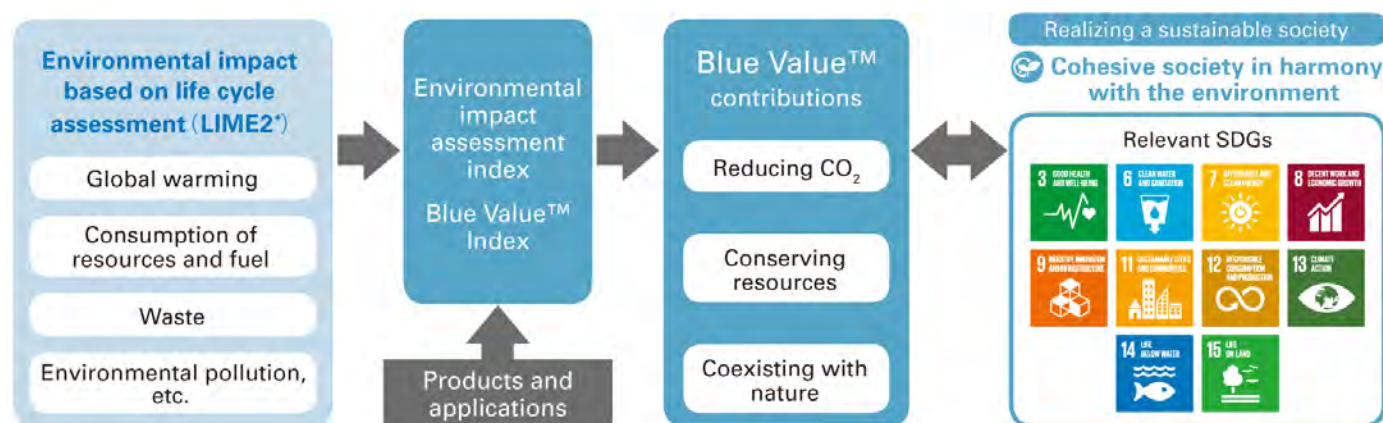
Instead of green, which is associated with nature and ecology, blue represents something much bigger—the earth.
It is also our corporate color and signifies harmony with the global environment and our contributions to society.

Many chemical products pass through various stages; for example, they are manufactured and processed into end products and then disposed of after use. We visualize from a product stewardship perspective how we could reduce a product's impact on the environment at each stage of its lifecycle. By sharing this information with various stakeholders, we believe we can further contribute to environmental protection. With this idea in mind, we devised the Blue Value™ standard for environmentally friendly products in 2015 with the aim of achieving a future cohesive society in harmony with the environment.

We use the Blue Value™ Index—our own LCA-based environmental impact assessment index—to evaluate products and services depending on their application and certify them as Blue Value™ if they significantly contribute to protecting the environment in the following three categories: (1) reducing CO₂ ; (2) conserving resources; and (3) coexisting with nature.

We carry out comparative assessments against market-standard products and our existing product lineup because a requirement for Blue Value™ certification is that not only must the product have a higher score in either of the evaluation categories, it must not be inferior in all categories for each stage of its lifecycle. Moreover, the use of qualitative and semi-quantitative assessments means products can be easily evaluated, but whenever required, the department responsible for LCAs can technically and quantitatively assess the superiority of a product's environmental contributions.

[Examples of Blue Value™ Product Contributions across Product Life Cycle Stages](#)



* LIME2 (Lifecycle Impact assessment Method based on Endpoint modeling):
Damage assessment-type lifecycle environmental impact assessment method based on environmental conditions in Japan.

Environmental Impact Assessment Index — Blue Value™ Index

Contributions	Blue Value™ Index	
	Evaluation categories	Related assessment items
Reducing CO₂ 	<ul style="list-style-type: none"> Reduction of GHG emissions Saving of energy, electricity, fuel 	<ul style="list-style-type: none"> Weight and volume reduction Long service life Natural energy sources Non-fossil raw materials Environmental cleanup
Conserving resources 	<ul style="list-style-type: none"> 3Rs, ease of sorting, conservation of resources 	
Coexisting with nature 	<ul style="list-style-type: none"> Ecosystem conservation (human health) Ecosystem conservation (environmental organisms) Prevention of environmental contamination 	

* Related assessment criteria are evaluated on contributions to any one of the evaluation criteria.
* GHG emission-related global warming substances, chemical substances harmful to ecosystems, and environmental pollutants are all substances for which characterization factors have been calculated in LIME2.

Reduction of GHG emissions

- Reduce GHG emissions at the raw materials acquisition, manufacturing/processing, and end products use/disposal stages

Saving of energy, electricity, fuel

- Reduce energy such as electricity and fuel at the raw materials acquisition, manufacturing/processing, and end products use/disposal stages
- Use of end products in the energy conservation field

3Rs, ease of sorting, conservation of resources

- Use reusable/recyclable materials at the manufacturing/processing stages for products, processed items, and end products as well as reduce material usage
- Products, processed items, and end products based on reuse/recycling
- Possible separation at the time of disposal

Ecosystem conservation (human health)

- Reduce the impact on human health from chemical substances across product lifecycles; specifically, reduce the addition of chemical substances harmful to human health, curb their formation, use chemical substances that are less toxic, and use end products in the health & safety fields

Ecosystem conservation (environmental organisms)

- Reduce the impact on ecosystems from chemical substances across product lifecycles; specifically, reduce the addition of chemical substances harmful to ecosystems, curb their formation, use chemical substances that are less toxic

Prevention of environmental contamination

- Reduce the impact on the global environment excluding people/living organisms from environmental pollutants across product lifecycles; specifically, reduce the addition of environment pollutants harmful to ecosystems, curb their formation, and use substances that do not pollute the environment

Examples of Blue Value™ Product Contributions across Product Life Cycle Stages

Mobility

Product	Application(s)	Life Cycle Stage	Reasons for Blue Value™ Certification	Contributions		
				CO ₂	Resources	Nature
TAFMER™	Bumper and instrument panels	Manufacturing, Processing	Reduces energy consumption during polymer manufacturing with the use of high-productivity catalysts.	○		
Mitsui EPT™	Weather-strip sponge	Manufacturing	Reduces energy consumption during polymer manufacturing with the use of high-productivity catalysts.	○		
LUCANT™	Lubricant additive for automobiles	Use	Improves fuel efficiency by reducing temperature dependence of lubricant's viscosity and maintaining appropriate viscosity.	○		
Polypropylene (PP) compounds	Bumper and instrument panels	Processing	Reduce GHG emissions by roughly 13% by not requiring painting process.	○	○	
ADMER™	Adhesive polyolefin for plastic fuel tanks	Use	Lightens fuel tanks by 10-30% with the use of plastic instead of metal	○		
ARLEN™	ABS pistons	Use	Reduces weight by 60% through use of alternatives to metal.	○		
AURUM™	Turbo seals	Use	Increase the fuel economy through use of alternatives to metals.	○		
MILASTOMER™	Oil-resistant automotive parts	Use	Reduces weight by 10-15% comparing to market-standard products, and fuel saving.	○		

Food & Packaging

Product	Application(s)	Life Cycle Stage	Reasons for Blue Value™ Certification	Contributions		
				CO ₂	Resources	Nature
STABio™	Hardener for coatings	Materials, Processing	Reduces fossil resource consumption with use of bio-based raw materials and the use of solvents during paintings.	○	○	
T.U.X™	Sealant films	Processing	Saves energy by using a lower heat seal temperature, while its improved film strength means less resin is used.	○	○	
ECONEIGE™	Food packaging materials	Processing	Delivers a white finish by diffusing light on layers of air created inside films. Reduces the amount of resin used by 20-30% without the need for white printing.	○	○	
BARIASTAR™	Coating agent for thermal paper labels	Processing	Reduces drying process by integral coating of three layers of thermal paper (undercoat, heat-sensitive and topcoat layers).	○	○	
HIPRENE™	Textile base Material	Use	Contributes to improved safety during construction and prevention of environmental pollution because does not contain solvents.			○
SPASH™, Pal Fresh™	Food packaging materials	Use	Reduces GHG emissions by reducing the amount of food wastes.	○		
IGROS™ Tape	Electronic components manufacturing process films	Processing	Emits no air pollutants and ecotoxic substances in tape manufacturing process because does not contain solvents.	○	○	○
SOLAR ASCE™	Encapsulant sheets for solar cells	Use	Reduces power generation loss by improving ability to withstand high humidity and insulation durability.	○	○	

Health Care

Product	Application(s)	Life Cycle Stage	Reasons for Blue Value™ Certification	Contributions		
				CO ₂	Resources	Nature
Do Green™ MR-174™	Ophthalmic lens materials	Materials	Reduces fossil resource consumption with use of bio-based raw materials.	○	○	
Acrylamide	High-polymer flocculants	Manufacturing	Reduces energy consumption during manufacturing stage by lowering of production temperature through use of biocatalyst (enzyme).	○		
AIRYFA™	Nonwoven fabric for disposable diapers	Use	Reduces amount of waste by using a fiber structure that offers both softness and strength.	○	○	

Basic Materials

Product	Application(s)	Life Cycle Stage	Reasons for Blue Value™ Certification	Contributions		
				CO ₂	Resources	Nature
ECONYKOL™	Seat material	Materials	Reduces fossil resource consumption with use of bio-based raw materials.	○	○	
MOSDIO™	Rear doors	Processing	High rigidity enables replacement of metal parts. Realizes 30% reduction in weight.	○		
Evolve™	Extruded laminates	Processing	Saves energy by use of catalysts during manufacturing process and reduces amount of resin used during processing by enhanced sealing performance.	○	○	
AdBlue™	Exhaust gas reduction agent	Use	Reduces NOx emissions. Contributes to fuel efficiency	○		○

Next Generation Business

Product	Application(s)	Life Cycle Stage	Reasons for Blue Value™ Certification	Contributions		
				CO ₂	Resources	Nature
Diagnostics and Consulting Services for Solar Power Generation Plants	—	Use	Reduce GHG emissions, which in turn assists clients in preventing yield reduction of solar power generation plants.	○		

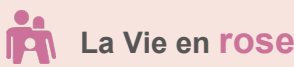
Visualizing Contributions
to the Environment and Society

Blue Value™ — Environmental
Contribution Value

Rose Value™ — QOL Improvement
Contribution Value

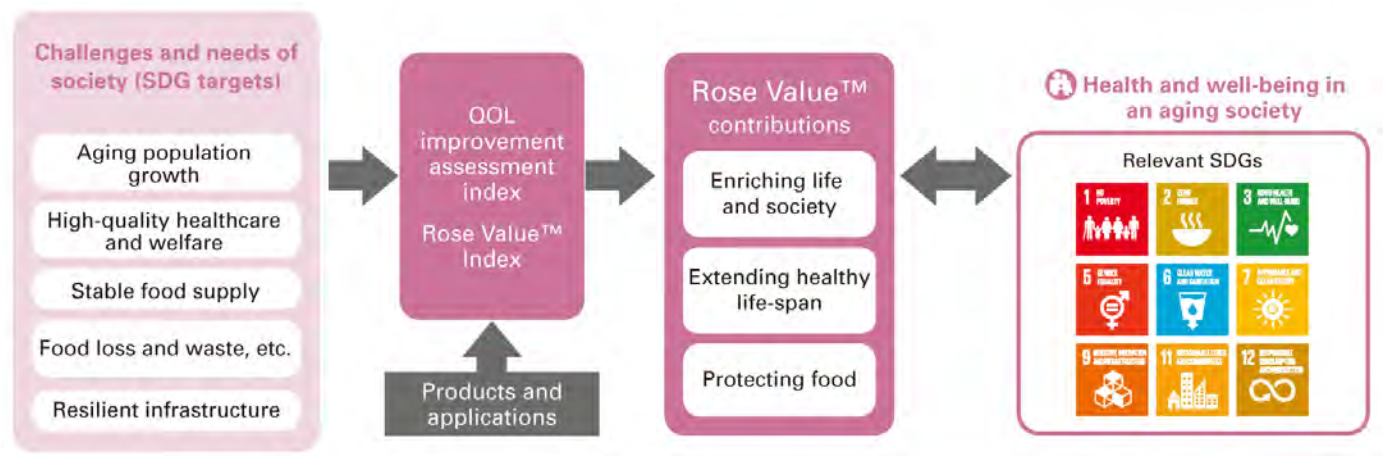
Blue Value™ / Rose Value™ Products

Rose Value™ — QOL Improvement Contribution Value












Days brimming with happiness and hope for people from all walks of life.

In 2016 we devised the Rose Value™ for products and services that help improve QOL in order to demonstrate the kind of value our Group can provide in aiming to realize health and well-being in an aging society in the future. In response to the changing challenges and needs of society, in 2019 we added to and amended the categories to contribute to sustainable communities, including disaster prevention/mitigation and longer infrastructure life. We use the Rose Value™ Index—our own QOL improvement assessment index developed in accordance with the targets of the SDGs and other needs of society—to evaluate products and services in consideration of sustainable procurement and certify them as Rose Value™ if they significantly contribute to improving QOL in the following three categories: (1) enriching life and society; (2) extending healthy life-span; and (3) protecting food. We use qualitative and easy-to-understand evaluation criteria incorporating mainly universal design and amenity, resilient and smart city, universal health coverage, and food security perspectives to carefully examine whether the value of the functions and concept of a potential Rose Value™ product or service contributes to improving QOL in the evaluation categories.



QOL Improvement Assessment Index— Rose Value™ Index

Contributions	Rose Value™ Index evaluation categories
Enriching life and society    	<p>Contribute to a comfortable life for everyone and sustainable communities.</p>
	<ul style="list-style-type: none"> • Improving comfort in people's lives Provide products, buildings and spaces that take into consideration the needs of a variety of people
	<ul style="list-style-type: none"> • Enhancing nursing care Specialized nursing and caregiving is a component of "improving comfort in people's lives"
	<ul style="list-style-type: none"> • Ensuring the sustainability of communities Promote disaster prevention/mitigation measures, longer service life of infrastructure, shift to ICT in communities
Extending healthy life-span   	<p>Contribute to building a society that enables healthy and comfortable lives through improving medical service quality, easing physical burdens, and providing nutritional support.</p>
	<ul style="list-style-type: none"> • Supporting physical well-being Assist, improve, and heighten functions throughout the body, either directly or indirectly
	<ul style="list-style-type: none"> • Advancing medical care and pharmaceuticals Raise the level of medical technology and service in every phases of health, from pre-symptomatic disease to illness Or improve aspects of medicine functionality, quality, and production
	<ul style="list-style-type: none"> • Preventing and taking action against infectious diseases Prevent or take action against infectious diseases
Protecting food  	<p>Contribute to safe, secure, and stable food supply through improving productivity and reducing food waste.</p>
	<ul style="list-style-type: none"> • Improving food productivity Raise food yields as well as work efficiency; improve related equipment capabilities
	<ul style="list-style-type: none"> • Guaranteeing safe and stable food distribution Secure and raise the level of safety and stability in food distribution
	<ul style="list-style-type: none"> • Reducing food loss and food waste Reduce waste from the perspectives of maintaining food freshness, extending "best-before date," packaging for contents separation and compartmentalization, loss when shipping, and other factors

Blue Value™ / Rose Value™

Visualizing Contributions
to the Environment and Society


Blue Value™ — Environmental
Contribution Value

Rose Value™ — QOL Improvement
Contribution Value

Blue Value™ / Rose Value™ Products

Blue Value™ / Rose Value™ Products


Some of our Blue Value™ and Rose Value™ products are shown below.

 **Blue Value™**

Reduces CO₂

Conserves resources

Coexists with nature

 **Rose Value™**

Enriches life and society

Extends healthy life-span

Protects food



- Reduces CO₂
- Conserves resources

Bumper and instrument
panel materials

PP compounds

Reduce GHG emissions
by roughly 13% by not
requiring painting process.



- Reduces CO₂

Adhesive polyolefin for
plastic fuel tanks

ADMER™

Lightens fuel tanks by 10-
30% with the use of
plastics instead of metal.

- Reduces CO₂
- Coexists with nature

Exhaust gas reduction
agent

AdBlue™

Reduces NOx emissions.
Contributes to fuel
efficiency.



- Reduces CO₂
- Conserves resources

Seat cushion material

ECONYKOL™

Reduces fossil resource
consumption with use of
bio-based raw materials.



* AdBlue is a trademark of the VDA (Verband der
Automobilindustrie).



Reduces CO₂

Conserves resources

Milky-white food
packaging film

ECONEIGE™

Delivers a white finish by
diffusing light on layers of
air created inside films.

Reduces the amount of
resin used by 20-30%
without the need for white
printing.



Reduces CO₂

Conserves resources

Protects food

Sealant film

T.U.X™

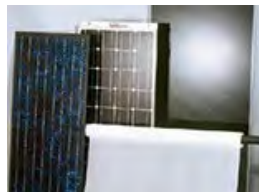
Saves energy by using a
lower heat seal
temperature, while its
improved film strength
means less resin is used.
Its excellent sealing
performance and impact
resistance reduces the
amount of food wasted
in food production and
distribution.

Reduces CO₂

Encapsulant sheets for
solar cells

SOLAR ASCE™

Reduces power
generation loss by
improving ability to
withstand high humidity
and insulation durability.



Reduces CO₂

Diagnostics and Consulting Services for Solar Power Generation Plants

Reduce GHG emissions,
which in turn assists
clients in preventing yield
reduction of solar power
generation plants.



Extends healthy life-span

Ophthalmic lens materials

MR™

Contributes to vision
correction, eye health, and
comfort.



Enriches life and society

Nonwoven fabric for
disposable diapers

SYNTEX™

Pursues the basics of
being leakproof,
breathable, and unlikely to
cause diaper rash, as well
as a higher level of
functionality, such as
comfort and a snug fit.

Reduces CO₂

Conserves resources

Enriches life and society

Nonwoven fabric for disposable diapers

AIRYFA™

Reduces amount of waste by using a fiber structure that offers both softness and strength. Disposable diapers support comfortable living for babies and their carers.



Enriches life and society

Food packaging materials

CMPS™

Easy-open film that even children and the elderly can manage.



Protects food

Insecticide

TREBON™

Contributes to stable crop production and helps boost food production.



Protects food

Hybrid rice

Mitsuhihari

F1 hybrid rice cultivar with superior high yield and taste. Mitsuhihari's delayed harvesting has the advantage of dispersing the concentration of harvesting resources, and results in the improvement of food productivity.

Extends healthy life-span

Insecticide

VECTRON™

Controls mosquitos, a carrier of infectious diseases like malaria. Contributes to the eradication of malaria.



Protect food

Reduce CO₂

Keep-fresh film

SPASH™, PALFRESH™

Suppress wilting and discoloration of fruits and vegetables and contribute to a reduction in food loss. Reduce GHG emissions by reducing the amount of food wastes.





Reduces CO₂

Conserves resources

Extends healthy life-span

Ophthalmic lens materials

Do Green™ MR-174™

Reduces fossil resource consumption with use of bio-based raw materials.



Extends healthy life-span

Pre-filled Syringe

APEL™

Minimum drug alteration thanks to lower elution compared to glass. Chip-proof structure ensures safe use. Contributes to advancement of medical care and pharmaceuticals.

Extends healthy life-span

Medical packaging material

APEL™

Low moisture permeability protects soluble medicines and maintains medicinal quality. Contributes to advancement of pharmaceuticals.



Extends healthy life-span

Artificial limb material

HI-ZEX MILLION™

High impact resistance and flexible shaping enable creation of exceptionally well-fitting artificial limbs suitable to different body parts. Contributes to support physical well-being.



Enriches life and society

Cooking equipment

TPX™

Highly non-stick surface keeps dirt away and ensures easy cleaning. Contributes to improve enhancing comfort in people's lives.



Enriches life and society

Heat-resistant food container

TPX™

Material provides transparency equivalent to glass and heat resistance as high as to be microwavable. Contributes to improve enhancing comfort in people's lives.

Enriches life and society



Reduces CO₂

Coexists with nature

Enriches life and society

Extends healthy life-span



Various Handle Parts

MILASTOMER™

Good plasticity and nonslip surface enables good hold with minimum effort. Contributes to improve enhancing comfort in people's lives.

Seat cushion materials

Nextyol™

Improved automotive fuel economy delivered from lighter weight and drastic reduction in VOCs and odor contribute to mitigating climate change and to creating a comfortable living environment.



Extends healthy life-span

Synthetic pulp for water purifier filter

SWP™

Capture and removal of heavy metals and other impurities makes water safe to drink.



Enriches life and society

Synthetic pulp used in fiber cement construction materials

SWP™

Results in fiber cement construction materials that are resistant to brittleness and cracks, extending the life of infrastructure and contributing to sustainable urban development.

Protects food

Synthetic pulp for teabags

SWP™

Enables teabags to be heat-sealable, eliminating the need for metal staples. Contributes to food safety in production and in consumption, as well as the safety of the product itself.



Enriches life and society

Concrete surface reinforcement agent

Toughness Coat™

Resin film formed on the surface of concrete structures gives greater durability and impact resistance, extending the life of infrastructural systems and preventing and reducing the effects of disasters.





Enriches life and society

Mitsui Gas Pipe System

Pliable polyethylene pipes bend as needed to prevent gas leaks even after ground deformation. Helps prevent and reduce the effect of disasters.



Enriches life and society

Rainwater storage tank permeation layer

Geopool

Installed under parking areas, etc., it controls surface water flow by storing rainwater temporarily and gives a slow release, preventing flooding after rainstorms, etc.

Enriches life and society

Foundation reinforcement injection materials

Ground Ace™

Foundation of structures can be reinforced without removing the structure, even for liquefied soil. Contributes to swift restoration after a disaster.

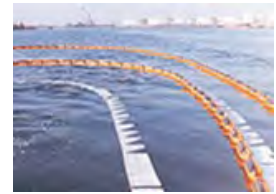


Enriches life and society

Hazardous substance adsorbent materials

Tufnel™, Oil Blotter™

Adsorbs oil without absorbing water and without sinking in the water. Prevents oil dispersion in oceans or rivers after an oil tanker grounding resulting in leakage.



Enriches life and society

Sanitation wipe

FASTAID™ Virus Sweeper Towel

Towel soaked in sodium hypochlorite solution can be produced easily. Easy to store and useful in emergencies or during evacuation to a shelter.

Risk and Compliance



Risk and Compliance Management

- Management System
- Risk Prevention Measures
- Compliance Training

Bribery Prevention

Tax

Information Management

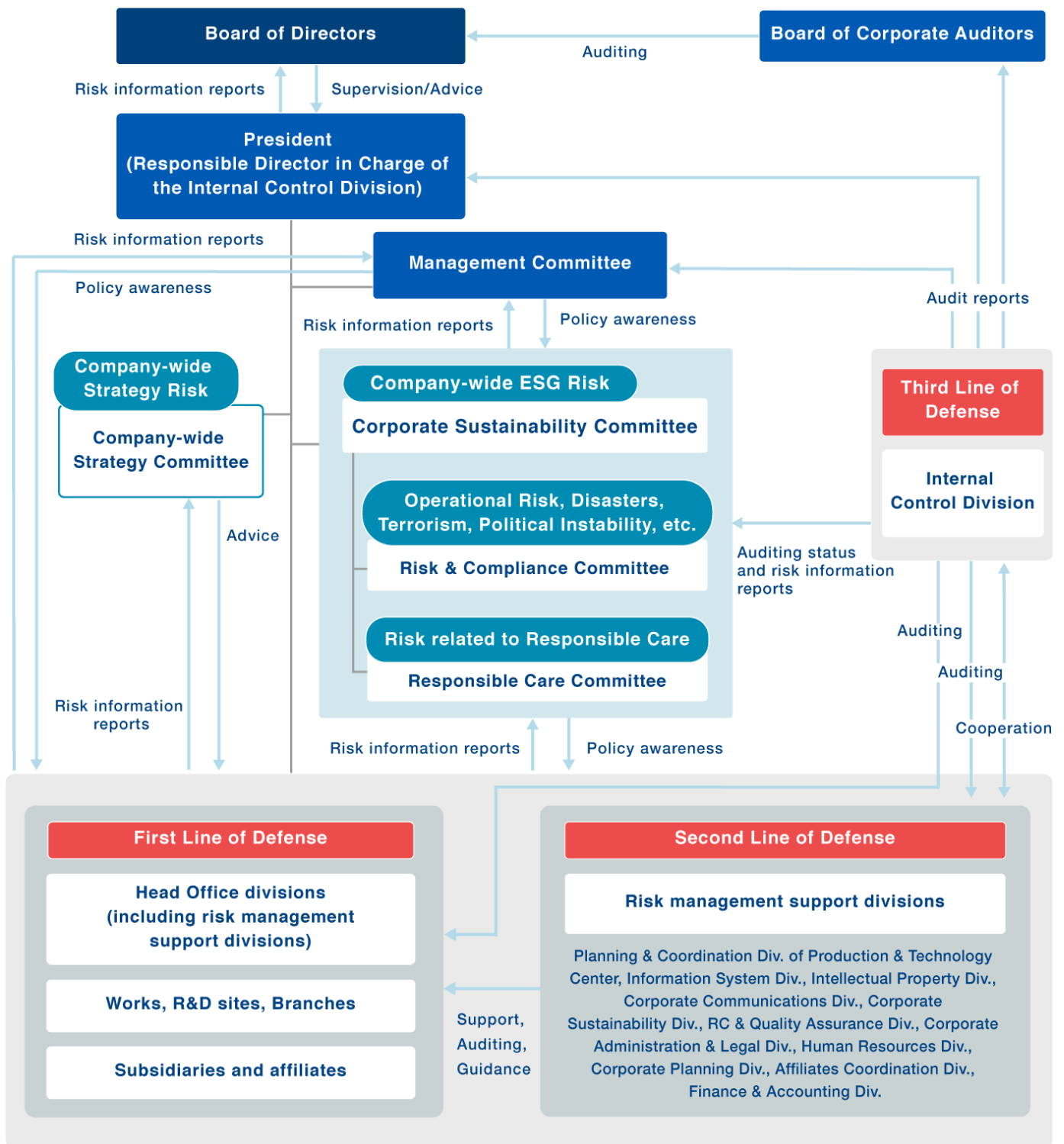
Management System

Policy and Basic Approach

To earn the trust of our shareholders, customers, the local community and all our other stakeholders, and to fulfill our corporate social responsibilities, it is crucial to effectively engage in risk management and compliance promotion structure. We will endeavor to uncover new risks that arise in response to changes in our business portfolio, expansion of business and changes in the external environment, and also prevent those risks from materializing. In February 2006, the Mitsui Chemicals Group formulated its [Action Guidelines](#), which provide the basis for the actions of all its personnel, and introduced the two maxims, “always act in good faith” and “have a high regard for people and society.” Acting in accordance with these action guidelines and risk management rules (company regulations) allows us to remain in control of all risks that could potentially threaten our business activities, thus retaining the trust of our stakeholders and fulfilling our corporate social responsibility.

System and Responsible Officers

Risk Management System



The Board of Directors is responsible for risk management across the entire Mitsui Chemicals Group.

First and second lines of defense

All our divisions (Head Office, Works, laboratories, branch offices and affiliates) conduct risk assessments in accordance with [the risk model](#) and [procedures](#) within the annual budget. Having identified the risks, they design and implement a management system to address the risks within the organization. The director in charge of each division is responsible for identifying and managing the risks. (First line of defense)

To ensure that risk management is fully implemented in each division, the risk management support divisions with specialized knowledge provide support to each division and may conduct audits or give guidance when necessary. (Second line of defense)

Each division reports information according to the type and severity of the risks to [the Company-wide Strategy Committee](#), [Corporate Sustainability Committee](#), Risk & Compliance Committee and [Responsible Care Committee](#). Each of these committees deliberates on how to address the risks and either issues their decision as the policy of the division or provides advice. [The Management Committee](#) collects information on the risks identified in the whole of the Mitsui Chemicals Group and uses it as material for management decision-making and decides on what action to take.

Third line of defense

The Internal Control Division independently audits operations in both the first and second lines of defense and provides assurance to top management and the Board of Directors. The Internal Control Division conducts business audits and responsible care audits to maintain and strengthen the level of internal control in the Mitsui Chemicals Group and works to keep existing business risks at an acceptable level. At the same time, the Division conducts continual inspections and assessments of the design and operation of internal controls relating to financial reporting for the entire Mitsui Chemicals Group, as required under the Financial Instruments and Exchange Act, as the J-SOX assessment as a part of the statutory audit and directs its efforts to ensuring the correct and efficient execution of operations.

The business audit includes an internal audit process based on self-assessment of internal controls utilizing the compliance checklist. The compliance checklist includes items related to compliance with the competition law, prevention of bribery and corruption, insider trading and harassment, compliance with the securities export control regulations, appropriate handling of corporate and personal information, human rights, information systems security, risk management, credit management, fair accounting and tax administration, and organization and operation of appropriate internal controls. The checklist is revised every year. As process owners for each of the above items, the risk management support divisions are audited on the state of their operations. Additionally, audits are conducted based on a theme selected each fiscal year from the risk status both in and outside the organization.

From among the responsible care audits (environment & safety audit, occupational health audit, quality audit, and chemical safety audit), the Internal Control Division is responsible for executing the environment & safety audit and the occupational health audit. The Internal Control Division also audits quality audit and chemical safety audit conducted by the risk management support divisions have been executed appropriately.

Risk & Compliance Committee and the roles of directors on the committee

The Risk & Compliance Committee has been created to develop and execute specific policies, strategies and plans to address concerns related to risk management and compliance.

External risks such as natural disasters, terrorism, riots and political insecurity, and in the category of internal risks, operational risks represented by violation of laws and rules, loss of credibility of financial reports, environmental pollution, plant accidents, major occupational incidents, product liability litigation, loss of supplier credibility, mental health issues, deterioration of labor-management relations, information leaks and destruction of information communication systems, etc. are covered by the Committee's activities. The committee implements measures including information gathering and evaluation, issuing instructions to relevant divisions, development of the group-wide risk management policy, and reviewing countermeasures to specific risks. It also manages the whistleblowing (Risk Hotline) system. Important policies, strategies and plans decided by the Committee are approved by the Management Committee.

Composition of the Risk & Compliance Committee

Chair	The responsible director in charge of the Risk & Compliance Committee
Members	Responsible director in charge of the Corporate Sustainability Committee, Responsible director in charge of the Corporate Administration & Legal Division, General Manager of the Internal Control Division, General Managers of the Planning & Coordination Divisions in each Business Sector, General Manager of the Planning & Coordination Division, General Manager of the Corporate Communications Division, General Manager of the Corporate Sustainability Division, General Manager of the RC & Quality Assurance Division, General Manager of the Corporate Administration & Legal Division, General Manager of the Human Resources Division, General Manager of the Affiliates Coordination Division, General Manager of the Information System Division, other members appointed by the Chairperson
Observer	Corporate Auditor
Secretariat	Corporate Administration & Legal Division

Should there be an emergency* that seriously impacts or is likely to impact our Group or society at large and conducted action becomes necessary, the director in charge of the Risk & Compliance Committee coordinates action with the relevant directors and they jointly assess conditions. Based on the findings, a report is submitted to the President, who decides whether action should be taken by the company or whether a headquarters for corrective action should be formed. When a headquarters for corrective action is formed by a decision of the President, it will issue guidance and advice on the corrective action needed to resolve the situation.

The most recent case involves the formation of the COVID-19 Action Headquarters. The director in charge of the Risk & Compliance Committee is in charge of the headquarters, which makes decisions and gives instruction on measures to ensure employee safety and related matters.

* Examples of emergencies:

- Accidents or incidents in the Mitsui Chemicals Group that cause damage to the lives, health, property and living conditions of people or that are likely to have an impact on the environment in the surrounding area.
- An event causing grave losses of human and tangible assets or damage to the credibility of the Group and resulting in a significant decline in business performance or in serious claims for damages.

Goals and Results

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Incidence of major legal and regulatory violations	Mitsui Chemicals Group	0	1	×	0	0 (FY2025)

Having decided on KPIs for social and environmental targets under the 2025 Long-term Business Plan, we state the figures for major legal and regulatory violations, including those that affect the Group's social standing, business operations, earnings and other key parameters. Our domestic subsidiaries, Shimonoseki Mitsui Chemicals, Inc. received a notice from Yamaguchi Prefecture on August 5, 2019 that it would be subject to legal procedures in accordance with the High Pressure Gas Safety Act. This relates to multiple problematic leaks found at the company's high-pressure gas production facilities. In response to these events, we would like to sincerely apologize for causing significant concerns among many people, including local residents, the authorities and customers. We are treating this incident very seriously. We will endeavor thoroughly to strengthen group-wide legal compliance, review internal control and prevent any further incidents of this sort from recurrence in Mitsui Chemicals Group, including Shimonoseki Mitsui Chemicals, Inc.

Risk models (examples of possible risks)

Categories	Risk examples
Business	<ul style="list-style-type: none"> • Collapse of share in the materials market through entrance of competitors • Shortfall in meeting operating profit target due to rise in material prices and/or fluctuations in exchange rates • Poor spread and revenue declining due to slow recovery of the market • Sales decrease and decline in the market due to increase of imports, and increase of stock caused by falling sales • Significant deterioration in business due to reduced demand caused by changes in social climate
Sales	<ul style="list-style-type: none"> • Violations of antitrust regulations
Product safety	<ul style="list-style-type: none"> • Inappropriate management of products to be exported
Compliance	<ul style="list-style-type: none"> • Contract-related problems and complaints • Non-compliance with intellectual property regulations • Violation of laws • Violation of tax laws regarding accounting procedures, or inadequate procedures
Health and safety	<ul style="list-style-type: none"> • Occurrence of serious accidents • Occurrence of serious occupational accidents • Non-compliance with laws related to the environment and occupational health and safety • Loss of social credibility through accidents or problems
Quality	<ul style="list-style-type: none"> • Inadequate management of high risk goods • Occurrence and increase in complaints • Occurrence of serious quality problems • Loss of social credibility through quality falsification
Production and facilities	<ul style="list-style-type: none"> • Production volume reduction due to problems in plants etc. • Production problems accompanying increase in operating efficiency • Occurrence of serious problems in using external facilities
Capital	<ul style="list-style-type: none"> • Occurrence of uncollectible debts
Human resources	<ul style="list-style-type: none"> • Increase in mental health problems • Occurrence and unsettled harassment issues
Information management	<ul style="list-style-type: none"> • Inadequate management of M&A-related internal information • Leakage of confidential information and/or private information • Leakage of customer information • Unaddressed information system security risks • Leakage of insider information

Examples of ESG risks in the supply chain**Environmental risks**

Supply chain Issues	Risk examples
Upstream-Downstream Environmental laws and regulations	<ul style="list-style-type: none"> • Cessation of plants that are not compliant with environmental laws and regulations • Cessation of material procurement and loss of customers accompanied by tightening of environmental laws and regulations • Increase in subcontract expenses to comply with environmental laws and regulations

Upstream-Downstream Climate change	<ul style="list-style-type: none"> • Cessation of plant operation caused by natural disasters (heavy rain, flooding, powerful typhoons, etc.) • General price rise due to energy shift as an anti-climate change measure and cost increase due to tax reforms in the subcontractors' countries
Upstream Destruction of nature	<ul style="list-style-type: none"> • Severe criticism from NGOs etc. due to participation in deforestation for oil palm plantations through palm oil usage • Backlash from communities due to inadequate control over air, water, and soil pollution, as well as waste emissions (possibly including violation of laws), which may lead to inability to continue plant operations
Upstream-Downstream Natural disasters	<ul style="list-style-type: none"> • Cessation of plant operation caused by natural disasters (earthquakes, tsunamis, etc.)
Upstream Material and energy procurement	<ul style="list-style-type: none"> • Purchase of high-priced materials as a result of environmental procurement based on customers' policies • Inability to procure materials due to decrease in by-product materials through suppliers shift to green production • Cessation of plant operations due to outages of electricity, water, etc. through physical or political reasons
Downstream Development of recycling	<ul style="list-style-type: none"> • Market shrinkage due to rapid increase in product recycling • Pressure on profits through requests from customers to share recycling costs • Difficulty in continuing business due to disuse of additives unsuitable for recycling

Social risks

Supply chain Issues	Risk examples
Upstream-Downstream Human rights violations	<ul style="list-style-type: none"> • Boycott of customers' products due to forced and/or child labor problems in subcontractors, followed by associated compensation • Boycott of products due to racial discrimination and/or human rights issues concerning workers in partner companies • Labor-management disputes and/or severe criticism from NGOs etc. due to unclear and/or discriminatory employment conditions for foreign workers • Severe criticism from NGOs etc. due to being regarded playing a role in local subcontractors' invasion of residential area for the indigenous population • Strikes or plant operation cessation following labor union formation and/or refusal of collective bargaining in local country
Upstream-Downstream Poor working conditions	<ul style="list-style-type: none"> • Health damage from worsened labor conditions in production sites etc. • Accidents or death from overworking of employees in subcontractors due to excessive long-hour working • Labor disputes and/or severe criticism from NGOs etc. due to failure to pay minimum wage or living wage
Upstream Conflict minerals	<ul style="list-style-type: none"> • Severe criticism from NGOs etc. for taking a part in inhuman acts through purchasing conflict minerals
Upstream-Downstream Severe criticism	<ul style="list-style-type: none"> • Severe criticism from NGOs etc. of a specific material or chemicals and plastics in general • Influence on business from tightening or changes to laws and regulations in response to rise in critical public opinion • Customers pulling out from business due to rise in critical public opinion and/or severe criticism

Governance risks

Supply chain Issues	Risk examples
Upstream-Downstream Regional and geopolitical issues	<ul style="list-style-type: none">• Plant operation cessation due to territorial disputes or terrorism• Stagnation or uncertainty of Mexican economy due to lack of progress in NAFTA negotiations• Steep rise in raw oil prices or procurement difficulties due to worsened Middle East situation• Difficulty in business continuation through withdrawal of investment due to trading with sanctioned countries
Upstream Bribery and corruption	<ul style="list-style-type: none">• Loss of social credibility through bribery of local civil servant by local consultant

End

Procedures for Identifying Risks and Specifying / Managing Priority Risks

1. Risk Identification

Identify risks at each department by performing a full review of each responsible operation and relevant laws/regulations, and taking into consideration the status of priority risk management during the previous fiscal year.

2. Risk Categories

Identified risks are assessed according to impact and likelihood of occurrence, and then categorized from I to IV within the matrix shown below.

Criteria

◆ High Impact

- Very high level of monetary impact (damages, earnings reduction)
- Casualties incurred
- Organizational survival and strategic targets significantly impacted
- Company image and reputation severely damaged
- Local communities heavily affected

◆ High Likelihood of Occurrence

- High likelihood of occurrence at least once during the fiscal year
- Actual occurrence during the past three years
(However, possible to establish evaluation criteria tailored specifically to the circumstances of each department)

High Impact Low	II	I
	IV	III
	Low	High
	Occurrence potential	

3. Specifying Priority Risks

Based on the categories listed above, one or more priority risks are selected from risks categorized under I (II if there is no I; from III if there is no I or II)

4. Establishing Risk Countermeasures, Management Items and Targets

Establish countermeasures for priority risks as well as management items and targets in order to implement these countermeasures (it is desirable to establish quantitative management items/targets to extent possible, but it is possible to set these on a qualitative basis if obtaining qualitative items proves difficult)

Risk Prevention Measures

Risk Hotline

Our Risk Hotline enables any Group's employee who has obtained information relating to risks, including details of illegal activities going on within the Company, to directly report the matter to and seek advice from the Risk & Compliance Committee or an outside attorney. The hotline is open not only to directors, corporate auditors, and employees, but also to all parties with an interest in the Company's business activities including the families of employees, contractors at our works or other sites and suppliers. Any and all information relating to risks received through the hotline is immediately and appropriately reported to the Company's corporate auditors.

Apart from the Risk Hotline, we are operating a system by which a harassment consultant contact office is located at each of our business sites' human resource division.

Reporting and Consultation Desk

[Report and Consultation to the Company's Risk & Compliance Committee]

For the attention of:

The Secretariat, Risk & Compliance Committee

Corporate Administration & Legal Division

Mitsui Chemicals, Inc.,

Shiodome City Center, 1-5-2, Higashi-Shimbashi, Minato-ku, Tokyo 105-7122,

Japan

E-mail : Risk@mitsuichemicals.com

[Report and consultation to external contact [attorney]]

For the attention of:

Mitsui Chemicals, Inc. Hotline

Daiichifuyo Law Office, Kasumigaseki Building 12F, Kasumigaseki, 3-2-5, Chiyoda-ku, Tokyo

100-6012, Japan

E-mail : risk-MCI@daiichifuyo.gr.jp

Target Case Studies

■ Corruption ■ Bribery ■ Human Rights ■ Employment Environment
■ Environmental Contamination ■ Compliance with Laws and Regulations
■ Procedures Relating to Business ■ Others

Law

Operation of the risk hotlines

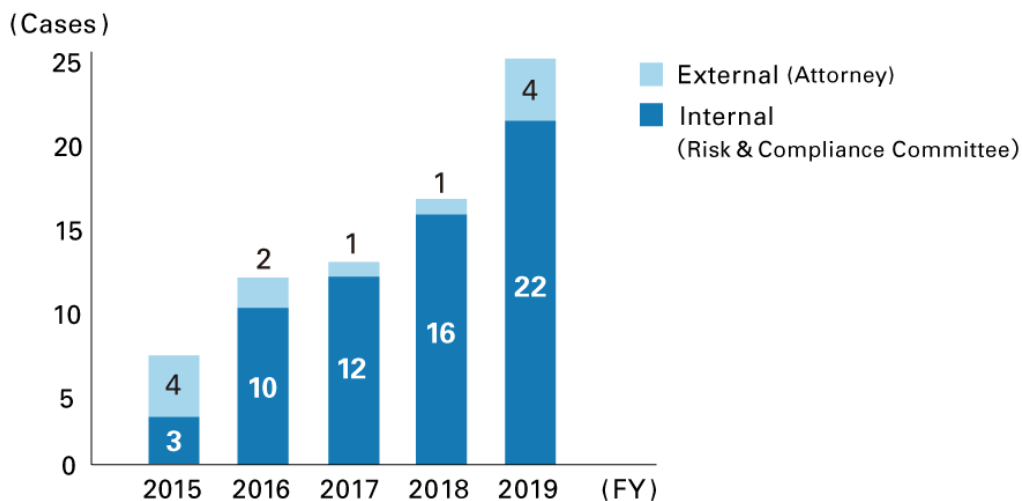
- The Company restricts those able to view E-mails and letters received by the Risk & Compliance Committee or the external point of contact to only some members of the Committee. Furthermore, those able to view correspondence strictly observe confidentiality with regard to the name or location of any person using the hotline to report or seek advice or to the content of their report, which for the purposes of investigation is not disclosed to anyone other than the minimum number of officers and employees or to attorneys. Internally stipulated regulations safeguard the information against further disclosure or leakage
(including the name or location of any person using the hotline to report or seek advice, or acts that would make it easy to ascertain the content of their report).

- The Company will keep confidential from anyone other than those involved any information relating to those cooperating for the purpose of the investigation or information gained through the investigation.

- Any person using the hotline to report or seek advice is not to be subject to penalty by reason of having written a report or sought advice. However, this limit will not apply in cases where the person who used the hotline to report or seek advice had done so for the purpose of deceiving others, for example by deliberately conveying false information, or in cases in which a report was made for the purposes of unlawful activities, such as coercion or blackmail.

Anonymous reports and requests for advice by letter or E-mail are accepted. However, please be aware that in the event that a person cannot be contacted by the Company, there will be cases where the situation will not be fully understood and steps, such as an appropriate investigation or response, will not be taken.

Risk Hotline Operating Performance



Business Continuity Plans (BCPs)

Due to the ever-present risks, such as large-scale disasters, an outbreak of a new type of influenza and large-scale accident at a production site, the Company prepares for crises that may have serious consequences for the Group, has established a system to promptly and appropriately respond to each function, such as Head Office, production site or supply chain, and formulated a Business Continuity Plan (BCP) to fulfill its supply responsibility to customers. For the BCP to be executed in the event of a major earthquake in the Tokyo Metropolitan area, the plan establishes certain systems and outlines that, in the event that the Company's Head Office is unable to operate properly, its functions will be transferred to a main base such as the Osaka Works. Additionally an emergency headquarters will quickly establish a chain of command, and emergency customer response centers will be established to provide our customers with support quickly and effectively. BCPs have also been put in place in preparation for an outbreak of any new-type influenza and for a large-scale accident at a production site.

With regard to some of the important raw materials, we are purchasing from multiple sources and ensuring back-up sources to safeguard the supply chain, building a production system at multiple business sites for the Group's main products, and maintaining a certain level of inventory.

Regarding COVID-19 sweeping the world today, various divisions have developed BCPs to prepare for all situations, including bans on movements across prefectural borders and outbreaks of infection within the company. The COVID-19 Action Headquarters organized at our Tokyo Head Office has strengthened and coordinated actions with our overseas operations, including those in China, to ensure that early action is taken to secure employee safety and that swift action is taken to preserve business continuity.

Compliance Training

As an indication of the priority given to compliance with laws and regulations over any pursuit of profit, the Mitsui Chemicals Group has identified compliance with all laws and regulations as the first item in [the Action Guidelines](#) formulated in February 2006. In addition to putting in place a risk management framework that includes the Risk & Compliance Committee and Risk Hotline, Mitsui Chemicals is acutely aware of the critical need to have its employees, who drive its risk management framework forward, strictly adhere to all laws and regulations. With this in mind, the Company has undertaken four initiatives in an effort to ensure compliance. In addition to preparing the Compliance Guidebook, we conduct workplace discussions covering case studies of violations of laws and regulations as well as compliance awareness training in order to strengthen the understanding of employees. From a skills and knowledge perspective, we also conduct legal and regulatory compliance training.

Compliance Guidebook

The Compliance Guidebook (issued in 2006) summarizes basic points that Group directors, corporate auditors, and employees should consider when carrying out their duties. It is a tool that emphasizes the need to comply with all laws and regulations, a key component of the Mitsui Chemicals Group Action Guidelines. As circumstances dictate, steps are taken to revise the content of the Compliance Guidebook to include specific examples of violations of the laws and regulations of each country as well as instances of bribery or the falsification of data, issues that are attracting widespread media interest in Japan, and to increase awareness within the Group as a whole. We updated the guidebook regularly, and recently added points to bear in mind with regard to company and personal information when using social networking services (SNS).

We have compiled a guidebook on the theme of antitrust laws and corruption laws for the Asia-Pacific region and added a Chinese version containing information on Chinese laws and regulations and risks to the Japanese and English versions.

[Compliance Guidebook \(Excerpt\) \(PDF : 66KB\)](#)

Example-based Workplace Discussions on Legal and Regulatory Violations

The Company and its domestic subsidiaries and affiliates have been organizing example-based workplace discussions on legal and regulatory violations since fiscal 2008. These discussions involve members of staff in each workplace discussing examples of compliance violations at Mitsui Chemicals and at other companies, with a focus on the causes, preventive measures, and the potential for similar occurrences in their own workplace. The aim is to raise awareness of legal and regulatory compliance and reinforce interactive communication with senior members of staff. Discussions have received a positive response in many of our workplaces, with some departments voluntarily increasing the frequency of discussion sessions and others picking out examples of particularly relevant violations at other departments. In fiscal 2019, we conducted discussions at 57 company departments and 23 subsidiaries and affiliates.

Compliance Awareness Training

The awareness of individual directors, corporate auditors, and employees is the most important factor to ensure compliance. The required level of awareness varies however depending on each individual's position within the Company. We therefore tailor the contents of compliance awareness training to suit every level, from new recruits to employees newly promoted to a management position, newly appointed line managers, and each management rank. In fiscal 2019, compliance awareness training was conducted as part of the new employee training, midcareer employee training and line manager training programs to foster awareness of compliance with laws and regulations, based on case studies and discussions of violations in the Group and other companies. Our goal is for individuals at every level to take the initiative and set an example for others, thereby raising levels of compliance awareness throughout the Group and creating a more open corporate culture.

Key Achievements of Stratified Training

Legal and Regulatory Compliance Training

Here at the Mitsui Chemicals Group, we organize legal and regulatory compliance training in order to improve employees' knowledge. Training is provided via e-learning or group training sessions, both of which cover specific laws and internal regulations that our employees need to be aware of in order to carry out their duties. We also organize customized training sessions for individual divisions or subsidiaries and affiliates. Required subjects vary depending on the contents of each employee's duties. We also require employees to re-take courses on a regular basis to ensure that they are aware of recent developments. Participation in these training initiatives is audited by the Internal Control Division.

e-Learning and Training Themes

- Industrial safety and health
- Process safety legislation
- Environmental legislation
- legislation Quality control
- Finance and taxation
- Intellectual property
- Harassment Information
- Contracts
- Antimonopoly legislation
- Credit control
- Export control
- management Purchasing

Compliance training in the Asia-Pacific

Since fiscal 2015, Mitsui Chemicals Asia-Pacific, Ltd., Mitsui Chemicals regional head office located in Singapore, has been exercising its initiative in actively organizing training programs.

A guidebook on the theme of antitrust laws and corruption laws has been developed for the Asia-Pacific region and distributed widely. Since fiscal 2016, seminars on bribery regulations, antitrust laws and contracts have been held in Singapore, Thailand, Malaysia, India and Indonesia, and regular discussion training on cases of compliance violations around the world have been organized.



~For compliance with laws and rules~

Compliance Guidebook

Mitsui Chemicals, Inc.

~For compliance with laws and rules~

Compliance Guidebook

December 1, 2003	First Edition
May 30, 2006	Second Edition
December 1, 2012	Third Edition(Electronic Publishing)
February 1, 2016	Fourth Edition(Electronic Publishing)
November 1, 2016	Fifth Edition (Electronic Publishing)
July 1, 2017	Sixth Edition(Electronic Publishing)

MITSUI CHEMICALS, INC. Corporate Administration & Legal Division

This Guidebook is based upon Japanese law, regulation and customs and refers to Japanese cases. It may be possible that the cases in the Guidebook do not apply in any jurisdictions except Japan.

Aiming to Become a Reliable Mitsui Chemicals Group - Striving to Be a Trusted Entity -

In February 2006, we established “Mitsui Chemicals Group Action Guidelines” as part of our Corporate Social Responsibility (CSR) strategy. These Guidelines were compiled to present the guidelines for actions for the officers and employees of the Mitsui Chemicals Group. These Guidelines are intended to be referred to by them when they consider what they should value most in their behavior in order for the Group to continue to contribute widely to society and become an entity that earns the trust of its stakeholders. The top priority item set forth in these Guidelines is “Compliance with the laws and regulations”.

At the outset of the Action Guidelines, the Mitsui Chemicals Group declared “We will give priority to compliance with laws and regulations over pursuit of any profit”. If you are forced to choose either profit or compliance with laws and regulations, please do not hesitate to give priority to compliance with laws and regulations. We should never repeat the violation of the High Pressure Gas Safety Law or cartels (for polypropylene, gas distribution pipe, etc.), among other things.

In recent years in Japan, cases of violations of laws, regulations and rules have been frequently reported by the press. These cases include the incidents of product data fabrication and accounting fraud by listed companies and an emission gas scandal of a powerful carmaker having global operations. Society is keeping an ever increasingly sharp eye on these corporations having committed the offenses. In these situations, they are facing a possibility that as a consequence of their single breach of a law, regulation or rule, they may devastatingly lose their social confidence that they have built over many years and the foundation of their existence as corporations may be shaken. We must have a strong realization that compliance with laws, regulations and rules is the major premise of the existence of any corporation and without it any corporation can neither continue to exist nor fulfill its social responsibility.

Furthermore, in light of the global development of our businesses that are growing year by year, it is all the more important for us to have a greater awareness of the importance of compliance with the laws, regulations and rules of foreign countries as well as those of Japan. We are required to have an accurate understanding of various regulations of foreign countries and consider at all times whether or not our own actions are appropriate. In particular, the concerns about the problems of injustice and corruption including cases of bribery involving foreign public officials are rapidly growing in the world. This is an issue to be seriously addressed by the whole Mitsui Chemicals Group for the sake of our moving forward with global business operations, among other reasons.

I firmly believe that if all of our officers and employees take actions in good faith, keeping compliance with laws, regulations and rules in mind, we will gain greater social confidence and be able to lay the foundations for the sustainable development of our Group.

April, 2020



Osamu Hashimoto, President

~For compliance with laws and rules~

Compliance Guidebook

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Bribery Prevention

Policy

With business taking on an increasingly global nature with each passing year and in light of the world's heightened focus on bribery in recent years, the further development and strengthening of an international bribery prevention framework is an important task to be addressed by the Mitsui Chemicals Group as a whole. The Mitsui Chemicals Group will comply with all regulations aimed at preventing bribery in the countries and regions in which the Mitsui Chemicals Group is engaged in business, including the Unfair Competition Prevention Act of Japan, the Foreign Corrupt Practices Act of the U.S., and the Bribery Act of the U.K. (all such regulations, the "Bribery Regulations"). Whenever it is faced with choosing between profits or compliance, the Mitsui Chemicals Group will never hesitate in prioritizing compliance. With the aim of preventing bribery by clearly stating matters such as the basic stance of the Mitsui Chemicals Group towards bribery and the rules to be followed by its personnel, the Mitsui Chemicals Group has formulated this Policy. This Policy applies to all personnel of the Mitsui Chemicals Group.

Including the Mitsui Chemicals Group Policy on Bribery Prevention and other content on bribery, [the Compliance Guidebook](#) increases awareness throughout the Group. With regard to high-risk areas, we prepare and distribute manuals to employees and are focusing on initiatives, such as group training sessions, to prevent bribery. [Audits](#) conducted by the Internal Control Division also include content on bribery.

[Compliance training](#)

The Mitsui Chemicals Group Policy on Bribery Prevention

1. Prohibition of bribery

Personnel of the Mitsui Chemicals Group will not engage with any other person in any act of making or receiving a bribe.

2. Development of a bribery prevention framework

The Mitsui Chemicals Group will strive to operate its compliance-related departments, and whistleblowing notification centers in a fair and equitable manner, and will maintain and operate organizations and systems designed to prevent acts of bribery.

3. Education and training

The Mitsui Chemicals Group will continually provide education and training to personnel in order to further ensure an ethical mindset aimed at preventing bribery and to secure the operation of its bribery prevention framework.

4. Audits and system reviews

The Mitsui Chemicals Group will perform periodic audits to confirm whether its bribery prevention framework is actually functioning and, based on the results of such audits, will continually review the effectiveness of the bribery prevention framework of the Mitsui Chemicals Group (including this Policy) and make improvements as necessary.

5. Recording and storing of transaction details

In order to evidence its compliance with the Bribery Regulations of each country and with this Policy, the Mitsui Chemicals Group will use appropriate internal control systems to factually and accurately record approval documents, accounting books, and the like relating to expenditures, and will appropriately store all relevant ledgers and forms.

6. Disciplinary action

If an employee violates this Policy, the Mitsui Chemicals Group will take appropriate and swift disciplinary action in accordance with work rules and the like.

Definition of Terms

- 1) "Making a bribe" means giving, or offering or promising to give, any money or other benefits to a public officer, etc., directly or indirectly, for the purpose of having the public officer, etc. act or refrain from acting in a particular way in relation to his or her duties, or having the public officer, etc. use his or her position to influence another public officer, etc. to act or refrain from acting in a particular way in relation to that officer's duties, in order to obtain illicit gains in business.
For example, providing hospitality or gifts to an instructor or staff member of a national public university, or to a physician or staff member of a national public hospital, would constitute "making a bribe."
- 2) "Receiving a bribe" means receiving, or demanding or promising to receive, any money or other benefits in relation to one's own duties for the purpose of obtaining illicit gains for oneself or a third party.
- 3) "Bribery" means the act of making a bribe or receiving a bribe.
- 4) "Public officer, etc." includes any of the following persons:
 - (i) A person engaged in public duties for the national or local governments of his or her own or a foreign country ("Governments");
 - (ii) A person who engages in the affairs of an entity established under a special law or regulation to carry out specific affairs related to the public interest;
 - (iii) A member of staff of any of the following public companies or entities ("companies, etc.") granted special privilege by a Government:
 - (a) A company, etc. in which a Government directly or indirectly holds a majority of the voting shares or paid-in capital;
 - (b) A company, etc. the majority of whose officers are appointed or nominated by a Government;
 - (c) A company, etc. otherwise substantively controlled by a Government;
 - (iv) A political party or a staff member thereof;
 - (v) A candidate for public office;
 - (vi) A person engaged in public duties for a public body;
 - (vii) A person engaged in the affairs of Government or public body as authorized thereby; or
 - (viii) Any other person similar to any of ① through ⑦ above.
- 5) "Personnel" means all officers, employees, and temporarily employed persons of the Mitsui Chemicals Group.

Policy and Basic Approach

The Mitsui Chemicals Group is constantly engaged in business activities to realize [our Corporate Vision](#), which comprises our Corporate Mission and Corporate Target. Our Group recognizes efforts to achieve effective corporate governance as part of the process will allow us to achieve sustainable growth and increased corporate value over the medium to long term.

The tax regulations of countries and regions across the globe affect the business activities carried out by our Group in various ways, and complying with such regulations is one of the important responsibilities companies must fulfill. To adequately fulfill this responsibility, our Group will formulate a tax policy in order to achieve our Corporate Mission and as a result we will avoid not only tax litigation, additional taxes and penalties, but also prevent our Group and its various stakeholders from facing the negative repercussions which arise from such events.

The Mitsui Chemicals Group Tax Policy

1. Compliance

Our Group will comply with the tax laws and regulations of each relevant country and region, utilize in an appropriate manner the benefits available under the preferential tax regimes provided in their tax regulations, and file tax returns and make appropriate tax payments (i.e. using values neither excessive nor insufficient). Furthermore, to ensure accurate tax processing, our Group will apply proper accounting procedures in accordance with the relevant laws and regulations.

2. Tax planning

Our Group manages tax planning in a fair and appropriate manner commensurate with our business activities. Furthermore, we comply with international tax rules and the laws and regulations of each country in which we conduct business activities, and make an effort to minimize tax risks.

Our Group does not arrange tax avoidance through the utilization of tax havens and does not conduct tax planning in a manner not commensurate with our actual business conditions.

3. Initiatives to minimize tax risks

Although our Group strives to deal with taxes in accordance with the tax regulations of each relevant country, there is a certain degree of probability that the tax implications our Group has determined to be appropriate may not be agreed by the tax authorities of the respective country.

Our Group will seek tax advice from third-party tax professionals as necessary researching, evaluating and considering enough multiple options, and make appropriate decisions. We believe that this minimizes the risk of tax litigation, additional taxes and penalties.

4. International taxation

(1) Transfer pricing

Our Group believes that tax payment will be made appropriately in each respective country and region by allocating income internationally to each group company in accordance with their degree of contribution. Based on this understanding, our Group complies with international regulations such as the OECD Transfer Pricing Guidelines, applies transfer pricing methods based on the results of function and risk analyses and determines prices for transactions conducted with foreign related parties.

In order to reduce tax risk pertaining to transfer prices, our Group receives advice from third-party professionals and utilizes the advance pricing agreement (APA) program and other systems offered by tax authorities.

(2) Elimination of double taxation

If double taxation occurs whereby taxes are levied by multiple countries and regions on the same economic benefits, our Group will strive to eliminate double taxation by taking advantage of the tax treaties and mutual agreement procedures provided by the relevant countries.

5. Relations with tax authorities

Our Group will respond as necessary to inquiries or requests to provide information from tax authorities and maintain good relations with tax authorities.

In order to reduce uncertainty surrounding tax operations and to ensure tax transparency, our Group will apply tax implications in a manner for which rational explanations can be provided and will strive to immediately resolve matters of opinion between our company and tax authorities.

Furthermore, with regard to guidance received from tax authorities, we will take measures to prevent its recurrence.

System and Responsible Officers

The CFO of Mitsui Chemicals Inc. has responsibility for building our Group's tax governance structure.

To ensure the proper functioning of the foregoing structure, our Finance and Accounting Division carries out the following practical tasks and operational management in cooperation with the Finance and Accounting Divisions of each company of our Group.

- Concerning matters that need to be dealt with on a global basis, such as tax audits and transfer pricing regulations, we continuously strive to improve group-level management in cooperation with the Finance and Accounting Divisions of each company of our Group.
- Concerning matters that can be handled to a certain degree within the Finance and Accounting Divisions of each company of our Group, we provide the assistance to each company as necessary to handle tax matters appropriately.

Our Finance and Accounting Division uses the information received from each company of our Group to monitor the tax governance of each group company and each tax item from a group perspective, and implements corrective measures when necessary and reports the status of management to our CFO as needed.

Basic Approach

The Mitsui Chemicals Group appropriately handles information related to customers and to our own company that we use in our corporate activities. As well as complying with laws and internal regulations, we promote an understanding of the importance and responsibility of information management with employees, and conduct management.

Initiatives in Information System Security

In order to offer better products and services, the Mitsui Chemicals Group believes that it is indispensable to utilize customer information and other information that we possess through IT. Therefore, we recognize the importance of establishing information system security and undertake the following measures:

- Establishing the system to prevent unauthorized access to confidential information and unauthorized removal of information from the company
- Training and enlightenment regarding security risks for subsidiaries and affiliates and inspections of their security levels
- Obliging of all employees who use information systems to get training on information system security once a year

We plan to further enhance the information security system in the future by addressing increasing risks caused by cyber attacks as an important management issue.

Personal Information Protection

The Mitsui Chemicals Group recognized that it is an important social responsibility to handle and protect personal information appropriately. We stipulate the Privacy Policy and Personal Information Protection and Management Regulations, and at the same time we provide corporate training programs to employees and undertake regular audits. In addition, we have developed a global personal information protection framework that complies with General Data Protection Regulation (GDPR) and appropriately manage the personal information we hold.

[Privacy Policy](#)

Responsible Care



Responsible Care Management

- Management System
- Roll Out Globally

Safety and Prevention

- Management System
- Initiatives to Prevent Major Accidents
- Accidents and Occupational Injuries
- Training
- Drills

Environmental Protection

- Management System
- GHG and Energy
- Industrial Waste
- Environmentally Hazardous Substances
- Water
- Biodiversity
- Environmental Accounting/Compliance

Product Stewardship

- Management System
- Regulatory Compliance and Distributing the Safety Use Information
- Providing Safe Products
- Training

Quality of Products and Services

- Management System
- Initiatives

Logistics

- Management System
- Safety and Quality
- Stable Transportation

Occupational Health

- Management System
- Health and Productivity Management
- Preventing Exposure to Harmful Substances

Management System

Policy and Basic Approach

Responsible Care is an activity that the world's chemical industry is integrally promoting to improve the quality of life (QOL) by chemical products and to contribute to the sustainable development of society. All companies voluntarily implement activities designed to ensure safety, health and quality as well as protect the environment throughout the entire life cycles of their chemical products, publicize the results of their activities and engages in dialog with the local communities where they operate. As Responsible Care activities span entire life cycles, it is believed that the philosophy behind these activities is applicable not only to the chemical industry that manufactures the chemical products but also universally by all industries that use them.



The Mitsui Chemicals Group has identified certain basic elements of the Responsible Care activities undertaken by the Group in accordance with the Responsible Care Policy. Guided by this Policy, the Group engages in various Responsible Care activities in such areas as [safety and prevention](#), [environmental protection](#), [occupational health](#), [product stewardship](#), [the quality of products and services](#), and [logistics](#). Through its Responsible Care activities, the Company and Group are committed to addressing the expectations and earning the trust of society as well as the local community while also contributing to the sustainable development of the public at large and the chemical industry.

The Responsible Care Policy is upheld in the “Philosophy and Policy Relating to Ensuring Safety” of the Mitsui Chemicals Group. It was formulated based on the philosophy of [the Responsible Care® Global Charter](#) drawn up by the International Council of Chemical Associations (ICCA).

[The Responsible Care® Global Charter: Company Signatorie](#)

Responsible Care Policy

Based on its Corporate Mission and Action Guidelines, the Mitsui Chemicals Group acknowledges that its business challenge is not only to comply with laws and regulations of the countries in which it does business, but also to continuously contribute to the improvement of safety, health, the environment, and quality, for the sustainable development of society. We will expand our business focus while continuing to improve and maintain good communication with all our stakeholders and business partners.

- We pledge that safety is our top priority and will focus on achieving zero accidents and occupational injuries.

- We will assess the risks to people and the environment from our products throughout their lifecycles, while working to ensure the health and safety of all persons and to reduce the environmental impact of those products.
- We will contribute to improve quality of life and protect the environment through our business activities by developing beneficial technologies and products.
- We will provide high-quality products and services that satisfy the needs of our customers and respond to the trust that they place in us.
- We will actively promote the well-being of all our employees.

These Rules shall come into full force as of October 1, 1997.

These Rules as revised shall remain in full force and effective as of September 1, 2015

We also produced [guidelines](#) to better ingrain the Responsible Care Policy throughout the Mitsui Chemicals Group. We translated the Responsible Care Policy and guidelines into eight languages, including English, Chinese, Korean and Malay, and sent them throughout the Group as a whole.

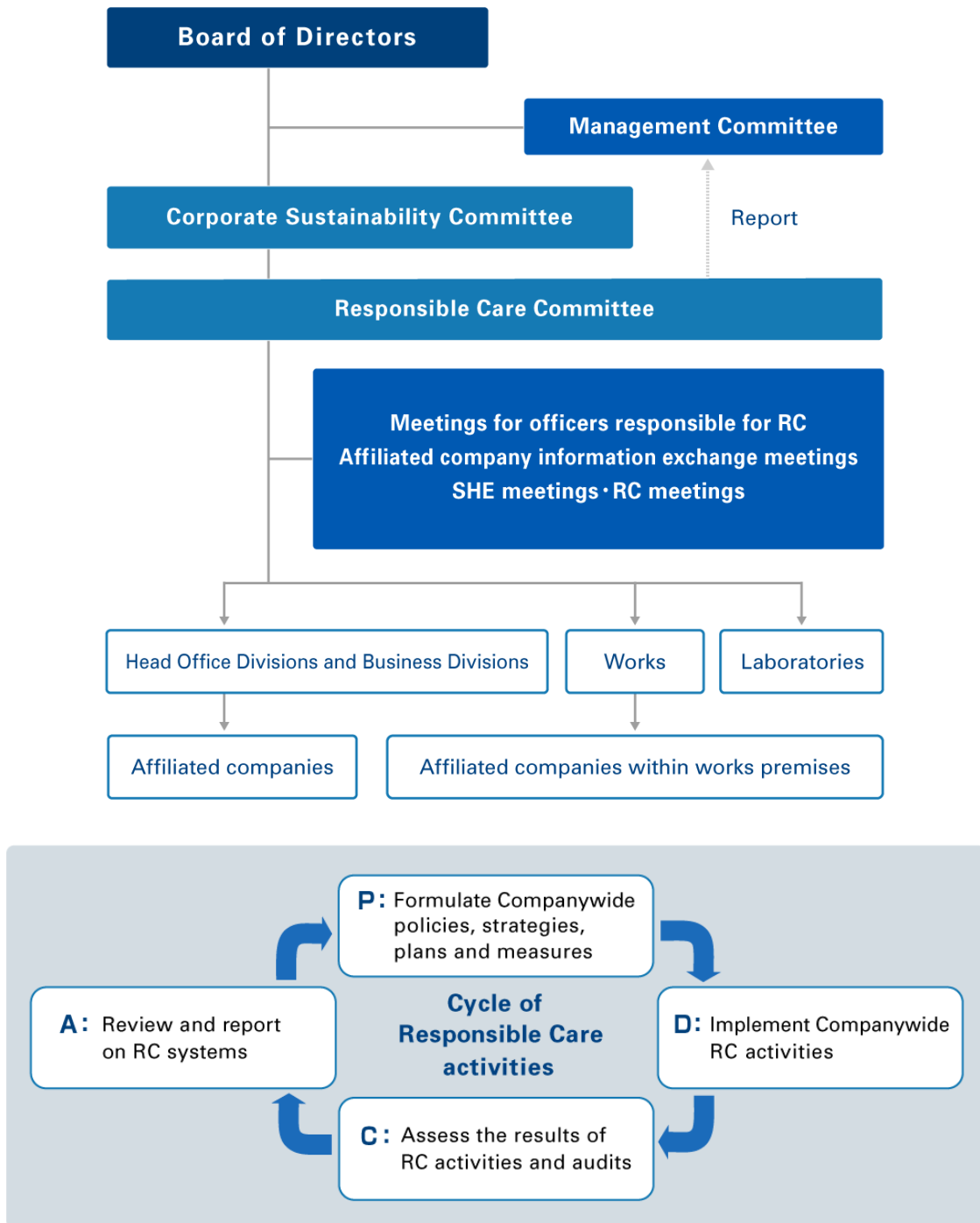
In addition, to further expand Responsible Care activities at subsidiaries and affiliates, Mitsui Chemicals drew up (in Japanese, English, and Chinese editions) [the Shiodome Manifesto](#). Based on the articles of the Responsible Care® Global Charter, the Manifesto serves as a declaration that promotes the Group's Responsible Care policy and frameworks for subsidiaries and affiliates. The presidents of Group subsidiaries and affiliates that manufacture and market chemical substances, (excluding subsidiaries and affiliated companies situated within the premises of the works sites of Mitsui Chemicals, Inc.) signed off in acknowledgement of their commitment.

System and Responsible Officers

The director in charge of the Responsible Care Committee is the responsible officer.

Chaired by the responsible director in charge of the Responsible Care Committee, the Responsible Care Committee convenes three times a year, formulates policies, strategies and plans with regard to Responsible Care activities, conducts performance evaluations and reviews Responsible Care related systems. The general managers of each division (the general managers from the RC & Quality Assurance Division; Safety and Environment Technology Division; Planning & Coordination Division Production & Technology Center; Logistics Division; and Human Resources Division), who are the Committee's permanent members, report on the Responsible Care activities in their respective jurisdictions at Responsible Care Committee meetings. The responsible director in charge of the Responsible Care Committee also bears the responsibility for the deliberations and discussions held at the Committee, and outlines of their content are reported to the Management Committee, thereby ensuring a senior management-level commitment to Responsible Care.

Responsible Care Management System



Role of the Responsible Care Committee

- Formulated Responsible Care -related policies, strategies, plans and measures on a companywide basis
- Assess the results of Companywide Responsible Care activities on a yearly and quarterly basis
- Publicize and raise awareness of Responsible Care within the Company
- Assess the results of Responsible Care audits
- Review Responsible Care systems and examine other important issues

Composition of the Responsible Care Committee

Chair	Director in charge of the Responsible Care Committee
Permanent members	Center Executive of the Production & Technology Center, General Manager of the Planning & Coordination Division of Each Business Sector, General Manager of R&D Planning & Coordination Division, Planning & Coordination Division of the Production & Technology Center, Safety & Environment Technology Division, the RC & Quality Assurance Division, Purchasing Division, Logistics Division, Human Resources Division, Corporate Planning Division, Affiliates Coordination Division, Corporate Sustainability Division, and Internal Control Division, other members appointed by the Chairperson
Observers	Corporate Auditor, President of the Mitsui Chemicals Labor Union, other members appointed by the Chairperson
Secretariat	RC & Quality Assurance Division

We constantly exchange information between divisions in charge of Responsible Care and engage in Responsible Care activities that involve the Company as a whole. Regular meetings are held by the representatives of each department on a monthly basis. We also appoint a member of staff to be in charge of Responsible Care (RC Officer) at each business division and in each department and roll out Responsible Care -related policies and strategies across the Mitsui Chemicals Group as a whole through RC Officer meetings (held twice a year). Based on these policies and strategies, specific Responsible Care activities are carried out by individual departments, including each works and business division.

The Mitsui Chemicals Group as a whole also promotes Responsible Care, including support for specific activities for domestic and overseas affiliated companies as well as departments with various functions. Meetings are also held twice a year with domestic subsidiaries and affiliates to exchange information. Moreover, steps are taken to share policies related to Responsible Care activities as well as activity results. Turning to overseas subsidiaries and affiliates, SHE (Safety, Health, and Environment) meetings are held by region. In addition to sharing policies and strategies relating to Responsible Care, every effort is being made to promote Responsible Care throughout the Group as a whole.

Internal Audits

We conduct environment & safety ([environmental protection](#), [safety and prevention](#)), [occupational health](#), [quality](#), and [chemical safety audits](#), in order to objectively evaluate the effective implementation of Responsible Care activities at our works, business divisions, laboratories as well as subsidiaries and affiliates all over the world. The Internal Control Division is responsible for environment & safety audits and occupational health audits. Quality audits and chemical safety audits are managed by the risk management support divisions, and the suitability of these audits is itself inspected by the Internal Control Division. The audit results are then reported to the Management Committee and the Responsible Care Committee.

External Certification

The Mitsui Chemicals Group obtains external certification on our environment management system, occupational health and safety management system, and quality management system in each site.

Status of External Certification

Participating in Chemical Industry Associations in Each Country and Region

We report the results of our Responsible Care activities to each association and are working to maintain the transparency of the chemical industry in the eyes of society.

Report recipients: The Japan Chemical Industry Association (JCIA), the Association of International Chemical Manufacturers (AICM, China), the Taiwan Responsible Care Association (TRCA), the Singapore Chemical Industry Council (SCIC), the Federation of Thai Industries (FTI), the American Chemistry Council (ACC), and the European Chemical Industry Council (CEFIC).

Topics that are likely to become management issues are gathered from information obtained in the course of the activities at these associations and reported to top management.

Support Initiatives

Guide to the Responsible Care Policy

The Mitsui Chemicals Group pursues sustainable business activities while fulfilling its responsibilities to society in line with the ideals advocated in its corporate mission of “Contribute broadly to society by providing high-quality products and services to customers through innovations and the creation of materials, while keeping in harmony with the global environment”.

The mindful actions of officers and personnel of the Mitsui Chemicals Group are important in cultivating the trust and confidence of our stakeholders and society. To realize sustainable development of society and our group while contributing to our stakeholders, we will continue to “act in good faith”, “cherish people and society”, and provide “creative and innovative solutions” in line with our action guidelines.

Responsible care initiatives originated in unique activities of the chemical industry to ensure ongoing improvements in safety, health, and environmental platforms. Although originating in the chemical industry, the principles are universal to all industries.

Responsible care at the Mitsui Chemicals Group is not limited to chemical products and materials. Its ideals cover all aspects of the product lifecycle from development, logistics, use, and disposal. It is the self-implemented management and improvement of measures related to safety, health, the environment, and quality.

In accordance with our corporate philosophy and action guidelines, we will meet the expectations of and fulfill our responsibilities to the community and society by not only complying with rules and regulations but by also contributing to and advancing safety, health, and environmental initiatives as well as bolstering quality for the continued sustainability and growth of society. The Mitsui Chemicals Group recognizes these to be its most important responsibilities to society and will make every effort convey its activities and principles by better communication with stakeholders and corporate entities while expanding its business focus and activities.

◆ **We pledge safety is our top priority and focus on achieving zero accidents and occupational injuries.**

Everyone recalls the April 22, 2012 tragedy at Iwakuni-Ohtake Works where an explosion and fire claimed the life of one of our young employees. This accident resulted in a loss of society's trust toward our company. We all pledged that, "We must never let an accident like this to happen again". To be true to this promise, we have strictly implemented fundamental safety activities. However, the establishment of a safety culture does not happen overnight. We will steadfastly continue our safety efforts, one step at a time, so that we may become a "corporate group with the highest level of safety".

Additionally, the Mitsui Chemicals Group aims for safe and stable operations in the event of natural disasters including earthquakes, tsunamis, and typhoons, by conducting daily response drills and by preparing equipment measures for emergency actions such as emergency shutdowns. These efforts aim to regain the trust of society and "realize an industrial infrastructure that is in harmony with the local communities".

◆ **We make efforts to assess risks of our products throughout their lifecycles to ensure the health and safety of all persons and to protect the environment by reducing their environmental impact.**

Mitsui Chemicals engages in sound chemical substance management as a part of efforts to support the international pledge of the Word Summit on Sustainable Development to minimize the negative impact of chemicals on people and the environment by the year 2020. To this end, we have assessed the risk of chemical substances on humans and the environment throughout the product life cycle, and are working to ensure human health and reduce environmental load. We provide assessment results to our stakeholders and contribute to creating a secure society.

◆ **We contribute to improving quality of life and protecting the environment through our business activities by developing beneficial technology and products.**

The Mitsui Chemicals Group aims to contribute to social issues such as a society coexisting in harmony with the environment and "successful aging" where all people can enjoy good health and happiness in an aging society through our business activities. To this end, we are actively developing technology and

products that contribute to improving quality of life and protecting the global environment.

◆ **We provide high quality products and services that satisfy customer needs and respond to the trust that they place in us.**

When providing products and services, we believe it is important to ensure quality from the perspective of the customer and respond to the trust they place in us. Therefore, we make every effort to understand the uses of our products by our customers, and provide products that our customers can use with confidence and satisfaction.

◆ **We actively promote the well-being of all our employees.**

“Employee well-being is directly linked to the company’s well-being.” “Improving the health of our employees is in itself a contribution to society.” With this in mind, the Mitsui Chemicals Group is actively involved in efforts to improve the health of all persons working within the Group. Not only is physical health but also mental health an important issue. To this end, we will support employees in their voluntary efforts to ensure good health and promote the creation of lively work environments.

September 1, 2015

The Mitsui Chemicals Group pursues the fulfillment of its responsibilities to society based on its corporate philosophy to “Contribute broadly to society by providing high-quality products and services to customers through innovations and the creation of materials, while keeping in harmony with the global environment”.

Therefore, to earn the trust of society, the Mitsui Chemicals Group will voluntarily pursue Responsible Care activities which assure protection of the environment, safety, occupational health, and quality throughout the entire lifecycle of a product from its development, manufacture, transport, use, consumption, and final disposal.

As a member of the Mitsui Chemicals Group, I pledge that my company will adhere to the following commitments:

1. Take leadership in promoting Responsible Care activities and cultivate a culture of active participation in Responsible Care activities by all employees.
2. Safeguard people and the environment through continual improvement of the system and performance regarding environmental preservation, process safety, occupational safety and health, chemical safety, quality management, and logistics safety.
3. Implement sound chemical management to aim for higher performance beyond regulatory compliance for chemicals.
4. Aim to further improve safety management by providing logistics partners and product users with product safety information and methods to appropriately handle the products.
5. Continue efforts to secure the confidence of local communities by sharing the results of safe operation performance and information on chemical safety whenever necessary to local municipalities and communities.
6. Contribute to the sustainable growth of the Mitsui Chemicals Group and by extension the sustainable development of society by steadily implementing Responsible Care activities.

Signature _____

Name: 101

Title: SAMPLE

Company: SAMPLE

Date: _____

Status of External Certification (As of June 2020)

Country Region	Company	Business Sites	Certification		
			Environment	Occupational Health & Safety	Quality
Japan	Mitsui Chemicals, Inc.	Ichihara Works	ISO14001	OHSAS18001	ISO9001
		Mobara Branch Factory	ISO14001	OHSAS18001	ISO9001
		Nagoya Works	ISO14001		ISO9001 IATF16949 (electrolyte solution business)
		Osaka Works	ISO14001	OHSAS18001	ISO9001
		Iwakuni-Ohtake Works	ISO14001	OHSAS18001	ISO9001
		Omuta Works	ISO14001		ISO9001
	Saxin Corporation	Factory	ISO14001		ISO9001
	Sun Medical Co., Ltd.	Factory			ISO13485
	Sunrex Industry Co., Ltd.	Factory	ISO14001		ISO9001
	Shimonoseki Mitsui Chemicals, Inc.	Factory	ISO14001		ISO9001
	Japan Composite Co., Ltd.	Shimizu Factory	ISO14001		ISO9001
	Toyo Beauty Supply Corporation	Factory			ISO9001
	NIPPON ALUMINUM ALKYLs, LTD.	Osaka Plant	*	*	ISO9001
	Prime Polymer Co., Ltd.	Head Office			ISO9001
	Hokkaido Mitsui Chemicals, Inc.	Factory			ISO9001
	Utsunomiya Chemical Industry Co., Ltd.	Utsunomiya Factory			ISO9001
		Funaoka Factory			ISO9001
		Shinshiro Factory			ISO9001
		Tosu Factory			ISO9001
	Mitsui Chemicals MC Co., Ltd.	Head Office, Shimizu Factory	ISO14001	OHSAS18001	ISO9001
		Kaibara Factory	ISO14001	OHSAS18001	ISO9001
	MITSUI CHEMICALS SUN ALLOYS CO., LTD.	Factory	*	*	ISO9001
	Mitsui Chemicals Industrial Products, Ltd.	Saitama Factory	ISO14001		ISO9001
		Ohtake Factory	*	*	ISO9001
	Mitsui Chemicals Tohcello, Inc.	Head Office	ISO14001		ISO9001
		Katsuta Works	ISO14001		ISO9001
		Ibaraki Works	ISO14001		ISO9001
		Hamamatsu Works	ISO14001		ISO9001
		Anjo Works	ISO14001		ISO9001
	Shikoku Tohcello Co., Ltd.	Factory	ISO14001		ISO9001
	Mitsui Chemicals & SKC Polyurethanes Inc.	Tokuyama Factory	ISO14001		ISO9001
	Yamamoto Chemicals, Inc.	Head Office, Yao Plant	ISO14001		ISO9001
		Omuta Plant	ISO14001		ISO9001

* Included in the certification of Mitsui Chemicals Sites as it is located within the Mitsui Chemicals sites premises.

Country Region	Company	Business Sites	Certification		
			Environment	Occupational Health & Safety	Quality
China	Tianjin Cosmo Polyurethane Co., Ltd.	Tianjin Plant	ISO14001		ISO9001
		Suzhou Plant	ISO14001		ISO9001
	Mitsui Chemicals Nonwovens (Tianjin) Co., Ltd.	Factory			ISO9001
	Mitsui Chemicals Functional Composites (Shanghai) Co., Ltd.	Factory	ISO14001		ISO9001
	Mitsui Advanced Composites (Zhongshan) Co., Ltd.	Plant	ISO14001		ISO9001 IATF16949
	Zhang Jia Gang Free Trade Zone Mitsui Link-upon Advanced Material, Inc.	Factory	ISO14001		ISO9001 QC080000
	Foshan Mitsui Chemicals & SKC Polyurethanes Co., Ltd.	Plant	ISO14001		ISO9001
South Korea	KOC Solution CO., Ltd	Factory			ISO9001
Southeast Asia	Mitsui Elastomers Singapore Pte. Ltd.	Factory	ISO14001	OHSAS18001	ISO9001
	Mitsui Phenols Singapore Pte. Ltd	Factory	ISO14001	OHSAS18001	ISO9001
	Prime Evolve Singapore Pte. Ltd.	Factory	ISO14001	OHSAS18001	ISO9001

Country Region	Company	Business Sites	Certification		
			Environment	Occupational Health & Safety	Quality
Southeast Asia	SDC Technologies Asia Pacific, Pte. Ltd.	Factory			ISO9001
	Grand Siam Composites Co., Ltd.	Works	ISO14001	OHSAS18001	ISO9001 IATF16949
	Mitsui Hygiene Materials (Thailand) Co., Ltd.	Factory	ISO14001 ISO50001	ISO45001	ISO9001
	Siam Tohcello Co., Ltd.	Works	ISO14001	OHSAS18001	ISO9001
	Thai Mitsui Specialty Chemicals Co., Ltd.	Works	ISO14001	OHSAS18001	ISO9001
	P. T. PETnesia Resindo	Works	ISO14001	OHSAS18001 SMK3	ISO9001
	Mitsui Chemicals Scientex Sdn. Bhd.	Works	ISO14001	OHSAS18001	ISO9001
	MCNS Polyurethanes Malaysia Sdn. Bhd.	Works	ISO14001		ISO9001
	PT. MCNS Polyurethanes Indonesia	Works	ISO14001	OHSAS18001 SMK3	ISO9001
	Mitsui Prime Advanced Composites India, Pvt. Ltd.	Factory	ISO14001		ISO9001
USA	Advanced Composites, Inc.	Ohio Plant	ISO14001	ISO45001	ISO9001 IATF16949
		Tennessee Plant	ISO14001	OHSAS18001	ISO9001 IATF16949
	Advanced Composites Mexicana, S.A. de C.V.	Factory	ISO14001 Clean Industry		ISO9001
	Anderson Development Company	Factory	ISO14001 RC14001		ISO9001
	SDC Technologies, Inc.	Factory			ISO9001
	Mitsui Prime Advanced Composites do Brasil Indústria e Comércio de Compostos Plásticos S.A.	Factory			ISO9001
Europe	Acomon S.R. L.	Factory	ISO14001		ISO9001

* Total 44 sites (75%) of 59 production sites acquired ISO 14001 certification.

* Also, 19 sites (32%) of 59 production sites acquired OHSAS 18001 or ISO45001 certification.

Responsible Care Management

Management System

Roll Out Globally

Roll Out Globally

Mitsui Chemicals is rolling out Responsible Care activities to subsidiaries and affiliates in Japan and overseas as a part of efforts to promote Responsible Care across the Group as a whole.

Global Network

Mitsui Chemicals is building an information network across the five regions where its subsidiaries and affiliates operate: China, Asia, Europe, the Americas, and Japan as its center. This network gathers Responsible Care-related information from industry associations located in each region, which after being summarized and analyzed by the head office is shared throughout the Mitsui Chemicals Group.

As part of the Responsible Care activity programs in each region, the Company holds SHE (Safety, Health, and the Environment) meetings that gather together the staff in charge of Responsible Care of various subsidiaries and affiliates. SHE meetings provide opportunities for participants to learn from each other by analyzing process accidents, occupational injuries and other case studies as well as learning best practices.

China

Nine affiliates in China participated in the SHE meeting for China affiliates held in Shanghai in July 2019. The meeting spotlighted information sharing and exchange regarding each company's activities in the area of safety and environment. We also provided Hazard and Operability Studies (HAZOP) training sessions.

Americas

Five companies in the Americas participated in the RC Meeting for the region held in California, USA, in November 2019. Information was shared on various activities organized to assure safety, as well as action on product stewardship. Additionally, the analysis study of the accidents in Mitsui Chemicals Group was presented at the Meeting.

Asia-Pacific Region

The Asia-Pacific RC Meeting was held in Bangkok, Thailand, in March 2019. Fifteen companies in the region participated and shared information on their environmental and safety activities.

Evaluation of the Responsible Care Activities of Mitsui Chemicals Group

Mitsui Chemicals Group's Responsible Care activities are attracting high external praise.

Japan

Nagoya Works has received the Japan Chemical Industry Association (JCIA) Responsible Care Outstanding Award. The Award was made in recognition of the wide-ranging nature of Nagoya Works' environmental protection activities, including steadfast endeavors to reduce both greenhouse gas emissions and the discharge of wastewater and industrial waste. Nagoya Works was also praised for the fact that all employees have pursued these activities in parallel with the reorganization of the site arising from business restructuring, and for efforts to promote understanding among local citizens and cooperation with local government, which are essential for a plant located in an urban area.

[Mitsui Chemicals Nagoya Works Receives 2020 JCIA Responsible Care Outstanding Award](#) Nagoya Works recognized for wide-ranging efforts to reduce environmental burden in an urban location



Sodegaura Center R&D base has received the JCIA Safety Award Special Prize. All employees involved in R&D have as such played a role in receiving this latest award, with the JCIA looking highly upon these employees for their safety awareness and ongoing safety activities – and the fact that these have allowed operations to continue without incident. The award received is the highest form of safety commendation that the JCIA hands out to research institutes.

[Mitsui Chemicals' Sodegaura Center Wins JCIA Safety Award Special Prize \(Research Institute\)](#) Awarded for continued excellence in safety activities



China

In April 2019, Mitsui Chemicals was presented with [the 2019 RC Chairman's Award](#) by the Association of International Chemical Manufacturers.

Presented biannually to companies with an outstanding track record, this award recognized the Group's extensive ongoing Responsible Care activities as well as its contributions to the sustainable development of the Chinese chemical industry and Chinese society over a long period.

The company received this recognition for the diligent safety-related activities it conducted in the region, including reinforcement of hazard detection activities and improvements to the work environment at its affiliates in China, its continued reporting of its safety and environmental data and the scientific experiment workshop it organized at Hope Primary School in Anhui Province.



Kaori Matsue, Director, RC & Quality Assurance Division (Top row, sixth from right)

Mitsui Chemicals Becomes First Japanese Company to Receive AICM Responsible Care Chairman's Award Recognized for contribution to society and the sustainable development of China's chemical industry

Indonesia

In March 2019, P.T. PETnesia Resindo was awarded the Zero Accident Award by the Ministry of Manpower of the Republic of Indonesia.

Singapore

Mitsui Phenols Singapore Pte. Ltd. was awarded the SCIC Responsible Care Awards by the Singapore Chemical Industry Council (SCIC) in March 2019. It was also awarded the Excellence Awards for Community Awareness and Emergency Response Code category, etc. Furthermore, it was certified the SCIC-SCDF (the Singapore Civil Defense Force) Responsible Care Collaboration and Recognition Scheme 2018. Mitsui Elastomers Singapore Pte. Ltd was awarded the SCIC Responsible Care Awards for the Achievements in four categories.

Safety and Prevention

Management System

Initiatives to Prevent Major Accidents

Accidents and Occupational Injuries

Training

Drills

Management System



Policy and Basic Approach

The Mitsui Chemicals Group places top priority on safety for the Group’s sustainable growth. Safety is the foundation of society’s trust, and at the same time, ensuring safety increases our manufacturing quality, leading to improvement of corporate value from the financial viewpoint.

With this approach, we established a management policy that states “Safety is our top priority,” and [our Responsible Care Policy](#) declares that, “We pledge that safety is our top priority and will focus on achieving zero accidents and occupational injuries.” Top management repeats this as the President’s message, etc. to all the Group employees on many occasions, such as in opening addresses, plants visits, Safety Day messages, and in Company newsletters.

The Mitsui Chemicals Group understands the key to realizing this vision of safety and accident prevention is to maintain a high level of safety regardless of the diversification of employees, facilities, and technologies as business globalization and business portfolio reform progresses. In line with this vision, we strive to provide education and training to employees to be able to put fundamental safety initiatives into practice, globally promote the safety culture, and introduce and disseminate new safety technologies.

All employees of the Mitsui Chemicals Group including contractors are committed to relentlessly implementing the safety culture, reaffirming their heartfelt commitment to the pledge “safety is essential and for the benefit, not only of ourselves, but also our families, colleagues, and society as a whole.”

System and Responsible Officers

Assigning the president as the Chief and the director in charge of the Production & Technology Center as the person directly responsible, the Safety & Environment Technology Division formulates, disseminates and promotes the safety and prevention strategy. [The Responsible Care Committee](#) examines strategy progress and identifies subsequent challenges based on the strategy review and environmental analyses obtained within and outside of the Group in order to create an annual plan and a medium to long-term plan.

The Company holds Health and Safety Committee meetings that include the participation of the responsible officers and labor union members for each site. The Safety and Environment Technology Division regularly checks the achievement of the priority issue targets relating to safety and prevention at domestic bases and ascertains the progress made. In addition, the Division collects, consolidates, and analyzes information on the occurrence of any serious accident and information on occupational accidents in the entire Group and shares that information throughout the Group.

Management and labor union members in the Head Office hold regular Health and Safety Committee meetings to deliberate issues relating to occupational health and safety. At these meetings, the attendees report on and deliberate issues relating to occupational safety and health, including occupational accidents.

Internal Audit

The Internal Control Division conducts environmental & safety audits (for environmental protection, safety and prevention) at Works and laboratories of the Mitsui Chemicals Group.

Environmental & Safety Audit (safety and prevention)	Confirms that the policy of "safety is our top priority" is being comprehensively implemented, that activities are being organized to eliminate accidents and occupational injuries and that there is compliance with the relevant laws and regulations. Indicates nonconformities that require revision or improvement.
	Scope: Works and laboratories of Mitsui Chemicals Inc. and its subsidiaries and affiliates
	Frequency: Once every one to three years (depending on size, business type and management level of the audited organization)

Goals and Results

Accidents

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of major accidents ^{*1}	Mitsui Chemicals Group	0	0	○	0	0 ongoing (FY2025)
Number of abnormal conditions / accidents ^{*2}	Mitsui Chemicals Group	5 or less	18	×	7 or less	—

*1 Major accidents:

Accident with a severity level of 18 points or more, as specified by the Japan Petrochemical Industry Association (JPCA) under Center for Chemical Process Safety (CCPS) evaluation procedures.

*2 Abnormal conditions/accidents:

Although under JPCA accident criteria having an intensity level of less than 18 points, conditions/accidents that the Company judges should be monitored under Company standards in consideration of the relevant laws and regulations.

Occupational injury

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of serious accidents ^{*1}	Mitsui Chemicals Group	—	0	—	0	—
Significant occupational injury frequency ^{*2}	Mitsui Chemicals Group	0.15 or less	0.31	×	—	0.15 or less (FY2025)
	Mitsui Chemicals, Inc. ^{*3}	—	0.00	—	0.15 or less	—
	Domestic Subsidiaries & Affiliates	—	0.83	—	0.15 or less	—
	Overseas Subsidiaries & Affiliates	—	0.62	—	0.15 or less	—
	Construction subcontractors	—	0.25	—	0.23 or less	—

*1 Serious Occupational Injuries:

Occupational injuries that fall under disability grades 1 to 7, causing death, injury or illness.

*2 Significant occupational injuries:

“Significant Occupational Injuries(SOIs)” refer to occupational injuries that resulted in absence from work or death. SOIs also include lighter occupational injuries that, due to the potential danger in the cause of the injury, could have led to absence from work or death. SOIs do not include those injuries that are not directly related to operations.

*3 Includes contractors operating on site.

Initiatives to Prevent Major Accidents

Based on our management policy of putting safety is our top priority in everything that we do, we have continued to implement a range of safety activities throughout the Mitsui Chemicals Group. Nevertheless, the explosion and fire occurred at the resorcinol production facility inside our Iwakuni-Ohtake Works in 2012. We take this latest incident very seriously and will strive to prevent any future recurrence. Reflecting on that incident, we have been implementing a series of initiatives to prevent major accidents such as fundamental safety measures to ensure that nothing like that ever happens again.

Top Management's Strong Commitment to Safety and Prevention

On Safety Day and during National Safety Week, etc., the Company president repeatedly conveys to all Mitsui Chemicals Group employees that they follow the management policy of "making safety their top priority in everything they do." In addition, we are working to ensure active involvement with worksites that includes the Vice President, Senior Managing Executive Officer and the Center Executive of the Production & Technology Center by conducting tours of the parent company works and each production sites of domestic and overseas affiliates. The fiscal 2019 results are as follows.

- Instructions to make safety the top priority provided directly to employees at Head Office during the opening address (simultaneously broadcast to all domestic sites)
- Broadcasting the President's safety day moral discourse across the Group as a whole, and pledge to make safety the top priority published in Company newsletter
- Communicated safety instructions directly to employees at Head Office on Safety Day (simultaneously broadcast to all domestic sites)
- Broadcasting the President's National Safety Week message across the Group as a whole
- Direct safety instructions provided during Works visits (control room, auditorium, etc.)
- The Company newsletter featured a dialogue on safety between the president and Mr. Atsumi Miyake, Professor of Yokohama National University and Vice President of Japan Society for Safety Engineering

Fundamental Safety Measures

Mitsui Chemicals takes extremely seriously the explosion and fire at the resorcinol production facility at its Iwakuni-Ohtake Works on April 22, 2012. For these seven years, we have been introducing a series of fundamental safety measures, reviewing and improving comprehensive safety and prevention at a company-wide level. A number of measures that have been developed after exhaustive discussions are now incorporated into our daily activities, and continuous safety improvements are being made by repeating the PDCA cycle in our daily tasks. While carefully weighing the priorities against each other in implementing these fundamental safety measures to raise safety levels, we will continue to introduce more initiatives in the years ahead.

Overview of Efforts Aimed at Advancing Fundamental Safety Measures

From the beginning of 2013, we built up the fundamental safety measures shown in overview in the chart below and conducted them on a Group-wide basis.

Key Points of the Fundamental Safety Measures

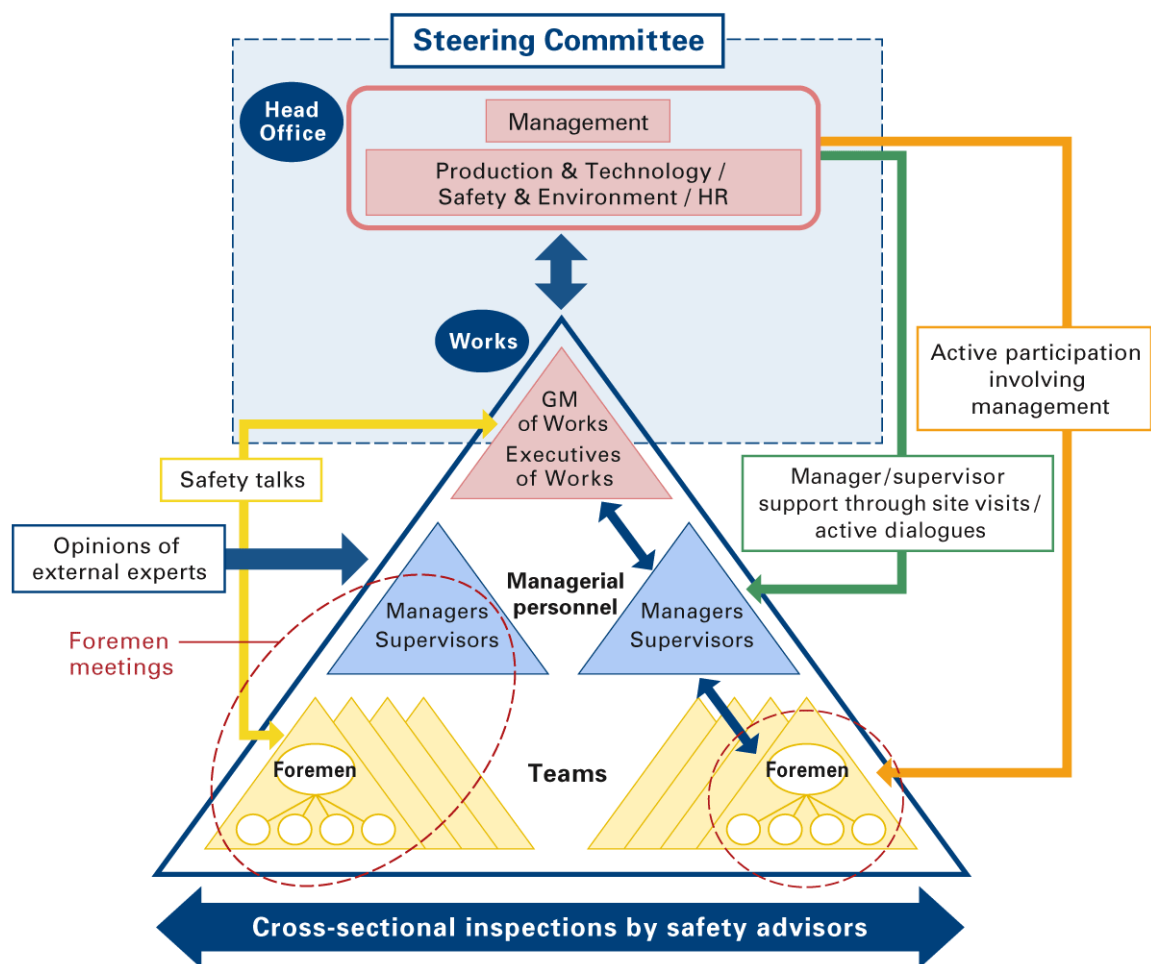
- The steering committee^{*1}, which reports directly to the president, deliberates Group-wide issues and sets the direction for activities
- Management spearheads the participation in safety initiatives through active dialogue owing to greater opportunities for Head Office personnel to visit plants
- Issues pointed out by external experts and other third parties are reflected in plant operations
- General managers of Works give safety talks, while cross-sectional safety inspections are performed by safety advisors^{*2}
- Meetings among foremen organized by managers help to enhance communication

^{*1} Steering committee:

To make swift progress of fundamental safety measures, the members shown in the diagram meet to discuss Group-wide issues and set the direction of activities.

^{*2} Safety advisors:

Veteran employees involved in daily activities and improving the overall level of safety at plants by exchanging opinions with workers.



Progress with Fundamental Safety Measures

Addressing three important challenges and involving the deployment of 11 measures, the fundamental safety measures are used to advance concrete efforts throughout the company. Many of the measures have moved forward to the point where they are now positioned as everyday tasks. In fiscal 2019, following the fire that occurred in the Mobara Branch Factory in 2017 and the resulting recurrence prevention measures, we have been working on building a system that can incorporate advances in safety technologies, and since fiscal 2018 we have been reviewing the technology assessment system. Following the chimney fire that occurred during periodic repairs at the Osaka Plant in 2018, we are reviewing our engineering work management system. We will provide production line managers with a revised training program that incorporates the lessons learned from these incidents.

Three important challenges, 11 measures		Implementation schedule (fiscal year)						
		2013	2014	2015	2016	2017	2018	2019
(1) Allow line managers to focus on and properly manage worksites								
①	Reduce the workload of line managers		On an ongoing basis					
②	Train line managers			On an ongoing basis		Strengthen		
(2) Improve technical skills and ensure skills are passed down (clarify rights & responsibilities)								
③	Train engineering staff with situational awareness			On an ongoing basis				
④	Build safety technology systems			On an ongoing basis		Strengthen		
⑤	Review technical assessment systems and structures		On an ongoing basis			Strengthen		On an ongoing basis
(3) Ensure safety is the top priority, cultivate professionalism, and give workers a sense of accomplishment								
⑥	Reorganize/boost functions of Safety & Environment Division			On an ongoing basis			Strengthen	
⑦	Reinforce safety as a top priority (strict adherence to basics, diagnosis)							
⑧	Cultivate and bolster professionalism (Completely update manuals and draft supplementary materials)						On an ongoing basis	
⑨	Improve teamwork and communications within organizations				On an ongoing basis			
⑩	Establish attractive senior positions (Human Resources Committee, etc.)		On an ongoing basis					
⑪	Measures to give workers a sense of accomplishment in safety performance and operations		On an ongoing basis					

Thorough Risk Assessments

Mitsui Chemicals applies the HAZOP^{*1} to assess safety in the building, expansion, and refurbishment of facilities and to identify dangers in plants as a means of eliminating the possibility of accidents. Learning the lessons from the resorcinol production facility explosion and fire at the Iwakuni-Ohtake Works, we expanded to include non-routine operations at Works. In addition, the Company has been conducting non-routine risk assessments on a continuous and constructive basis. The Company will continue to undertake thorough risk assessments.

Fostering HAZOP Leaders

The role of the HAZOP leader, who is the leader of the analysis, is an important one. To foster HAZOP leaders at the Company, since fiscal 2013 we have been holding training sessions for manufacturing workplace staff and others for them to learn more about analysis methods and investigation concepts at each Works. We will plan to periodically hold these training sessions to foster HAZOP leaders and to improve the level of HAZOP.

Measures to Non-routine Risk Assessment

From fiscal 2013 to fiscal 2014, based on the inspection procedures established during emergency shutdowns by operating model plants at all Works on a trial basis, the Inspection Group organized at each Works conducted inspections of emergency shutdown procedures at all plants. Finally, Head Office staff conducted follow-ups on the inspection results for each Works.

From fiscal 2014, the Company conducted verifications of the assessment methods, for which both “What if^{*2}” and batch HAZOP were utilized, at several model plants. Then, in fiscal 2015, at the Osaka Works and Ichihara Works, we began risk assessments related to the non-routine operation “startup” and applied to all Works and in fiscal 2016. We continue these procedures to all Works in fiscal 2020.

*1 HAZOP:

Hazard and Operability Studies. A method to formulate safety measures by seeking any possible deviation from normal operations, and analyzing the cause of such deviation and its possible impact.

*2 What-if:

A method to formulate safety measures by repeating “What if...” questions to explore possible incidents and their impact.

Safety Culture Assessment

The Mitsui Chemicals Group is collaborating with Niigata University and the Graduate School of System Design and Management at Keio University to undertake safety culture assessment, which enable the visualization of a workplace's strengths and weaknesses. By repeated in-house discussions on all rank-specific gaps, the assessment can also be used as a tool to improve workplace communications.

The second safety culture assessment took place in the Osaka Works and Omuta Works in fiscal 2019. All the five Works have finished the second safety culture assessment. The assessment were useful to discover the results of the workplace safety promotion activities and environmental changes around the workplaces over the past four years.

One affiliate company was subject to the second assessment.

The assessment results were found to be useful in helping employees to become aware of the safety culture operating in their workplaces, and we continue to utilize this assessment.



Briefing at Omuta Works

Status of Undertaking Safety Culture Assessment

Mitsui Chemicals, Inc.		
	～FY2018	FY2019
Ichihara Works*	●●	
Mobara Branch Factory*	●	●
Nagoya Works*	●●	
Osaka Works*	●	●
Iwakuni-Ohtake Works*	●●	
Omuta Works*	●	●

* Including subsidiaries and affiliates within factory premises where the parent company works manager bears the responsibility for Responsible Care implementation.

Subsidiaries & Affiliates		
	～FY2018	FY2019
Domestic	<ul style="list-style-type: none"> • Toyo Beauty Supply Corporation • Sun Alloys Co., Ltd. • Sunrex Industry Co., Ltd. • Mitsui Chemicals & SKC Polyurethanes Inc., Tokuyama Factory • Utsunomiya Chemical Industry Co., Ltd. Utsunomiya Factory, Funaoka Factory, Shinshiro Factory, Tosu Factory • Shimonoseki Mitsui Chemicals, Inc. • Yamamoto Chemicals Inc. Yao Plant, Omuta Plant 	<ul style="list-style-type: none"> • Mitsui Chemicals Sun Alloys Co., Ltd.

	<ul style="list-style-type: none"> • Mitsui Chemicals Industrial Products Ltd., Saitama Factory • Honshu Chemical Industry Co., Ltd., Wakayama Works 	
Overseas	<ul style="list-style-type: none"> • Mitsui Hygiene Materials (Thailand) Co., Ltd. • Mitsui Chemicals Nonwovens (Tianjin) Co., Ltd. 	

Receipt of Third-party Assessments of Process Safety Capability

On an ongoing basis, the Mitsui Chemicals Group receives process safety capability assessments from the Japan Safety Competency Center. Aimed primarily at manufacturing industries dealing with petroleum and petrochemical products, the assessments cover security from the viewpoint of safety infrastructure and safety culture and enable the visualization of strengths and weaknesses with regard to safety capability by means of numerical values. Through its process safety capability assessments, the Japan Safety Competency Center is aiming to raise the safety level of the Japanese chemical industry, a purpose with which the Company is in full agreement.

Following on from the Osaka Works and the Ichihara Works, in April 2018 the Iwakuni-Ohtake Works conducted a self-assessment of its safety capability and then underwent an evaluation by the Japan Safety Competency Center. Osaka Works will undergo an evaluation in the future.

We will continue to utilize advice from the Japan Safety Competency Center, a third party, in our future safety and process safety activities.



Assessment result report meeting (Iwakuni-Ohtake Works)

Measures to Boost Seismic Resistance of Existing High-pressure Gas Facilities

In response to a notification issued by Japan's Ministry of Economy, Trade and Industry in May 2014, the Company has almost finished an assessment of the seismic resistance of its existing high-pressure gas facilities. Based on the results of the assessment, the Company has formulated a repair plan and is systematically undertaking seismic enhancement work.

Accidents and Occupational Injuries

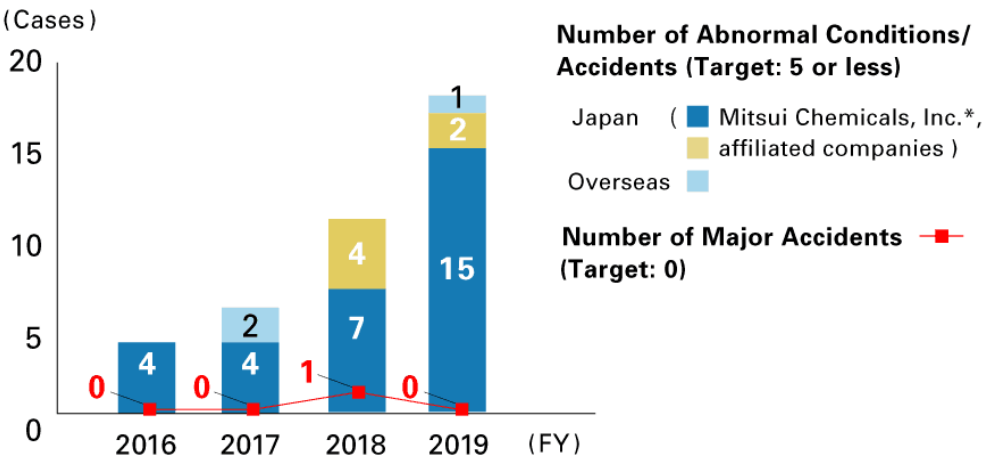
The Mitsui Chemicals Group positions as KPIs and monitors major accidents, the number of abnormal conditions/accidents as well as the occupational injury frequency.

Major Accidents and Abnormal Conditions/Accidents

In fiscal 2019, the Mitsui Chemicals Group reported zero major accidents*¹, meeting its target of zero. However, the number of abnormal conditions/accidents*² is on the rise, totaling 18 against the target of five or less. Because the causes of 13 of these accidents were equipment-related, studying prevention has become a major issue. To prevent recurrence, we are working on (1) developing appropriate maintenance plans, (2) reinforcing change management (risk assessment) and (3) improving the quality of construction.

- *1 Major Accidents:
Accident with a severity level of 18 points or more, as specified by the Japan Petrochemical Industry Association (JPCA) under Center for Chemical Process Safety (CCPS) evaluation procedures.
- *2 Abnormal conditions/accidents:
Although under JPCA accident criteria having a severity level of less than 18 points, conditions/accidents that the Company judges should be monitored under Company standards taking into account the relevant laws and regulations.

Number of Major Accidents and Abnormal Conditions/Accidents



* Including subsidiaries and affiliates within our Works, and the Works general manager bears the responsibility for Responsible Care implementation.

Occupational Injuries

Compared with the Japanese overall industry average and the Japanese chemical industry average, the Company maintains a high level in terms of Days Away from Work Cases (DAFWCs) and, in aiming to achieve the world's highest standards for safety, targets a frequency of 0.15 or below with regard to significant occupational injuries^{*1}. The significant occupational injury frequency for the Mitsui Chemicals Group for fiscal 2019 was 0.31, and thus we were unable to achieve the targeted numerical value. Once again, the long-term issue is developing human resources with an awareness of hazards and spreading the safety culture throughout the entire Group. Accidents in the category, "becoming caught or entangled in machinery" often result in severe occupational injuries, and preventing this type of accident has become a priority issue over the past several years. Because the numbers of such accidents have not dropped at our domestic affiliates, we plan to focus our support in fiscal 2020 on preventing these types of accidents.

We have re-examined our targets for fiscal 2020 and later. The first objective is zero serious occupational injuries^{*2}, a critical target that must be achieved by the entire Group. Next, the targets for the frequency of significant occupational injuries have been categorized according to the category of the accident. We clarified which body is responsible for management by separating the targets for Mitsui Chemicals, domestic affiliates, overseas affiliates and construction subcontractors. In particular, the targets for construction subcontractors have been reviewed to improve their performance below the average over the past three years. In recent years, the number of occupational injuries to personnel working in our factories on a temporary basis has increased, requiring better safety management on the part of Mitsui Chemicals as project owner. We are directing our efforts to preventing occupational injuries by implementing measures that address issues specific to the category of the injury.

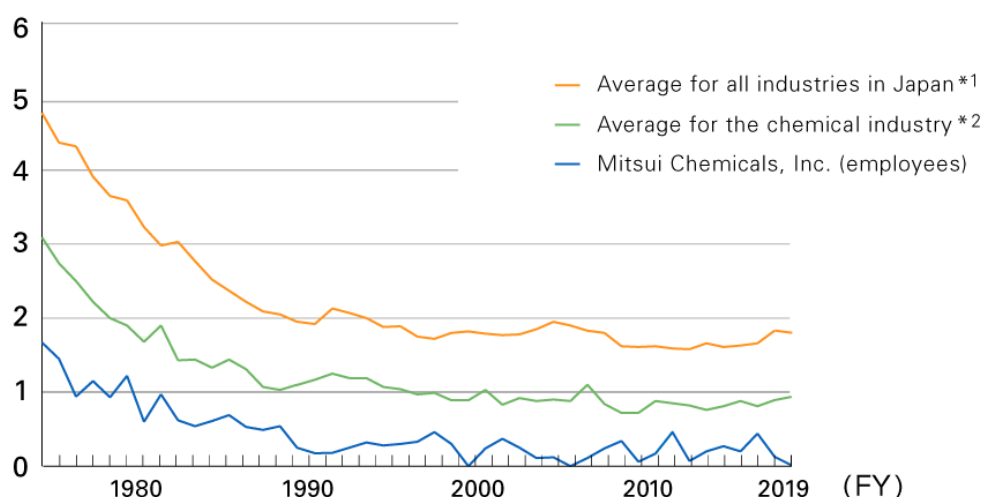
*1 Significant Occupational Injuries:

"Significant Occupational Injuries(SOIs)" refer to occupational injuries that resulted in absence from work or death. SOIs also include lighter occupational injuries that, due to the potential danger in the cause of the injury, could have led to absence from work or death. SOIs do not include those injuries that are not directly related to operations.

*2 Serious Occupational Injuries:

Occupational injuries that fall under disability grades 1 to 7, causing death, injury or illness.

Comparison of Occupational Injury Frequency between Mitsui Chemicals, the All Industries in Japan and the Japanese Chemical Industry

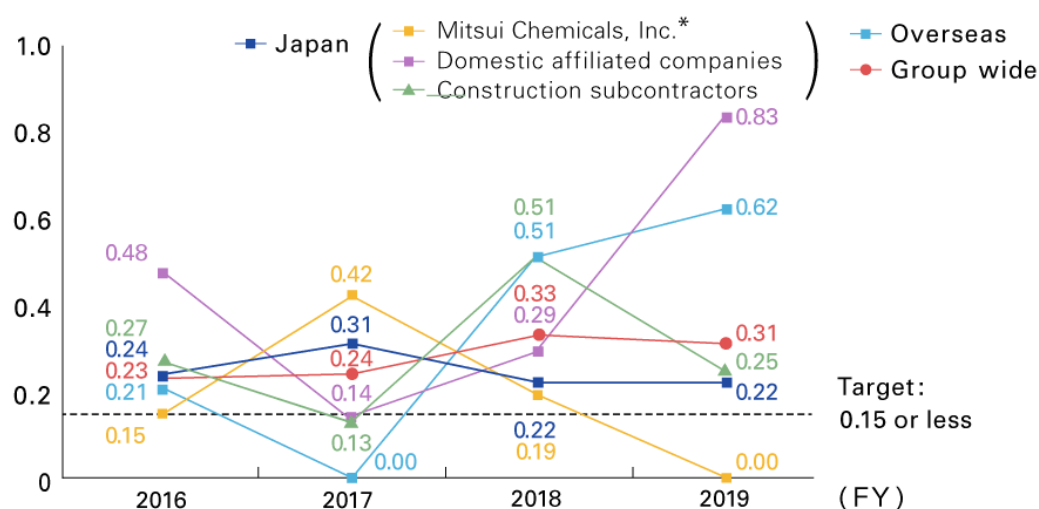


- * Occupational injury frequency = Number of individuals killed or injured by occupational accidents x 1 million hours / Total working hours for all employees
- * The figures for the all industries in Japan and for the Japanese chemical industry indicate the Days Away From Work Case (DAFWC) frequency. The Mitsui Chemicals figures represent the DAFWC frequency until the end of the first half of fiscal 2012, and the Significant Occupational Injury frequency from the second half of fiscal 2012.

Sources:

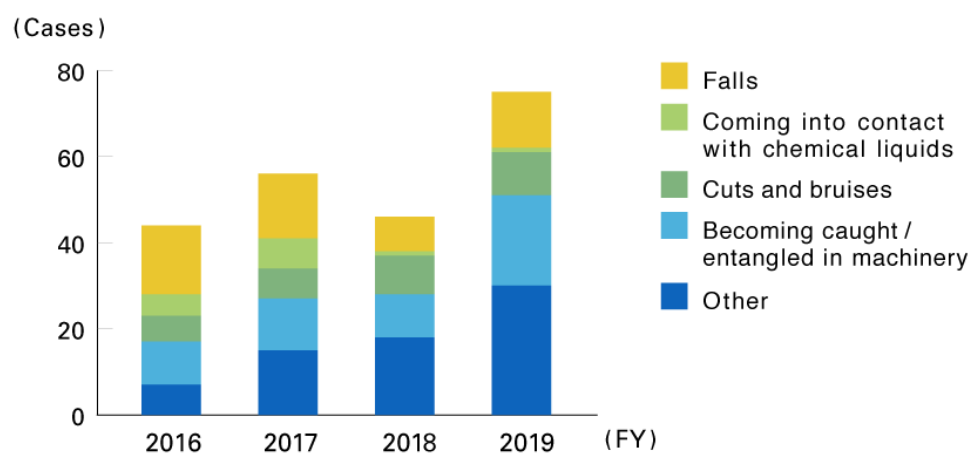
- *1 Ministry of Health, Labour and Welfare White Paper Survey on Industrial Accidents
- *2 Japan Industrial Safety & Health Association "General Guidebook on Industrial Safety"

Significant Occupational Injury Frequency



* Includes contractors operating on site.

Number of Occupational Injuries Resulting in Zero or More Lost Work Days by Type



* Includes subcontractors operating and constructing for Mitsui Chemicals.

Safety and Prevention

Management System

Initiatives to Prevent Major Accidents

Accidents and Occupational Injuries

Training

Drills

Training

The Mitsui Chemicals Group is implementing various initiatives, including training, toward nurturing human resources with a high awareness of dangerous situations and the ingraining of a safety culture throughout the Group.

Safety Day

To keep alive the memory of the explosion and fire that occurred at a resorcinol production facility, Mitsui Chemicals has designated April 22 as Safety Day, a day on which a safety pledge ceremony and presentations take place every year. Although the events were downsized in scale in fiscal 2020 to prevent the spread of the COVID-19, the President's moral discourse has been communicated to the entire Mitsui Chemicals Group, with all employees reaffirming their commitment to making safety their top priority in everything they do. Works-wide broadcasting systems and online meeting systems were made use of at each worksite to communicate messages from the company President and the general manager of Works reaffirming that safety is the top priority.



Head Office safety pledge ceremony (April 2019)



Safety pledge ceremony at Iwakuni-Ohtake Works (April 2019)

Hazard Prediction (Kiken Yochi, or “KY”) as well as Pointing and Calling

In order to eliminate accidents and occupational injuries at the Mitsui Chemicals Group, we undertake initiatives at parent company Works and at domestic and overseas affiliates to entrench and energize hazard prediction (Kiken Yochi, or “KY”) and pointing and calling.

At parent company Works, planning, implementing, evaluating and improving each Works leads to a raised level of operations. During the course of these initiatives, as it is important to develop human resources who are able to recognize dangerous things as being dangerous and take safe action to prevent danger, KY education is

implemented on an ongoing basis at each Works. KY trainers are chosen at each Works to perform as drivers of these KY initiatives, and Companywide meetings held once a year. At these meetings, KY trainers report on the status of KY initiatives at their Works, and exchange opinion on troubles or questions about KY initiatives. KY trainers utilize the information with regard to KY activities at their own Works.

With regard to KY and pointing and calling training for domestic and overseas affiliates, the Safety & Environment Technology Division have provided training support on an ongoing basis. That the significance and necessity of KY and pointing and calling training are understood at all affiliates, assists in their use in actual work situations and is thus helping to lead to their entrenchment. The training incorporates exercises, presentations and team discussions that are appropriate to actual work situations, looking back on their daily tasks, and raising awareness so that safer actions can be taken. Key men are of necessity to entrench KY and pointing and calling, and the Company is encouraging their development through training.

KY training sessions

	Number of Attendees (Total Training Time)		
	FY2017	FY2018	FY2019
Mitsui Chemicals, Inc.	608 (2,128 hrs.)	963 (3,659.4 hrs.)	1,010(2,424 hrs.)
Domestic Subsidiaries & Affiliates	411 (1,233 hrs.)	357 (821.1 hrs.)	259(725.2 hrs.)
Overseas Subsidiaries & Affiliates	122 (488 hrs.)	68 (340 hrs.)	37(222 hrs.)
Total	1,141(3,849 hrs.)	1,388(4,820.5 hrs.)	1,306(3,371.2 hrs.)

Near-miss Activities

At each Mitsui Chemicals Group production site, information on workers' narrowly avoided major accidents or disasters, or "near-misses," that occur as a result of operations, is identified, and the details are shared within the organization. These sharing activities are ongoing. In line with the occupational safety and health management system for each production site, the organization determines the cause of these near misses, as well as preventive measures. Those concerned are provided with the awareness gained, and plans are put into effect that cover both concrete matters, as well as more intangible issues, in the course of operations. In carrying out these preventive measures, Mitsui Chemicals continues to secure necessary resources. Examples of specific representative measures are as follows.

Iwakuni-Ohtake Works

Referring to the accidents and occupational injuries that occurred in other workplaces and Works, all members of the Ohtake Manufacturing Section shared the task of identifying locations and operations with risks typical to a chemical plant that could cause a near-miss case. Such risks include (1) concerns for corrosion and collapses of stairs and floor (2) Machinery for open inspections etc. under a nitrogen atmosphere; and (3) Fires caused by alkylaluminum. Among these identified near-miss cases, the Health and Safety Committee members in each workplace select locations and operations with associated high risks and notify job group members on a monthly basis to prevent possible accidents. They also suggest improvement ideas for a better safety work environment.

Omuta Works

Agrochemical Section members and operational subcontractors began listing up unsafe locations and unsafe behavior, as well as operational procedures that could lead to unsafe situations in specific facilities. Listed issues were then discussed in safety meetings in job groups and subcontractors to establish safer operational methods, eliminate risky tasks, and make facility improvements. The adopted safety measures have been implemented one by one.

Mitsui Chemicals Industrial Products, Ltd.

The Ohtake Office focused its actions on preventing traffic accidents and incidents involving falls, which accounted for the highest number of near-misses over the past three years. A traffic hazard map was developed to cover the Office and will eventually cover the entire Ohtake Works of Mitsui Chemicals. In addition to implementing safety measures at the locations of near-misses, signs and other display panels were updated to reduce the number of hazardous locations at the offices and to foster greater safety awareness.

Small-group Activities

Each Works at Mitsui Chemicals conducts small-group activities that undertake activities in group units of small numbers of people to deal with issues or matters causing concern, such as, in view of the characteristics of a Works, enhancing production workplace capabilities, refining mindsets and human resources development, workplace revitalization and business improvements. We share the results of the small-group activities throughout a Works by means of presentations, and the honoring of best practices leads to heightened motivation. We are deploying the activities horizontally, such as by making reference to them in workplace activities, and promoting the revitalization of workplaces and Works as a whole as well as a raised level of operations. Typical examples of specific activities are as follows.

Ichihara Works

Staff members of the Elastomer Section 1, noticed that there was a high percentage of defect products under a brand manufactured in the works. In order to reduce these defective products, operators and full-time workers cooperated with each other to investigate the causes, formulate countermeasures, and consider plans. This resulted in a review of manufacturing conditions, which successfully led to a significant reduction in defects. The works achieved its predetermined goal of more than 10 million yen cost reduction and profit improvement per year.

Osaka Works

Actions identified by operators that would reduce costs were taken in the Polypropylene Section. One example involved an operator who recognized that there was a problem with a drain (steam condensate) trap at a specific location that had failed several times. The cause was investigated and improvements were implemented with the cooperation of the relevant departments. The type of drain trap was changed, which prevented any recurrence of the problem and resulted in a reduction in the amount of steam consumed.

Mitsui Chemicals Operation Services Co., Ltd. (MCOS)

On June 19, 2019, Iwakuni-Ohtake Works held the 13th presentation on MCOS companywide small-group activities. MCOS refers to MC Operation Support, an affiliated spin-off company that provides production support for Mitsui Chemicals, mainly overseeing disaster prevention security services, filling/packaging, and operations/operational support at Mitsui Chemicals Works. Attended by the Center Executive of the Production & Technology Center, the General Manager of Iwakuni-Ohtake Works, and relevant parties, 12 teams delegated by different business facilities across Japan gave presentations on their on-going efforts in their respective workplaces. The Center Executive encouraged the teams by saying, “Your easy-to-understand presentations and sincere attitude to work improvement has moved us all. Let us build up such practical competence in the frontline across the entire Mitsui Chemicals Group.” We shall further reinforce our capabilities on the production workplace and cost competence in all of our Works.



Presentation on MCOS companywide small-group activities

Best Plants Awards

The purpose of the Best Plant Award is to revitalize Works by honoring the excellent production sections for their activities related to safety, environment, quality and production technologies. Having started this system in fiscal 2004, since fiscal 2013 Mitsui Chemicals has focused outside the field of safety achievements and the like but also on safety processes and recognized through these awards the successes and hardships of production sections. In fiscal 2019, 13 applications were submitted from domestic and overseas production sites, one of which was selected for the President's Awards and five for Production & Technology Center Executive's Awards. The Company's global expansion is advancing due not only to the Mitsui Chemicals parent company but also to award-winning domestic and overseas affiliates. It should be noted that along with the aforementioned awards, we simultaneously awarded the General Manager of Works' Award and General Managers of Headquarters Award.

Best Plants Awards 2019

President's Award for Best Plant

Mitsui Chemicals Sun Alloys Co., Ltd.

Production & Technology Center Executive's Award

Polypropylene Sect., Ichihara Works, Prime Polymer Co., LTD.



President's Award for Best Plant Ceremony
(Mitsui Chemicals Sun Alloys Co., Ltd.)

Solar Material Sect., Nagoya Works, MITSUI CHEMICALS
TOHCELLO, INC.

Phenol Sect., Manufacturing Dept.-1, Osaka Works

Mitsui Chemicals Functional Composites (Shanghai) Co., Ltd. (China)

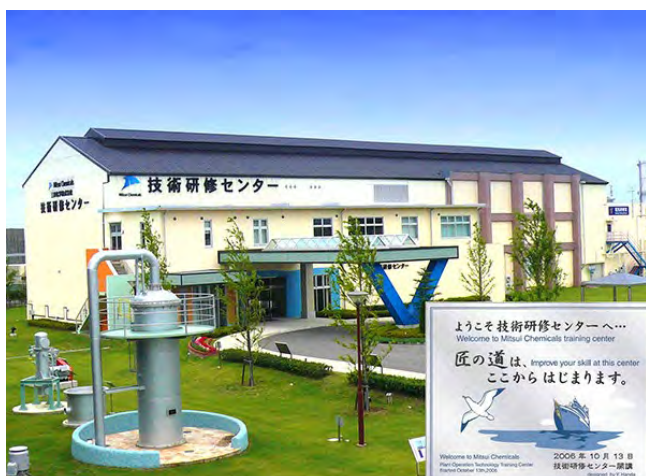
Zhang Jia Gang Free Trade Zone Mitsui Linkupon Advanced Material,
Inc. (China)

In addition, we toured the outstanding workplaces recognized by the President's Award for Best Plant as well as held an exchange meeting as a means to exchange information. Starting in fiscal 2015, we have held this event with the aim of enabling employees to gain awareness that is difficult to obtain in their own workplaces and Works, provide opportunities for line managers to share their concerns and encourage each other, and improve the safety culture throughout the Mitsui Chemicals Group.

In 2020, the exchange meeting will hold over two days in the Ohtake Manufacturing Section, Manufacturing Dept.-2, Iwakuni-Ohtake Works, the winner of the President's Award for Best Plant 2018 and in Mitsui Chemicals Sun Alloys Co., Ltd., the winner of the President's Award for Best Plant 2019. Details of winning practices are published on the intra-company networks in Japanese, English, and Chinese to disseminate good practice across the global Mitsui Chemicals Group.

Mitsui Chemicals' Plant Operation Technology Training Center

Mitsui Chemicals established its first Plant Operation Technology Training Center in Mobara in 2006, and then in Nagoya in 2007, to train plant operation personnel. Chemical plant operators are trained in Mobara, and the Nagoya center provides training programs for operators of film processing factory. These training programs are targeted not only at employees in Mitsui Chemicals Inc.'s Works, but also staff in R&D centers and indirect departments, as well as in affiliate companies under the global Mitsui Group. Our hands-on-based training programs cultivate safety-minded and skilled operators with substantial equipment knowledge.



Mitsui Chemicals' Plant Operation Technology Training Center (Mobara and Nagoya)

Mitsui Chemicals' Plant Operation Technology Training Center (Mobara and Nagoya) Training Sessions for Mitsui Chemicals Group Employees

For Our Group employees				
		Number of Attendees (Total Training Time)		
		FY2017	FY2018	FY2019
For Plant Operators	When joined Company	122	174	90 (765hr)
	Follow-up training (six months after joining Company)	142	166	134 (3,752hr)
	Promoted staff (3-4 years after joining Company)	80	56	95 (2,660hr)
	Workplace managers (8 years or more after joining Company)	57	43	42 (588hr)
For Engineers	When joined Company	23	44	32 (336hr)
	3-5 years after joining Company	18	29	28 (588hr)
For Researchers		78	59	60 (630hr)
Others		609	201	92 (414hr)
For employees of affiliates				
		Number of Attendees (Total Training Time)		
		FY2017	FY2018	FY2019
Domestic affiliates		212	263	353 (2,824hr)
Overseas affiliates		54	88	45 (630hr)
Total				
		Number of Attendees (Total Training Time)		
		FY2017	FY2018	FY2019

	1,395	1,123	971 (13,187hr)
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Since fiscal 2018, we have been actively developing human resources that form the foundations of global group management. We provide support for human resources development and training not only to the company, but also to all the various group companies in Japan and overseas in a way that suits their specific needs.

Local training programs were actively organized for Japanese group companies with staff members dispatched from the training center. A training program that makes use of virtual reality (VR) introduced in fiscal 2018 has been made available to as many employees as possible, and has contributed immensely to preventing occupational injuries. Regarding training for group companies in the Southeast Asia region, the Operation Excellence Training Center (OETC) of the Siam Group in Thailand has been utilized to give training courses in Thai and English. We have licensed the whole of our own training system to the Siam Group. In addition, training support has been provided to group companies in Singapore, along with the provision of local training on fire and static electricity to meet local needs.

Local training program by our center staff members

For Our Group employees		
	Number of Attendees (Total Training Time)	
	FY2018	FY2019
Local training program	239	1,255 (10,040hr)



Training program for overseas group companies



Training based on VR technology (falling accidents)



Training at OETC in Thailand



Local training in Singapore

In fiscal 2015, our internal hands-on training was opened up to companies outside of the Group. Due to the extremely strong need for human resources development and safety training at production sites of various industries, the programs have attracted a large number of attendees. Our training programs have been highly evaluated by attendees, with comments such as “The program gave me new insights that I can make use of in my own company,” and “Hands-on training based on accident/disaster case studies is easy to understand.” As a result of the praise the company earned for its training programs from the China Petroleum and Chemical Industry Federation (CPCIF) after a tour of the Center in fiscal 2019, preparations have been underway to provide training to chemical companies in China, starting in fiscal 2020.

External Training Sessions (Mobara)/Responses to Center Tour Requests (Mobara and Nagoya)

	FY2017	FY2018	FY2019
Number of Training Attendees	344	317	274
Number of Center Visitors	695	630	456



Tour of the Center by representatives of China Petroleum and Chemical Industry Federation (CPCIF)

Management System	Initiatives to Prevent Major Accidents	Accidents and Occupational Injuries
Training	Drills	

Drills

At Mitsui Chemicals, we hold evacuation drills and emergency shutdown drills in the event of a major earthquake or tsunami. We also hold various disaster drills that include emergency activities such as firefighting, emergency call-outs and reporting as part of measures to respond to emergencies at Works. Going forward, we will conduct various drills in a systematic, ongoing manner in tandem with relevant government agencies and local communities.

Process Safety and Disaster Prevention Drills

At Mitsui Chemicals, we are continually improving our in-house disaster prevention capabilities in cooperation with the relevant administrative bodies. In addition to conducting disaster prevention drills, including emergency activities such as firefighting, emergency call-outs and reporting, we also carry out joint drills with municipal fire and police departments, validate emergency responses and take steps to improve any shortcomings. We formulate site-specific plans at each Works every year and conduct drills designed specifically for the operations carried out according to each working environment of our sites. We also organize full-scale comprehensive disaster prevention drills on a regular basis at each of our Works, including joint training with municipal fire departments and volunteer firefighting units, and training involving the local police. We work with municipal fire departments and nearby companies to organize joint disaster prevention drills as a form of reciprocal training between companies. We introduce some examples of the drills below.

Ichihara Works

A Works comprehensive disaster prevention drill is conducted twice a year to prepare for an accident or disaster. This drill was assumed to have been caused by an earthquake, and was conducted jointly among our own volunteer firefighting organization, the municipal fire services as well as the joint firefighting units from neighboring companies. We continue to hold various disaster prevention drills to maintain our high level of safety awareness through reinforcing our relationships with relevant municipal bodies.



The on-site disaster control command post and fire extinguishing operation by the volunteer firefighting units (Ichihara Works)

Mobara Branch Factory

A comprehensive disaster prevention drill was conducted jointly with the municipal firefighting headquarters. The drill supposed that toxic gas leaked from the ground section of the pressurized gas cylinder's pressure gauge on a weekday during the daytime and that the gas cylinder warehouse filled with gas. We have held training drills on 1) information communication between the disaster prevention headquarters and the disaster prevention command center, 2) evacuation, 3) firefighting and 4) various environmental measurements. This training has enabled us to verify that the initial response system functions smoothly when a disaster occurs and to confirm the role of each group and individual. In this way, we are constantly working to increase the level of safety and improve our disaster prevention system.



The on-site disaster control command post and fire extinguishing operation by the volunteer firefighting units (Mobara Branch Factory)

Nagoya Works

A comprehensive disaster prevention drill was organized to prepare for a large-scale earthquake. It involved an initial response drill in the event of an emergency plant shutdown or similar event, an evacuation drill and a drill to address the possible escape of hazardous material resulting from a broken pipe. It was planned as a "blind drill," with participants not provided with any information on the type of substance that had escaped or the location of the leak. It aimed at reinforcing the initial response of each disaster prevention team, encouraging individual team members to think and act independently when carrying out their designated roles. Efforts will be directed to further improving disaster prevention awareness and skills through full-participation drills.



The on-site disaster control command post and collecting escaped materials (Nagoya Works)

Osaka Works

A comprehensive disaster prevention drill was organized on a weekday during the daytime to prevent a fire following the escape of hazardous materials from the mechanical seal of the fluid transmission pump in the hazardous materials facility. The drill was very productive and confirmed the smooth liaison between the self-defense disaster prevention units. We continue to ensure safety in all our Works by training for the different types of disasters that we may encounter, focusing on a prompt initial response to the emergency and smooth communications between those in different roles.



The on-site disaster control command post and fire extinguishing operation by the volunteer firefighting units (Osaka Works)

Iwakuni-Ohtake Works

A Works comprehensive disaster prevention drill was conducted in collaboration with the municipal firefighting department and the land-based joint disaster prevention organization, based on a scenario where a level-5 earthquake occurred during the daytime on a weekday, and a crack was found in the side wall of a tank. A flammable chemical then leaked from the crack and a fire broke out caused by a static electrical spark. The drill was designed to reinforce our disaster control capabilities by verifying that each unit could take action voluntarily following their action guidelines, the effectiveness of the joint disaster response, and the promptness of communications with the relevant authorities and public announcement following the accident's occurrence.



Fire extinguishing by chemical disaster prevention vehicle (Iwakuni-Ohtake Works)

Omuta Works

With the participation of the municipal firefighting department, the city disaster control office, and the police, a Works comprehensive disaster prevention drill was conducted. The emergency scenario was that a flammable chemical leaked from the transfer pipe of a hazardous chemical facility in a high-rise building and caught fire. The drill examined the coordination among the relevant authorities in terms of emergency control structure, firefighting tactics, and public relations with the local community. We continue to improve our emergency response to make it even faster and more reliable.



The on-site command post and volunteer firefighting units in action (Omuta Works)

Earthquake and Tsunami Drills

At Mitsui Chemicals, we conduct various drills to ensure that all staff are better prepared in the event of a major earthquake or tsunami, which are assumed at each site. These include emergency shutdown drills and evacuation drills to evacuation areas. The following are a few select examples of the drills conducted at each production site.

Ichihara Works

A drill was conducted based on the assumption that a massive tsunami warning had been issued in the inner bay of Tokyo Bay following an earlier earthquake that occurred during a weekday daytime. The drill included an initial response, such as an emergency plant shutdown, evacuation to designated locations and roll call, and a personnel safety report. We could confirm that the evacuation was smooth and its time had been shortened by repeated training.



Evacuation to the designated location and confirmation of personnel safety (Ichihara Works)

Osaka Works

An evacuation drill was conducted in preparation for a giant tsunami alarm issued as a result of a Nankai megathrust earthquake with a seismic intensity of over 6. It was designed to raise awareness of disaster prevention and to confirm the location of tsunami evacuation shelters designated by the Works, evacuation methods and evacuation conditions. Repeated drills train employees to evacuate swiftly to the designated shelters. Problems that were identified in the drills have been addressed to improve and reinforce the disaster prevention system.



Evacuation to designated locations and personnel safety check (Osaka Works)

Omuta Works

A drill was held in the Omuta Works to simulate a leak of hazardous gas from a plant following an earthquake of seismic intensity of 5 on a weekday during the daytime. This time the drill was more comprehensive than usual, with each workplace having to select an evacuation destination from the designated locations and decide on the route taken to reach that destination. All issues identified in this drill will be categorized and countermeasures implemented. We are working to address all the risks that could arise in the event of a serious disaster to reinforce our disaster prevention system.



Evacuation to designated locations and personnel safety check (Omuta Works)

External appraisal for our volunteer firefighting units – Receiving a Fire and Disaster Management Agency Director's award

The each self-defense disaster prevention unit of Ichihara Works, Osaka Works and Iwakuni-Ohtake Works received a Fire and Disaster Management Agency Director's award (Encouragement Award) from the Ministry of Internal Affairs and Communications (MIC) at the Fiscal 2019 Skill Contest of Self-defense Disaster Protection Systems for Petrochemical Complexes, etc. organized by the Fire and Disaster Management Agency of the Ministry of Internal Affairs and Communications.

This contest, which was first launched in fiscal 2014 with the aim of enhancing skills and morale, pits large-scale chemical plant elevated water cannon and foam concentrate transporter crews against each other in a number of operations, such as their safety management and the standard of their firefighting vehicles and equipment.

We recognize that self-defense disaster prevention units of the three Works judged on their fire control technique and discipline. This award marked the sixth year in a row since the contest started that we had received an award.

Accumulating experience from daily training that will lead to improved disaster prevention techniques in the years to come, we will contribute safer and more stable Works operations.



Fire and Disaster Management Agency Director's award/Self-defense disaster prevention unit of Ichihara Works



Fire and Disaster Management Agency Director's award/Self-defense disaster prevention unit of Osaka Works



Fire and Disaster Management Agency Director's award/Self-defense disaster prevention unit of Iwakuni-Ohtake Works

Environmental Protection

Management System	GHG and Energy	Industrial Waste
Environmentally Hazardous Substances	Water	Biodiversity
Environmental Accounting/Compliance		

Management System

Policy and Basic Approach

The Mitsui Chemicals group's business activities may affect the global environment, such as GHG emissions from the consumption of energy, including electricity and heat; water resource consumption in product heating, cooling, and cleaning processes; and emissions of chemical substances to the atmosphere, water, and soil etc. Aiming to minimize the negative impact on the global environment throughout the lifecycles of the products we act to protect the environment in two ways: by reducing the environmental impact of our business activities and by appropriately managing chemical substances. We also publish environmental accounting figures and run eco-efficiency assessments in relation to our environmental impact and economic activities, in an effort to ascertain the impact of our activities and pave the way for sustainable development.

[Our Responsible Care Policy](#) states that the Group makes efforts to assess the risks of our products throughout their lifecycles in order to ensure the health and safety of all persons and to protect the environment by reducing their environmental impact. We are promoting environmental protection in line with internal regulations for the management of the environment and safety that establish our basic environment protection policy.

- * Please refer [here](#) for details of Climate Change Policy.
- * Please refer [here](#) for details of Reduce Environmental Load through Products and Services.
- * Please refer [here](#) for details of Product Stewardship.

System and Responsible Officers

The director in charge of the Production & Technology Center is the person directly responsible for our environmental protection system. The Production & Technology Center Planning & Coordination Division and the Safety & Environment Technology Division formulates, disseminates and promotes the environmental protection strategy. In addition, they also collaborate with business divisions, production sites and affiliated companies to promote environmental protection.

The Planning & Coordination Division in the Production & Technology Center and the Safety & Environmental

Technology Division regularly check to confirm progress in meeting priority goals for environmental protection at domestic sites. Data related to the protection of the environment, including for GHG emissions, are collected once a year, with the results of analysis shared throughout the Group.

Internal Audit

The Internal Control Division conducts environmental & safety audits (for environmental protection, safety and prevention) at Works and laboratories of the Mitsui Chemicals Group.

Environmental & Safety Audit (environment protection)	Confirms the status of environment protection and that there is compliance with the relevant laws and regulations. Indicates nonconformities that require revision or improvement.
	Scope: Works and laboratories of Mitsui Chemicals Inc. and its subsidiaries and affiliates
	Frequency: Once every one to three years (depending on size, business type and management level of the audited organization)

Goals and Results

GHG / Energy

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
GHG emissions ^{*1} reduction rate (Compared with FY2005)	Japan	—	27.7%	—	—	25.4% or more (FY2030)
Reduction of GHG emissions ^{*1} (Compared with the previous fiscal year)	Japan	30 thousand tons or more	40 thousand tons	○	50 thousand tons or more	—
Five-year annual energy intensity reduction rate	Mitsui Chemicals, Inc.	1% or more	-0.4%	×	1% or more ^{*2}	1% or more (FY2025)
Energy intensity index (FY2009=100)	Mitsui Chemicals, Inc.	90.4 or less	94.9	×	Average annual reduction of 1% ^{*2} or more	—

*1 Emission and reduction volume at full capacity, which is different than what is shown in the graph on the “GHG and Energy” page.

*2 Goal is to achieve either target

Substances Subject to the PRTR Act

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Emission of substances subject to the PRTR Act	Mitsui Chemicals, Inc.	Formulate initiatives toward 450 ton/year	As planed (768ton)	○	Consolidate initiatives toward 450 ton/year	Measures aimed at achieving 450 ton or less in FY2020

Industrial Waste

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Landfill rate for industrial waste	Japan	1% or less	0.4%	○	1% or less	1% or less
	Overseas	1% or less	0.5%	○	1% or less	1% or less

Air

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Volatile Organic Compound (VOC) emissions	Mitsui Chemicals, Inc.	3,000 ton or less	1,579 ton	○	3,000 ton or less	Make plans for further reductions

General measures to preserve the environment notwithstanding the above

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of environment-related accidents	Mitsui Chemicals Group	0	0	○	0	0
Number of violations to environmental laws and regulations	Mitsui Chemicals Group	0	0	○	0	0

Environmental Protection

Management System

GHG and Energy

Industrial Waste

Environmentally Hazardous Substances

Water

Biodiversity

Environmental Accounting/Compliance

GHG and Energy

Based upon [our Climate Change Policy](#), the Mitsui Chemicals Group is committed to reducing GHG emissions and energy consumption, particularly aiming at low-carbon manufacturing.

* See [here](#) for other information concerning climate change.

[Climate Change-Related Information \(CDP\)](#) (PDF : 849KB)

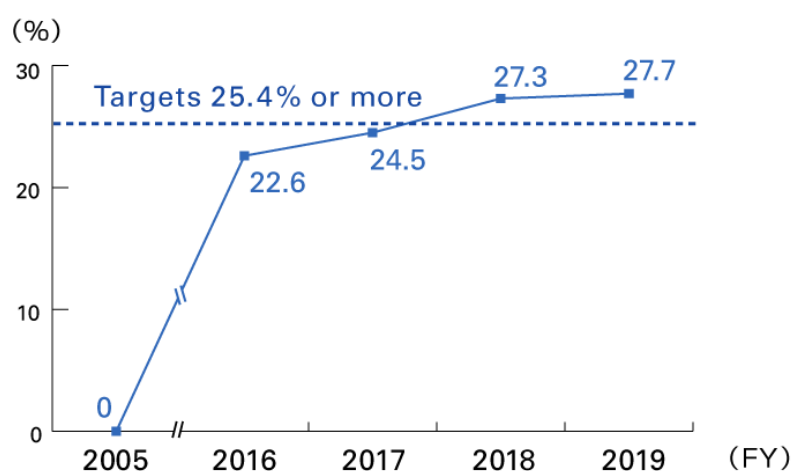
[Climate Change-Related Verification Statement](#) (PDF: 258KB)

GHG Emissions and Energy Consumption

In fiscal 2016, the Mitsui Chemicals Group set itself the long-term target of reducing domestic greenhouse gas (GHG) emissions by 25.4% by fiscal 2030 (compared with fiscal 2005, operating at full capacity). To this end, we are working to realize a low-carbon society by actively promoting energy conservation, switching to alternative fuels, and creating innovative processes.

In fiscal 2019, we set the goal of reducing GHG emissions by over 30,000 tons (compared with fiscal 2018; operating at full capacity), and we achieved a reduction of 40,000 tons. We achieved this by comprehensively reducing factory energy use, including enhancing exhaust heat recovery, improving the efficiency of our refining processes. As a result, our GHG emissions reduction rate (operating at full capacity) reached 27.7% compared with fiscal 2005.

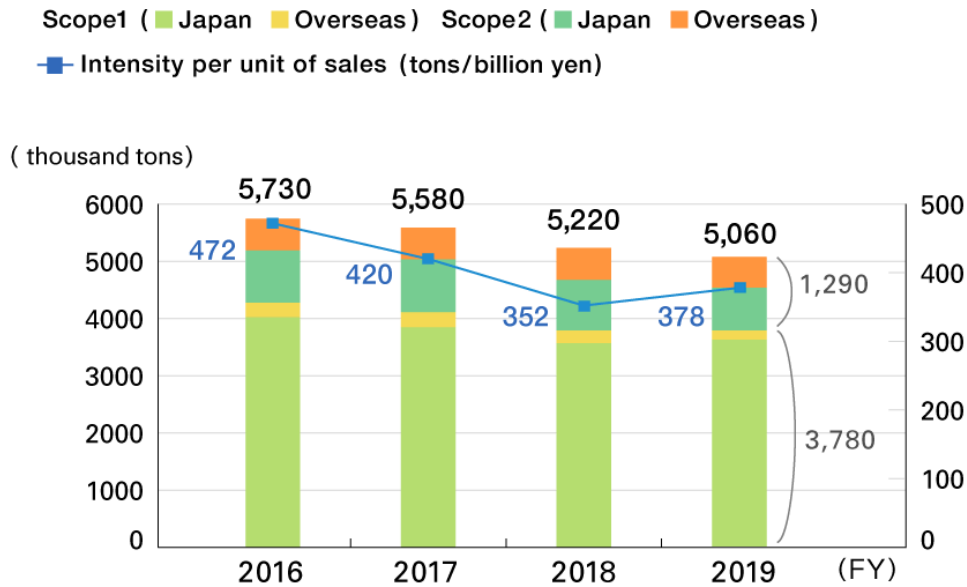
GHG Emissions Reduction Rate (compared with fiscal 2005, operating at full capacity) (Japan)



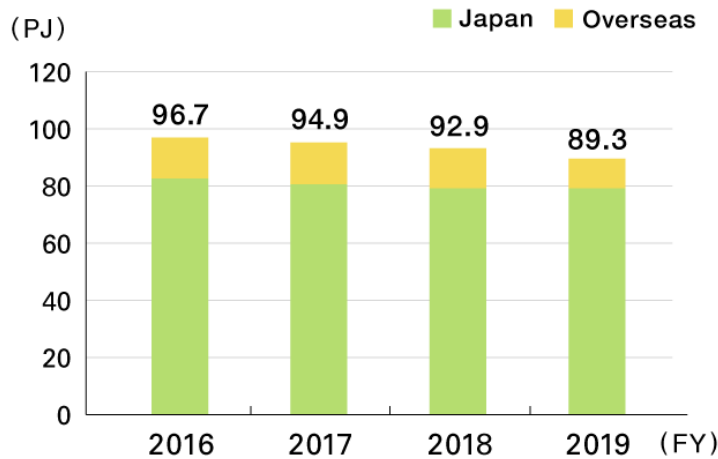
* Scope of affiliates: Domestic consolidated subsidiaries

The Mitsui Chemicals Group reduced GHG emissions (Scope 1 and 2) in fiscal 2019 by 160,000 tons compared with fiscal 2018. The Group adopted a five-year annual energy intensity reduction rate of 1% or more as its target under the 2025 Long-term Business Plan; however, the result for fiscal 2019 was -0.4%. Looking ahead, while targeting a five-year rate of at least 1%, since fiscal 2018 we have aimed to either achieve a five-year annual reduction rate of at least 1% or an average annual reduction in the energy intensity index (FY2009 = 100) of at least 1%. This is because of the difficulties involved in evaluating long-term reduction efforts based on a five-year annual reduction rate. In addition, we calculate GHG emissions regarding Scope 1 and 2 emissions generated from in-house operations and production activities as well as Scope 3 for indirect emissions in order to identify GHG emissions throughout the entire supply chain, extending from purchasing raw materials to customer use and disposal.

GHG Emissions (Scope 1 and 2)

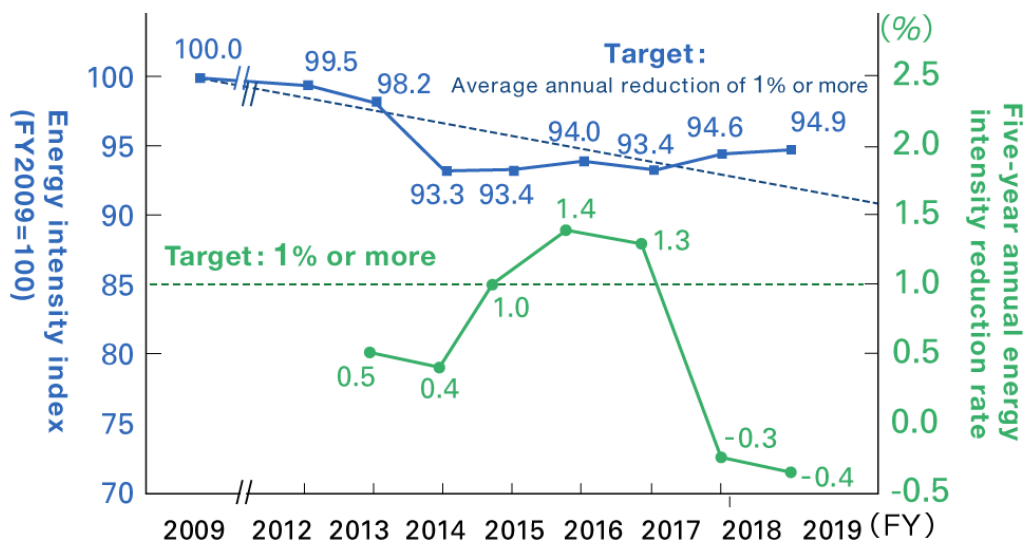


Energy Consumption



- * Scope of Japan and overseas affiliates: Consolidated subsidiaries
- * GHG emissions calculated in accordance with Japan's Law Concerning the Promotion of Measures to Cope with Global Warming based on energy consumption figures for overseas consolidated subsidiaries.
- * The gases used to calculate GHG emissions are CO₂, CH₄, N₂O, HFC, PFC, SF₆, NF₃.

Energy Intensity (Mitsui Chemicals, Inc.)

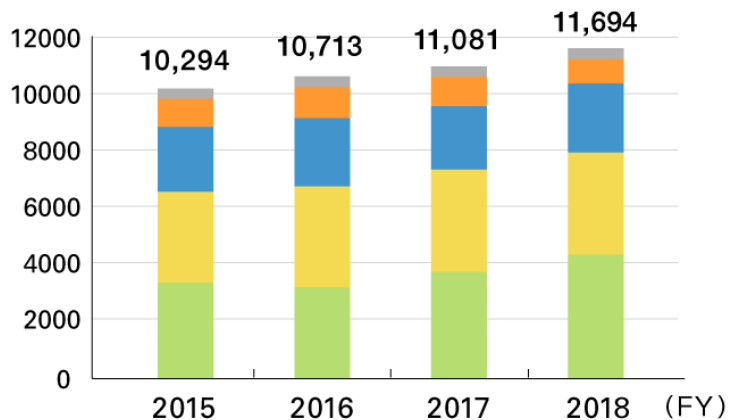


- * Energy intensity denominator is ethylene conversion production volume.
- * Retroactive changes were made on energy intensity due to revisions to energy intensity denominators (the conversion factor for production volume) for some products.

GHG Emissions (Scope 3) (Mitsui Chemicals, Inc.)

- 01: Purchased goods and services
- 11: Sold product specifications
- 12: Sold product disposals
- 15: Investment
- Others

(Thousand tons CO₂eq)



Breakdown of GHG Emissions (Scope 3) (Mitsui Chemicals, Inc. Fiscal 2018)

Category	Emissions (Thousands of tons CO ₂ eq / year)
01 : Purchased goods and services	4,381
02 : Capital goods	76
03 : Fuel- and energy-related activities (not included in Scope 1 and 2)	205
04 : Transportation/distribution (upstream)	54
05 : Waste generated from operations	38
06 : Business travel	5
07 : Employee commuting	5
08 : Leased assets (upstream)	1
11 : Sold product specifications	3,621
12 : Sold product disposals	2,455
15 : Investment	854
Total	11,694

【Calculation Method】

Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains (Ver. 2.3), Ministry of the Environment and Ministry of Economy, Trade and Industry

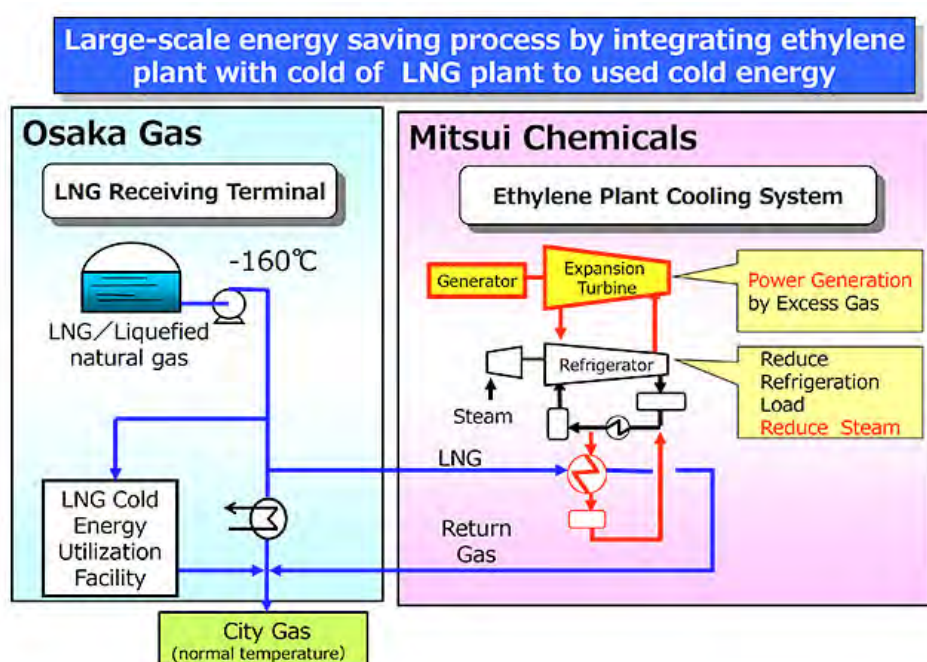
Based on the Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains (Ver. 2.4) published by the Ministry of the Environment and Ministry of Economy, Trade and Industry, we used emission factors provided by IDEA and the Act on Promotion of Global Warming Countermeasures calculation/reporting/disclosure system, and emission units formulated by the Ministry of Environment.

Energy-Saving Process Using LNG Cold Energy

Together with Osaka Gas Co., Ltd., Mitsui Chemicals and its group company, Osaka Petrochemical Industries, Ltd. have adopted energy-saving process by using liquefied natural gas (LNG)-generated cold energy in the ethylene plant. This world-first energy-saving process using LNG-generated cold energy on a large-scale at our ethylene plant commenced in October 2010.

To transport and store natural gas, it is liquefied by cooling it to -160°C . Liquefied gas is a good source of cold energy. During its liquefied state, LNG emits boil off gas which has auto-refrigeration properties. When returning LNG to its gas state, it continues to retain superior cooling abilities.

At Mitsui Chemicals' Osaka Works OPC ethylene plant, after thermal decomposition of naphtha (crude gasoline) at high temperatures, base materials such as ethylene and propylene are separated and purified by cooling the cracked gas. By efficient use of LNG cold energy from the adjacent OPC ethylene plant of Osaka Gas Senboku Works, a significant reduction in CO_2 emissions was possible.



CCU (Carbon Capture Usage) Technologies

Mitsui Chemicals took part in the CCU Project ($\text{CO}_2 + \text{H}_2 \rightarrow \text{CH}_3\text{OH} + \text{H}_2\text{O}$) lead by the Research Institute of Innovative Technology for the Earth (RITE) (commissioned by NEDO), and developed a high activity catalyst. Refinement of this highly active catalyst eventually was tested by the pilot plant of CCU technology in Mitsui Chemicals Osaka Works in 2009. This was a verification test, producing 100 tons of methanol per year from hydrogen and CO_2 which was contained in the exhaust gases. We

have confirmed the conversion ratio from CO_2 to methanol and the catalyst life and obtained necessary data items for creating a technological package. However, due to several issues that remained to be addressed concerning costs and availability of hydrogen source, this technology has not yet been commercialized. Nevertheless, we believe that this promising technology should greatly contribute to the realization of low-carbon society which is currently sought by the world.

Management System	GHG and Energy	Industrial Waste
Environmentally Hazardous Substances	Water	Biodiversity
Environmental Accounting/Compliance		

Industrial Waste

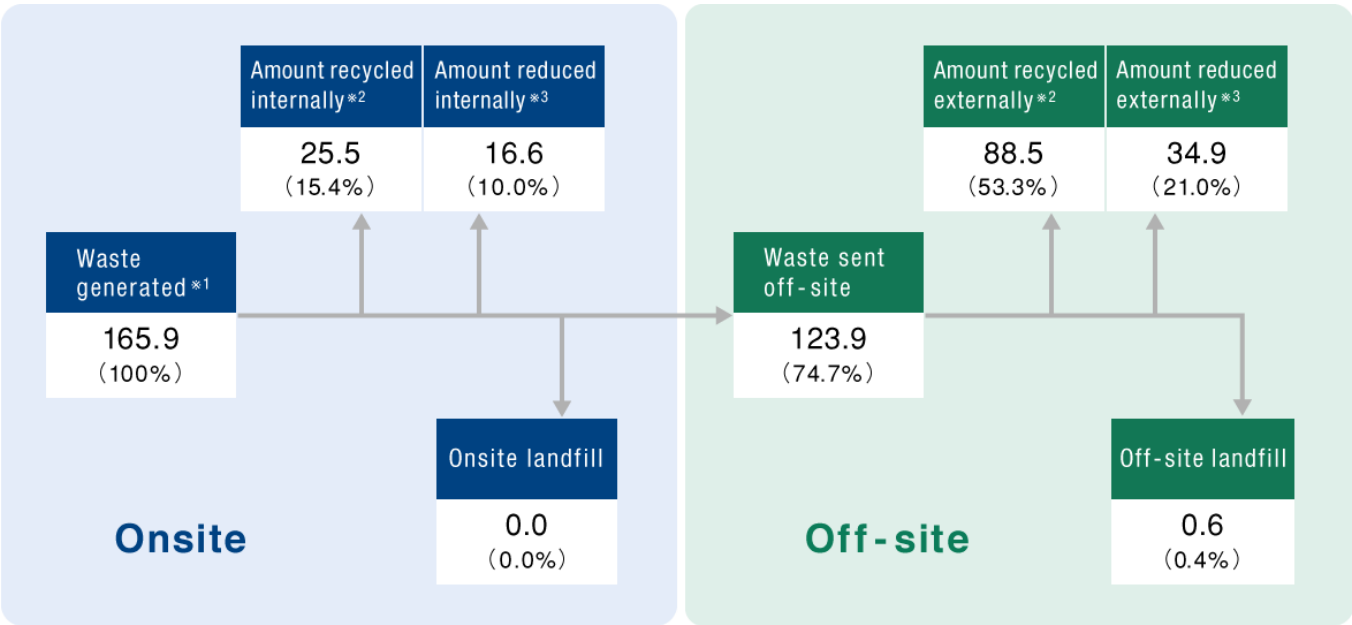
The Mitsui Chemicals Group aims at minimizing the landfill rate for industrial waste to 1% or less. In order to reduce the landfill volume, we are implementing waste reduction measures such as energy recovery and recycling wastes into cement materials and base course materials for road. In fiscal 2019, we achieved the goals set by Mitsui Chemicals Inc. and domestic affiliates, making a total of nine consecutive years of meeting these goals. Overseas affiliates have now achieved their goals for eleven consecutive years.

* Please refer [here](#) for scope of data.

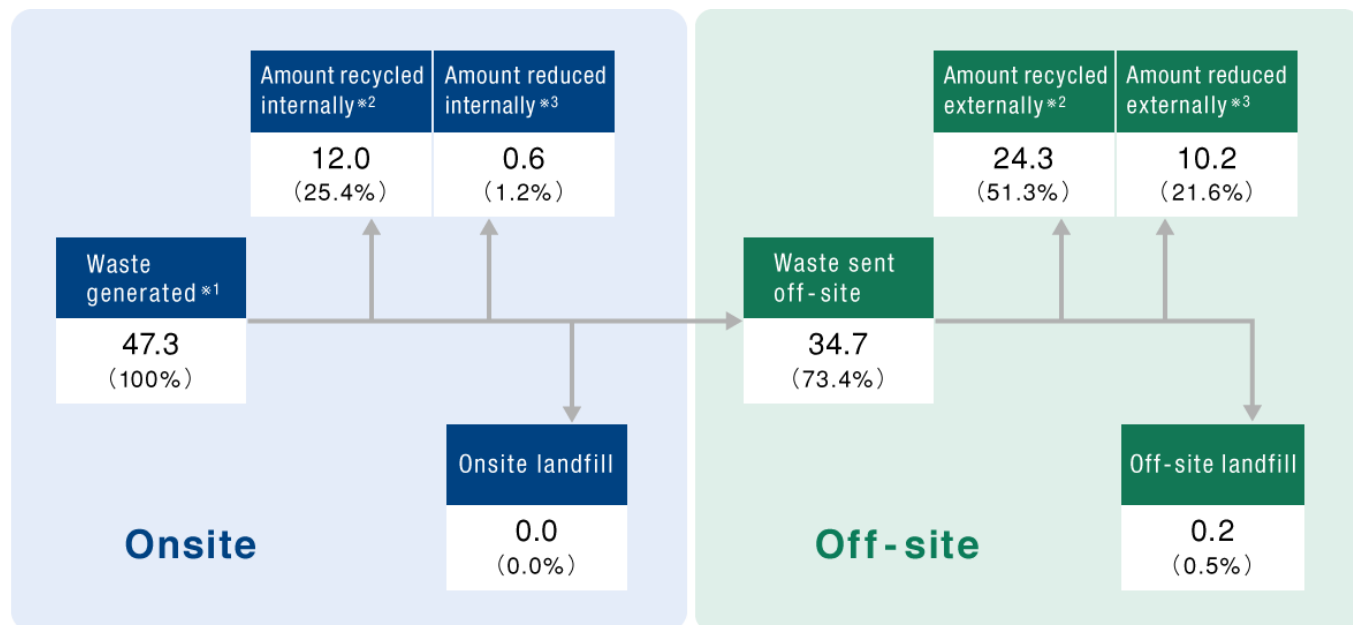
The Waste Management and Public Cleansing Law was revised partially to tighten controls over inappropriate disposal of waste. Due to this revision, business operators who discharge 50 tons or more of specially controlled industrial waste must use an electronic manifest from fiscal 2020. To fully meet the requirements of the revised Law, we have started the operation of the electronic manifest.

Industrial Waste Treatment Process (FY2019)

Japan



Overseas



* Unit: Thousand tons

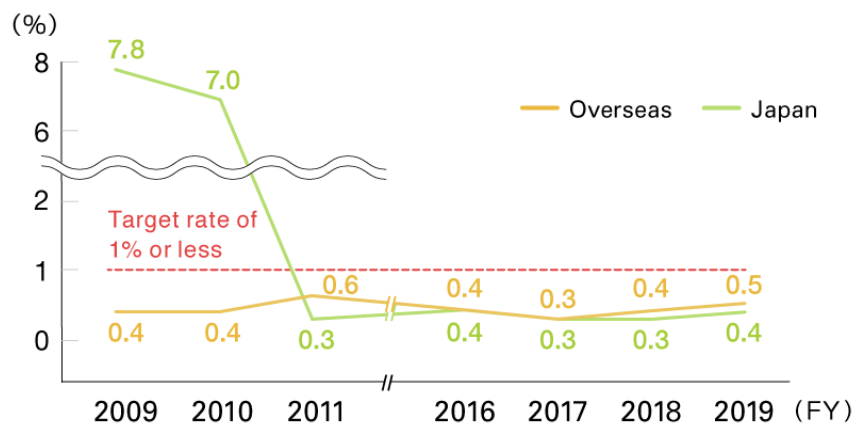
* Any minor discrepancies in percentages are due to rounding.

*1 Waste generated: Sludge (dry weight), waste plastics, soot and dust, etc.

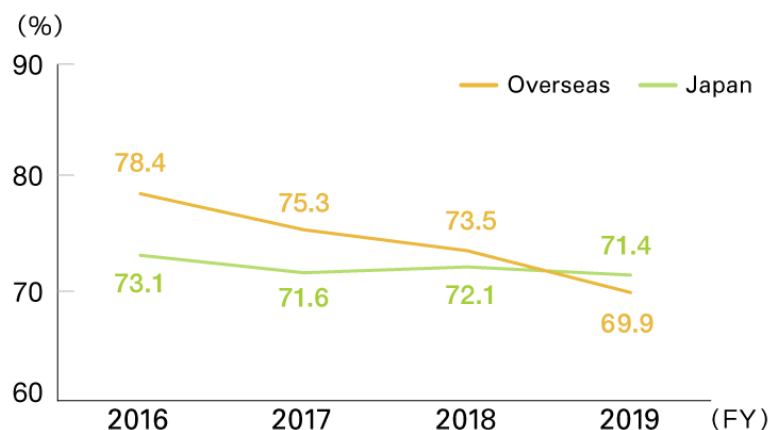
*2 Recycled waste volume: The value includes recycled plastic waste and waste oil used as a fuel.

*3 Amount reduced: Amount reduced as a result of waste plastic incineration and waste acid neutralization.

Landfill Rate for Industrial Waste



Recycling Rate



* Landfill rate for industrial waste = (Onsite landfill + Off-site landfill) / Waste generated

* Recycling rate = Amount recycled externally / Waste sent off-site

Management System	GHG and Energy	Industrial Waste
Environmentally Hazardous Substances	Water	Biodiversity
Environmental Accounting/Compliance		

Environmentally Hazardous Substances

The Mitsui Chemicals Group is monitoring emissions of volatile organic compound (VOC), NOx, Sox, soot and dust, hazardous air pollutants, and substances subject to the PRTR Act, and working to reduce environmental impact.

* Please refer [here](#) for scope of data.

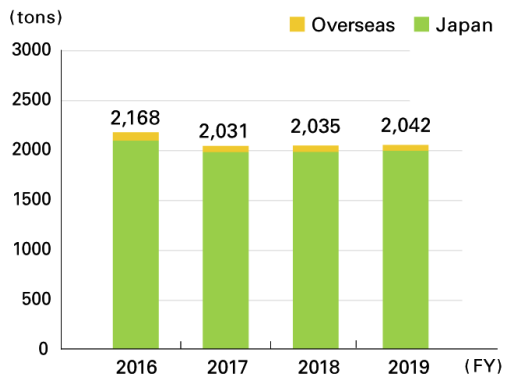
Air

Of the hazardous air pollutants specified under the Air Pollution Control Act, we are particularly focused on reducing emissions of priority substances that pose a significant health risk.

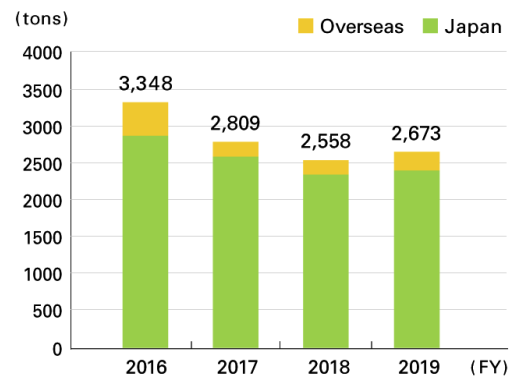
The Japanese government set a target of reducing fixed-source volatile organic compound (VOC) emissions in fiscal 2010 by 30% compared with fiscal 2000. VOC emissions at Mitsui Chemicals reached 8,523t in fiscal 2000, so our goal is 5,966 tons/year. However, the Company established an even stricter goal and achieved emissions of less than 3,000 tons/year in fiscal 2010. We have since continued maintaining emissions at this level. Because the Mitsui Chemicals Group produces various chemical products, a wide range of VOCs are subject to reduction, such as solvents used in production and decomposed residue from plastic molding. We use various methods to reduce VOC emissions into the air, including absorption by activated carbon and other filters, neutralization by acid or alkaline water, combustive decomposition, and Pressure Swing Adsorption (PSA).

Further, burning fuel in chemical manufacturing processes generates SOx, NOx, and soot and dust. We therefore implement a variety of measures to reduce release of these items into the atmosphere by removing them using catalysts, installing dust collectors and washing towers, and using fuels free from nitrogen and sulfur.

Volatile Organic Compound (VOC) Emissions

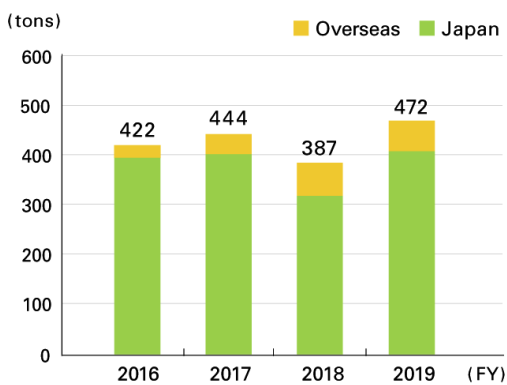


NOx Emissions

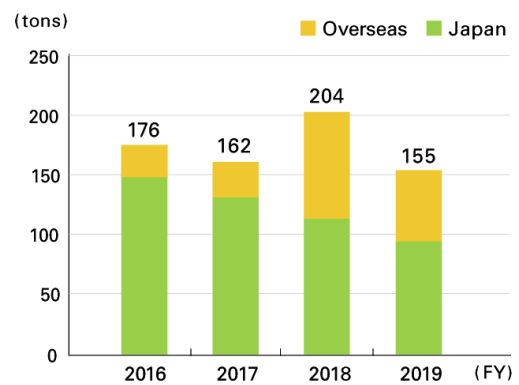


* Mitsui Chemicals, Inc. emitted 1,579 tons achieved its goal of less than 3,000 tons/year in FY2019.

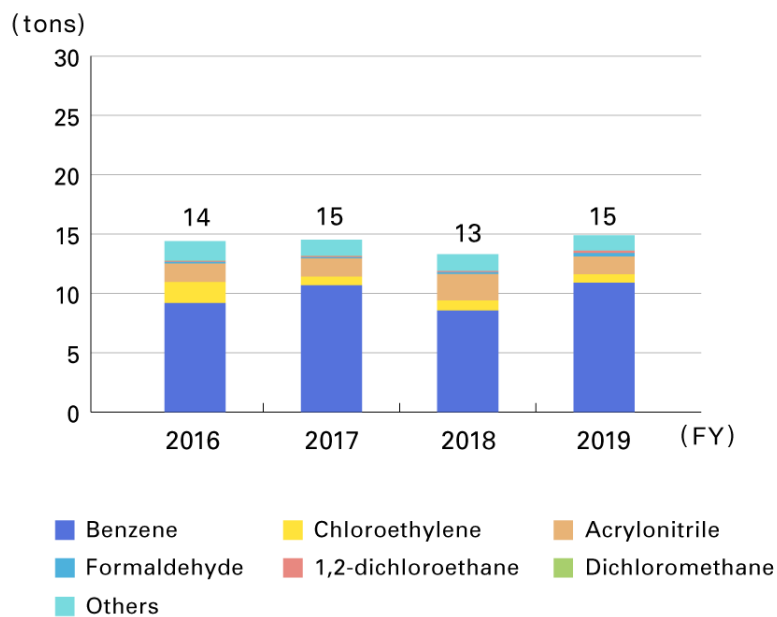
SOx Emissions



Soot and Dust Emissions



Emissions of Hazardous Air Pollutants (Mitsui Chemicals, Inc.)



* Precious emission figures: 771 tons (FY1995), 445 tons (FY2000), 110 tons (FY2005)

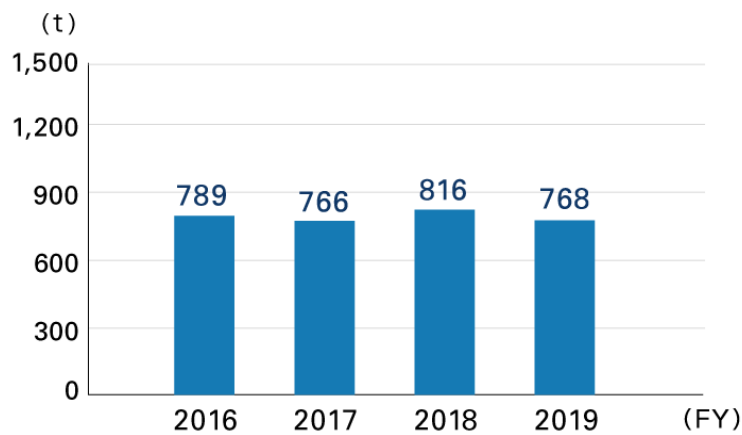
Substances Subject to the PRTR Act

In accordance with the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management (PRTR* Act), Mitsui Chemicals submits a report to the Japanese government each year declaring the amounts of designated substances produced or used by the Company that were released into the environment or transferred elsewhere. We are further reinforcing our management while also seeking other ways to reduce annual emissions 450 tons or less.

* PRTR: Pollutant Release and Transfer Register.

[PRTR Data for Individual Sites \(PDF : 203KB\)](#)

Substances Subject to the PRTR Act Emissions (Mitsui Chemicals, Inc.)



* Scope of Mitsui Chemicals, Inc.: Parent company production sites and the Sodegaura Center.

PRTR Data for Individual Sites (FY2019)

We have calculated the top ten PRTR substances emitted by Mitsui Chemicals at each of our Works (substances handled in annual volumes of at least one ton), and figures for dioxins.

Unit: Tons/year (Dioxins: mg-TEQ/year)

Ichihara Works

Substance	Ordinance designation number	Emitted				Transferred	
		Air	Water	Soil	Total	Sewage	Off-site
N-Hexane	392	182.82	0.00	0.00	182.82	0.00	4.09
Toluene	300	17.21	0.01	0.00	17.21	0.00	25.57
Xylene	80	6.61	0.01	0.00	6.62	0.00	1.78
Cumene	83	5.34	0.01	0.00	5.35	0.00	0.00
Ethylbenzene	53	5.25	0.00	0.00	5.25	0.00	2.17
Epichlorohydrin	65	2.39	0.00	0.00	2.39	0.00	0.00
Benzene	400	1.48	0.01	0.00	1.49	0.00	7.64
Zinc compounds (water-soluble)	1	0.00	1.49	0.00	1.49	0.00	0.00
Hydrogen fluoride and its water-soluble salt	374	0.00	0.77	0.00	0.77	0.00	0.00
Styrene	240	0.44	0.00	0.00	0.44	0.00	0.13

Mobara Branch Factory

Substance	Ordinance designation number	Emitted				Transferred	
		Air	Water	Soil	Total	Sewage	Off-site
Styrene	240	0.15	0.00	0.00	0.15	0.00	0.00
Methyl methacrylate	420	0.06	0.00	0.00	0.06	0.00	0.00
N-Butyl acrylate	7	0.04	0.00	0.00	0.04	0.00	0.00
Acrylic acid	4	0.02	0.00	0.00	0.02	0.00	0.00
Xylene	80	0.01	0.00	0.00	0.01	0.00	0.00
Methacrylic acid n-butyl	419	0.01	0.00	0.00	0.01	0.00	0.00

Nagoya Works

Substance	Ordinance designation number	Emitted				Transferred	
		Air	Water	Soil	Total	Sewage	Off-site
Acrylonitrile	9	0.01	33.03	0.00	33.04	33.03	146.38
Styrene	240	0.29	2.86	0.00	3.15	2.86	8.78
1,2-Epoxypropane	68	1.27	1.67	0.00	2.94	1.67	0.22
Ethylene oxide	56	0.16	0.14	0.00	0.30	0.14	0.04
Toluene	300	0.19	0.00	0.00	0.19	0.00	0.00
N,N-Dimethylformamide	232	0.01	0.00	0.00	0.01	0.00	1.63
Phenol	349	0.00	0.00	0.00	0.00	0.00	0.00

Osaka Works

Substance	Ordinance designation number	Emitted				Transferred	
		Air	Water	Soil	Total	Sewage	Off-site
Cumene	83	17.42	0.00	0.00	17.42	0.00	0.06
Benzene	400	6.31	0.01	0.00	6.32	0.00	0.00
Dicyclopentadiene	190	3.98	0.00	0.00	3.98	0.00	0.00
Zinc compounds (water-soluble)	1	0.00	3.96	0.00	3.96	0.00	0.45
Toluene	300	3.34	0.01	0.00	3.35	0.00	0.23
Methyl methacrylate	420	2.06	0.00	0.00	2.06	0.00	11.03
Trichlorofluoromethane	288	1.76	0.00	0.00	1.76	0.00	0.00
Acrylonitrile	9	1.46	0.00	0.00	1.46	0.00	2.68
α-methylstyrene	436	1.28	0.00	0.00	1.28	0.00	0.50
1,4-Dioxane	150	1.11	0.03	0.00	1.14	0.00	0.00
Dioxins	243	0.0600	0.0210	0.0000	0.0810	0.0000	0.1360

Iwakuni-Ohtake Works

Substance	Ordinance designation number	Emitted				Transferred	
		Air	Water	Soil	Total	Sewage	Off-site
N-Hexane	392	124.63	0.00	0.00	124.63	0.00	0.00
Toluene	300	22.99	0.03	0.00	23.01	0.00	0.00
Xylene	80	21.78	0.00	0.00	21.78	0.00	0.00
1,4-Dioxane	150	0.00	6.32	0.00	6.32	0.00	0.00
Bromomethane	386	4.68	0.00	0.00	4.68	0.00	0.00
Benzene	400	2.83	0.00	0.00	2.83	0.00	0.00
Acetaldehyde	12	0.91	0.00	0.00	0.91	0.00	0.00
Cumene/Isopropyl benzene	83	0.45	0.00	0.00	0.45	0.00	0.00
Ethylbenzene	53	0.24	0.00	0.00	0.24	0.00	0.00
Phenol	349	0.01	0.19	0.00	0.20	0.00	0.00
Dioxins	243	0.0000	0.0750	0.0000	0.0750	0.0000	0.0020

Omuta Works

Substance	Ordinance designation number	Emitted				Transferred	
		Air	Water	Soil	Total	Sewage	Off-site
Toluene	300	238.82	0.26	0.00	239.08	0.00	493.77
Dichlorobenzene	181	43.34	0.52	0.00	47.95	0.00	281.74
Toluene (Yotsuyama area)	300	19.86	0.00	0.00	19.86	0.00	0.00
Dicyclopentadiene	190	9.61	0.00	0.00	9.61	0.00	7.94
Epichlorohydrin	65	6.56	0.00	0.00	6.56	0.00	0.01
N,N-Dimethylformamide	232	0.14	4.56	0.00	4.70	0.00	0.04
Formaldehyde	411	0.00	4.52	0.00	4.52	0.00	0.84
Phenol	349	1.74	0.00	0.00	1.74	0.00	0.90
Acetonitrile	13	0.00	0.60	0.00	0.60	0.00	0.08
Dinitrotoluene	200	0.00	0.32	0.00	0.32	0.00	0.00
Dioxins	243	0.0000	0.0900	0.0000	0.0900	0.0000	0.0000

Sodegaura Center

Substance	Ordinance designation number	Emitted				Transferred	
		Air	Water	Soil	Total	Sewage	Off-site
Dichloromethane	186	0.34	0.00	0.00	0.34	0.00	1.33
N-Hexane	392	0.22	0.01	0.00	0.23	0.01	1.87
Dichlorobenzene	181	0.13	0.00	0.00	0.13	0.00	1.44
Xylene	80	0.06	0.00	0.00	0.06	0.00	5.78
Methylenebis (4,1-phenylene) = diisocyanate	448	0.01	0.00	0.00	0.01	0.00	1.09

Management System	GHG and Energy	Industrial Waste
Environmentally Hazardous Substances	Water	Biodiversity
Environmental Accounting/Compliance		

Water

Water is an indispensable component of the Mitsui Chemicals Group's various chemical product manufacturing processes. For example, water is used in manufacturing processes that include heating, cooling, and washing as well as for equipment that removes harmful chemical substances produced during these processes and discharges effluent. Formulating its basic philosophy on water resources, the Mitsui Chemicals Group works to manage efficient water usage and water preservation. In addition, we ask suppliers to carry out activities that include waste water management and efficient utilization of water as described in [the Sustainable Procurement Guidelines](#).

* Please refer [here](#) for scope of data.

[Climate Change Policy](#)

[Water-related Information \(CDP\)](#) (PDF : 671KB)

Basic Philosophy on Water Resources

1. We recognize that water is a finite and precious resource, and regard water conservation as a key priority on a global scale.
2. We make every effort to use water efficiently as we recognize quality water resources are crucial to our operations.
3. We appropriately manage water on a case-by-case basis for each country and region in which we operate, in recognition of the fact that water resources distribution varies both geographically and temporally.

Reducing Emissions of Water Pollutants

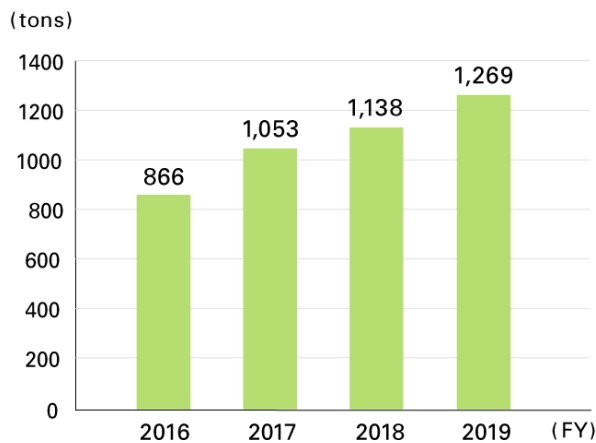
We monitor the emission volumes for water pollutants such as chemical oxygen demand (COD), nitrogen and phosphorus, to conserve water quality. The emission volumes for each of these items are kept significantly lower than levels required by law or other legislation.

In domestic production sites with high water usage, the wastewater from different plants is collected together before it is treated

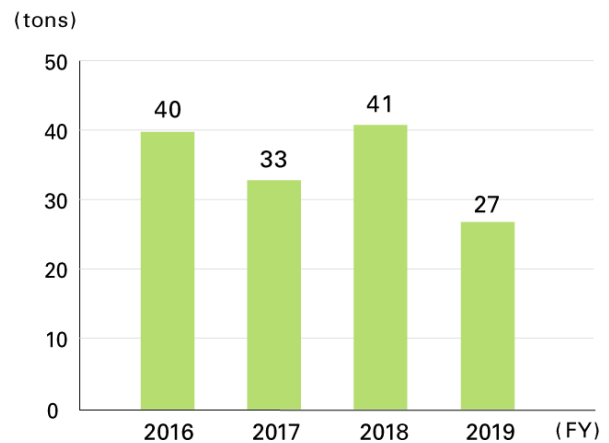
by neutralization, oil separation, and removal of solids. We also pass the wastewater through an activated sludge process to remove organic substances using microorganisms. However, some of the water cannot be treated by the activated sludge process as it contains substances that inhibit microorganisms from organic decomposition or the organic substances contained in the water are persistent. Such wastewater is treated in a normal manner after treated with ozone, combustion, or anammox.*

* Anammox: Anaerobic ammonium oxidation. A process to remove nitrites from ammonium-rich wastewater using ammonia-oxidizing bacteria.

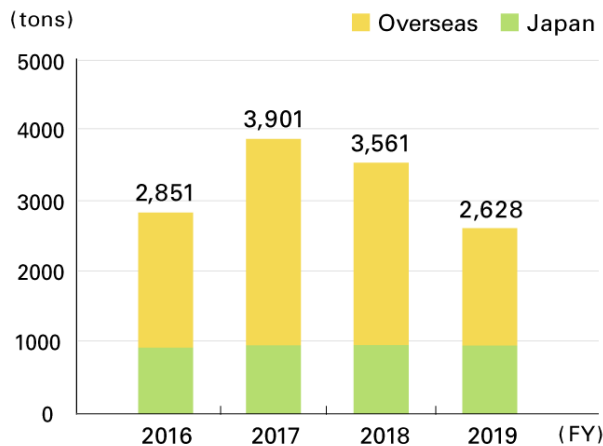
Total Nitrogen Emissions (Mitsui Chemicals, Inc.)



Total Phosphorous Emissions (Mitsui Chemicals, Inc.)



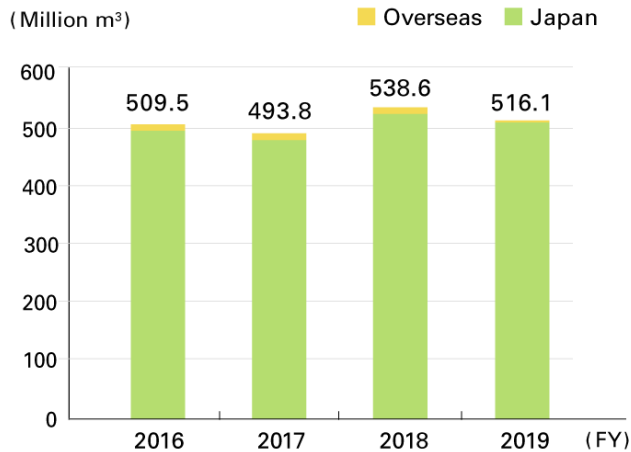
COD, BOD Emissions



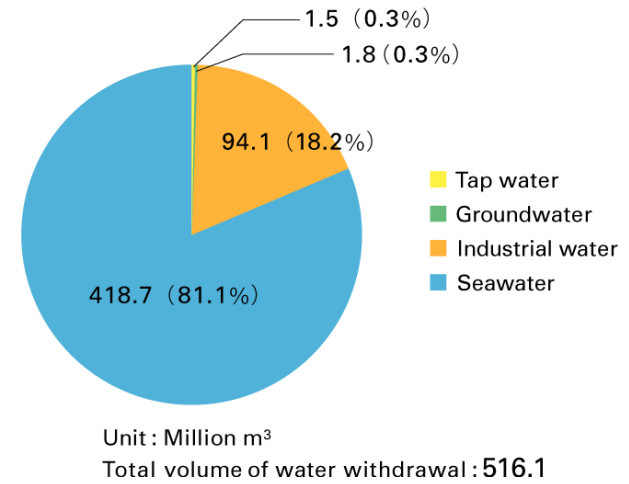
Efficient Use of Water

The Mitsui Chemicals Group monitors the volumes of water withdrawal, discharge, consumption, and recycling in an effort to use water efficiently. The Group proactively engages in water recycling particularly at production facilities that use large amounts of water.

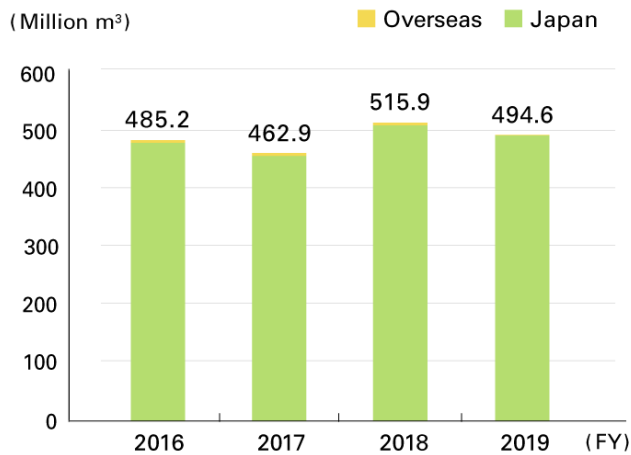
Volume of Water Withdrawal (tap water, groundwater, industrial water, and seawater)



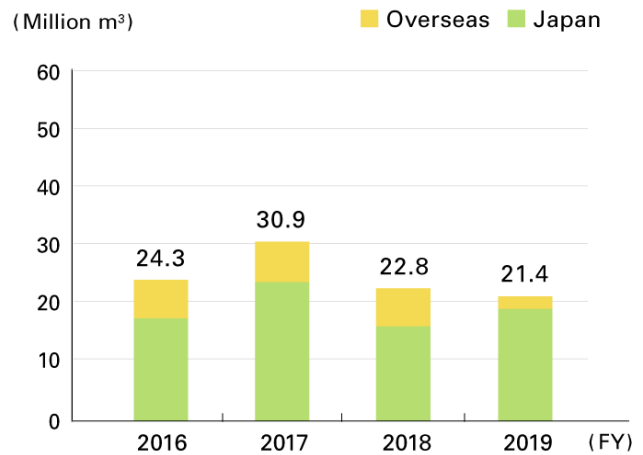
Breakdown of Volume of Water Withdrawal (FY2019)



Discharge Water Volume

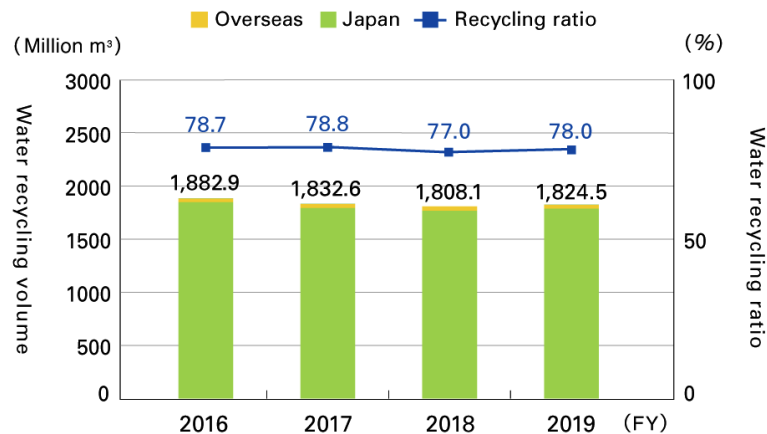


Water Consumption*



* Water consumption = water withdrawal – discharge water volume

Water Recycling Volume and Ratio*



* Water recycling ratio = water recycling volume / (volume of water withdrawal + water recycling volume)

Water Risk Assessment

The Mitsui Chemicals Group conducts water risk assessments for its production sites from the present up to the year 2040. To do this, we use the AQUEDUCT Water Risk Atlas of World Resources International (WRI). The Water Risk Filter of the World Wildlife Fund (WWF) has also been added as an evaluation tool from fiscal 2018. Assessment tools have been used to identify regions where water stress is high. Detailed assessments of the unit water levels at production sites, water usage volumes and local data have also been conducted to verify that the water risk at each site is at an acceptable level. In addition, similar surveys are conducted at new plants when operations are commenced.

Including [biodiversity risk](#) as a part of water risks, we use IBAT to gather data and investigate biodiversity risk based on the following evaluation items: Protected areas, priority protected areas, endangered species and endangered freshwater species surrounding our production sites.

In support of the [TCFD recommendations](#), we are conducting assessments on the physical risks to our production sites (floods, drought & temperature changes), based on IPCC RCP 2.6 and RCP 8.5. In the future, we will conduct environmental impact assessments to include items with high materiality in the scenario analysis. In identifying sites to be assessed, 47 sites in eight areas that rank high in importance (Japan, China, Southeast Asia, India, United States, Europe, Brazil and Mexico) have been selected for analysis and assessment for the risk of floods, drought and temperature changes. The risk of water-related natural disasters tend to be high for Japan, China, Southeast Asia and India and the number of disasters is expected to increase in many areas. Water supplies tend to be strained in India and Mexico, with a similar trend anticipated for Singapore and Thailand. Based on these findings, Mitsui Chemicals plans to assess the impact on production sites, determine how the company can mitigate it and apply the results to its scenario analysis.

Management System	GHG and Energy	Industrial Waste
Environmentally Hazardous Substances	Water	Biodiversity
Environmental Accounting/Compliance		

Biodiversity

The Mitsui Chemicals Group aims to minimize the negative impact on the global environment and ecosystems from the products it manufactures and sells throughout their lifecycles.

The manufacture of chemical products has the potential for impacting biodiversity in the air, water, and soil through GHG emissions when using energy (electricity and thermal), the consumption of water resources in heating, cooling, and cleaning processes, and water-polluting effluent. In addition, the release and decomposition of harmful chemical substances at the manufacture, use, and disposal stages of chemical product lifecycles can reduce the number of species living in those environments.

To prevent any loss of biodiversity, the Mitsui Chemicals Group is working on the following initiatives aimed at [mitigating climate change](#), [recycling of resources](#), [managing chemical substances](#) and [reducing environmentally harmful substances](#) to contribute to realizing a cohesive society in harmony with the environment.

Basic Approach to Biodiversity Conservation

1. We conduct our business activities in gratitude for the blessings of nature and biodiversity and recognize that environmental preservation is a globally important issue.
2. We contribute broadly to society by encouraging biodiversity conservation through the supply of environmentally friendly materials, products, and services.
3. We will comply with international biodiversity agreements.
4. We strive to conserve biodiversity by cooperating with relevant parties in Japan and abroad and within and outside the company and taking into account its effect in the supply chain.
5. To conserve biodiversity, we will promote employee social contribution activities that have our stakeholders trust.

Biodiversity Risk Assessment

Believing that reducing environmental burdens throughout the Mitsui Chemicals Group’s production and business

activities helps preserve biodiversity, we undertake initiatives that include managing chemical substances, reducing GHG emissions, and managing water resources. In fiscal 2017, we conducted surveys of ecosystems surrounding production sites of our Group companies. Using IBAT,^{*} these surveys confirmed the absence of nature protected areas (i.e. world heritage sites, IUCN Category I, II, III, Ramsar Sites) within a 3km radius around these production sites.

^{*} IBAT :

Integrated Biodiversity Assessment Tool. Developed jointly by BirdLife International, Conservation International, International Union for Conservation of Nature (IUCN), United Nations Environment Programme (UNEP), and UN Environment World Conservation Monitoring Centre, IBAT facilitates access to basic data and the latest information on natural preservation.

Contributions through Products and Services

The Mitsui Chemicals Group is developing products and services that help reduce environmental burdens. Formulating “Blue Value™” as a means for displaying environmental contribution value, products that help reduce CO₂, protect resources, and harmonize with nature are designated as Blue Value™ products. Setting Blue Value™ product net sales ratios as a KPI in the 2025 Long-term Business Plan, we aim to expand products that help conserve biodiversity.

Contributions through the Supply Chain

In procuring our raw materials, we are making efforts to select materials and suppliers that will result in a lower environmental impact in line with [our Purchasing Policy](#). As indicated in [the Sustainable Procurement Guidelines](#), we request our suppliers to support the preservation of biodiversity. In [logistics](#), we work to reduce environmental impact mainly by undertaking modal shifts and shared logistics. We [provide product safety information](#) in an effort to help customers handle products appropriately and minimize environmental impacts.

Participation in Initiatives

We support [the Declaration of Biodiversity by the Japan Business Federation \(Keidanren\)](#) and participate in [the Japan Business and Biodiversity Partnership](#). The policy and initiatives of Mitsui Chemicals in this area has been introduced in Initiatives for Declaration of Biodiversity by Keidanren.

Social initiatives that support the conservation of biodiversity

The Mitsui Chemicals Group undertakes environmental creation initiatives to conserve biodiversity at its business sites.

^{*} Major activities are shown [here](#).

Wildlife Survey on Rice Fields

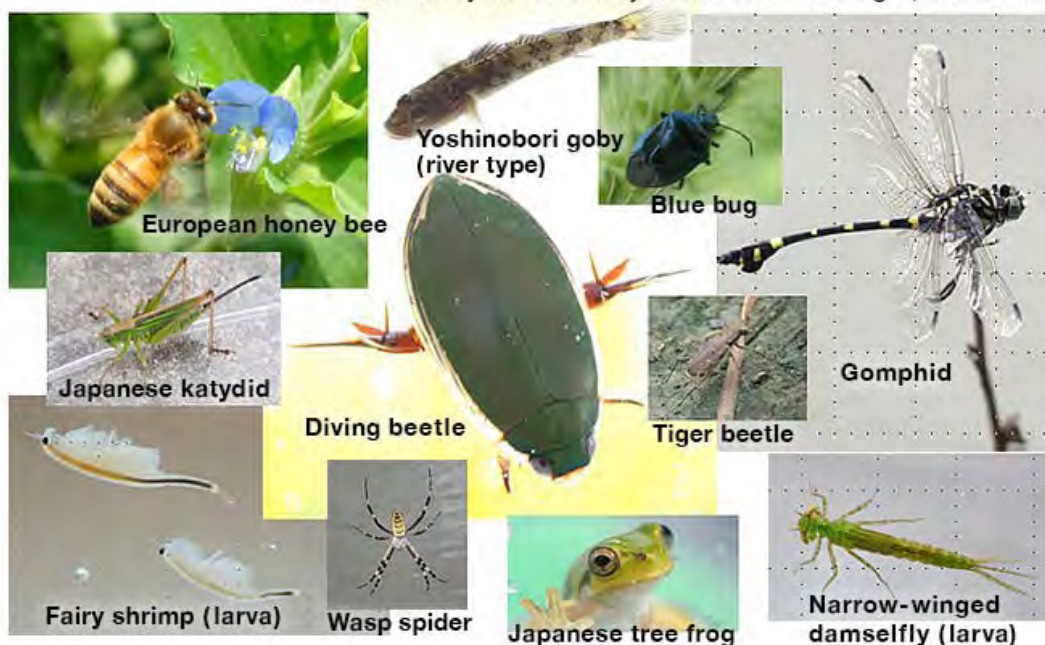
The Mitsui Chemicals Group affiliate company, Mitsui Chemicals Agro, Inc. (MCAG), has been conducting a “Wildlife Survey on Rice Fields” using MCAG products since 2012.

Involved in the manufacture and sales of agrochemicals and fertilizers, MCAG conducts the “Wildlife Survey on Rice Fields” annually with the full support of customers, confirming that a wide variety of wildlife inhabit rice fields. MCAG surveys the effects of agrochemical use on wildlife in rice paddies, which leads to the improvement and development of products. Further, through the release of experts’ written opinions that summarize the results of these wildlife surveys, we certify that rice was grown in rice paddies inhabited by a wide variety of wildlife, which contributes to adding value to local rice.



Examples of the wildlife observed on the survey

In-house survey conducted by Mitsui Chemicals Agro, Inc. in 2014



Preservation Activities at Omuta Works

At the Omuta Works (Fukuoka Prefecture), Mitsui Chemicals has a protected forest that spans approximately 5.4 hectares and engages in ongoing activities to preserve this area. In 2009, we cooperated on a survey of the natural

environment in the forest around our property (the southern side of Mt. Takatori) at the request of Omuta City, which considers the preservation of the natural environment an important issue. The survey conducted by Omuta City Natural Environment Survey Association examined rare plants and species of living organisms in areas managed by Omuta Works, and presented its findings in the Omuta City Natural Environment Survey Results Report.

Rare wildlife found in survey (example)

Plants	Serissa japonica, tree of a thousand stars
	Selaginella moellendorffii
Amphibians	Japanese brown frog
Insects	Cydnidae, Parastrachia japonensis



Donations to Environmental Conservation Organizations

Mitsui Chemicals employees have been annually donating to [the Japan Environmental Action Network \(JEAN\)](#) — an NGO that engages in ocean and river environmental preservation activities—through [the One-Coin Club](#) since fiscal 2015.

Management System	GHG and Energy	Industrial Waste
Environmentally Hazardous Substances	Water	Biodiversity
Environmental Accounting/Compliance		

Environmental Accounting/Compliance

Environmental Compliance

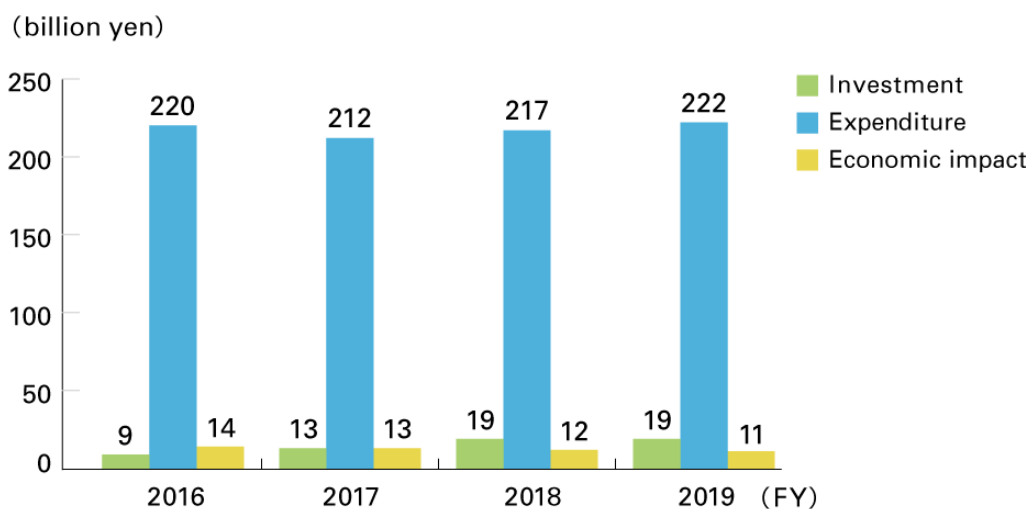
The Mitsui Chemicals Group believes that compliance with the environmental laws and regulations of the nations and regions in which it operates and addressing the opinions and complaints of local residents are an important part of environmental compliance.

Through training our employees about environmental laws and regulations and conducting audits at each of our operating sites, we aim for zero violations of environmental laws and regulations. Moreover, management at each of our locations conducts [regular meetings with members of local communities](#) so as to exchange opinions and broaden understanding in regard to the operation of the facility. Each business site fields complaints and comments from local residents. Moreover, Mitsui Chemicals maintains a [our Risk Hotline](#) that allows members of the local community to express their opinions. Thanks in part to these efforts, there were no violations of environmental laws or regulations in fiscal 2019. We will continue our efforts in environmental compliance in order to earn and maintain the trust of society in general.

Environmental Accounting

Mitsui Chemicals invests as much as is necessary in responsible care, including environmental initiatives and occupational health and safety. We also compile and publish our environmental accounts in accordance with the Environmental Accounting Guidelines set out by the Japanese Ministry of the Environment in 2005.

Environmental Accounts (Mitsui Chemicals, Inc.)



Environmental Accounts

Breakdown of Investment and Expenditure (FY2019 Mitsui Chemicals, Inc.)

Unit: million yen

Category	Main initiatives	Investment	Expenditure
1. Business area costs (Cost of reducing the environmental impact of production and service activities within our business area)		1,879	14,369
1-1 Pollution prevention cost	Measures to prevent VOC air pollution, odors, reduce wastewater, etc.	(771)	(12,256)
1-2 Global environmental conservation cost	Energy saving equipment	(1,094)	(156)
1-3 Resource circulation cost	Recycling waste plastics, etc.	(13)	(1,957)
2. Upstream/downstream costs (Cost of reducing the environmental impact of production and service activities in upstream or downstream areas)		0	0
3. Administration cost (Cost of environmental management activities)	Maintaining environmental management systems, training employees, etc.	0	611
4. R&D costs (Cost of environmental research and development activities)	Developing products and processes to protect the environment, reduce environmental impact, etc.	0	6,308
5. Social activity costs (Cost of environmental social activities)	Increasing greenery, funding measures to combat pollution, etc.	0	210

6. Environmental remediation cost (Cost of remediating environmental damage)	Remediating pollution, etc.	2	717
Total		1,879	22,215

Environmental Accounts

Breakdown of Economic Impact (FY2019 Mitsui Chemicals, Inc.)

Unit: million yen

Category	Main benefits	Economic impact
1. Income from recycling	Recycling waste into resources	417
2. Income from saving energy	Saving energy	517
3. Income from saving resources	Improving our raw material intensity index	207
Total		1,141

* Scope of Mitsui Chemicals, Inc.: Parent company production sites and the Sodegaura Center

Management System

Regulatory Compliance and Distributing the
Safety Use Information

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Management System

Policy and Basic Approach

As a member of the supply chain, the chemical industry is responsible for chemicals management from product development to disposal (product stewardship). Beyond observing the regulatory requirements in each country, the Mitsui Chemicals Group voluntarily manages an extended range of chemicals to enhance the scope of product stewardship.

To minimize risks to human health and the environment throughout a product life cycle, cooperation with other stakeholders in the supply chain is indispensable. The Mitsui Chemicals Group proactively collects chemical information from suppliers, assesses risks concerning our products, and maintains mutual communications with customers on any hazards in our products and how to handle them safely.

[The Mitsui Chemicals Group's Responsible Care Policy](#) states that the Group makes efforts to assess the risks to people and the environment from our products throughout their lifecycles, while working to ensure the health and safety of all persons and to reduce the environmental impact of those products. We have stipulated the Mitsui Chemicals Group's Principles for Chemicals Management to unify our basic group-wide approach in fiscal 2019, and now distribute them across the Group.

Mitsui Chemicals Group's Principles for Chemicals Management

Mitsui Chemicals Group will contribute to the development of a safe and sustainable society by managing chemicals in accordance with the following principles in order to ensure the health and safety of all persons and reduce environmental impact.

- 1.We establish Chemicals management policies and rules, and take actions in accordance with them.**
- 2.We manage our chemicals management system appropriately.**
- 3.We promote the safe handling of chemical products throughout the value chain through risk communication with our business partners.**
- 4.We understand the needs of our stakeholders and provide appropriate product information.**

Founded on the above Policy and Principles, and taking account of global chemical management trends and the Group's business direction, we determine the medium-term goals (Our ideal state) and priority issues on which to take action over the next five years. The priority issues are revised every year.

Medium-Term Goals (Our Ideal State in 2025)

Ideal State: A state in which the Principles for Chemicals Management is established, accelerating sustainable development and growth, product value is heightened, and such efforts are recognized by stakeholders throughout the Mitsui Chemicals Group.

Priority Issues

- 1.Establish the Principles of Chemicals Management and strengthen and maintain chemicals management depending on the levels of each company
- 2.Secure response to new risks from the establishment of new laws and revision of laws
- 3.Prepare a chemical information communication structure that can respond to the circular economy
- 4.Strengthen product risk management to minimize product risk based on global targets
(Product risk management for new applications, disposal and recycling)

The Mitsui Chemicals Group’s Chemicals Management



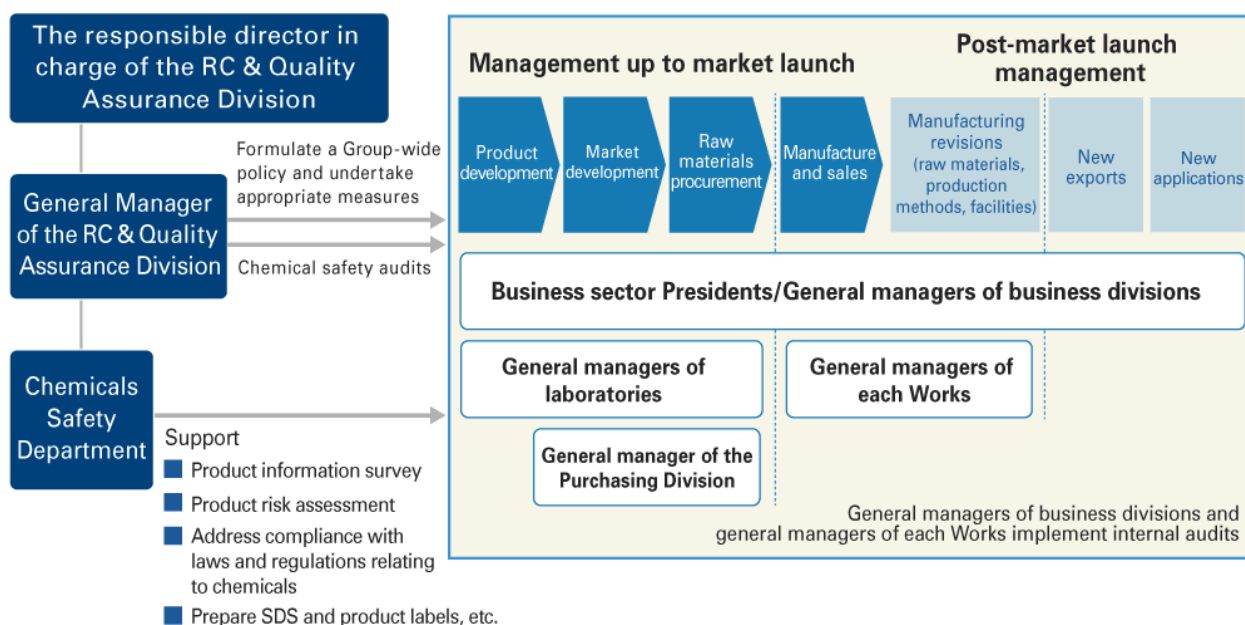
System and Responsible Officers

The progress made concerning the group-wide policy, basic approach, medium-term goals, and important issues are subject to deliberation by [the Responsible Care Committee](#) as a part of Responsible Care.

Responsibility for a product is taken by the General Manager of the business division that owns the product and the Business sector President responsible for that division. The responsible director in charge of the RC & Quality Assurance Division reviews and establishes the group-wide chemicals management policy, and ensures that the policy is understood and put into practice in all companies. The director also provides advice, instructions, and guidance to the Business Sector Presidents.

General Managers of laboratories ensure that the design of a new product takes safety and the environment fully into account. Chemicals management in our works is undertaken by the General Managers of the works, and when procuring materials, chemicals management is undertaken by the General Manager of the Purchasing Division. The General Manager of the RC & Quality Assurance Division keeps up with the latest movements in chemicals management policies and laws, creates the concrete measures for compliance, and promotes the implementation of such measures across the Group. Under the initiative of the General Manager of the RC & Quality Assurance Division, the Chemicals Safety Department provides concrete support for group organizations, including product information surveys, product risk assessments, means to achieve chemicals regulation and standard compliance, and for creating SDSs and product labels.

Chemicals Management System (Mitsui Chemicals, Inc.)



Internal Audit

The RC & Quality Assurance Division conducts chemical safety audits of each division of the Mitsui Chemicals Group. The fairness of such audits is independently assessed by the Internal Control Division.

Chemical Safety Audit

Confirming the chemical management system, the state of its management and state of compliance with relevant laws and regulations.

Scope: Business divisions, branch offices and laboratories of Mitsui Chemicals, as well as affiliated companies that market chemical products. (Laboratories are included in the scope of audit because they provide samples.)

Frequency: In principle, once every three years

Goals and Results

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of legal and regulatory violations	Mitsui Chemicals, Inc.	0	0	○	0	—
Product risk assessment implementation rate	Mitsui Chemicals, Inc.	Set up new medium to long-term goals	<ul style="list-style-type: none"> Set up goals for around 2025 99% or more 	○	<ul style="list-style-type: none"> formulate new assessment indicators 99% or more 	—
Provision ratio of the latest safety information for all products *	Mitsui Chemicals, Inc.	100%	100%	○	100%	Maintaining 100% (2025)

* Most recent SDS submission rate.

Management System

Regulatory Compliance and Distributing the
Safety Use Information

Providing Safe Products

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Regulatory Compliance and Distributing the Safety Use Information

In order to achieve the WSSD 2020 Goal and SDGs, many countries are now enacting new laws or renewing regulations related to chemical substance management. Compliance with these laws is the foundation of sustainable business and Mitsui Chemicals implements various measures to ensure our legal compliance. Also, information communication throughout the supply chain is indispensable for chemicals management from product development to disposal (product stewardship). We are making extra efforts to convey information about the safe handling of our products—even beyond attaching the legally-specified Safety Data Sheets (SDSs) and labels.

Compliance with New or Revised Regulations Related to Chemical Substances

Following the EU REACH regulations that systematically changed the chemical management system, many countries are also strengthening their local regulations. A number of revisions to the laws and regulations concerning existing chemical substances will also take place. Led by the Mitsui Chemicals Global Chemical Regulation Compliance Team, in which all business and corporate divisions participate, we constantly investigate and rapidly implement group-wide response measures for these new or revised laws and regulations across the Group. We maintain our systematic approach to adhere to any new or revised laws and regulations in each country.

Korea

The amended Act on Registration and Evaluation, etc. of Chemicals came into force in early 2019. This is the Korean version of the REACH regulation that covers existing chemical substances that are manufactured or imported at a mass of one ton or more per year. Including pre-notification, which is a preliminary chemical substances registration, we completed procedures to be compliant with these new regulations by the end of June 2019. We are fully observing the Occupational Safety and Health Act enforced in January 2020.

Taiwan

We are following the new systems that started in April 2020, which require reporting annual manufacturing/import volumes of registered chemical substances.

The US

The TSCA Inventory Notification Requirements rule was implemented under the Toxic Substances Control Act (TSCA), in August 2017. Mitsui Chemicals has completed the notification of the chemicals that are listed in the existing chemical substances inventory and that were imported or manufactured in the last ten years. We are ensuring that we will conduct Chemical Data Reporting (CDR) in 2020.

Turkey

A new law similar to the EU REACH regulation was enforced. We are now working toward the preliminary registration that is due by the end of December 2020.

Japan

The Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) was revised and the criteria of reporting chemical substances in small production volumes was changed in January 2019. The reporting criteria used to be the amount of production or import but now it is based on the amount of emissions. Therefore, we systematically obtained usage information for our products from customers and completed the designated report.

Through its industry initiatives, Mitsui Chemicals collects the latest information on chemical regulations across the world, which in turn contributes to product stewardship in the chemical industry. Collaborating with chemical companies across the world through industry organizations such as the International Council of Chemical Associations (ICCA), we are working to resolve problems surrounding chemical substances. In Japan, we continuously and promptly obtain the latest regulatory information through the Japan Chemical Industry Association (JCIA) and play an important role as a chemical management specialist. In revising the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.(CSCL), we participated in the Policy Coordinating Committee under the JCIA, negotiating for the changes to be applied in an efficient and effective manner.

[International Council of Chemical Associations \(ICCA\) and Chemical Industry Associations in Each Country](#)

Establishing Global Networks

We reach out to obtain legal information from each country to maintain our compliance with local laws and regulations. Mitsui Chemicals dispatches Regulatory Experts to our affiliate companies in the U.S., Germany, China, Taiwan, and Thailand, to gather information related to chemical regulations, such as how the local authorities operate, and local chemical industry policies. These experts attend the annual Regulatory Expert Meeting to discuss issues they have identified.

Chemical Product Safety Information System

Thorough data management is important to manage chemical substances following the legal requirements. Mitsui Chemicals handles data on the chemicals contained in products and materials in an integrated manner using Mitsui Chemicals Safety Information System (MiCSIS). MiCSIS is used to confirm legal compliance with domestic and foreign regulations, manage production/import quantities, create multilingual SDSs and product labels, and link to chemSHERPA* in a prompt and secure manner. We also extended the use of MiCSIS to affiliate companies in Japan from fiscal 2019 in order to reinforce data management across the Group.

Registering chemical substances and chemical products is just a beginning in any country, and our efforts to manage such chemicals never end—even after the products are introduced to the market. Understanding the chemicals in our products in full through MiCSIS, we respond promptly to any regulatory changes after the market launch of our products.

* chemSHERPA :

Chemical information Sharing and Exchange under Reporting Partnership in supply chain.

A scheme for conveying information about chemical substances contained in products. The Ministry of Economy, Trade and Industry is developing and promoting this scheme in aims of having the scheme utilized globally.

Providing the Latest Safety Data

Mitsui Chemicals attaches SDSs to all products regardless of legal requirements or the presence of hazardous chemicals (excluding some molded items) to communicate accurate safety information. Some products also come with extra information that supplements the SDSs.

We are continuously improving the quality of SDSs to distribute the latest chemical information to our customers. For this purpose, legal regulations and hazard information in different countries is managed by MiCSIS in an integrated manner. MiCSIS is capable of creating SDSs suitable for different regions, including Japan, Europe, the US, Korea, Taiwan, and China. In fiscal 2019, we newly created SDSs for Thailand, one of our major export destinations.

Management System

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Providing Safe Products

For human health and environmental protection as well as for sustainable development, the Sound Chemicals and Waste Management scheme for chemical substances and hazardous waste, which takes into account product life cycles, is being proposed and is also being deployed by the International Council of Chemical Associations (ICCA). The Mitsui Chemicals Group is engaging in business and product development that incorporates those perspectives, as a member of the supply chain that aims at sustainable development.

Product Risk Assessment

Mitsui Chemicals assess the potential risks for all new products. We also assess risks concerning existing products when materials or manufacturing methods are changed, their applications are extended, related laws and standards are revised, and new scientific findings are announced. As our business fields diversify, we plan to conduct risk assessments on both new and existing products to suit new applications, as well as for disposal and recycling.

* For risk assessment and management in works and distribution, see the following sections : [Occupational Health](#); [Safety and Prevention](#); [Environmental Protection](#); and [Logistics](#).

Risk Assessment for New Products

The risk assessment of a new product and a new brand is divided into five stages. A certain set of risk assessments is designated for each stage and the assessment task is shared among the R&D Laboratory, business divisions, Works, the RC & Quality Assurance Division, and the Safety & Environment Technology Division. The same applies to catalysts and additives used for materials or in the manufacturing process, and byproducts generated during manufacturing.

Product Development Guidelines

Stage	Role	Response Measures
	Tentative product concept setting	Gathering of safety-related information, conducting of collection and verification of information of chemicals in products

II	Tentative product concept market opportunity assessment	Provide customers with safety information when supplying prototypes
III	Preliminary market development by limited number of customers	Notify those involved within the Company of safety information Provide safety information to limited number of potential customers
IV	Full-scale market development	↓ Implement product risk assessment ↓ Hold product safety conference ^{*1} → Change ^{*2} / cease development ↓ Implementation of risk management measures ^{*3} Submission of application for approval
V	Commercialization, release to market	Implement Change Control Implement risk assessment of existing products

*1 Held when it cannot be confirmed that the risk is sufficiently low, etc., or in the event of conflicts arising with internal standards.

*2 Examples: Changes of materials, method of manufacture, specifications, etc.

*3 Examples: Restrictions on application/use conditions; in addition to SDS, information conveyed in technical documents

Risk Assessment for Existing Products

Mitsui Chemicals has conducted risk assessments for our existing products in stages in order to contribute to attainment of the WSSD 2020 goal. In fiscal 2016, worker risk assessment was carried out using the Control Banding Method,^{*1} and from the total number of around 2,500 Company products we narrowed down the number of high-priority products to approximately 1,000. In fiscal 2017, the risk levels of the highest-priority products from among these 1,000 products were calculated for all possible use cases by utilizing tools such as ECETOC TRA,^{*2} which is used for risk assessments specified by the EU REACH regulation. In fiscal 2018, we expanded the assessment coverage to low-priority products and completed the risk assessment for all of our products.

*1 Control Banding Method:

A chemical substance management method created by the International Labour Organization (ILO) with the aim of protecting workers from chemical substances.

*2 ECETOC TRA:

A targeted risk assessment (TRA) tool developed by the European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC).

Voluntary Control of Chemicals

Chemical substances may be harmful to human health and the environment. Mitsui Chemicals is systematically reducing its use of chemicals of concern.

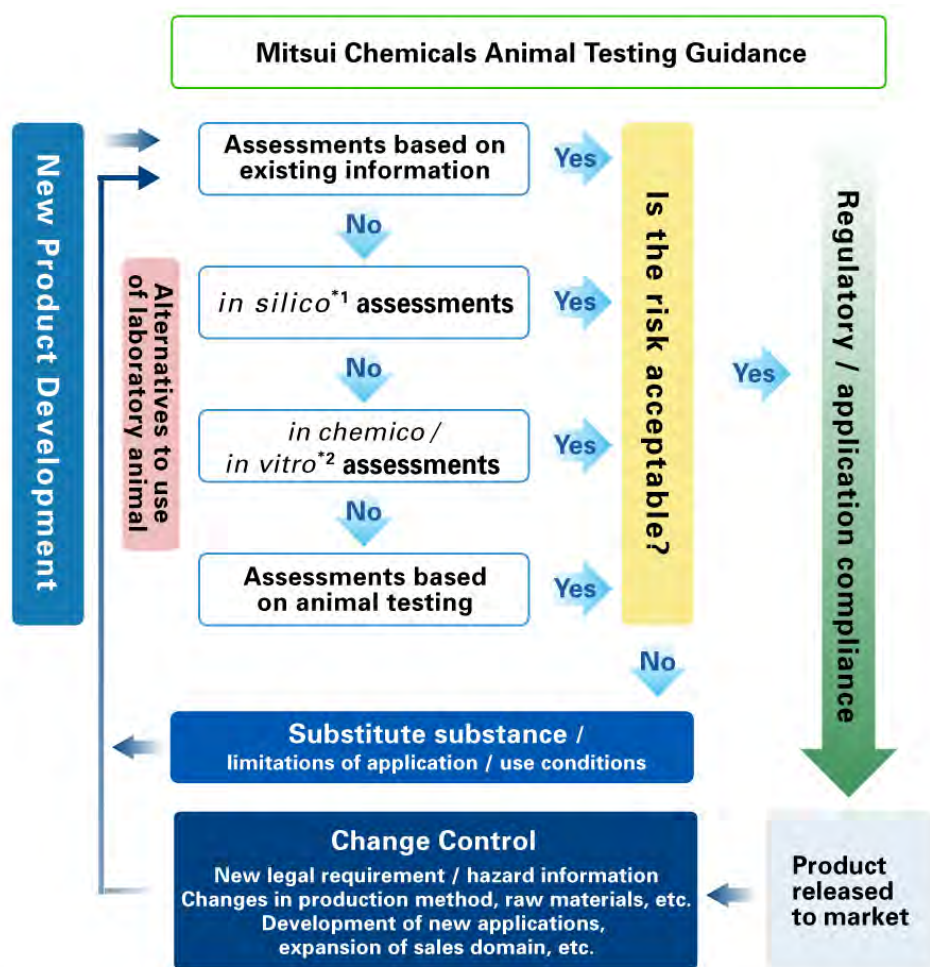
We specify chemicals subject to the following list (1) to (7), below, as Prohibited Substances, and we do not use, produce, or sell these substances. For substances the use of which is restricted or that require specific information disclosure, handling in each stage of purchasing, R&D, and manufacturing is strictly controlled. The use of substances categorized as (8) to (16) in the list are specifically determined according to product purposes.

1. Industrial Safety and Health Act: Substances subject to Prohibition on Manufacturing and Other Activities.
2. Industrial Safety and Health Act: Substances categorized as Group-1 Substances in the Ordinance on Prevention of Dangers Due to Specified Chemical Substances.
3. Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.: Class I Specified Chemical Substances.
4. Poisonous and Deleterious Substances Control Act: Specified Poisonous Substances.
5. Act on the Protection of the Ozone Layer Through the Control of Specified Substances and Other Measures: Substances listed in Annexes A and B.
6. Act on the Prohibition of Chemical Weapons and the Regulation of Specific Chemicals: Specified substances (Schedule 1 Chemicals under the Chemical Weapons Convention).
7. Stockholm Convention on Persistent Organic Pollutants (POPs): Substances listed in Annexes A, B, and C.
8. (US) Toxic Substance Control Act (TSCA): Prohibited or restricted substances in Section 6.
9. (EU) ELV Directive.
10. (EU) RoHS Directive Annex II.
11. (EU) POPs Regulation Annex I.
12. (EU) REACH: Substances listed in the Substances of Very High Concern (SVHC) Candidate List and Annex XIV (Authorization List).
13. (EU) REACH Annex XVII (Restricted substances).
14. (EU) Medical Device Regulation (MDR): Substances listed in Annex I, 10.4.
15. Global Automotive Declarable Substance List (GADSL).
16. IEC 62474 DB Declarable substance groups and declarable substances.

Safety Assessment and Animal Testing System

The development of chemical products and chemicals management requires the safety test data demanded by legal regulations. There are also cases in which animal test may be necessary. We have established the Group's animal testing policy that declares on the 3R principles (of Replacement, the utilization of alternative methods; Reduction, reduction of the number of uses; and Refinement, the alleviation of suffering) and the internal regulations for the animal testing facility. Based on the internal regulations, the Institutional Animal Care and Use Committee inspects all animal tests, including those outsourced, from the viewpoint of 3Rs before approving them.

In fiscal 2019, our management system's compliance with the Ministry of Health, Labour and Welfare guidelines for animal testing was certified by the Japan Health Sciences Foundation.



*¹ *in silico* : Computational scientific method utilizing structural activity correlations and similar substance information.

*² *in chemico/in vitro* : Laboratory-level evaluation method that utilizes scientific / biological reactions.

Acquisition of New Assessment Technologies

The Integrated Approaches to Testing and Assessment (IATA) is becoming widespread as a global trend of risk assessment. IATA is an approach that integrates existing data, and testing data *in silico* (techniques that predict harmfulness from a chemical substance's structure) and *in vitro* (alternative testing without using animals) to make animal testing a last resort. IATA has been adopted under the OECD testing guidelines of irritation, corrosiveness, and sensitivity, etc., as well as in regulations in different countries. Mitsui Chemicals is actively employing such new techniques.

In fiscal 2018, in an effort to contribute to establishing technologies for alternatives to animal testing, we participated in activities to improve the precision of predicting irritation in the OECD QSAR*¹ toolbox, one of the *in silico* approaches, to develop an assessment flow that produces more objective results. We published our development at a European toxicity conference Eurotox 2018 and in an academic journal*². Also, ADRA*³, developed in a project in which we participated, was adopted in the OECD Guidelines for the Testing of Chemicals in 2019.

*¹ QSAR: Quantitative Structure – Activity Relationships.

*² Atsutoshi Abe, Takuhito Sezaki, Katsutoshi Kinoshita, Development of a read-across workflow for skin irritation and corrosion predictions, SAR AND QSAR IN ENVIRONMENTAL RESEARCH 30 (2019), pp.279–298

*³ ADRA: Amino acid Derivative Reactivity Assay. A test method to detect the first key event that leads to an Adverse Outcome Pathway (AOP) in skin sensitization.

Training

It is indispensable to raise the awareness of our individual employees for chemicals management from product development to disposal (product stewardship). We provide them with training programs to acquire knowledge to comply with regulations and handle products correctly, and spread the knowledge across the supply chain in order to establish a corporate culture that protects human health and the environment.

The chemicals management training program comprises the following three courses; e-learning, basic seminar course and advanced course:

E-Learning	We provide employees with a basic knowledge of chemical safety management to ensure the safety of our products and legal compliance. Educational records are managed by an internal system.
	<div>Scope</div> All employees in business and R&D Laboratory and all line managers of works and indirect departments
	<div>Education contents</div> <ul style="list-style-type: none"> □. Basics of laws and regulations on chemicals management □. Basics of chemicals management in Mitsui Chemicals <ul style="list-style-type: none"> - Mitsui Chemicals Responsible Care Policy - Basic knowledge specified by corporate rules on chemicals management
Basic seminar course	<div>Scope</div> Employees who need to acquire concrete handling methods
	<div>Education contents</div> <ul style="list-style-type: none"> - Identifying chemicals in products and investigation of product information - Legal compliance before and after product market introduction - Product risk assessment - Providing safety information (SDSs and labels) - Consideration of chemicals in products from the design stage - How to check laws and regulations in Japan and other countries

Advanced course	Learning about chemicals specific to a certain product or application, such as food packaging materials.
	<div>Scope</div> Employees involved in specific types of products and purposes

Other than the courses listed above, the Chemicals Safety Department provides the RC officers in purchasing and procurement divisions, business sectors, R&D centers, and information system divisions with the following information in monthly meetings to keep up their knowledge levels, as well as confirming that they undertake designated actions, and to provide support to them. RC officers spread the information they acquire across their respective divisions and report back on related actions undertaken to the Chemicals Safety Department.

- Global trend of tightening regulations concerning chemical safety management and response by Mitsui Chemicals
- Our policies and schedules for designated regular reports to authorities

Management System

Policy and Basic Approach

The Mitsui Chemicals Group is taking a two-pronged approach in quality management, based on quality control and quality assurance, to bring management levels higher than ever across the supply chain. We aim to offer products and services that fully satisfy our customers, gaining their trust through quality compliance reinforcement, quality risk reduction, and human resources development that underlies our quality management.

Under [our Responsible Care Policy](#), we have identified details of our quality system and other key issues such as PDCA procedures as basic matters concerning quality management in our internal regulations. In conjunction with the global expansion of the Group's business, we have identified specific principles for global quality management in order to ensure a uniform awareness toward the basic level of quality. Steps are being taken to roll out these principles across the Group as a whole.

The Mitsui Chemicals Group's Global Quality Management Principles

The Mitsui Chemicals Group makes every effort to increase customer satisfaction via a two-pronged approach to quality management, based on quality control ("built-in quality activities" ^{*1}) and quality assurance ("activities that win over customers' trust" ^{*2}). In this regard, the Company has identified the following principles.

1. Provide customer-oriented products and services

- Clarify customers' requirements and ensure quality
- Design and provide products that also look beyond immediate customer needs
- Propose and provide new products and services that address customers' needs

2. Ensure objective and transparent quality assurance

- Give priority to compliance with laws and regulations over the pursuit of any profit
- Put in place a framework that enables a prompt response when an issue occurs
- Ensure the independence of the Quality Assurance Division

3. Put in place a framework that allows the stable supply of products

- Ensure quality control from the procurement of raw materials to the delivery of products to customers
- Adhere strictly to a policy of management of change and non-conforming product control

4. Create a more open corporate culture

- Adhere strictly to a policy of "report, contact, and consult;" promote the sharing of information between departments
- Undertake the exchange and horizontal deployment of quality assurance information and techniques across the Group

*1 Built-in quality activities:

Our built-in quality activities are aimed at minimizing discrepancies at every stage of the process, including purchasing, design, logistics, and sales as well as manufacturing, to enable every department to provide the same quality of product and service.

*2 Activities that win over customers' trust:

Our activities that win over customers' trust meanwhile are aimed at resolving issues from the customer's perspective, and are spearheaded by the Quality Assurance Department, independently of our sales and manufacturing sections.

Quality Management Philosophy



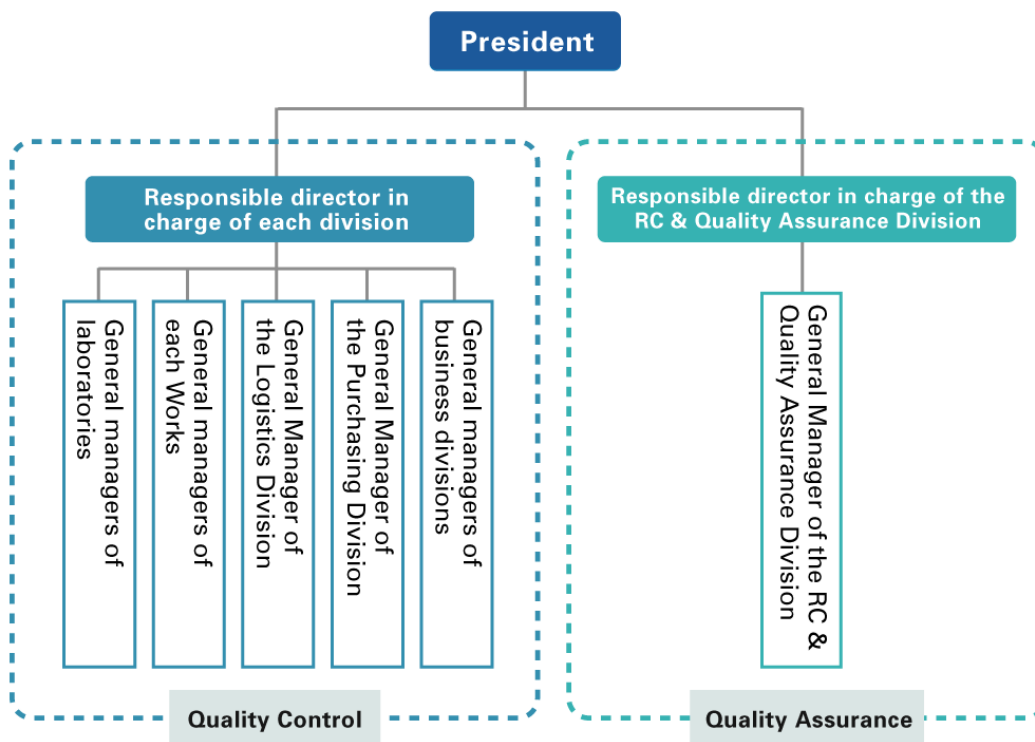
System and Responsible Officers

With the president assuming ultimate responsibility for quality management, the RC & Quality Assurance Division controls quality management for the entire Mitsui Chemicals Group in Japan and overseas. Under this structure, every effort is made to improve product and service quality in all divisions and further raise customer satisfaction. Business divisions, the Logistics and Purchasing divisions, Works, and laboratories are responsible for quality control. The RC & Quality Assurance Division is responsible for quality assurance. As the heads of each division, general

managers engage in quality management.

In addition to systematically collating customer complaints, steps are taken to monitor the details, causes, and each customer's response with respect to each complaint. After analyzing the information gleaned on a monthly basis, the results are shared within the Group. After conducting a review of complaints over the year, quality targets are identified for the following fiscal year.

Quality Management System



Internal Audits

Our RC & Quality Assurance Division conducts quality audits in the Mitsui Chemicals Group's various departments, including the head office, works, and domestic and overseas affiliates. The suitability of these audits is then independently audited by the Internal Control Division.

Quality audits	<p>Confirms that the assignment of responsibilities is clear to ensure product and service provision as required by customers; an appropriate quality management system is implemented; and the system is effectively operated to improve customer satisfaction. Creates the audit program for the following year based on a review of the current year's audit findings and risks inside and outside the Company. Fiscal 2019 audit included checking the soundness of product inspections.</p>
	<p>Scope: Works of Mitsui Chemicals, Inc., business divisions, logistics and purchasing divisions, affiliates of the consolidated subsidiaries that have a manufacturing division (including production contractors). May include other affiliates, as necessary.</p>
	<p>Frequency: Once every one to three years (depending on size, business type, and management level of the audited organization).</p>

Goals and Results

PL Accidents and major legal and regulatory violations

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of PL accidents	Mitsui Chemicals Group	0	0	○	0	0 (FY2025)
Number of major quality-related legal and regulatory violations	Mitsui Chemicals Group	0	0	○	0	0 (FY2025)

Complaints

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Incidence of customer non-conformance	Mitsui Chemicals Group	—	—	—	—	Less than 10ppm (FY2025)
Number of complaints for which the Company is responsible	Mitsui Chemicals, Inc.	Reduce by at least 10% (over 2017)	Increase	×	Continue at FY2019 Goals	A deemed level of zero complaints (FY2025)
Number of high risk complaints	Mitsui Chemicals, Inc.	Less than 20% of the total	6% of the total	○	Less than 10% of the total	A deemed level of zero complaints (FY2025)

In fiscal 2019 we did not experience any major quality-related legal and regulatory violations or suffer any product liability incident. Also, we achieved the target of the number of high risk complaints causing problems for customers, in line with the Company's criteria. However, the total number of complaints in fiscal 2019 increased and so we were unable to achieve our set target. These complaints were eventually consolidated by promptly reporting the causes and implementing recurrence prevention measures.

Initiatives

Improving the Standard of Quality Management

We conduct highly effective [quality audits](#) and enhance the human resource development programs to improve quality management levels.

Quality Training

We possess a variety of quality training programs, including those for new employees. There are 19 quality e-learning courses available not only for domestic companies but also for overseas affiliates. Especially for the compliance, we are using audits and other initiatives as direct training opportunities as well as conducting quality lectures. Moreover, we have been implementing frontline measures to prevent quality issues on the shop floor (QRG activities) since fiscal 2010, with the aim of identifying and eliminating risks that could lead to quality issues. We are implementing these measures in our subsidiaries and affiliates.

Award for Quality Management Activity in Mitsui Chemicals Group

Since 2010, we run the Award for Quality Management Activity in the Mitsui Chemicals Group scheme each November, which is an industry-designated quality promotion month. We encourage voluntary quality management activities and award those who have achieved outstanding results across various workplaces in order to raise quality awareness and encourage the willingness to make improvements.

In fiscal 2019, we presented one General Manager's Prize of the RC & Quality Assurance Division, four Excellence Prizes, and two Special Prizes. The General Manager's Prize was given to Mitsui Chemical Nagoya Works in recognition of their acquisition of IATF 16949 Certification for the electrolyte solution business, as a result of united efforts by the production, sales, and laboratory organizations.

Award for Quality Management Activity in Mitsui Chemicals Group in fiscal 2019

General Manager's Prize of the RC & Quality Assurance Division

Nagoya Works

Excellence Prize

Mitsui Advanced Composites (Zhongshan) Co., Ltd. (China)

Shimonoseki Mitsui Chemicals, Inc.



General Manager's Prize (Nagoya Works)

TAISHO MCT LTD. Omuta Factory

Ichihara Works

Special Prize

Utsunomiya Chemical Industry Co., Ltd.

Mitsui Chemicals Agro, Inc.

Shanghai Sinopec Mitsui Chemicals, Co., Ltd (China)

Responding to the Voices of Customers

Whenever we receive a complaint from one of our customers regarding our products or services, Business, Manufacturing, and Logistics Divisions together with the Quality Assurance Division work in unison to identify the cause of the complaint and to take corrective action. In this manner, every effort is made to implement preventive measures across the organization as a whole.

As one such initiative, all members of the Quality Assurance Division reassess the root cause of each complaint, reconsider appropriate countermeasures, and confirm progress every week. At the same time, energies are channeled toward extracting important case studies, particularly where there is a substantial risk to customers, and where the potential exists for similar cases to arise. These case studies are then shared across the relevant departments. Society's interest toward the impact of chemical substances on people's health and the environment continues to rise. Against this backdrop, chemical substance regulations are becoming increasingly stringent with growing importance placed on the higher level of management of products containing chemical substances.

Under these circumstances, the Mitsui Chemicals Group has implemented thorough chemical substance management across the entire supply chain. We have not only set up an information database in response to inquiries regarding products containing chemical substances from customers, but also established a designated department to undertake appropriate research. Through these means, we are working diligently to reply accurately to each inquiry in a timely manner.

Response to the New Business

The Mitsui Chemicals Group takes steps to ensure compliance with all applicable statutory, regulatory, and authentication requirements on an individual product application basis and conducts internal risk assessments before bringing a particular product to market. From fiscal 2015, we established a designated group to address compliance issues in connection with laws and regulations related to pharmaceutical affairs including medical instruments and authentication. With this designated group taking the lead, every effort is made to confirm the safety and efficacy of products. Steps are also taken to strictly comply with all statutory and regulatory requirements. Moreover, we look to confirm the status of statutory, regulatory, and authentication compliance through periodic inspections after products have been launched.

Management System

Policy and Basic Approach

It is important for the Mitsui Chemicals Group to secure safety, environmental considerations, and quality in our logistics activities. However, the circumstances surrounding logistics are becoming increasingly difficult due to the extreme weather often caused by climate change, and natural disasters, such as earthquakes, as well as a serious shortage of labor. Mitsui Chemicals endorsed the sustainable logistics initiative, put forward in March 2019 by Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT), the Ministry of Economy, Trade and Industry (METI), and the Ministry of Agriculture, Forestry and Fisheries (MAFF). We announced a declaration of independent activities in June 2019 to improve conditions related to logistics, such as details of transportation requests and safety assurance. We are actively working to maintain stable transportation. To prepare for the new changes likely to occur in the next 10 to 20 years, we are working in collaboration with the supply chain to build a resilient logistics system capable of a versatile response to all environmental changes.

The Mitsui Chemicals Group has established "Logistics Environment, Safety, and Quality Management Bylaws" based on [its Responsible Care Policy](#) and Company-wide regulations for risk management. Moreover, the Group complies with all related legal and regulatory requirements and has put in place various initiatives including logistics accident countermeasures. Logistics subcontractors are also required to comply with the Group's bylaws. Further, in fiscal 2019, we made a plan for the rules to be observed concerning the transportation and storage of dangerous goods as the Mitsui Chemicals Group Global Policy to reinforce our international logistics management.

System and Responsible Officers

The responsible director in charge of the Logistics Division manages our logistic system. The Logistics Division sets goals for the fiscal year based on results (number of accidents, complaints, etc.) up to the previous year. Various measures (audit of logistics subcontractors, training, on-site discussion, campaigns, etc.) are incorporated into the annual plan with definitive steps then taken to implement a PDCA cycle. The Logistics Division reports on logistics performance as well as the progress of annual plans while promoting the exchange of opinions through various means including regular meetings with [the Responsible Care Committee](#) and the responsible director in charge of the Logistics Division.

Among a host of measures, steps are taken to conduct a Logistics Division Responsible Care audit of the Group's business sites and logistics subcontractors based on specific criteria and a checklist that is prepared in advance. In this manner, every effort is made to monitor the progress of annual logistics Responsible Care plans. The results of the aforementioned measures and audit are reported to all relevant logistics-related parties and proper action taken.

Goals and Results

Safety

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of significant occupational injuries ^{*1} in logistics	Mitsui Chemicals Group	0	0	○	0	0
Number of major accidents ^{*2} in logistics	Mitsui Chemicals Group	0	0	○	0	0

*1 **Significant occupational injuries** in logistics :

Significant occupational injuries that occurred during logistics activities undertaken by the Mitsui Chemicals Group including across the supply chain.

*2 **Major accident** in logistics :

Major accident that occurred during logistics activities undertaken by the Mitsui Chemicals Group including across the supply chain.

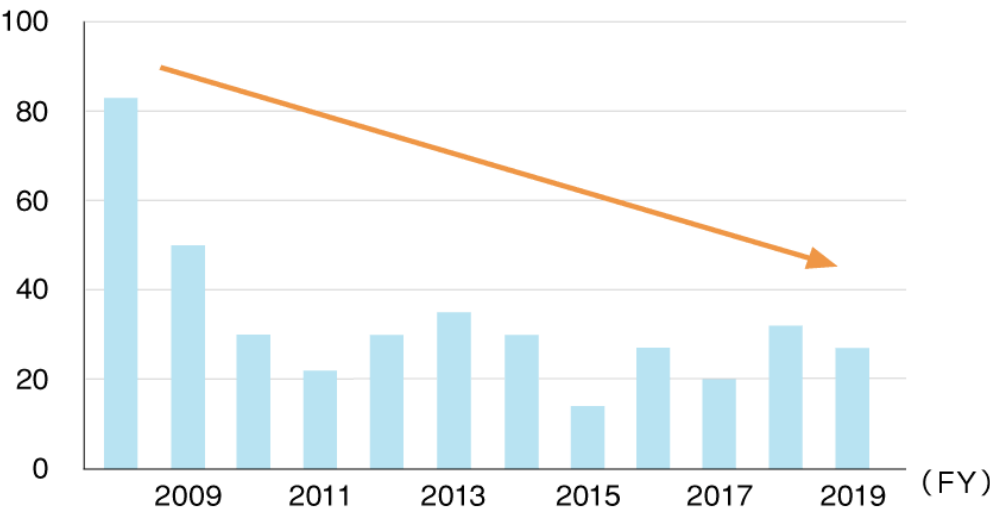
Quality

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of issues impacting customers ^{*3}	Mitsui Chemicals Group	25 or less	27	×	22 or less	90% or less (average of the most recent three years)
Incidence of issues impacting customers ^{*3}	Mitsui Chemicals Group	55ppm or less	60ppm	×	50ppm or less	10ppm or less (FY2025)
Number of complaints	Mitsui Chemicals Group	7 or less	7	○	7 or less	—

*3 Issues impacting customers:

Quality issues (including complaints) and accidents that impacted customers.

Number of issues impacting customers



Compliance

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Number of legal and regulatory violations	Mitsui Chemicals Group	0	0	○	0	0

Safety and Quality

Dialog with Logistics Subcontractors

Mitsui Chemicals delegates its entire logistics operation to logistics subcontractors. To realize safe logistics with appropriate consideration given to quality and the environment under these partnerships, we believe it is important to communicate and disseminate a policy that positions safety as the top priority for each and every person in our logistics operations. The department responsible for logistics at each of our works holds a logistics meeting roughly once a month with their logistics subcontractors to share information concerning logistics issues and details of hiyari-hatto (near-miss) incidents, conduct on-site patrols of the works or a mutual patrol in multiple works, and problem prevention training using past cases. We publish monthly and weekly reports to raise their consciousness of logistics safety and quality. We also make every effort to prevent accidents as part of our logistics operations by requiring subcontractors to undergo responsible care audits and engage in safety dialogs with on-site operators. Energies are also directed toward preventing incidents in the logistics process. This includes the elimination of erroneous shipments and deliveries as well as product leakages.

Third-party logistics (3PL)* companies take the lead in managing 3PL products. The aforementioned activities are also undertaken with the departments responsible for logistics at each works playing a supporting role.

* Third-party Logistics (3PL) :

A form of logistics operation where other companies undertakes all or a portion of logistical tasks.

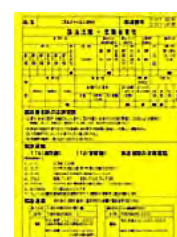


Monthly report on logistics safety quality

Safety Measures for Product Transportation

Providing product information

The Mitsui Chemicals Group products include hazardous substances specified by the United Nations Recommendations on the Transport of Dangerous Goods^{*1} and Japan's Fire Service Act and other domestic laws. When subcontracting goods distribution, we provide a Safety Data Sheet (SDS) detailing the chemical handling and storage regardless of their hazard or danger level. We also submit a Yellow Card,^{*2} which specifies the emergency response procedure and contact details in case of an accident, and mandate the logistics subcontractors to carry the card during shipping.



Yellow card

*1 United Nations Recommendations on the Transport of Dangerous Goods :

A recommendation developed by the United Nations Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods in order to ensure the safety of international transportation of such goods, updated every two years. Depending on the danger and hazard level, dangerous goods are classified as follows: 1 explosives; 2 gases; 3 flammable liquids; 4 flammable solids; 5 oxidizing agents and organic peroxides; 6 toxic and infectious substances; 7 radioactive substances; 8 corrosive substances; and 9 miscellaneous.

*2 Yellow card :

An emergency contact card on which are written the actions to be taken by those involved, including the truck driver, fire and police, in preparation for the unlikely event of an accident when transporting chemical substances or high-pressure gas. Promoted by the Japan Chemical Industry Association.

Collaboration with other companies in the same industry

The Mitsui Chemicals Group is keen to maintain safe and secure goods distribution by preparing for emergency situations in addition to thorough compliance with relevant laws. As for high risk products,* we are working together with other companies in the same industry to reinforce safety measures, such as organizing a mutual emergency support system, including stocking emergency response equipment and materials. We are also considering a third-party review of the safety assessment of high risk goods transportation.

* High risk products :

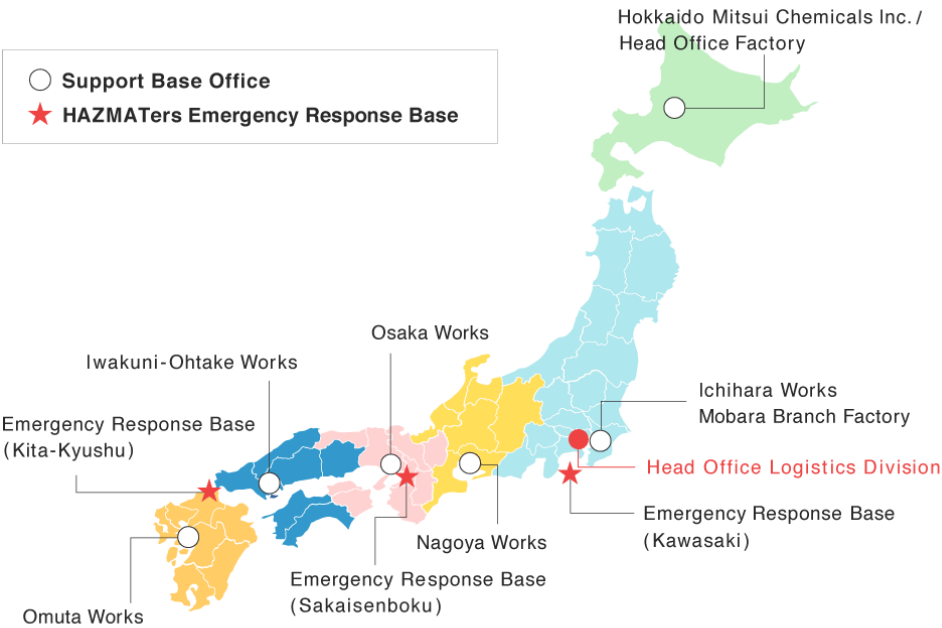
Products that may have a significant social impact if a transportation accident occurs, determined according to its danger level, hazard level, transportation volume, etc.

Emergency response

We convene the Mitsui Chemicals Group Logistics Emergency Network (MENET) in the event of a logistics accident, enabling us to act promptly and proactively as the shipment owner. The network is divided into six areas covering different parts of Japan, and the major works in each area is appointed as the emergency support provider, available to be mobilized 24 hours-a-day. These designated works continue to improve their emergency response capabilities through annual emergency contact and mobilization drills.

In 2017, we concluded the Hazardous Material Emergency Response Service (HAZMATers) contract with the Maritime Disaster Prevention Center to cover a wider scope of expertise and emergency response equipment and materials. Also, in fiscal 2019, we introduced an emergency response helpline provided by the National Chemical Emergency Centre established by the UK government. This will enable us to quickly respond to overseas logistics incidents and inquiries concerning our group products, enhancing our responsible care management for our global logistics.

MENET Support Bases and HAZMATers Emergency Response Bases



Stable Transportation

The logistics environment has entered an age where delivery companies choose the owners and the type of transportation. To achieve sustainable logistics, we must become an owner selected by logistics subcontractors and shipping companies. For this reason, the Group is working to secure stable transportation through a comprehensive study to improve working conditions in the logistics industry, reduce CO₂ emissions, introduce BCP, etc.

Modal Shift

In fiscal 2017, five companies including Mitsui Chemicals were collectively certified as modal shift businesses by Japan's Ministry of Land, Infrastructure, Transport and Tourism. In this instance, certification recognized the modal shift away from the use of trucks to rail when transporting products between the Company's operations in the Ichihara area (Chiba Prefecture) to its affiliate DOW-MITSUI POLYCHEMICALS CO., LTD. in the Ohtake area (Hiroshima Prefecture). In August 2017, large containers provided by Japan Freight Railway Company (JR Freight) were introduced in full for container round use* based on the shared logistics system of the Mitsui Chemicals Group. These efforts have assured stability in the mode of transportation, reduced CO₂ emissions by 70% and reduced working time for truck drivers. They were achieved through the partnership between the Mitsui Chemicals Group, JR Freight and our logistics subcontractors.

* Container round use :

Container round use is a concept that returning the container with another cargo after unloading the cargo on the outbound instead of returning "Empty".



Introducing container round use

We made greater advances in modal shift for transportation from the Ichihara area to the Chugoku area. Previously, Mitsui Chemicals had used trucks to ship synthetic resin using 500-kilogram flexible intermediate bulk containers (FIBCs). However, the particular nature of the product did not allow stacking in two tiers. For this reason, a 12-ton

truck was able to carry only eight tons of products in a single layer, which is only 67% of the truck's loading capacity. This presented a problem of loading efficiency. Accordingly, Mitsui Chemicals produced – with registered design rights on – a dedicated rack to enable the FIBCs to be stacked in two tiers, along with a special 20-foot high-cube container that has been registered as a utility model. The containerization of the cargo made it possible to improve loading efficiency and achieve a modal shift to the use of domestic container ships. These achievements led to a reduction in CO₂ emissions and a reduction in truck drivers' workload. We received the Award for Eco-Friendly Logistics Technology at 20th Logistics Environment Award of the Japan Association for Logistics and Transport. We are expanding this practice to other areas of Japan. We are now making plan and discussing with our logistics subcontractors and shipping companies to use marine transportation to the Kyushu area.



Dedicated racks enable FIBCs to be stacked

In addition, Mitsui Chemicals has been designated as an Eco Rail Mark company by the Administration and Screening Committee of Japan's Ministry of Land, Infrastructure and Transport.



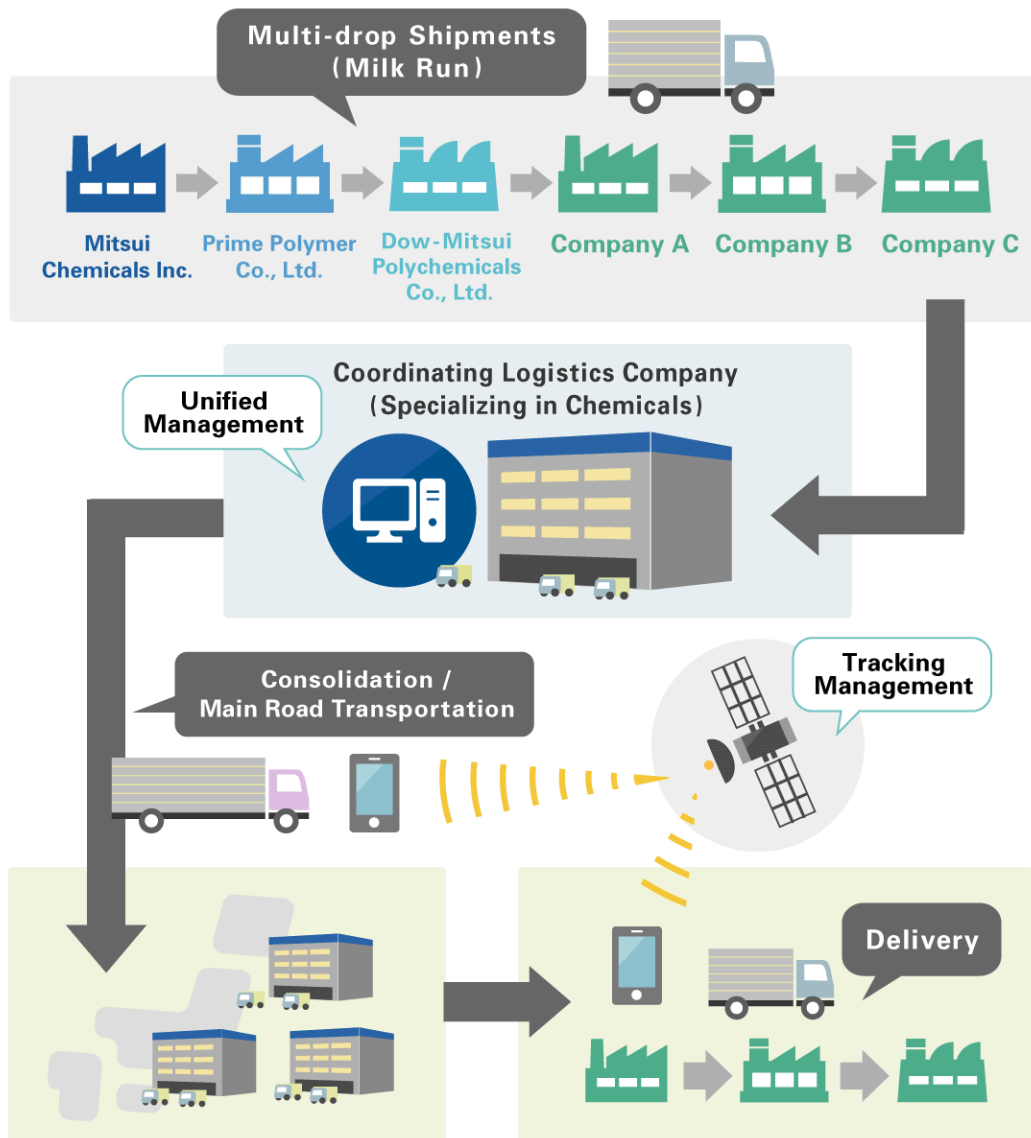
Shared Logistics System for Small-lot Products by Other Companies in the Same Business

Against the backdrop of an increasingly serious shortage of drivers and burgeoning mail order demand, operators began to shun the transportation of chemicals. Securing stable transportation capacity for small-lot products over long distances thus became an urgent issue common among chemical shippers.

In the Keiyo area to the east of Tokyo, we have collected shipments from the production sites of other manufacturers in the vicinity and share the logistics of delivering those products to customers via common transportation routes since 2016. Traditionally, transportation was carried out by delivery companies that took chemicals mixed with loads of general merchandise on set routes via multiple transshipment points. Since we reduced the number of transshipment points by using companies specializing in chemicals, we reduced the number of quality issues, such as damage caused in transit. We could also achieve the improvement in load efficiency which leads the effect of reducing our CO₂ emissions. This system started with shipments destined for the Tohoku areas and has expanded to destinations in the

Hokuriku and Koshinetsu areas. To boost the shared logistics system, activities will be developed together with the logistics subcontractors and shippers who are participating in the system. There are different logistics collaboration schemes in both goods owners and chemical companies. We are currently working to establish a combined transportation system. This system should be able to replace or supplement some parts of the national transportation networks, through which we plan to create a stable, small-lot transportation scheme for chemicals.

Shared Logistics System



Greater Efficiency in Inventory Control and Shipment Management

For greater efficiency in inventory control and shipment management, we have introduced the use of portable terminals. The system involves printing QR codes on labels attached to each packaging type and reading the codes with portable terminals at acceptance and shipment for inventory and shipment control. This has led to a reduction in the workload and paperless processing compared with inventory control based on manual entry and spreadsheet input. Also, the risk of reading errors caused by visible checking of brand names and lot numbers has been removed by the system, preventing erroneous shipments. Full-scale operation was started at Nagoya Works in fiscal 2019, and it is scheduled to be introduced to Ichihara Works in fiscal 2020.



Project to Reduce Driver Standby Time

We are working to improve the work environment for truck drivers and ultimately to reduce the workload for logistics subcontractors, by reducing the standby time for truck drivers while waiting for loading. An appointment system has been introduced in chemicals loading for tank trucks at the Osaka Works and is producing results. It is scheduled to be introduced to Ichihara Works and Iwakuni-Ohtake Works in fiscal 2019.

Participation in Sustainable Logistics Initiative

Mitsui Chemicals announced its support for the sustainable logistics initiative proposed by the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of Agriculture, Forestry and Fisheries and submitted a declaration of its relevant independent activities. The initiative is aimed at addressing the increasing shortage of truck drivers, ensuring the stable logistics operations needed for domestic life and industrial activities while also contributing to economic growth. The initiative aims to improve productivity in truck transportation and create greater logistical efficiency while also looking to realize a better labor environment that makes work easier for female drivers and those over the age of 60. The table below describes the initiatives laid out in Mitsui Chemicals' declaration of its independent activities.

Initiative	Details and expected outcome
Introducing an appointment system	The introduction of an appointment system for trucks will help cut down on waiting time.
Utilizing pallets and more	By making use of pallets and reusable shipping cartons, cargo handling can be sped up.
Giving prior notice of shipment information	Being quicker to convey information from shippers about inbound and outbound shipments will give logistics workers more time to prepare.
Utilizing expressways	Mitsui Chemicals will enter into earnest negotiations about how to make use of expressways and who should bear the fees for this.
Making a modal shift toward sea and rail	Mitsui Chemicals will strive to cut down on greenhouse gas emissions by making active use of sea and rail transport for long-distance shipments.
Implementing safety measures for cargo handling work	Providing clear operational instructions, ensuring safe passage, establishing footholds and more will help to ensure more thorough worker safety.

Stopping or suspending operations during extreme weather	If extreme weather conditions occur or are expected to occur, Mitsui Chemicals will avoid making unreasonable requests for shipments.
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Energy Intensity for the Transportation of Products

Energy intensity for the transportation of products^{*} in fiscal 2019 was 7.13 kl/thousand tons, improving 3.2% comparing to fiscal 2018.

Energy Intensity (kL/thousand tons)

FY2016	FY2017	FY2018	FY2019
7.05	6.65	7.37	7.13

* Energy Intensity for the transportation of products:

Amount of energy consumed (crude oil equivalent in kiloliters) / Volume of product shipments (thousands of tons).

Management System

Policy and Basic Approach

The main purposes of occupational health are to prevent the health disorders caused by harmful factors in the workplace, while working to maintain and promote the health of employees. In addition to complying with the Occupational Health and Safety Act and related laws and regulations, the Company believes that encouraging employee health promotion leads to the happiness of employees and their families and that for employees to be energetically active in their local communities, including after retirement, is a corporate social responsibility and thus promotes occupational health. At the same time, the Company believes that healthy employees make for healthy organizations and contribute to an improvement in the Company's labor productivity, and we are thus working to improve both the well-being of our employees and the organizational culture.

Under [the Mitsui Chemicals Group Responsible Care Policy](#), we actively promote the well-being of all our employees. In addition, under Company rules (occupational health regulations) that pertain to occupational health management, set forth in our basic items that also cover occupational health, we have developed the basic philosophy of "Employee well-being is directly linked to the Company's well-being." Based on this, we actively work to develop occupational health measures, including for health management.

System and Responsible Officers

With the responsible director in charge of the Human Resources Division, the industrial physician who heads the Health Management Department (supervising industrial physician) in the Human Resources Division implements concrete measures.

Leading by the supervising industrial physician, we hold regular Group-wide industrial physician conferences to consider issues and measures related to health management. Based on these conferences, we formulate occupational health plans during the fiscal year and proposals for annual plan key issues and measures (Group-wide occupational health key issues), which are decided through deliberations by [the Responsible Care Committee](#). In addition, the Head Office, Sodegaura Center, and the healthcare sections of all five of our Works take the lead in drawing up and expanding occupational health annual plans for each business site and each business site reports its progress at the industrial physician conferences.

At each business site, full-time industrial physicians, nursing staff and health supervisors at healthcare sections promote efforts to improve employee health and measures designed to prevent employees from being exposed to harmful substances. We also maintain Group-wide statistics on the rate of lifestyle-related disease rates, number of days off due to illness, number of days of mental health disorders, number of new cases of mental health disorders,

working environment measurement results, and hazardous materials risk assessment results. We assign part-time industrial physicians, nursing staff, and other healthcare professionals to our smaller Works and to major Works operated by our subsidiaries and affiliates, in an effort to help improve the health of all Group employees. The relevant persons and labor union members at each Mitsui Chemicals site hold a health and safety committee meeting for each site, in which they participate and at which they report on and discuss issues related to occupational health, including the maintenance and promotion of health, workplace environments and long working hours.

Global Structure

(1) Dissemination of the Responsible Care Policy

As well as disseminating the Responsible Care Policy to overseas affiliates, we broadcast the CEO Message for National Occupational Health Week.

(2) Occupational health survey and audit

Mitsui Chemicals submits the Management Check List regarding to occupational health to affiliates that produce or handle chemical substances to assess their health management status in workplaces. Further, the Internal Control Division undertakes an occupational health audit in Works and laboratories of Mitsui Chemicals and its affiliates (except in the U.S., Europe, and some other regions) to confirm that the working environment is appropriately organized and efforts for health promotion are in place. The onsite audit is carried out once every two to five years depending on the size of the audited site, type of business, administration level, etc. The audited companies are notified of the audit results and are requested to correct any problems identified. If a company is requested to make corrections, it is subject to a follow-up audit after one year to confirm the correction progress.

Domestic affiliates share information related to occupational health in the meeting of employees in charge of HR at domestic subsidiaries and affiliates held every six months. The information provided in the meeting includes changes in occupational health-related laws and regulations with notes on such changes, and details of occupational health issues within the Group.

(3) Offering occupational health-related services

We are receiving an increasing number of requests from domestic affiliates to provide occupational health-related services of the same high quality as in Mitsui Chemicals itself. We are currently working to establish occupational health measures through close collaborations among Mitsui Chemicals and the affiliates. In these measures, Mitsui Chemicals and some affiliates are concluding comprehensive occupational health service contracts whereby the Health Management Department in Mitsui Chemicals directly provides these affiliates with the same health services as offered to employees of Mitsui Chemicals.

Goals and Results

Health and Productivity Management

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals

Frequency of absences from work due to health disorders	Mitsui Chemicals, Inc. registered employees	Less than 0.69	0.87	×	Less than 0.78	0.5 or less
Frequency of absences from work due to mental health disorders	Mitsui Chemicals, Inc. registered employees	Less than 0.37	0.56	×	Less than 0.45	0.25 or less
Average rate of lifestyle-related disease	Mitsui Chemicals, Inc. registered male employees	Less than 9.4%	10.2%	×	Less than 9.7%	8.0% or less
Ratio of smokers	Mitsui Chemicals, Inc. registered employees	23.2% or less	23.7%	×	23.2% or less	20% or less

Preventing Exposure to Harmful Substances

KPI	Scope	FY2019			FY2020	Medium to Long-term
		Goals	Results	Level Achieved	Goals	Goals
Working environment measurement result relating to harmful substances	Mitsui Chemicals, Inc.	Management Category I 100%	100%	○	Management Category I 100%	Management Category I 100%
Harmful substance risk assessment implementation rate: (New substances being handled and SDS-updated substances)	Mitsui Chemicals, Inc.	100%	100%	○	100%	—

Health and Productivity Management

Following our principle of “Employee well-being is directly linked to the Company’s well-being,” we implement a range of occupational health measures, including health management. In fiscal 2016, we clarified the framework of the occupational health audit to affiliates and expanded occupational health management globally. We have also been reinforcing the relationship between the Health Management Department and the Human Resource Division to encourage utilization of training programs and systems, and expand employment of people with disabilities.

Health Management

We promote good health management among employees via activities such as medical examinations and health guidance carried out by industrial physicians, nurses and other healthcare professionals.

Comprehensive medical check-ups

We have introduced comprehensive medical check-ups, combining regular medical examinations with special medical check-ups and cancer screening, and the uptake rates remain steady for more than 10 years. The uptake rate for medical check-ups was nearly 100% and the rates for cancer screening were as follows: nearly 100% for lung cancer, over 85% for colon cancer, over 60% for gastric cancer; over 70% for abdominal ultrasound, over 90% for prostate cancer, and over 50% for breast/uterine cervical cancer. The Health Management Department ascertains the results of the cancer screenings as well as regular medical examinations to encourage employees to see a medical specialist for necessary detailed examinations by explaining their physical condition. With regard to the results of the detailed examinations, the nearly 90% of cancers discovered by these screening, and 75% are discovered to be curable. As a result of gastric cancer risk screenings conducted in fiscal 2015, many employees underwent treatment to eradicate *Helicobacter pylori*. Moreover, the number of employees who are taking a gastric cancer screening using gastroscopic examinations or maintain follow-up checks by medical specialists has increased, particularly among those who received treatment to eradicate *Helicobacter pylori* or who were categorized in groups B-D by medical specialists. In fiscal 2020, those who had never received a cancer screening or who were categorized in group A in the previous screening can choose to take a gastric cancer risk screening

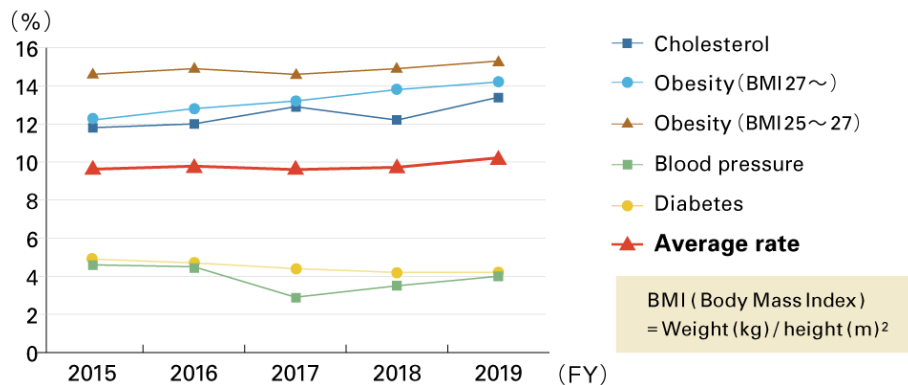
Rates of lifestyle-related diseases and ratio of smokers

With regard to the rates of lifestyle-related diseases, those for high blood pressure decreased, from 9.1% in fiscal 2008 to 4%, while blood sugar levels have remained flat. These results are due medical examination follow-up guidance, health guidance based on diabetes genetic test results for interested predisposed individuals, and health improvement activities. In fiscal 2019, as an initiative for elderly workers who suffer from diminished physical abilities, each site continued to devise measures to promote

health education from the younger generation and entrench exercise habits. Unfortunately, the percentage of those overweight, that is, beyond BMI 25, has been increasing. In fiscal 2020, each site will create a health improvement activities program plan and conduct the program followed by a post-program study for its efficacy. The most effective programs will be conducted on a Group-wide basis.

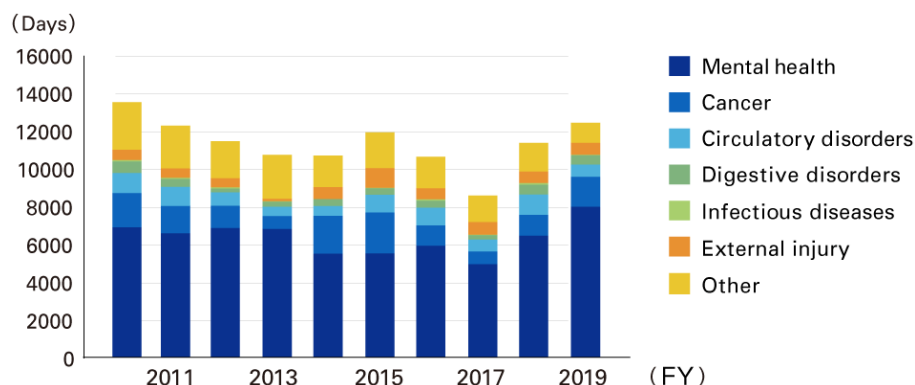
Also, in parallel with the management of smoking rooms, we offer support for quitting smoking. Compared to 10 years ago, the percentage of smokers in the company has decreased by 10%. The company now has a smaller percentage of smokers than the national figure.

Lifestyle-related Disease Rates (Mitsui Chemicals, Inc. Registered Male Employees)



* Lifestyle-related disease rates are compiled separately by gender since criteria for men and women differ depending on the category. As the proportion of men is high the case of Mitsui Chemicals, lifestyle-related disease rates for men are regarded as a KPI.

Breakdown of Days Off due to Illness (Mitsui Chemicals, Inc. Registered Employees)



Helping balance work and treatment

We also continue to help balance work and treatment for disease with the support of industrial physicians. We offer a health consultation and guidance for employees worried about their illness, such as not knowing the best action to take or when unable to understand the intention of the doctor, etc. If some special working arrangement is required for an employee, we discuss with the workplace and Human Resource Division to suit the requirements of the situation. Due to [these systems](#) that support treatment of illnesses, including cancer, it is no longer uncommon to continue working during strong treatment. We also created the Guidebook to Help Balance Work and Medical Treatment by compiling related information and concrete examples. The book was published on the internal bulletin board to make it accessible to employees whenever they need it.

Support for employees at overseas bases

At our overseas bases, our industrial physicians go overseas every year to make the rounds, conducting health interviews with all employees working overseas, including their families if they so desire. We are offering ongoing support to our employees for both mental and physical symptoms. With regard to long-term projects, we continue to provide employees with health support more frequently, such as once every three months.

Mental Health Initiatives

Mental health can have a significant influence on work productivity and is an important issue to maintain the health of employees. We raise awareness of mental health among employees through mental health initiatives such as training (for new employees, management staff, line managers, self-care training programs, etc.) We also conduct interviews and counselling by industrial physicians. Utilizing results of a stress survey, we aim to further improve the working environment.

Training, interview, and counselling

In addition to training, new employees (including new graduates, midcareer hires and contract employees) undergo e-learning-based communication courses for a fixed period after entering the Company. For two years after entering the Company, we also provide appropriate support regarding employee work-related lifestyles, which involves industrial physicians interviewing all new employees every six months, determining the status of communications in the areas of lifestyles, health, supervisors, colleagues, provided advice as needed.

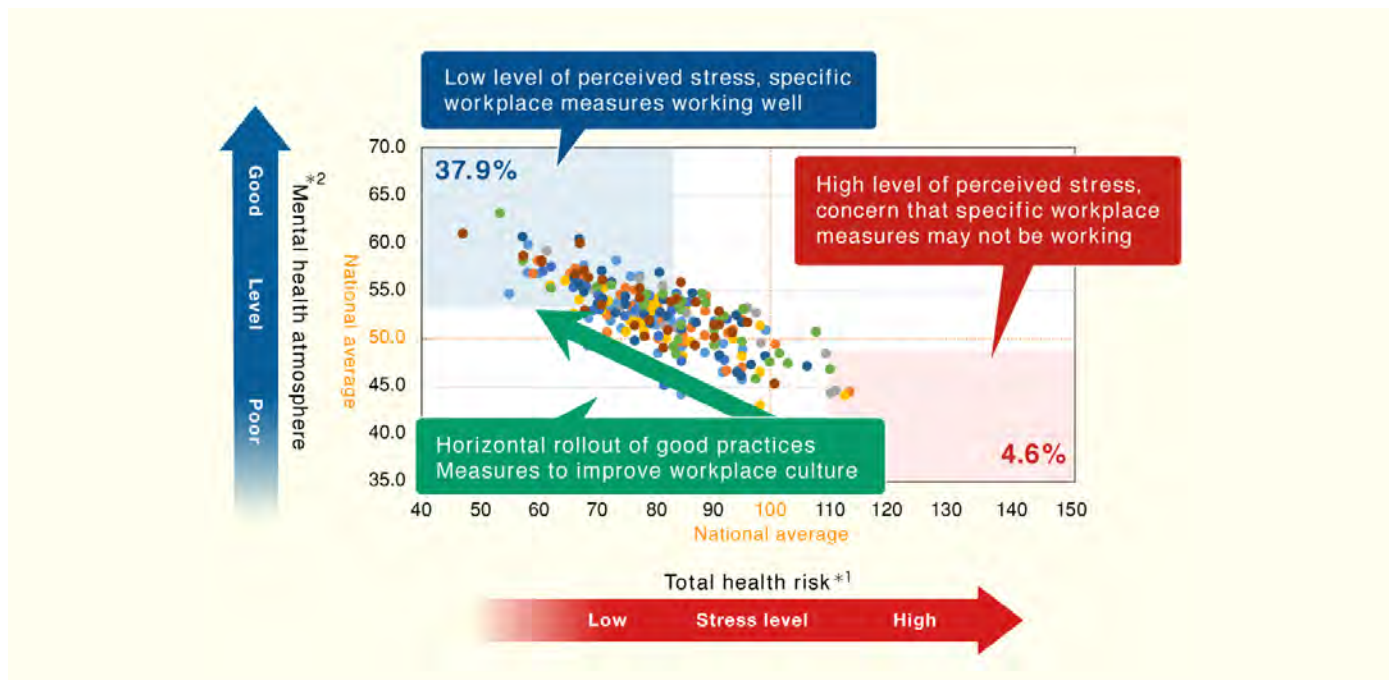
[Inclusion lecture meetings](#) have also been held recently. These meetings aim to create a culture to accept people with diverse characteristics and personalities, as well as those in the course of illness treatment, into workplaces.

Stress survey

In addition to our simple occupational stress survey, since 2011 we have conducted a workplace stress questionnaire (occupational stress and mental health) to provide hints for improving the workplace, with nearly all employees replying to. Beyond providing individuals with feedback, managers in each workplace are also given details of the results of their organization useful for improving workplace conditions. We have also formulated and implemented stress reduction plans (communication improvement plans) in workplaces deemed to be particularly susceptible to high stress levels by conducting interviews with managers and members of such workplaces. Moreover, we are working to identify good practices in workplaces with a positive mental health environment and improving work conditions over time, with interviews with and documents released by representatives of these workplaces made available via the intranet in order to apply them to other workplaces throughout the Company. In fiscal 2018, we introduced a dedicated system, through which the survey results of individuals and organizations can be checked on a website. The new stress questionnaire is helping workplaces to undertake voluntary actions to improve working conditions and many workplaces that actively utilize the survey results is increasing.

As a result, the percentage of workplaces with low noticeable stress levels and are considered to be functioning well in various categories rose from 22.1% in fiscal 2015 to 37.9% in fiscal 2019. Workplaces where there was judged to be a “high level of perceived stress, concern that specific workplace measures may not be working” decreased by half, from 8.7% to 4.6%. With regards to human resource management, we are enhancing the contents of [our leadership training programs](#), which improve the working environment by creating a better workplace atmosphere. In fiscal 2020, we continue to improve workplace culture by examining the results of stress-level surveys at each workplace over a period of years, as well as taking account of the benefits of teleworking.

Fiscal 2019 New Workplace Stress Survey Results (Mitsui Chemicals, Inc. and Contracted Affiliates)



* Each dot in the graph represents a workplace (department level at the Head Office, section level at offices).

* 1 Total health risk:
A measurement on the subjective sensory scale of workload, sense of control, and empathy from superior and co workers. (A relative measurement that uses 100 as the national average. A workplace score of 120 implies that the rate of health problems is 20% higher than the average.)

*2 Mental health atmosphere:

A scale-based measurement of the appropriateness of command and control, labor management, cooperation, and training opportunities. (A relative measurement that uses 50 as the national average. Higher figures imply a better workplace atmosphere.)

Infectious diseases countermeasures

Since January 2020, we have provided the support described below as COVID-19 countermeasures. We also donated N95 and other types of masks that we stored as a flu countermeasure to medical facilities near each site.

January to February 2020

- Sent surgical masks stored as a flu countermeasure to affiliated companies in China.

February 2020

- Promoted awareness of infection prevention measures.
- Prepared and distributed an instruction manual for employees and their families when a family member or colleague is infected, has suspected symptoms, or has been in close contact with an infected person.

- Prepared and promoted infection prevention measures in Works.
- Prepared and promoted a countermeasures manual in corporate dormitories.

March 2020

- Distributed surgical masks stored as a flu countermeasure among employees on a regular basis and dispatched the masks to employees working overseas.
- Promoted countermeasures for pregnant employees and those with chronic diseases.
- Prepared and promoted infection prevention measures in Works during regular shutdown maintenance.

A Wide Range of Health Management Programs

Mitsui Chemicals runs a wide variety of health promotion programs and supports the health management of its employees, primarily through its healthcare section and health insurance association. In fiscal 2019, our initiatives included the Healthy Mileage Campaign, fitness classes, eating habit/dietary classes, walking events, sports competitions, quitting smoking campaigns, employee cafeteria healthy menus, and health/balanced body measurement events.

The Healthy Mileage Campaign is a program that involves participation by individuals or teams, collecting points (health miles) for exercise and healthy lifestyles, and winning prizes for miles collected. With employees being able to enter achievements via the web and smartphones, the number of employees participating in this program was about 40% in Japan, and some employees were participated at overseas sites. We also measured participants' visceral fat and body fat before and after the exercise program so that they can grasp their current condition and manage their bodies more objectively, as well as confirming the effectiveness of the program.

The number of overseas sites that lead their own health improvement activities has also increased. In Zhang Jia Gang Free Trade Zone Mitsui Link-upon Advanced Materials, Inc. (China), has improved the environment for working with display terminals and the office layout to provide better light intake based on advice given by an industrial physician dispatched from the Head Office. The company has also started stretching exercises in the office.



Fitness class



Nutrition class and health menu



Better working environment and stretching exercises in a Chinese affiliate

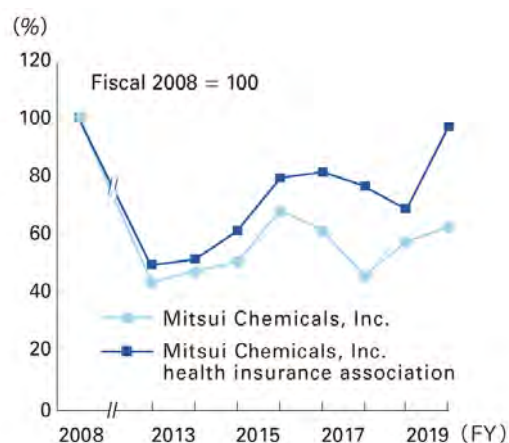
Reducing Medical Costs

The sickness/accident allowances have been on a decreasing trend since fiscal 2015; however, they have increased since fiscal 2018 due to an increase in those suffering from mental health issues. Even so, the total sickness/accident allowances in fiscal 2019 were only 62% of those in fiscal 2008. From a long-term perspective they continue to decrease due to measures to prevent the occurrence of cancers and cardiovascular diseases.

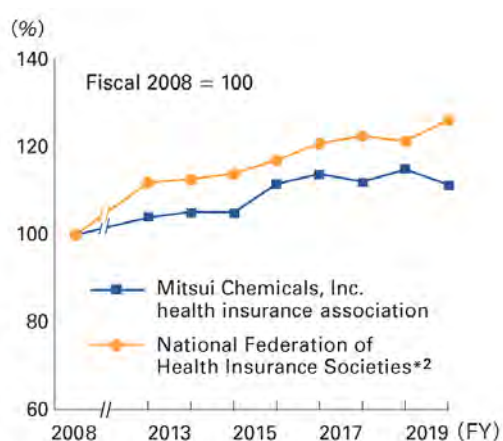
Taking the legally mandated medical benefits per insured person in fiscal 2008 as a baseline index of 100, the rate of increase of the Mitsui Chemicals Health Insurance Association was 11.3%. This is a 55% better performance than the increase in general health insurance association medical expenses.

These are considered to be comprehensive effects of health management, and we will continue to strengthen health promotion measures on an ongoing basis in the years to come.

Sick / Accident Allowances



Legally Mandated Benefits*1 (Per Insured Person)



*1 Legally Mandated Benefits:
Includes medical costs, sick / accident allowances, lump-sum birth allowances, maternity allowances, burial expenses.

*2 National Federation of Health Insurance Societies:
Data taken from an overview of health insurance society early budget collation results.

Certified as Health and Productivity Management Organization (White 500) for Fourth Consecutive Year

Mitsui Chemicals was recognized as White 500 companies in the 2020 Certified Health and Productivity Management Organization Recognition Program (large enterprise category), hosted by the Ministry of Economy, Trade and Industry (METI) and Japan Health Council for the fourth consecutive year. The program awards enterprises that are particularly keen in taking initiatives for overcoming health-related challenges in regional communities or promote health-conscious activities.



Mitsui Chemicals Receives Sports Yell Company Certification for Third Consecutive Year

Mitsui Chemicals has received the Sports Yell Company certification for 2019 from the Japan Sports Agency. This marks the third consecutive year that Mitsui Chemicals has earned this certification. Launched in 2017, the program acknowledges companies that are proactively running sports initiatives to improve employee health. The hope is that this will lead to a growing number of sports-related social opportunities. Mitsui Chemicals was recognized by the Japan Sports Agency for its Healthy Mileage competition, a health initiative that is run within the company.



Accredited as Tokyo Metropolitan Sports Promotion Company for Fifth Consecutive Year

Mitsui Chemicals was certified as a Tokyo Metropolitan Sports Promotion Company 2019, which is hosted by the Bureau of Olympic and Paralympic Games Tokyo 2020 Preparation, under the Tokyo Metropolitan Government, for the fifth consecutive year. The program started in fiscal 2015 to recognize enterprises taking initiatives in promoting sports among employees and making social contributions in the sports area. Our certification was in recognition of the Healthy Mileage Campaign for our employees.



Received Gold in Gan-Ally Declaration Awards for Cancer Initiatives for Second Consecutive Year

Mitsui Chemicals received the Gold Award at the 2nd Gan-Ally Declaration Awards for second consecutive year. The Gan-Ally Declaration Awards are an award scheme created by Gan-Ally-Bu, a private sector project that focuses on tackling problems faced by people who continue to work while undergoing treatment for cancer. The awards aim to encourage workplaces to be more accommodating of employees who have cancer, thereby creating a society where people can feel comfortable continuing to work while receiving treatment. The award was presented in recognition of the changes we made in the working system to enable employees to undertake treatment and continue their work at the same time. Such changes included allowing workers to take half-day special leave to make it easier to go to the hospital for regular cancer treatment, and revising the conventional work-at-home system to a remote working system applicable to those who are receiving treatment.



Mitsui Chemicals Received a Special Award from the Development Bank of Japan (DBJ) under the DBJ Health Management Rating Scheme

In March 2013, Mitsui Chemicals received a special award from [the Development Bank of Japan \(DBJ\) under the DBJ Health Management Rating scheme](#). Mitsui Chemicals was given the highest ranking and was recognized as a model company for health management, with attention drawn to the excellence of its initiatives for caring for the health of employees. One of the conditions of this financing scheme is that the company receiving the loan has excellent measures in place to manage the health of its employees, as evaluated by the Development Bank of Japan.



Preventing Exposure to Harmful Substances

We are committed to reducing occupational health risks and improving working conditions by, for example, utilizing the Occupational Safety and Health Management System ([OHSAS 18001](#)) scheme, the harmful chemical substance risk assessment (new risk assessment system) established in fiscal 2015, through onsite inspections conducted by industrial physicians and health supervisors as well as by means of internal audits.

Risk Assessment

The reformed Industrial Safety and Health Act now requires reinforcement of risk assessments of chemical hazards and implementation of countermeasures. Our conventional risk assessment system was updated to create a new system, and since fiscal 2016, we have been conducting a risk assessment of working with harmful substances (inhalant chemicals) using the new system.

By fiscal 2018, a total of 9,415 cases of qualitative risk assessment had been completed. Of these, 3,140 cases were identified to have a high risk level and we continued systematic quantitative evaluations, such as exposure assessments of individual employees. To date, quantitative assessment for 1,190 cases have been completed. The total number of completed qualitative risk assessment cases by fiscal 2019 marked 12,660, and we have finished all qualitative risk assessments. Of these, 4,297 cases were identified to be of high risk and we have completed quantitative assessments on 2,145 cases. Those work procedures judged to be of high risk as a result of the quantitative assessment, have been subject to methodical reforms to reduce the risks involved. We plan to conduct qualitative assessments on new procedures in fiscal 2020 and also to follow up quantitative assessment of the remaining 2,152 cases of those 4,297 high risk cases.

We also built specific risk assessments for health problems newly caused by the absorption of chemical substances through the skin in fiscal 2018 in response to a rise in social concern about absorption of hazardous chemicals through the skin. Since fiscal 2019, we have been conducting risk assessments of chemical absorption through the skin and have completed the assessment of 3,352 cases out of 3,418 to date. We plan to complete this risk assessment in fiscal 2020, and at the same time we will install new facilities, revise working procedures, and select protectors with more appropriate shielding and durability to reduce risks.

Working environment improvement example (1) – Sampling of specific chemical substances

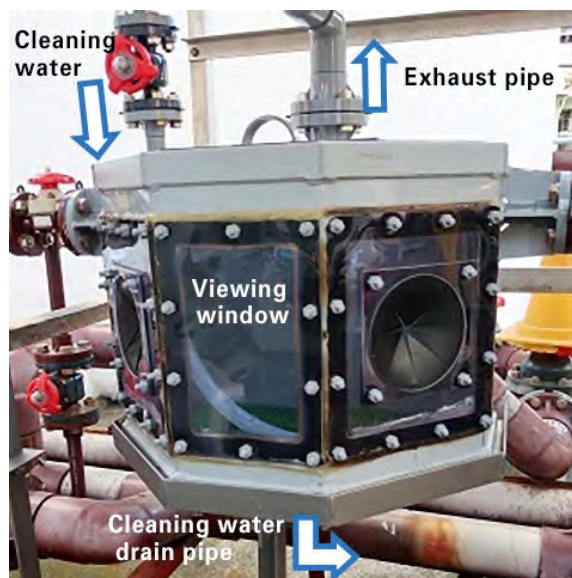
Before

After

Sampling was carried out in a sampling box; however, there were exposure risks when opening the door of the box.



The sampling box was completely sealed and all the handling can now be done without the need to open the box. Exposure risks have therefore been significantly reduced.



Working environment improvement example (2) – Sampling of organic solvents

Before


In one workplace, a chemical sample is taken out directly into a jar using an outlet pipe from a tank. This posed a risk of exposure to chemicals through skin contact and inhalation.



After

The opening of the outlet pipe for sampling was contained within a box. Also, a screw top sample jar attachable to the opening was introduced. This enabled purging, rinsing of the container with the chemical to be sampled, and sampling to be carried out in a sealed environment, significantly reducing the risk of skin contact and





Onsite Inspections Conducted by Industrial Physicians Aimed at Reducing Occupational Health Risks at Overseas Subsidiaries and Affiliates

In an effort to reduce occupational health risks at overseas affiliates, onsite inspections are undertaken on a systematic basis and steps taken to provide instructions regarding areas of occupational health improvement at the time head office industrial physicians make their rounds at overseas bases. This initiative was conducted at six overseas bases in fiscal 2019. Energies were also directed toward educating and training local responsible officers.