

Creating for Tomorrow



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# Editorial policy

## Introduction

We issued our first Environment Report in 1991, and in 1997 this was replaced by our Responsible Care Report. In 2006 we began issuing a CSR Report with content further enriched for greater accountability and communication with our stakeholders. In line with a trend in Europe to combine financial and non-financial information in a single integrated report, in 2014 we issued an Asahi Kasei Report replacing our Annual Report and CSR Report.

In addition to the CSR information included in the Asahi Kasei Report, we publish a CSR Report Internet Edition. The Asahi Kasei Group continues to contribute to the sustainability of society through business activities in accordance with our Group Mission.

## Reporting Period

The primary focus is fiscal 2016 (April 2016 – March 2017). Some information pertains to the period subsequent to this.

## Organizational boundary

Information herein pertains to Asahi Kasei Corp. and consolidated subsidiaries as of March 31, 2017, unless otherwise noted.

On April 1, 2016, Asahi Kasei Corp. became an operating holding company through the absorption of three of its core operating companies, Asahi Kasei Fibers Corp., Asahi Kasei Chemicals Corp., and Asahi Kasei E-materials Corp. The former company names may appear in this report.

With respect to Responsible Care, the scope is operations in Japan which implement the Asahi Kasei Group's Responsible Care program.

## Guidelines consulted

The Global Reporting Initiative's Sustainability Reporting Guidelines G4, ISO 26000, and other guidelines were consulted during the preparation of the reported information.

## Publication

Published November 2017 in Japanese

Revised in January 2018

Next scheduled publication: September 2018

(Previous publication October 2016)

# Management Commitment

**Contributing to solutions to the world's challenges by connecting our businesses, technologies, and human resources**



"Improve human culture." These words of Shitagau Noguchi, the founder of Asahi Kasei, manifested the company's mission of meeting shortages of daily necessities at the time our business began nearly a century ago. Ever since then, we have continuously adapted to meet the changing needs of the times, with business in fields ranging from fibers and chemicals to homes, health care, and electronic devices. Though the content of our operations have evolved, our aspiration to help the people of the world enjoy a better life remains unchanged. Our current Group Mission is to contribute to life and living for people around the world, and we operate in accordance with our Group Vision of providing new value to society by enabling "living in health and comfort" and "harmony with the natural environment."

The world around us is dramatically different than it was a century ago. We now have many challenges to be solved as indicated by the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015. Our aim is to contribute to society's solutions to such challenges by leveraging the strengths we gain by having an unparalleled diversity of business operations, technologies, and human resources. In doing so, we will provide value to the world in a way that only Asahi Kasei can.

We are now advancing our medium-term management initiative "Cs for Tomorrow 2018" that aims to provide solutions to two important challenges faced by society for "clean environmental energy" and "healthy/comfortable longevity with peace of mind." Our management environment has changed significantly in just the past year, including heightened environmental awareness as evinced by the Paris Agreement taking effect and the spread of electric vehicles, changing global market frameworks, and the rapid advance of new technologies for IoT, AI, etc. Nevertheless, we see no need to change our basic concept. While the importance of the two challenges faced by society remains unchanged, there is a greater urgency for us to build connections among our diverse businesses and diverse human resources as we build the base for the next phase. In fiscal 2016, the first year of Cs for Tomorrow 2018, the realignment of our business sectors proceeded smoothly and we achieved solid business performance. We will further accelerate the execution of Cs for Tomorrow 2018 as we work to create a portfolio of high-profitability and high value-added businesses in fiscal 2025.

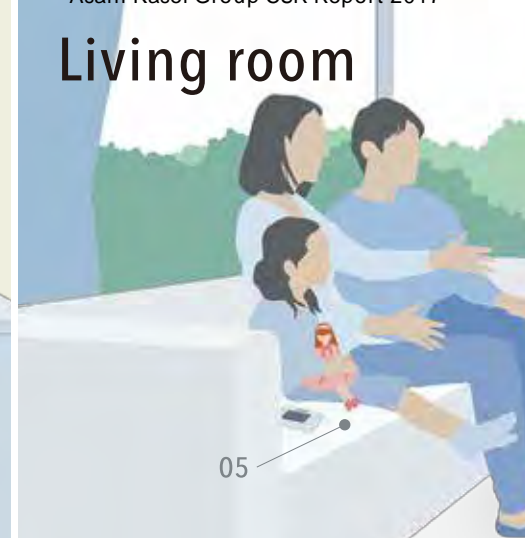
The Asahi Kasei CSR Report 2017 showcases our proactive efforts under Cs for Tomorrow 2018 to "contribute to life and living for people around the world," as illustrated in special features such as "Value Provided by the Asahi Kasei Group." I hope this report will help you gain a greater understanding of Asahi Kasei.

Hideki Kobori  
President

## Kitchen



## Living room



# Creating for Tomorrow

The commitment of the Asahi Kasei Group:

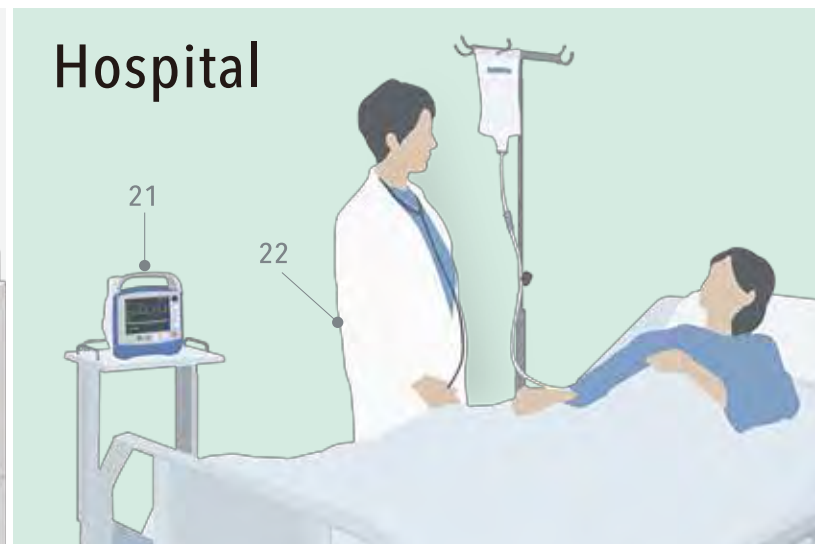
To do all that we can in every era to help the people of the world make the most of life and attain fulfillment in living.

Since our founding, we have always been deeply committed to contributing to the development of society, boldly anticipating the emergence of new needs. This is what we mean by "Creating for Tomorrow."

## Office



## Hospital



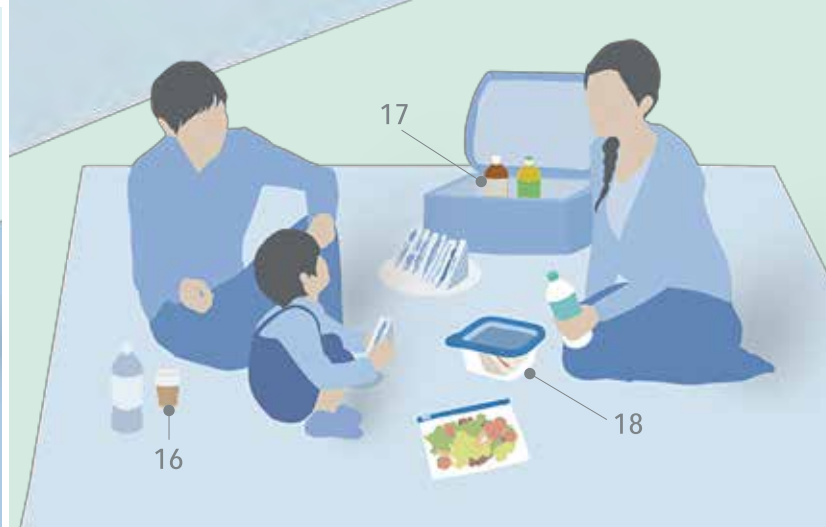
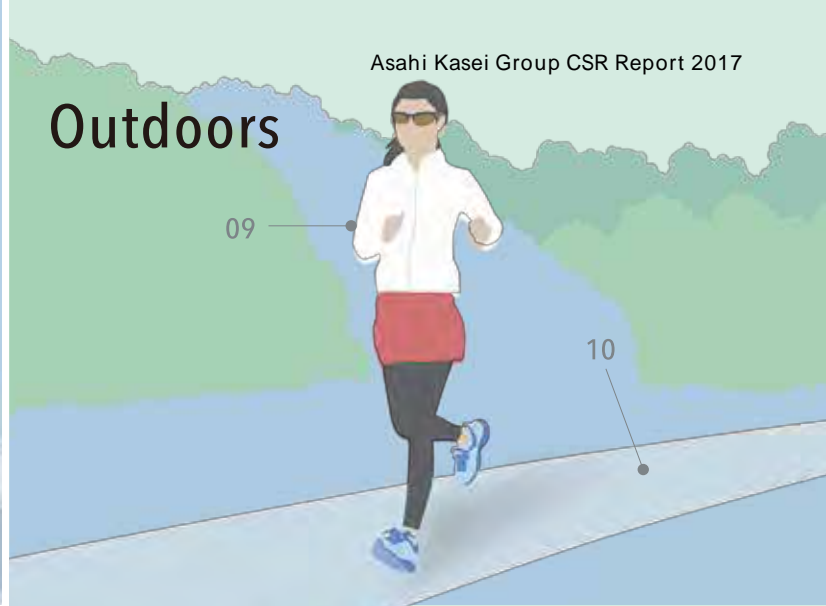
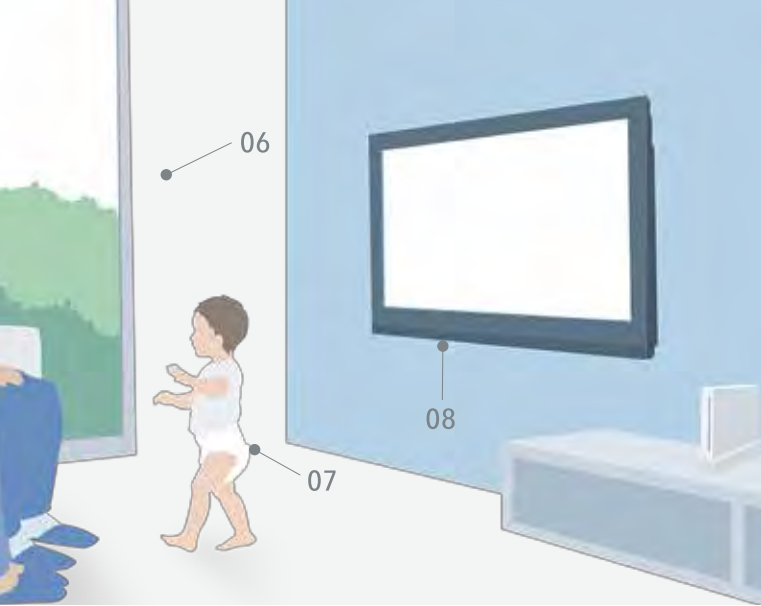
## Asahi Kasei Products and Technologies in Everyday Life

The Asahi Kasei Group's products and technologies, ranging from Hebel Haus™ unit homes and Saran Wrap™ cling film, and electronic parts used in computers and smartphones, to performance resins for automotive applications, and pharmaceuticals and AEDs that support people's lives, are used in various ways all around us.

- 01 Dishwashing detergent
- 02 Filtration at waterworks plant (hollow-fiber membranes)
- 03 Food preservation, cooking
- 04 Printing of packages (photosensitive resins)  
Plastic shopping bags (polyethylene)  
Foods and beverages (microcrystalline cellulose)
- 05 Covering fabric for sofas (microfiber suede)

- Video game console (ABS resin)  
Doll hair (Saran™ fiber)
- 06 Homes (unit homes, apartment buildings, condominiums)  
Construction materials (autoclaved aerated concrete, phenolic foam insulation panels)
- 07 Diapers (spunbond nonwovens, premium stretch fiber)





## Bathroom

## Bedroom

- 08 Home electronics**  
(polystyrene, ABS resin)  
**Electronic parts**  
(LSIs, Hall elements)
- 09 Sportswear**  
(premium stretch fiber, cupro fiber)  
**Zippers**  
(polyacetal)
- 10 Asphalt pavement**  
(thermoplastic elastomer)
- 11 Automobile parts**  
(performance resins)

- 12 Airbags**  
(nylon 66 filament)  
**Car navigation & audio system**  
(audio/voice LSIs)
- 13 Tires**  
(S-SBR for fuel-efficient tires)
- 14 Batteries**  
(Li-ion battery separator, lead-acid battery separator)
- 15 Paint**
- 16 Disposable plastic cups**
- 17 PET bottle shrink labels**  
(styrenic copolymer)

- 18 Food storage bags and containers**
- 19 Smartphone, Laptop computer**  
(Li-ion battery separator, electronic compass, Hall ICs)
- 20 Suit linings**  
(cupro fiber)
- 21 Defibrillators**
- 22 Medical devices**  
(dialyzers, therapeutic apheresis devices)

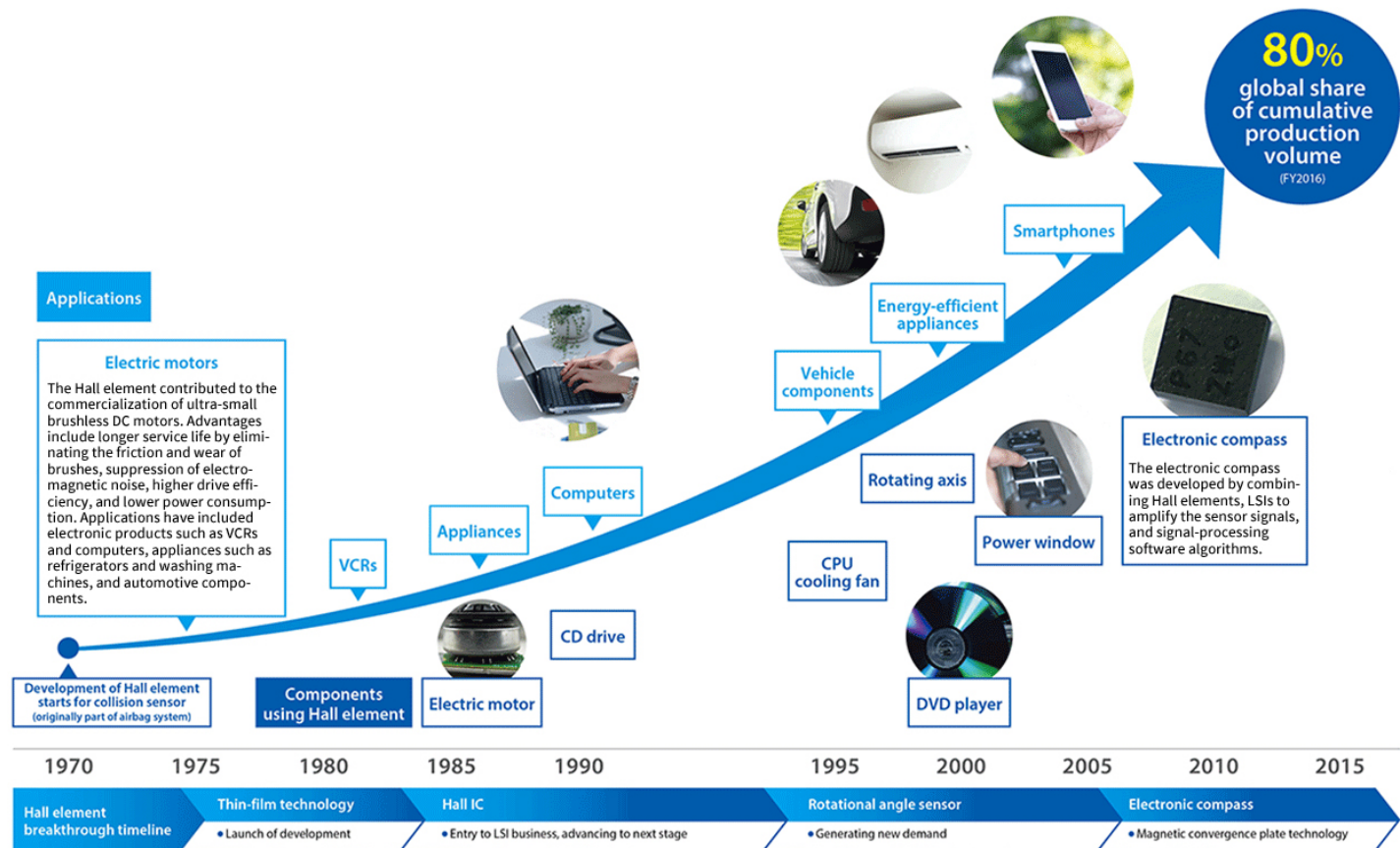
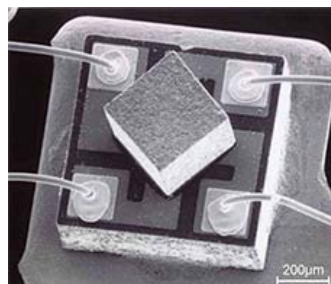
- 23 Prescription drugs**  
**Diagnostic reagents**  
**Drug manufacture**  
(virus removal filters)
- 24 Shampoo**  
(low-irritation surfactant)
- 25 Innerwear**  
(cupro fiber)
- 26 Facial mask**  
(cupro nonwoven fabric)
- 27 Skin care products**  
(cosmetics raw materials)

# Value Provided by the Asahi Kasei Group

Our Group Vision is to provide new value to society by enabling “living in health and comfort” and “harmony with the natural environment” in accordance with our Group Mission of contributing to life and living for people around the world. The Hall element is a notable example of a product that illustrates how Asahi Kasei has created value from the past to the present, and how we will continue to create value in the future.

## Hall element

The Hall element is a highly sensitive magnetic sensor made with a thin film of semiconductor material. The Hall element works by utilizing the Hall effect, in which magnetic fields cause change in voltage. With high sensitivity, Hall elements from Asahi Kasei can detect magnetic flux density and orientation. A broad range of applications include contactless switches in combination with magnets, angle sensors, and current sensors. Geomagnetic sensors using Hall elements have also been commercialized, and are widely used in smartphones. Asahi Kasei started mass production of Hall elements in 1975 and met various evolving needs of society over the following four decades by continuously developing new applications to create new value.



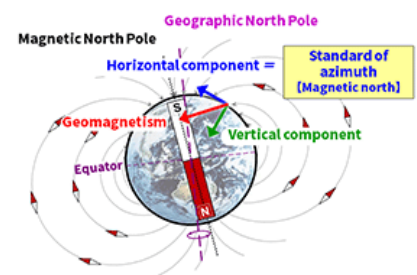
# Notable Example of Value Creation & Creating Value for the Future

## Notable Example of Value Creation—The Electronic Compass

Our invention of the electronic compass was achieved by combining technology for magnetic sensors to measure geomagnetism with our LSI and software technology. The electronic compass significantly enhanced the functionality of mobile phones and smartphones, enriching the experience of map applications such as pedestrian navigation systems and contributing to their widespread popularity.

### —About the electronic compass

The electronic compass, a semiconductor device that determines azimuth by measuring geomagnetism, is widely utilized for map applications installed in smartphones such as pedestrian navigation systems. Asahi Kasei developed the electronic compass by combining our technology for magnetic sensors, LSI technology to amplify the sensor signals, and signal-processing software algorithms. Asahi Kasei has earned a dominant share of the global electronic compass market.



### —The outset

Around 2000, when GPS was becoming a standard feature in mobile phones, we anticipated that there would be demand for pedestrian navigation systems similar to vehicle navigation systems. Unlike vehicle speed, however, walking is too slow to enable the direction of movement to be determined from GPS. Realizing that an electronic compass would be required to determine azimuth by measuring geomagnetism, we initiated its development.



### —Asahi Kasei's advantage for development

Our development of the electronic compass was not oriented as an effort to find a new outlet for a succession of our technologies starting from sensors and followed by LSIs. Rather, we first identified a market need and then took stock of our range of existing technologies, including sensors, LSIs, other constituent technologies, and manufacturing technology, and considered how to apply them in the development. We also leveraged our established business connections to ascertain customer needs from the early stages of development, and made many proposals. In addition to the advantage gained from each of these aspects, our true strength was the ability to combine all of them together in a new business model culminating in the electronic compass.

### —Competitive strength

While other companies focused on the development of sensors with high sensitivity, which was costly and time-consuming, Asahi Kasei already had an established mass-production infrastructure for magnetic sensors as well as signal-amplifying technology and distribution channels in its LSI business. Instead of aiming for high sensitivity, we sought to swiftly make an available product that provided utility to users. Our combination of technologies for sensors, LSIs, and algorithms enabled us to provide a solution to customers at low cost in a short time.





## Creating Value for the Future

Hall elements are poised for expanded use in the automobile field due to emerging trends for intensified application of electronic and control systems throughout the vehicle. The technology for Hall elements has also enabled the creation of infrared sensors which will meet growing demand in new fields such as human detecting sensors and gas sensors.

### For automobiles

In addition to conventional applications in motor control for power steering, power windows, and air conditioner fans, demand for sensors in the power train is expected to grow in line with engine downsizing and an increasing number of gears in the transmission for improved fuel efficiency and compliance with environmental regulations. The development and spread of autonomous vehicle technology around the world will provide further impetus to strong demand growth for sensors in vehicles.



### Infrared sensor

The infrared sensor was developed using thin-film semiconductor technology cultivated in the magnetic sensor business. It can be used to detect human presence in homes and other indoor environments. It also has great potential for use as a gas sensor in systems to heat and cool buildings. Especially in high-rise office buildings and in well-sealed homes, the efficiency of heating and cooling is highly dependent on the amount of outside air drawn in. By measuring indoor CO<sub>2</sub> concentration, a gas sensor can enable the minimum necessary ventilation while maintaining a comfortable indoor temperature, resulting in a significantly reduced energy requirement.

### Hall elements contributing to reduced CO<sub>2</sub> emissions

Under the “Cs for Tomorrow 2018” medium-term management initiative, Asahi Kasei aims to contribute to solutions for “clean environmental energy” through our diverse businesses. As magnetic sensors, Hall elements play an important role in saving energy. Electric motors are used in every kind of home appliance. By accurately detecting rotation position and speed, magnetic sensors enable the motors to run with the minimum amount of electricity, resulting in reduction of CO<sub>2</sub> emission from power generation.

We certified Hall ICs and Hall elements for air conditioner DC motors as global warming conscious products in accordance with our original guidelines. Our business activities with these products will make an ongoing contribution to the environment.



## Global Executives Interviews

Asahi Kasei acquired acute critical care device manufacturer ZOLL in 2012 and battery separator manufacturer Polypore in 2015 for a combined total of some \$4.4 billion. While ZOLL retained its management team after the acquisition, new leadership was installed at Polypore. In these interviews, leaders of the two companies share their thoughts on the PMI process and other management challenges.



### ZOLL



Richard Packer  
Chairman, Board Director,  
ZOLL Medical Corporation  
Primary Executive Officer,  
Asahi Kasei Corp.

### How do you evaluate the post-merger integration (PMI) process between Asahi Kasei and ZOLL?

The process of PMI went smoothly, I think mostly because of the flexibility that Asahi Kasei showed. ZOLL and Asahi Kasei have very different kinds of business, so we had to learn a lot about one another's ways of working. Asahi Kasei's PMI team really allowed the ZOLL people to help define what would work for ZOLL in the long term for continuous growth. It's a good example of what I found to be the Japanese way of making a plan after first scrutinizing conditions; different from the U.S. way of taking action first and thinking about it later.

Compensation was another area where Asahi Kasei showed flexibility. Knowing there are big differences between the American and Japanese systems, Asahi Kasei contracted an American compensation consulting firm to analyze what kind of incentives would be best for ZOLL. The firm concluded that in order to achieve retention, ZOLL people should be compensated in a different manner. But I told Asahi Kasei it wasn't necessary. ZOLL already had an effective compensation system that kept people satisfied, with a low turnover rate. Asahi Kasei flexibly adopted our opinion and trusted us more than the consulting firm, and the result was excellent.

When it comes to flexibility, I believe we owe a lot to the leadership of Fujiwara-san, the President of Asahi Kasei at the time. He and I had many discussions about how to integrate our companies. He always said that the key to success would be to retain the ZOLL people, since Asahi Kasei couldn't grow the business without them. I really appreciate his vision, giving us flexibility to manage the business after the merger as well.

## Did you find any shortcomings of Asahi Kasei?

In my view, some top management people may not really want to take bold actions for growth. They tend to seek stability. I believe that seeking growth provides greater potential to increase business opportunities, and ZOLL is always doing so. Like most American companies, we don't want to just be stable. The younger people in Asahi Kasei understand the need for growth and are eager for it, but some of the senior people don't give me that impression. I'm not saying we should always take high risks aiming for high rewards. The point is striking a balance between risk and reward. It's good to gain a degree of stability by having diversified operations, but we can't expect any growth at all without taking any risk.

## Why do you think some senior people place too much emphasis on stability?

It may be because of the Japanese system of lifetime employment and seniority. This functioned very well during the period of high growth until the 1990s. But past success can be an impediment to change. In effect, younger people are prevented from getting into positions of responsibility early in their career. If people don't join the management ranks until they are near retirement, it's natural that they would tend to value stability. They don't want to hurt the business during their tenure, and they can't expect to stay long enough to follow through on something new. If people joined the management ranks at a younger age, knowing they had 10 or 20 years ahead of them, they would be more ambitious in taking risks to expand their business. When I took responsibility for ZOLL, I was the youngest of the top executives; others were more than 10 years older than I. I looked for ways to grow the business, knowing the risks entailed, but I knew I had years ahead of me to make it work if I made a mistake.

In the United States, we have a way to fast-track young personnel, moving younger people into management earlier and giving them responsibility for growing their business. I know this may cause friction because some people are skipped over, and some younger people receive more compensation than their seniors. But I believe that it is important to utilize talented young people this way. A diversity in age is also beneficial because the more experienced people can serve as mentors to the younger leaders, and they can reinforce one another effectively.



Packer together with Taketsugu Fujiwara, President of Asahi Kasei at the time of the acquisition in 2012

## You said growth creates opportunities. What is needed for Asahi Kasei to grow more?

I think growth provides opportunities and solves various problems. Having worked at Asahi Kasei for five years, I really appreciate our corporate culture, I know we have outstanding people, and I understand how much they care about the company. Also, I have seen that we can be very flexible. So I think we already have the foundation for further success, but that alone is not enough. We need to build on that foundation by utilizing not only people of various ages but also local people in various locations. By flexibly utilizing a more diverse range of people, Asahi Kasei can build on its strengths toward further growth. I believe this can also establish Asahi Kasei's competitive advantage ahead of other Japanese companies in the midst of globalization. In that sense, utilizing diversity of personnel becomes all the more important.

Looking back on the 25 years I've been involved in the management of ZOLL, we have always utilized people of various nationalities. We leverage local people in the management of our operations around the world. For example, a German person runs our business in Germany, and a British person runs our British business. We deliberately involve local people in the management at each location rather than sending an American person, and it has worked well for us. Unfortunately, we have not been as successful with diversity of gender, as we do not have enough women in high executive positions. We need to do better in this area.

## Finally, could you tell us about the mission of the acute critical care business?

I remember when I first met people from Asahi Kasei. They were fascinated by the mission of ZOLL. Here was this medical equipment that could save a life in danger, and a company that saw its mission as saving lives by providing the right products. On the other hand, I was fascinated by the fact that Asahi Kasei, a 100-year-old company with \$20 billion in sales mainly in chemicals, had a mission of contributing to healthy living and longevity. You would rarely see that attitude in an American company. Asahi Kasei sincerely held protecting life to be one of its core values, which aligned perfectly with ZOLL's aims. Our relationship was cemented by sharing the same mission. Since the merger, ZOLL's growth has accelerated and our products save many more lives than before. Together with Asahi Kasei, ZOLL will continue to expand as we fulfil our unchanging mission of saving lives.



The LifeVest™ wearable defibrillator



The ZOLL AED Plus™ automated external defibrillator

## Polypore



Shigeki Takayama  
CEO, Polypore International, LP  
Senior Executive Officer,  
Asahi Kasei Corp.

### What is the key to expanding your business?

The operating environment for Polypore is changing very rapidly. As electric drive vehicles become more widespread, battery performance is improving tremendously. Performance requirements for battery separators are constantly on the rise. We need to meet these changes while maintaining high quality and stable supply. The key is adapting to rapid change. The management team must clearly discern the changes, and swiftly act accordingly.

### What measures have you taken to adapt to changes?

During the post-merger integration (PMI) process, we overhauled the management team. After the acquisition, a new kind of leadership was required for Polypore. Previously, skillful explanation was required in order to raise funds from the capital markets. As part of Asahi Kasei, however, this became unnecessary. Rather, swift actions toward growth while integrating our businesses together and adapting to rapid changes became essential. The previous management team was ill suited to the new tasks. The eight members of the current team are a diverse group, including three women and several nationalities—Japanese, American, German, and Chinese. This team is nimble enough to adapt our strategy on a monthly basis, yet adhere firmly to a long-term growth perspective. It is also able to gain the understanding of personnel as we busily work toward further growth.

### How do you evaluate the support you've received from Asahi Kasei?

The battery separator business is probably the most dynamically changing business in Asahi Kasei. The company understands that. Investment decisions are made swiftly and flexibly with sufficient consideration for economics and safety. A delay in judgment would be devastating for this business. I am extremely grateful that Asahi Kasei acts promptly and appropriately to respond to changes in the operating environment and meet customer needs.



Celgard™ lithium-ion battery separator

### How do you keep personnel motivated in such a rapidly changing operating environment?

Maintaining employee motivation is absolutely vital. Among brain scientists, there is a theory that people naturally fear change, and to maintain a balance people also need an equivalent degree of stability. I feel that the company's vision can serve as the needed source of stability. While people work hard every day on new developments and quality improvements to meet customer needs, the company's vision remains an unchanging beacon to continuously strive toward. For example, consider Elon Musk, the CEO of Tesla. He is also CEO of SpaceX, which develops rockets. His vision is for the rockets to be used to move 50,000 people to Mars in the near future. I understand that a sense of urgency regarding the world's energy issues and a grand vision are what motivate his employees. Polypore is also involved in solutions to the world's energy challenges. I would like to craft a clear vision that enables all our employees to share the same aim.

I also think it's important to enjoy change. Sometimes it's necessary to go beyond your own boundaries. In the United States, there tends to be clear recognition of personal performance, and so boundaries of responsibility are clearly delineated. At Asahi Kasei, though, people often work beyond their boundaries. This is one aspect of taking on challenges, which is one of our Group Values. Motivation for work comes not only from monetary remuneration. Even in the United States, "fun" is recently seen as an important factor. If the company encourages people to proactively reach beyond their own area, we can foster a culture that values fun. I hope we can get Polypore personnel to begin doing this, and our management team is now advancing discussions on how to do so.



Takayama gives his first briefing to Polypore and Celgard employees after the acquisition



## Globalization requires appropriate response to various changes. What do you consider to be important points?

The first is to have high-level administrative functions such as legal, HR, and IT. Polypore operates globally, with manufacturing sites around the world. They have rich knowledge and experience in various regions. I think the Asahi Kasei Group would benefit from leveraging such functions. For instance, if one of our businesses is going into a region where Polypore is already operating, Polypore's knowledge of legal procedures, HR systems, and IT infrastructure can be very helpful. Also, we have 10 group companies in the United States including ZOLL and Polypore. Polypore has a highly advanced IT infrastructure which could be used to support other operations as well.

The second important point is hiring outstanding local personnel in each location. For example, when we built a new Daramic™ plant in India, an excellent local employee led the project for us. Everything went very smoothly. The local managers and engineers we've hired in each location are fluent in English and help us think hard about the business. Retaining highly capable local personnel is extremely important. Polypore has a global HR network, and is able to contact appropriate outside people as required. It would be valuable for the Asahi Kasei Group to make use of this function.

Thirdly is outstanding communication. I have a telephone conference with around 100 global leaders every three months. In these quarterly conferences, I discuss the state of business, progress on achieving our budget, and what our challenges are. The participants have various nationalities and different native languages, so we try to make sure the documents are written in plain English. We are also careful about the sequence of the documents to be discussed. Arranging each conference requires careful coordination so as to avoid a time that falls on a holiday for any of the participants. We have a very capable communications team that arranges the conferences and prepares the documents. Effective communication is essential for smooth decision-making among our global leaders, and to advance the overall management of a global organization.



Daramic™ lead-acid battery separator

## What is the significance of your business?

Our business makes an important contribution to solutions to the world's fossil-fuel challenges. We have the potential to reshape the history of energy. It is a wonderful business that employees can tell their families about with pride. I'd like to channel this into motivation to work diligently for the growth of the business. Put simply, our product is a polyolefin film. But as part of a battery, it is an essential component that ensures safety and performance. More and more electric drive vehicles are on the road. Soon there will be a million, then two million. Our product plays a vital role in ensuring the safety of those vehicles. We can never compromise on the safety and quality of our products. We will continue to contribute to a society of clean environmental energy, providing safety that no competitor can match as we create new value for society.





# CSR

## CSR at Asahi Kasei

We believe that CSR is achieved by raising corporate value for our various stakeholders through our business operations in accordance with our Group Mission of contributing to life and living for people around the world.

In addition, based on a clear understanding of the effects of our operations on the global environment and local communities, our efforts and actions related to CSR are focused on four CSR Fundamentals: Compliance, Responsible Care, Corporate Citizenship, and Respect for Employee Individuality.



## Asahi Kasei supports the UN Global Compact and its 10 universal principles

### The 10 principles of the UN Global Compact



Network Japan  
WE SUPPORT

#### Human Rights

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

#### Labor

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

#### Environment

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

#### Anti-Corruption

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

Responsible Care represents the commitment and initiative to secure and improve safety and environmental protection at every step of the product life cycle through the individual determination and responsibility of each firm producing and handling chemical products. Today, 68 countries throughout the world have a Responsible Care program.

# CSR at the Asahi Kasei Group

Our efforts and actions related to CSR are focused on our four CSR Fundamentals: Compliance, Responsible Care, Corporate Citizenship, and Respect for Employee Individuality.

## Relationships with Stakeholders

We believe that CSR is achieved by raising corporate value for our various stakeholders such as customers, suppliers, shareholders, investors, the general public, local communities, and employees through our business operations in accordance with our Group Mission of contributing to life and living for people around the world.

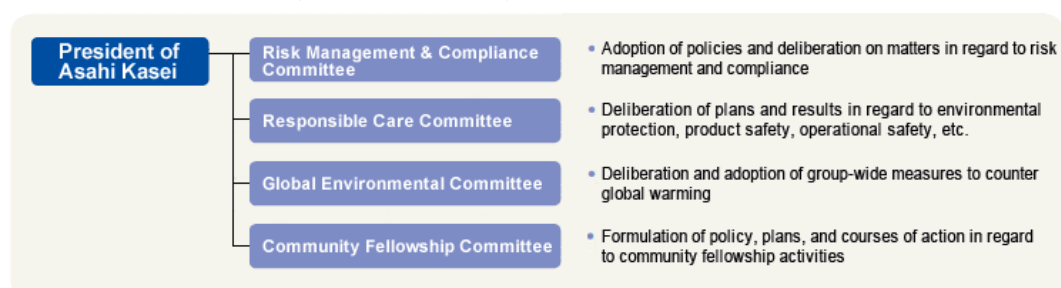
In addition, based on a clear understanding of the effects of our operations on the global environment and local communities, our efforts and actions related to CSR are focused on four CSR Fundamentals: Compliance, Responsible Care, Corporate Citizenship, and Respect for Employee Individuality.



## Structure and organization for CSR

In order to promote separate important activities regarding CSR more efficiently and decisively, we have four committees under the direct supervision of the Asahi Kasei President. The Risk Management & Compliance Committee and Responsible Care Committee are chaired by the Asahi Kasei President. The Community Fellowship Committee is chaired by an executive officer appointed by the president, and the Global Environment Committee is chaired by the executive officer of Corporate ESH & QA.

Framework for CSR advancement (as of September 1, 2017)



# Corporate Governance

The Asahi Kasei Group constantly endeavors to strengthen corporate governance for increased corporate value.

Translation of the Corporate Governance Report 

As of June 29, 2017

## Basic Views

The Group Vision of the Company is to provide new value to society and solve social issues by enabling “living in health and comfort” and “harmony with the natural environment” under the Group Mission of “contributing to life and living for people around the world.” With this as a base, the Company aims to contribute to society, achieve sustainable growth, and enhance corporate value over the medium to long term by promoting innovation and creating synergy through integration of various businesses. The Company continues to pursue optimal corporate governance as a framework to make transparent, fair, timely, and decisive decision-making in accordance with changes in the business environment.

## Basic Policies

### 1. Securing the Rights and Equal Treatment of Shareholders

While taking proper measures to secure shareholders' rights, the Company develops a proper environment for exercise of shareholders' rights including paying attention to foreign shareholders and minority shareholders and providing information necessary for the exercise of rights accurately and in a timely manner.

### 2. Proper Cooperation with Stakeholders other than Shareholders

The Group Vision of the Company is to provide new value to society and solve social issues by enabling “living in health and comfort” and “harmony with the natural environment” for people around the world, and the Company works to facilitate cooperation with its stakeholders.

### 3. Proper Information Disclosure and Securing of Transparency

The Company, in addition to disclosure required by laws and regulations, actively provides information to various stakeholders including financial information such as financial position and operating results, management strategy/issues, and non-financial information concerning risks and governance, etc.

### 4. Responsibilities of the Board of Directors

In order to achieve sustainable growth, enhance medium to long term corporate value, and increase earnings ability and capital efficiency, the Board of Directors of the Company presents the overall direction of its management strategy, develops an environment to support risk-taking by the management, and effectively oversees the business management of the Company from an independent and objective standpoint, based on the fiduciary responsibility and accountability to shareholders.

### 5. Dialog with Shareholders

The Company develops a system to have a constructive dialog with shareholders/investors and actively promotes such dialog.

# Overview of Current Corporate Governance System

## 1. Oversight and Audit

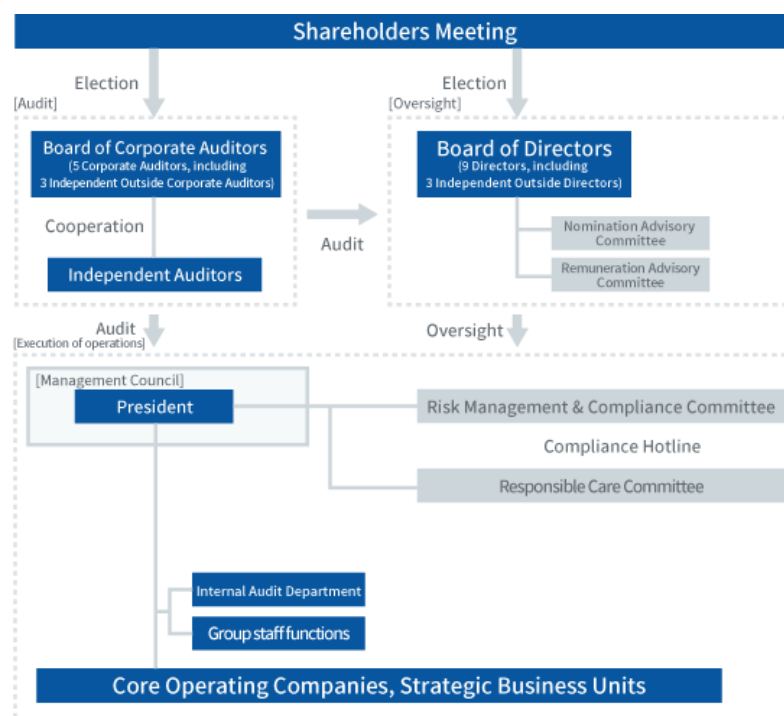
- 1) The Board of Directors, which consists of nine Directors including three Independent Outside Directors (one-third), makes decisions on matters that are stipulated by laws/regulations and the Articles of Incorporation as requiring a Board of Directors resolution, as well as on important matters for the Company and the Group, and oversees execution of operations by Directors and Executive Officers.
- 2) Under the Board of Directors, the Company has established a Nomination Advisory Committee and a Remuneration Advisory Committee, which mainly consist of Outside Directors, so that Outside Directors actively participate in consideration of the optimal makeup and size of the Board of Directors of the Company, policies to nominate candidates for Directors/Corporate Auditors, independence standards and qualification for Outside Directors/Corporate Auditors, Directors' remuneration policy/system, and evaluations of Directors for performance-based remuneration, and to provide relevant advice to the Board of Directors.
- 3) The Board of Corporate Auditors consists of five Corporate Auditors including three (majority) Independent Outside Corporate Auditors, and each Corporate Auditor, based on the audit policy stipulated by the Board of Corporate Auditors, oversees execution of duties by Directors by attending meetings of the Board of Directors and examining the status of execution of operations. In order to enhance the function of the Board of Corporate Auditors and to facilitate smooth cooperation and support with Outside Corporate Auditors, the Company has established a Corporate Auditors Office staffed with dedicated employees.
- 4) PricewaterhouseCoopers Aarata performs audits based on the Companies Act and the Financial Instruments and Exchange Act.
- 5) The Company has established Internal Audit Department which conducts internal audits based on an audit plan. Results of internal audits performed by each staff function are aggregated in the Internal Audit Department and reported to the Board of Directors.

## 2. Execution of Operation

- 1) The Company has adopted an Executive Officer system in order to expedite the execution of operations, as well as to clarify responsibilities and specify the roles of Directors in charge of decision-making and oversight, and of Executive Officers in charge of execution of operations.
- 2) The Company has established detailed standards for decision-making in its Decision-making and Approval Authority Regulations of the Group with regard to matters concerning the management plan, investment and loans, financing and fund management, the organization and management system, research and development, and production technology, and delegates authority to the Strategic Management Council and the core operating companies from the Board of Directors.

## 3. Risk Management and Compliance

- 1) The Company has established the Risk Management & Compliance Committee which adopts policies and deliberates on matters in regard to risk management and compliance.
- 2) The Company has established the Responsible Care (RC) Committee which discusses preventive measures and recurrence prevention measures for accidents related to environmental protection, product safety, operational safety, and workplace safety/health.



As of June 29, 2017



# Compliance

Throughout the course of our business activities, the Asahi Kasei Group is fully committed not only to adherence to laws and regulations that are applicable to each business and function, as well as relevant internal company rules. Each employee is also expected to uphold high ethical standards and respect social norms as we work to fulfill our Group Mission in accordance with our Group Values.

## 1. Framework for risk management and compliance

### (1) Asahi Kasei Group Basic Regulation for Risk Management & Compliance

The Asahi Kasei Group Basic Regulation for Risk Management & Compliance clearly specifies basic systems and organizations for the central aggregation and administration of all matters related to risk management and compliance.

### (2) Risk Management & Compliance Committee

Chaired by the President of Asahi Kasei Corp., the Risk Management & Compliance Committee adopts policies and deliberates on matters in regard to risk management and compliance throughout the Asahi Kasei Group, while monitoring the management of risks and the state of compliance.

## 2. Efforts for risk management and compliance

[Risk management >](#)

[Compliance system >](#)

# Risk management

We provide clear guidelines for risk management and emergency response in accordance with the Asahi Kasei Group Basic Regulation for Risk Management & Compliance to ensure business continuity and stable development by taking appropriate measures including prevention and resolution efforts deal with various potential risks throughout the Asahi Kasei Group.

## Reviews to identify latent risks in each business unit

Managers responsible for risk management and compliance are designated in each business unit, and work to assess and analyze their related risks and to plan and implement measures to mitigate serious risks. Through the Risk Management & Compliance Committee, we confirm and follow-up on the state of risk management in each business unit.

## Crisis response system

In the event of any major accidents, incidents, or problems which cause significant damage to Asahi Kasei Group operations or which may foreseeably cause our operations to have adverse effects on the general public, we establish a group emergency response headquarters which works with various divisions and departments to ensure that the proper response is taken.

# Compliance system

## Asahi Kasei Group Code of Conduct

### Significance of the Asahi Kasei Group Code of Conduct

The Asahi Kasei Group Code of conduct, which was established in April 2017, is a practical guide and standard for ethical conduct throughout the day-to-day work of each and every member of the Asahi Kasei Group. Members of the Asahi Kasei Group are expected to act with sincerity and uphold high ethical standards throughout their work to fulfill our Group Mission in accordance with our Group Values.

Note: Measures to gain understanding and familiarity with the Asahi Kasei Group Code of Conduct among subsidiaries and affiliates located outside Japan are scheduled to be performed henceforth.

### Outline of the Asahi Kasei Group Code of Conduct

1. Ensuring safety, environmental protection, and high quality to contribute to life and living
  - 1) Maintaining thorough safety in all aspects
  - 2) Provision of safe and high-quality products and services that customers can rely on
  - 3) Thorough management of workplace safety, ensuring safe and comfortable workplace environments
  - 4) Environmental protection and harmony with local communities
2. Maintaining sincere relationships with various related parties around us
  - 5) Timely and appropriate disclosure of information to society
  - 6) Appropriate descriptions to customers, provision of safe and reliable products and services
  - 7) Healthy relationships with customers and government officials
  - 8) Fair relationships with competitors
  - 9) Optimized procurement and healthy and appropriate relationships with suppliers
  - 10) Respect for human rights and diversity
3. Utilizing management assets appropriately and effectively
  - 11) Performing work with integrity and responsibility
  - 12) Compliance with accounting and tax rules, protecting company property
  - 13) Protecting and managing information
  - 14) Protecting and respecting intellectual property rights
  - 15) Compliance with laws and regulations, practicing corporate ethics

The Asahi Kasei Group Code of Conduct can be downloaded from the link below:

Asahi Kasei Group Code of Conduct 



Asahi Kasei Group  
Code of Conduct

## Compliance Hotline

The Asahi Kasei Group began employing a Compliance Hotline in April 2005 to ensure that any possible ethical lapses which employees may encounter or observe are dealt with swiftly and appropriately. Reports can be made through the corporate intranet or by post (to a specified law firm), in the name of the reporting party or anonymously.

Structures are in place to ensure that the reporting party incurs no disfavor or disadvantage as a result of having made a report.

In fiscal 2015, the system was expanded to enable suppliers and their employees to report or consult.

## Prevention of bribery

The Asahi Kasei Group Policies for Prevention of Bribery are available below.

Asahi Kasei Group Basic Policies for Prevention of Bribery 

## Information protection and management

### Information Security Countermeasures

Recognizing the importance of countermeasures to protect against information security risks, we established the Asahi Kasei Group Information Security Policy and aim to ensure and further improve information security.

#### Asahi Kasei Group Information Security Policy

As ensuring information security is an important management responsibility, the Asahi Kasei Group declares that it faithfully applies its established information security policy.

1. Legal Compliance  
We comply with laws and internal regulations concerning information security.
2. System Establishment  
We have an established system to safeguard information security throughout the organization.
3. Implementation of Countermeasures  
We implement appropriate information security countermeasures corresponding to our information assets to prevent information security incidents. In the event that an incident occurs, we respond swiftly and appropriately, strive to minimize any damage, and endeavor to prevent any recurrence.
4. Education of Employees  
We provide information security training to all employees to ensure full awareness of the importance of information security and the proper use of information assets.
5. Continuous Improvement  
We continuously assess our efforts for information security, and apply improvements as necessary.

December 1, 2016  
Hideki Kobori  
President  
Asahi Kasei Corporation

## Protection of personal information

Asahi Kasei is committed to the proper handling and use of personal information, in accordance with our Group Regulation for Management of Personal Information. Education and training for all employees includes the distribution of an information security handbook, which describes our rules for handling information, and the provision of education via e-learning.

Privacy Policy [>](#)

## Protection of intellectual property

The Asahi Kasei Group implements strict measures to prevent unauthorized or unintentional outflow of technological information and know-how in accordance with its basic policy and management standards for prevention of technology outflow. The Asahi Kasei Group also applies internal guidelines summarizing related precautions to take when entering business overseas as well as procedures to ensure the preservation of prior-use rights in China.

The company's internal magazine is used to raise further awareness among personnel, and workshops are held for training and education regarding protection of intellectual property.

For more information about our intellectual property, please refer to the Asahi Kasei Group Intellectual Property Report.

[Asahi Kasei Group Intellectual Property Report >](#)

## Market Compliance Committee

The Market Compliance Committee, which was formed in 1976, oversees compliance with the Antimonopoly Act (AMA). To ensure against any violation of the AMA such as participation in a price cartel, all across-the-board price increases require the approval of the committee before they can be implemented. The committee met 4 times in fiscal 2016, reviewing 17 cases. There was no violation of antimonopoly law in fiscal 2016.

## Export Control Committee

The Export Control Committee, which was formed in 1987, oversees compliance with export-related regulations. Regular duties related to export control are performed by our Export Control Dept., with significant cases requiring the approval of the Export Control Committee. The Export Control Committee did not meet in fiscal 2016, as there were no matters warranting discussion. There was no violation of export-related regulations in fiscal 2016.



# Responsible Care

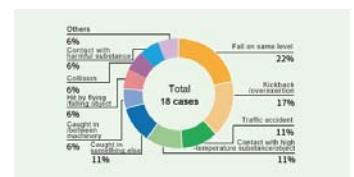
Safety is a fundamental prerequisite for the continuation of operations as a corporate member of society. To ensure that every aspect of safety is maintained, the Asahi Kasei Group implements a Responsible Care (RC) program comprising the six pillars of environmental protection, operational safety, quality assurance (including product safety), workplace safety and hygiene, health maintenance, and community outreach.

## Message from the Executive for RC



Masafumi Nakao  
Representative Director, Vice-  
Presidential Executive Officer  
Asahi Kasei Corp.

Asahi Kasei adopted an operating holding company configuration in fiscal 2016 and started the three-year medium-term management initiative “Cs for Tomorrow 2018” (CT2018). We are not only implementing various measures to achieve our business targets and build the base for the next phase towards fiscal 2025, but also contributing to society through our business operations. The operating climate is changing greatly with growing awareness for global environmental issues and corporate responsibility as a social entity. At the Asahi Kasei Group, in accordance with our Group Mission of contributing to life and living for people around the world, we will give due consideration to the environment, safety, and health throughout the full life cycle from R&D to manufacturing, product supply, and disposal, while focusing on the three fundamental “actuals” of the actual place, actual thing, and actual fact, as we ensure the stable provision of product quality that our customers can depend upon. While working to achieve our annual RC objectives, we will also advance RC activities from a broader perspective, reinforcing R&D to provide solutions to global warming and other environmental issues, in order to raise our corporate value for our various stakeholders.



### Responsible Care at Asahi Kasei

RC at the Asahi Kasei Group is not limited to chemicals-related operations but encompasses operations in all fields, including homes, health care, fibers, electronics, and construction materials.

### Environmental protection

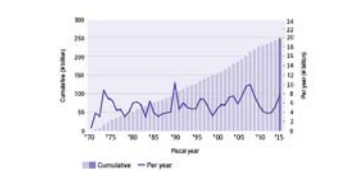
Our environmental protection effort includes measures to prevent pollution-causing accidents and measures to help preserve biodiversity under our ISO14001 environmental management system.

### Operational safety

Our ongoing, autonomous program to ensure operational safety includes safety assessment and hazard identification in accordance with a basic safety management policy, and specific plans are implemented on both annual and multi-year cycles.

### Workplace safety and hygiene

Our effort to prevent workplace accidents is integrated in a comprehensive OHSMS program that combines conventional safety initiatives with risk assessments and a prevention-oriented plan-do-check-act system.



### Health maintenance

We implement various activities to help employees maintain and advance their mental and physical well-being in accordance with our health management guidelines.

### Quality assurance

To deliver safe and reliable products and services to our customers, we strive to enhance our quality assurance activities.

### Managing chemical substances

We manage chemical substances rigorously and responsibly throughout the product life cycle, from materials procurement and R&D to use and disposal.

### Environmental and safety data

Environment-related expenditure and environmental performance data are shown here.

# Responsible Care at Asahi Kasei

RC represents the commitment and initiative to secure and improve safety and environmental protection at every step of the product life cycle through the individual determination and responsibility of each firm producing and handling chemical products, together with measures to gain greater public trust through disclosure and communication. RC was conceived in Canada in 1985, and was strengthened on a global scale with the establishment of the International Council of Chemical Associations (ICCA) in 1990. In 1995, the chemical industry in Japan began implementing RC with the establishment of the Japan Responsible Care Council (JRCC\*). Asahi Kasei was among the founding members of the JRCC, and played a leading role in the expansion and development of RC in Japan.

Responsible Care at the Asahi Kasei Group



\*JRCC: Operated as the Japan Chemical Industry Association's RC Committee since April 2011.

## Asahi Kasei Group RC Principles

RC at the Asahi Kasei Group is guided by the following principles. In April 2016, a statement regarding quality assurance was added, and the six elements were condensed into four.

We give the utmost consideration to environmental protection, quality assurance, operational safety, workplace safety and hygiene, and health maintenance, throughout the product life cycle from R&D to disposal, as preeminent management tasks in all operations.

- We give full consideration to the global environment, and make efforts to reduce the environmental burden of all operations.
- We continuously provide safe products and services with the quality that gives customers a sense of security and satisfaction.
- We strive for stable and safe operation while preventing workplace accidents and securing the safety of personnel and members of the community.
- We strive for a comfortable workplace environment, and support the maintenance and promotion of employee health.

In addition to maintaining legal compliance, we set self-imposed targets for continuous improvement, while performing proactive information disclosure and communication to gain public understanding and trust.

Revised on April 1, 2016

RC objectives and results [▶](#)

# Fiscal 2016 RC objectives and results

★★★Complete   ★★Satisfactory   ★Unsatisfactory

## RC compliance

| FY 2016 RC Objectives   | FY 2016 Results  | Attainment | FY 2017 RC Objectives  |
|---|--|------------|--|
| Enhance RC compliance   | Preparation for follow-up on RC compliance at overseas companies (start in FY 2017 using external organizations such as ERM) | ★★         | Review RC framework (including quality assurance)<br>Enhance RC compliance |
| Advance RC education and training for section managers and assistant chiefs | RC training course partially revised   | ★★         | Further advance RC education and training (gaining fuller understanding)   |
|   | Group discussions enhanced   |            |  |
|   | Follow-up until all members pass test<br>Communication and coordination with superiors                                       |            |  |
| Enhance RC at affiliates  | RC at affiliates enhanced through instructions and support by core operating companies                                       | ★★★        | Enhance RC at affiliates   |
| Enhance dialog with the public  | RC reports of 2 core operating companies and 8 plant complex sites were used in community outreach                           | ★★★        | Continue to enhance dialog with the public                                 |

## Environmental protection

| FY 2016 RC Objectives   | FY 2016 Results  | Attainment | FY 2017 RC Objectives   |
|---|--|------------|---|
| Avoid all polluting accidents and minor incidents                       | No polluting accidents or serious incidents<br>27 incidents (2 other than freon leaks) | ★          | Avoid all polluting accidents and minor incidents                               |
| Promote recycling-oriented society:                                     |  | ★★★        | Promote recycling-oriented society:   |
| ■ Final disposal of 0.3% or less of generated industrial waste          | ■ Goal reached with final disposal rate of 0.3%  |            | ■ Maintain rate of final disposal at 0.3% or less of generated industrial waste |
| ■ Recycling rate of at least 90%  | ■ Goal reached with recycling rate of 98%  |            | ■ Maintain recycling rate of at least 90%                                       |
| Prevention of global warming:   |  | ★★★        | Prevention of global warming:   |
| ■ Reduce CO <sub>2</sub> emissions in Japan by 28.2% from FY 2005 level | ■ 45% reduction from FY 2005 level   |            | ■ Reduce CO <sub>2</sub> emissions in Japan by 28.7% from FY 2005 level         |
| ■ Reduce global CO <sub>2</sub> emissions by 5% from FY 2010 level      | ■ 29.6% reduction from FY 2010 level   |            | ■ Reduce global CO <sub>2</sub> emissions by 5% from FY 2010 level              |

| FY 2016 RC Objectives   | FY 2016 Results  | Attainment | FY 2017 RC Objectives   |
|---|--|------------|---|
| <ul style="list-style-type: none"> <li>Reduce GHG emissions in Japan by 34.8% from FY 2005 level</li> </ul> | <ul style="list-style-type: none"> <li>48.6% reduction from FY 2005 level</li> </ul>   |            | <ul style="list-style-type: none"> <li>Reduce GHG emissions in Japan by 34.8% from FY 2005 level</li> </ul> |
| <ul style="list-style-type: none"> <li>LCA/CO<sub>2</sub> contribution ratio<sup>1</sup> of 8.3</li> </ul>  | <ul style="list-style-type: none"> <li>LCA/CO<sub>2</sub> contribution ratio of 10.3</li> </ul>  |            | <ul style="list-style-type: none"> <li>Achieve LCA/CO<sub>2</sub> contribution ratio of 8.5</li> </ul>      |
| Protect water resources:  |  | ★★★        | Protect water resources:  |
| <ul style="list-style-type: none"> <li>Water resource contribution ratio<sup>2</sup> of 8.3</li> </ul>      | <ul style="list-style-type: none"> <li>Water resource contribution ratio of 8.5</li> </ul>   |            | <ul style="list-style-type: none"> <li>Water resource contribution ratio of 8.8</li> </ul>                  |
| Control emissions of chemical substances:   |  |            | Control emissions of chemical substances:   |
| <ul style="list-style-type: none"> <li>Control emissions of PRTR-specified substances</li> </ul>            | <ul style="list-style-type: none"> <li>Release of PRTR-specified substances and emission of VOCs reduced by 92% and 87%, respectively, from FY 2000 level</li> </ul> | ★★★        | <ul style="list-style-type: none"> <li>Control emissions of PRTR-specified substances</li> </ul>            |
| <ul style="list-style-type: none"> <li>Control emissions of air and water pollutants</li> </ul>             |  |            | <ul style="list-style-type: none"> <li>Control emissions of air and water pollutants</li> </ul>             |
| Preserve biodiversity when procuring biological resources   | Continuously advanced actions in Nobeoka, Moriyama, and Fuji; started new program at Asahi Kasei Jyuko Co., Ltd. in FY 2016  | ★★★        | Promote preservation of biodiversity at each site   |
| Advance CSR procurement   | Implemented CSR procurement  | ★★★        | Advance CSR procurement   |

## Operational safety

| FY 2016 RC Objectives  | FY 2016 Results   | Attainment | FY 2017 RC Objectives  |
|--|---|------------|--|
| Avoid all industrial accidents   | No serious industrial accidents, 3 incidents including minor industrial accidents and slight injuries | ★★★        | Continue to avoid all industrial accidents   |
| Continuously monitor for hazards of fire, explosion, and leaks; perform training of managers                                     | Review performed at time of on-site confirmation for preventing abnormal reactions                    | ★★★        | Enhance risk assessment: <ul style="list-style-type: none"> <li>Continuously monitor for hazards of fire, explosion, and leaks</li> </ul>  |
| Prevent abnormal reactions, confirm interlock functions on-site  | Confirmed progress in preventing abnormal reactions and securing interlock functions                  | ★★★        | <ul style="list-style-type: none"> <li>Continue ongoing review to prevent abnormal reactions and confirm interlock functions</li> <li>Enhance pre-investment safety assessment system</li> </ul> |
| Control changes to equipment and operating conditions  | Ongoing confirmation of implementation at RC Audits, etc.   | ★★★        | Control changes to equipment and operating conditions  |
| Review earthquake response and enhance emergency response systems:   |   |            | Enhance earthquake response system:  |
| <ul style="list-style-type: none"> <li>Confirm seismic resistance of high-pressure gas facilities and formulate plans</li> </ul> | <ul style="list-style-type: none"> <li>Completed according to the plan</li> </ul>                     | ★★★        | <ul style="list-style-type: none"> <li>Review earthquake preparedness (emergency facilities, disaster response supplies)</li> </ul>  |

| FY 2016 RC Objectives  | FY 2016 Results   | Attainment | FY 2017 RC Objectives   |
|--|---|------------|---|
| <ul style="list-style-type: none"> <li>■ Implement seismic retrofitting for specific and non-specific buildings</li> </ul> | <ul style="list-style-type: none"> <li>■ Delay in some retrofitting for FY 2016</li> </ul>    | ★★         | <ul style="list-style-type: none"> <li>■ Advance seismic retrofitting of specific and non-specific buildings</li> </ul> |
| Monitor for items in need of replacement and uninspected items, implement remediation                                      | Information shared with Corporate Production Technology; ongoing review with new perspectives | ★★★        | Monitor for items in need of replacement and uninspected items, implement remediation                                   |

## Workplace safety and hygiene

| FY 2016 RC Objectives  | FY 2016 Results  | Attainment | FY 2017 RC Objectives   |
|--|--|------------|---|
| Avoid all workplace injuries:  |  | ★          | No serious workplace injuries:  |
| <ul style="list-style-type: none"> <li>■ Achieve frequency rate<sup>3</sup> of 0.1 or less</li> </ul>  | <ul style="list-style-type: none"> <li>■ 0.38</li> </ul>   |            | <ul style="list-style-type: none"> <li>■ Achieve frequency rate of 0.1 or less (1.0 or less overseas)</li> </ul>  |
| <ul style="list-style-type: none"> <li>■ Achieve severity rate<sup>4</sup> of 0.005 or less</li> </ul>   | <ul style="list-style-type: none"> <li>■ Over 0.005 (tentative)</li> </ul>   |            | <ul style="list-style-type: none"> <li>■ Achieve severity rate of 0.005 or less</li> </ul>  |
| Deepen utilization of OHSMS:   |  | ★★         |   |
| <ul style="list-style-type: none"> <li>■ Enhance risk assessment for workplace tasks</li> </ul>  | <ul style="list-style-type: none"> <li>■ Risk assessment level confirmed at audit and improvements applied as necessary</li> </ul>   |            |   |
| Avoid all accidents in "caught in/between machinery" category (no lost-workday injury):  |  | ★          | Prevent all accidents in "caught in/between machinery" category:  |
| <ul style="list-style-type: none"> <li>■ Perform sound risk assessment for mechanical equipment</li> </ul>   | <ul style="list-style-type: none"> <li>■ Advanced risk assessment for mechanical equipment, but one lost-workday injury in "caught in machinery" category occurred in irregular work in February 2017</li> </ul> |            | <ul style="list-style-type: none"> <li>■ Perform sound risk assessment for mechanical equipment</li> <li>■ Through standards of behavior for safety</li> </ul>      |
| Avoid chemical burn, poisoning, fire, explosion, etc. related to chemical substances (no lost-workday injury):   |  | ★★         | Avoid workplace injuries related to chemical substances:  |
| <ul style="list-style-type: none"> <li>■ Perform sound risk assessment for chemical substances</li> </ul>  | <ul style="list-style-type: none"> <li>■ Advanced risk assessment for chemical substances and management of workplace environment, but 1 lost-workday injury occurred</li> </ul>                                 |            | <ul style="list-style-type: none"> <li>■ Perform sound risk assessment for chemical substances</li> </ul>   |
| <ul style="list-style-type: none"> <li>■ Perform sound management of workplace environment</li> </ul>  |  |            | <ul style="list-style-type: none"> <li>■ Perform sound management of workplace environment</li> </ul>   |
| Prevent injuries during working hours unrelated to operating procedures and during commuting:  |  | ★★         | Prevent injuries during working hours unrelated to operating procedures and during commuting:   |
| <ul style="list-style-type: none"> <li>■ Prevent lost-workday injury related to stairways</li> </ul>   | <ul style="list-style-type: none"> <li>■ 4 lost-workday injuries due to falls related to stairways and walking</li> </ul>  |            | <ul style="list-style-type: none"> <li>■ Thorough standards of behavior for safety related to stairways and walking</li> </ul>                                      |
| <ul style="list-style-type: none"> <li>■ Prevent traffic accidents resulting in harm to self or others while commuting or traveling for sales</li> </ul> | <ul style="list-style-type: none"> <li>■ Injuries due to traffic accidents resulting in harm to self or others while commuting or traveling for sales decreased from 4 to 2</li> </ul>                           |            | <ul style="list-style-type: none"> <li>■ Program to prevent traffic accidents resulting in harm to self or others while commuting or traveling for sales</li> </ul> |

| FY 2016 RC Objectives  | FY 2016 Results   | Attainment | FY 2017 RC Objectives   |
|--|---|------------|---|
| Enhance safety management guidance of on-site contractors:   |   | ★★         | Prevent serious injuries related to on-site contractors and equipment work:   |
| <ul style="list-style-type: none"> <li>■ No serious accident of on-site contractors</li> </ul>     | <ul style="list-style-type: none"> <li>■ No serious injuries, but injury from forklift tip-over</li> </ul>            |            | <ul style="list-style-type: none"> <li>■ Improve the level of safety management guidance related to on-site contractors and equipment work</li> </ul> |
| Reinforce management of safety on equipment work:  |   | ★★         |   |
| <ul style="list-style-type: none"> <li>■ Zero severe injuries related to equipment work</li> </ul> | <ul style="list-style-type: none"> <li>■ No serious injuries, but injury in "caught in machinery" category</li> </ul> |            |   |

## Health maintenance

| FY 2016 RC Objectives  | FY 2016 Results  | Attainment | FY 2017 RC Objectives  |
|--|--|------------|--|
| Promote health maintenance and improvement among personnel:  |  | ★★★        | Promote health maintenance and improvement among personnel:  |
| <ul style="list-style-type: none"> <li>■ Promote the prevention of and countermeasures to lifestyle-related diseases</li> </ul>      | <ul style="list-style-type: none"> <li>■ Proportion of employees with health warning signs and obesity increased slightly; ratio of employees who smoke decreased</li> </ul> |            | <ul style="list-style-type: none"> <li>■ Promote the prevention of and countermeasures to lifestyle-related diseases</li> </ul>      |
| <ul style="list-style-type: none"> <li>■ Prevent falls</li> </ul>  | <ul style="list-style-type: none"> <li>■ Physical fitness tests performed as part of fall prevention program, follow-up implemented</li> </ul>                               |            | <ul style="list-style-type: none"> <li>■ Prevent falls</li> </ul>  |
| Promote countermeasures to mental health issues and enhance support system:  |  | ★★★        | Promote countermeasures to mental health issues and enhance support system:  |
| <ul style="list-style-type: none"> <li>■ Implement company-wide stress survey, utilize its results, and perform follow-up</li> </ul> | <ul style="list-style-type: none"> <li>■ Stress survey and follow-up implemented</li> </ul>  |            | <ul style="list-style-type: none"> <li>■ Implement company-wide stress survey, utilize its results, and perform follow-up</li> </ul> |
| Develop the health management system:  |  | ★★★        | Improve the health management system:  |
| <ul style="list-style-type: none"> <li>■ Resolve critical tasks at each site with lateral extension</li> </ul>                       | <ul style="list-style-type: none"> <li>■ Held internal interviews and provided instructions on health management activities</li> </ul>                                       |            | <ul style="list-style-type: none"> <li>■ Resolve critical tasks at each site with lateral extension</li> </ul>                       |
| <ul style="list-style-type: none"> <li>■ Establish the health management system at affiliates and independent plants</li> </ul>      | <ul style="list-style-type: none"> <li>■ Expanded scope of affiliates and independent plants supported by specialist industrial physicians</li> </ul>                        |            | <ul style="list-style-type: none"> <li>■ Establish the health management system at affiliates and independent plants</li> </ul>      |



## Product safety

| FY 2016 RC Objectives  | FY 2016 Results             | Attainment | FY 2017 RC Objectives                          |
|--|-----------------------------|------------|--|
| Ongoing zero lost-workday injuries related to serious product safety incidents (review the definition) | No product safety incidents | ★★★        | Maintain zero serious product safety incidents |

## Management of chemical substances

| FY 2016 RC Objectives   | FY 2016 Results   | Attainment | FY 2017 RC Objectives   |
|---|---|------------|---|
| Enhance management of chemical substances:  |   |            | Enhance management of chemical substances:  |
| <ul style="list-style-type: none"> <li>Promote compliance with laws and regulations on management of chemical substances in Japan and overseas</li> </ul> | <ul style="list-style-type: none"> <li>Compliance maintained and system enhanced</li> </ul>   | ★★         | <ul style="list-style-type: none"> <li>Promote compliance with laws and regulations on management of chemical substances in Japan and overseas</li> </ul> |
| <ul style="list-style-type: none"> <li>Encourage JIPS<sup>5</sup> activities</li> </ul>   | <ul style="list-style-type: none"> <li>Secretariat activities to promote JIPS; continued risk assessment and public disclosure of safety documents</li> </ul> | ★★         | <ul style="list-style-type: none"> <li>Encourage JIPS activities</li> </ul>   |
| <ul style="list-style-type: none"> <li>Promote JAMP<sup>6</sup> tools</li> </ul>  | <ul style="list-style-type: none"> <li>Provided and received information via MSDSplus and AIS, used new JAMP scheme chemSHERPA</li> </ul>                     |            | <ul style="list-style-type: none"> <li>Expand use of JAMP (chemSHERPA)</li> </ul>   |

## Living in health and comfort

| FY 2016 RC Objectives  | FY 2016 Results  | Attainment | FY 2017 RC Objectives  |
|--|--|------------|--|
| Number of people our health care business contributed to:                                  |  | ★          | Number of people our health care business contributed to:  |
| <ul style="list-style-type: none"> <li>Maintain the same level as FY 2015 level</li> </ul> | <ul style="list-style-type: none"> <li>14% decrease from FY 2015 level</li> </ul>  |            | <ul style="list-style-type: none"> <li>FY 2018 objective: maintain FY 2015 level</li> </ul>          |
| Number of residents in Hebel Haus™ homes:  |  | ★★         | Number of residents in Hebel Haus™ homes:  |
| <ul style="list-style-type: none"> <li>3.3% increase from FY 2015 level</li> </ul>         | <ul style="list-style-type: none"> <li>2.9% increase from FY 2015 level</li> </ul> |            | <ul style="list-style-type: none"> <li>FY 2018 objective: 10% increase from FY 2015 level</li> </ul> |

- LCA is used to determine the amount of reduction in CO<sub>2</sub> emissions enabled by Asahi Kasei products and technologies in comparison with conventional products and technologies. The ratio is calculated by dividing this amount by the global CO<sub>2</sub> emissions of the entire Asahi Kasei Group.
- The water resource contribution ratio is calculated by adding up the total quantity of water clarified and recycled using Asahi Kasei filtration technology and dividing this by the quantity of the Asahi Kasei Group's water intake.
- Number of accidental deaths and injuries resulting in the loss of one or more workdays, per million man-hours worked.
- Lost workdays, severity-weighted, per thousand man-hours worked.
- Japan Initiative of Product Stewardship: A chemical industry initiative promoted by the Japan Chemical Industry Association to minimize chemical risks through voluntary risk assessment and management.
- Joint Article Management Promotion-consortium.

# RC Management System

The management system of Asahi Kasei Group RC is maintained in accordance with our Group RC Management Guidelines and other internal standards. The RC Committee, a corporate organ under the direct authority of the president of Asahi Kasei, deliberates RC plans and results and ensures that continuous reevaluation and improvement are systematically pursued with “plan-do-check-act” (PDCA) cycles—for the Asahi Kasei Group as a whole, within each core operating company and Region\*, and within individual plants and facilities.

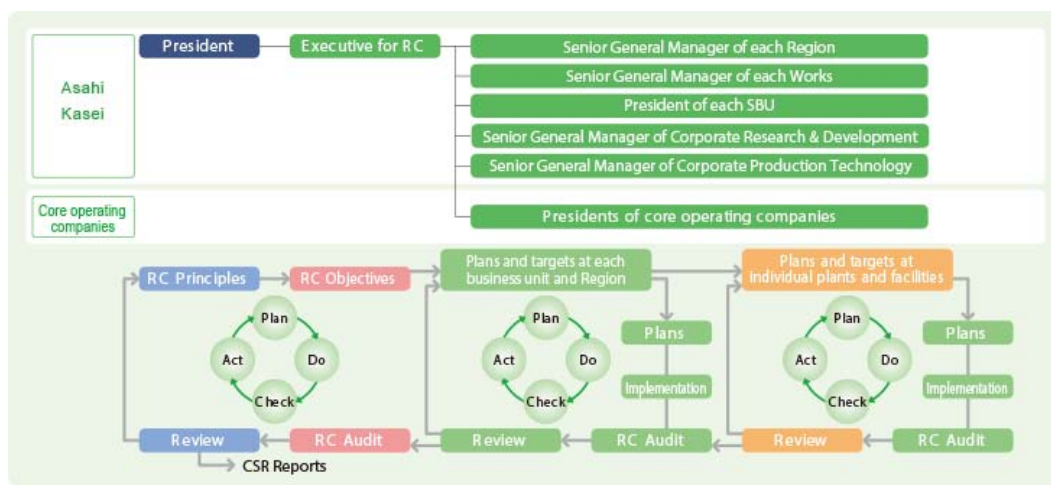
Certified compliance with internationally standardized management systems is obtained for the RC Management System of the Asahi Kasei Group. We have obtained ISO 14001 environmental management system certification for environmental protection and ISO 9001 quality management system certification for product safety. An Occupational Health & Safety Management System (OHSMS) is adopted for workplace safety, hygiene, and health.



RC Committee meeting

\*A site or group of sites consisting of several plants and facilities of various core operating companies. The Senior General Manager of each Region is responsible for the unified implementation of RC in the respective Region.

PDCA flow for RC



## RC education and training

In order to further heighten the effectiveness of our RC initiatives, we perform education and training on basic knowledge and practical application of RC activities, environmental protection, employee health, operational safety, and workplace safety. The training program applies to all key personnel including production managers and Environment, Health & Safety (EHS) managers, as well as candidates for those positions, group leaders of research departments, and EHS personnel.

Each fiscal year, we hold RC training courses especially for newly appointed managers, and in fiscal 2016, 73 personnel took part. Since the training began in fiscal 2007, a total of 797 personnel have taken the courses. In addition, a training course for assistant chiefs was formally initiated in fiscal 2012, and continues including requested improvements with some 160 personnel participating each year.

In fiscal 2014, we created a basic course in order to gain fuller understanding. We will continue to adapt our RC training courses to meet requests from both inside and outside the company, enabling personnel with different duties in a wide range of fields to gain a firm grasp of RC.



RC training lecture

## RC Symposiums

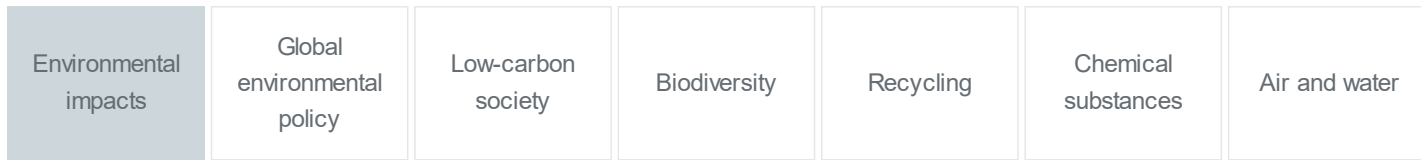
Every year, RC Symposiums are held at Asahi Kasei Corp., core operating companies of the Asahi Kasei Group, and the Nobeoka region, with awards presented to plants which have outstanding safety performance records. To share information and maintain the vitality of the initiative, RC results are reported, seminars are held, and Safety Awards are presented at the symposiums.



Asahi Kasei RC Symposium (December 2016)

# Environmental protection

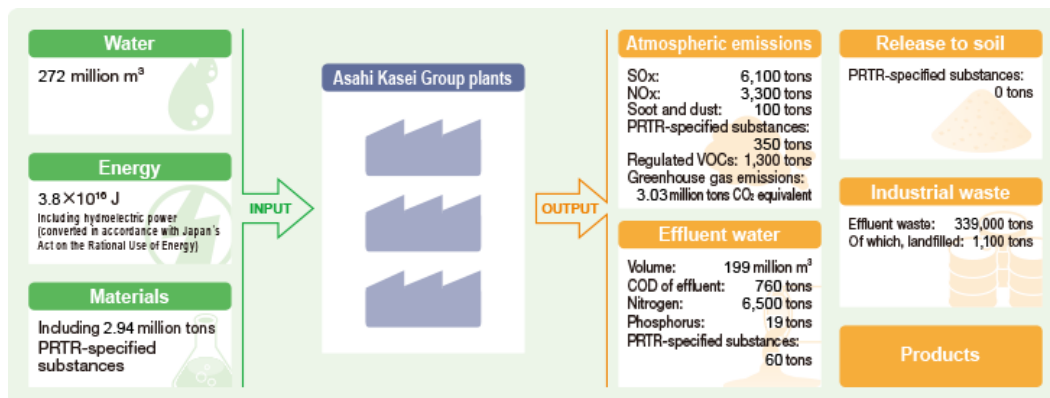
Our environmental protection measures include efforts for the achievement of a low-carbon society, the establishment of a circular economy, and the preservation of biodiversity.



The diagram below describes the environmental impacts of business activities at Asahi Kasei Group plants. As in our Group Vision of “harmony with the natural environment,” the Asahi Kasei Group considers environmental protection as one of its most important tasks. Our major focuses are on: 1) prevention of global warming; 2) promotion of a recycling-oriented society; 3) management of chemical substances; and 4) Biodiversity.

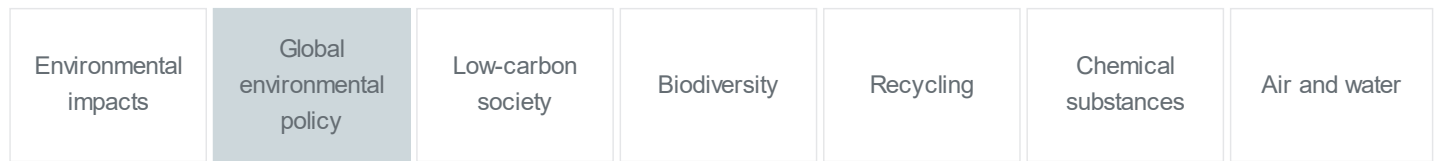
For prevention of global warming, we have established new indicators and targets to curtail greenhouse gas emissions to be achieved by fiscal 2020 and fiscal 2030. Regarding promotion of a recycling-oriented society, we continue to reduce our rate of final disposal and increase our rate of recycling. Furthermore, as a chemical company, we are working to promote safe handling of chemical substances and actively provide safety information. We are also making efforts to reduce the impact of our business activities on biodiversity.

Asahi Kasei Group Main Environmental Impacts (FY 2016)



# Environmental protection

Our environmental protection measures include efforts for the achievement of a low-carbon society, the establishment of a circular economy, and the preservation of biodiversity.



In June 2012, we established our Global Environment Committee to oversee an expanded scope of activities related to global warming. At its second meeting, the Global Environment Committee formulated policy on environmental initiatives that apply to the entire Asahi Kasei Group (below). Quantitative indicators and targets were revised in order to clearly visualize and confirm ongoing progress of these environmental initiatives.

## The Asahi Kasei Group's global environmental policy

### 1. Low-carbon society

- (1) Sharing the international goal of cutting worldwide greenhouse gas emissions in half by the year 2050, the Asahi Kasei Group will establish targets for reduction of emissions from its business activities by 2030.
- (2) The Asahi Kasei Group will contribute to the establishment of a low-carbon society by providing the world with products, technologies, and services that enable reduced greenhouse gas emissions through our proprietary technology.
- (3) The Asahi Kasei Group will monitor and clearly visualize the amount of CO<sub>2</sub> emissions from its supply chain.

### 2. Preserving water resources

The Asahi Kasei Group will help preserve water resources around the world through its domestic and international water supply filtration membrane module business and water recycling service business. The Asahi Kasei Group will measure the quantity of its water intake while striving to maintain and improve the efficiency of its water usage.

### 3. Recycling

The Asahi Kasei Group will promote the reduction of environmental impacts and the efficient utilization of resources and energy throughout the entire life cycle in its business activities in order to contribute to a circular economy. Specifically, we will promote the 3Rs of reduction, reuse, and recycling, and increase the usage of resources and energy with lower environmental impacts as well as renewable resources and energy.

### 4. Achieving harmony with nature

The Asahi Kasei Group will give due consideration to the conservation of natural capital and biodiversity, and promote the reduction of environmental impacts of its business activities. We will also monitor and carefully manage our use of land and biological resources.

### 5. Overseas locations (plants)

The Asahi Kasei Group will create systematic monitoring items that enable environmental management practices equivalent to those at its plants in Japan.

### 6. Supply chain

The Asahi Kasei Group will proactively collaborate with members of its supply chain to undertake the abovementioned activities.

## Quantitative indicators and targets of environmental initiatives

### 1. Low-carbon society

- GHG emissions
  - Reduce GHG emissions in Japan to 35% below the FY 2005 level by FY 2020
- Clean power generation
  - Maintain use of biomass fuel at 60% or more by energy content in mixed combustion at the biomass power plant in Nobeoka
- LCA/CO<sub>2</sub> contribution ratio\*
  - Achieve a ratio of 11.0 by FY 2020 (3.2 in FY 2010)
  - Achieve a ratio of 15.0 by FY 2030

\*LCA is used to determine the amount of reduction in CO<sub>2</sub> emissions enabled by Asahi Kasei products and technologies in comparison with conventional products and technologies. The ratio is calculated by dividing this amount by the global CO<sub>2</sub> emissions of the entire Asahi Group.

### 2. Preserving water resources

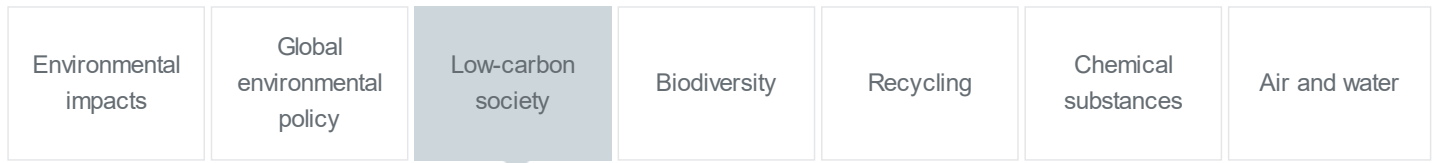
- Water resource contribution ratio\*
    - Achieve a ratio of 9.3 in FY 2018 (1.2 in FY 2011)
- \*The water resource contribution ratio is calculated by adding up the total quantity of water clarified and recycled using Asahi Kasei filtration technology and dividing this by the quantity of the Asahi Kasei Group's water intake.

### 3. Energy management policy and target

- Policy
  - Plan measures for preventing global warming and conserving limited resources, promote reduced energy use in all phases of business activity
- Target
  - Improve unit energy consumption by an annual average of at least 1% over a 5-year period

# Environmental protection

Our environmental protection measures include efforts for the achievement of a low-carbon society, the establishment of a circular economy, and the preservation of biodiversity.



As a participant in the Commitment to a Low Carbon Society launched in April 2013 by the Japan Chemical Industry Association and Nippon Keidanren, the Asahi Kasei Group is implementing activities in line with this commitment. We will also pursue activities under global indicators and targets set for our overseas manufacturing sites as well.

In June 2014, we established a Global Environment Action Committee. We are now able to act more swiftly and deeply to contribute to a low-carbon society and other global environmental protection measures.

Asahi Kasei Group RC Principles >

## The Asahi Kasei Group's activities for building a low-carbon society

- 1.Reducing greenhouse gas (GHG) emissions of the Asahi Kasei Group
  - (1) GHG emissions in Japan
  - (2) Scope 3 emissions
- 2.Helping reduce CO<sub>2</sub> emissions throughout the entire lifecycle of products
- 3.Making international contributions
- 4.Developing innovative new technologies

## The Asahi Kasei Group's environmental initiative framework

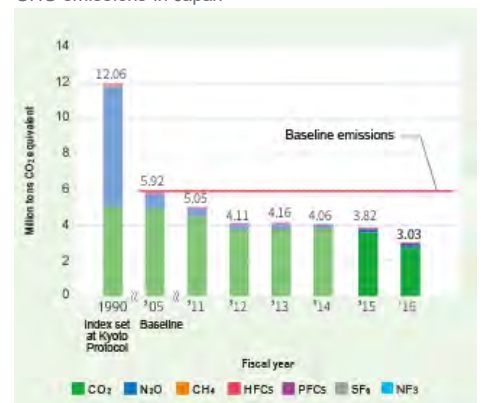
|  |   |
|--|---|
| <b>Global Environment Committee</b>        | This committee deliberates and adopts group-wide environment measures. It is chaired by the operating holding company Executive for RC, and has the Presidents of the SBUs and the Executives for RC of the core operating companies as members. It meets twice per year.   |
| <b>Global Environment Action Committee</b> | This committee is chaired by the General Manager of Corporate ESH & QA, and has the RC Promoters of the SBUs, the core operating companies, and Corporate Research & Development as members. It develops concrete measures based on decisions of the Global Environment Committee. It meets twice per year.   |
| <b>LCA Committee</b>                       | This committee consists of the chair from the operating holding company and members from the SBUs, the core operating companies, and Corporate Research & Development. It promotes LCA throughout the Asahi Kasei Group and performs LCA for the Group's products and technologies, including those under development. It meets 5 to 6 times per year, and reports results of its activities to the Global Environment Committee. |

## Reducing greenhouse gas (GHG) emissions of the Asahi Kasei Group

### GHG emissions in Japan

The Asahi Kasei Group's GHG emissions in Japan from production processes in fiscal 2016 were equivalent to 3.03 million tons of CO<sub>2</sub>-eq, which represents a reduction of 49% compared to the 5.92 million tons of CO<sub>2</sub>-eq from our baseline year of fiscal 2005. Significant factors that contributed to this reduction include the suspension of ammonia, benzene, and ethylene production, and the start of biomass power generation. Compared to the emissions level in 1990, the index year set under the Kyoto Protocol, we continue to maintain a reduction of GHG emissions by more than 70%, most notably through the development of technology for thermal decomposition nitrous oxide (N<sub>2</sub>O) byproduct.

GHG emissions in Japan

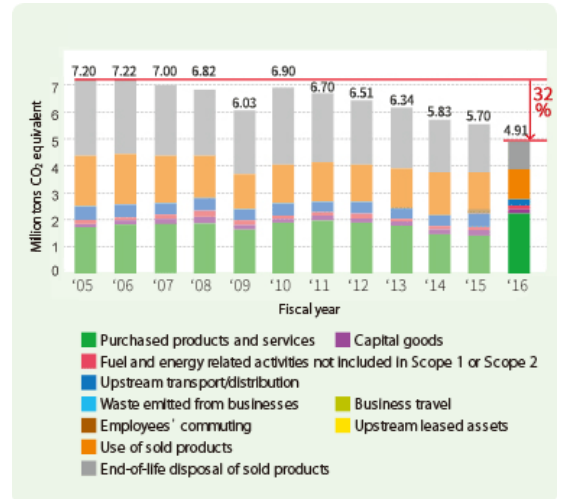


## Scope 3\* emissions

The domestic Japanese portion of Scope 3 emissions over time has been calculated for all operations except Asahi Kasei Pharma, yielding data on 99% of such emissions for the entire Asahi Kasei Group. Our Scope 3 emissions have steadily declined from fiscal 2005 to fiscal 2016, with some fluctuation due to the global financial crisis, and in fiscal 2016 they were some 32% lower than in fiscal 2005. This reduction can be attributed to the closure of our naphtha cracker as part of a structural improvement in Mizushima which reduced Category 12 emissions (end-of-life disposal of sold products) and to the launch and growing sales of Hebel Haus™ products with power generation, efficiency, and conservation functions which reduced Category 11 emissions (use of sold products).

\*Scope 3 emissions: Greenhouse gases emitted indirectly by a company throughout its supply chain. The method for calculating Scope 3 emissions is described in Environmental and safety data >. The Asahi Kasei Group's Scope 3 emissions from Category 1 (purchased products and services) in Japan in Fiscal 2016 were 2.26 million tons of CO<sub>2</sub>-eq. The emissions were independently assured by KPMG AZSA Sustainability Co., Ltd. Please refer to the Independent Assurance Report >.

Scope 3 emissions in Japan

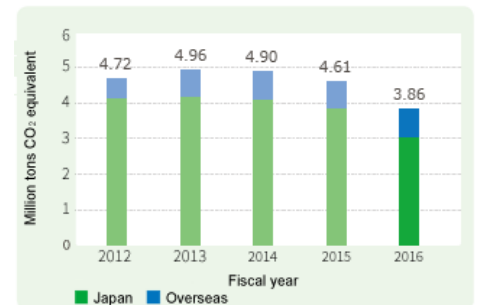


## Global GHG emissions\*

Although GHG emissions in Japan have been decreasing by a wide margin as a result of various efforts and structural reforms, GHG emissions overseas have been increasing due to the start-up of new plants. The Asahi Kasei Group will employ a range of measures to further reduce total global GHG emissions toward a target to be achieved in 2030, in accordance with the Paris Agreement. Fiscal 2016 Scope 1 GHG emissions were 2.84 million tons of CO<sub>2</sub>-eq and fiscal 2016 Scope 2 GHG emissions were 1.02 million tons of CO<sub>2</sub>-eq.

\*Fiscal 2016 global GHG emissions have been assured by KPMG AZSA Sustainability Co., Ltd. Please refer to the Independent Assurance Report >.

Global GHG emissions



## The Asahi Kasei Group's efforts to reduce CO<sub>2</sub> and GHG emissions in Japan

### Alleviating the environmental effects of physical distribution

Product shipments for Asahi Kasei Group operations in Japan amounted to some 1.2 billion ton-kilometers in fiscal 2016—a 3% decrease from fiscal 2015—generating approximately 100 thousand tons of CO<sub>2</sub> emissions—a 3% decrease. In cooperation with the transport firms contracted for shipment, a wide range of measures are employed to reduce energy consumption and alleviate the environmental effects of physical distribution.

Asahi Kasei has received Eco-Rail Mark certification in recognition of our preferential shipment of products by rail, an ecological mode of transport which results in lower CO<sub>2</sub> emissions for a given weight and distance than many other means of transportation.



The Eco-Rail Mark

### Use of low-pollution vehicles

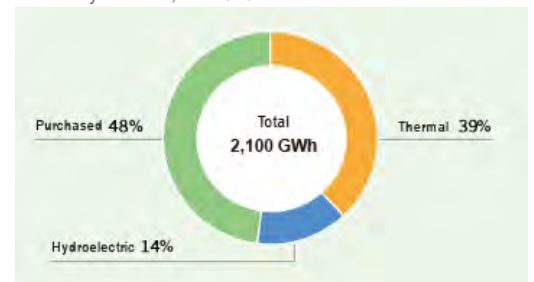
The Asahi Kasei Group is phasing in low-pollution vehicles for use in marketing and within plant grounds. In fiscal 2016, some 82% of company-owned vehicles were low-pollution vehicles

### Renewable energy

The Asahi Kasei Group has 9 hydroelectric power generation plants in the Nobeoka Region, which provided 14% of the total electricity we used in Japan. Generation of the equivalent amount of power at thermoelectric plants would result in approximately 180 thousand tons\* of CO<sub>2</sub> emissions annually. Furthermore, our biomass power generation facility in Nobeoka started operation in August 2012.

\*Using Japan's Ministry of Economy, Trade and Industry and Ministry of the Environment standard of 587 g CO<sub>2</sub>/kWh.

Electricity sources, FY 2016





## Reducing CO<sub>2</sub> emissions throughout the product life cycle

### Life cycle assessment of reduced CO<sub>2</sub> emission

Although CO<sub>2</sub> is generated during the manufacture of materials and intermediate products in the Asahi Kasei Group, there are also many examples of products which contribute to reduced CO<sub>2</sub> emissions during use. LCA calculation takes such contribution into account and determines the amount of CO<sub>2</sub> reduction achieved over the product life cycle. By expanding sales of such products and commercializing new products and technologies that enable significant reduction of CO<sub>2</sub> emission based on LCA, we contribute to the overall reduction of greenhouse gas emission throughout the supply chain.

### Global warming conscious products

In April 2013, we formulated guidelines on global warming conscious products. Having formulated a similar set of guidelines in 2003 for eco-friendly products, the Asahi Kasei Group decided to formulate a new set of guidelines for global warming conscious products given recent demand both in Japan and overseas.

In accordance with these guidelines, we have certified the products in the following chart as global warming conscious products.

List of global warming conscious products

| Rank | Product name  |
|------|---|
| A    | Hall ICs and Hall elements for DC motors used in air conditioners               |
| A    | Ion-exchange membrane production process for caustic soda                       |
| A    | Synthetic rubber for fuel-efficient tires                                       |
| A    | Phosgene-free polycarbonate production process                                  |
| A    | Fusion™ 3D knitted fabric for energy-saving humidifier filters                  |
| A    | Hebel Haus™ with power generating, efficiency, and conservation functions       |
| B    | Hebel Haus™ with next-generation insulation                                     |
| B    | Hipore™ lithium-ion battery separator for electric and hybrid electric vehicles |
| B    | Neoma™ phenolic foam insulation panels for homes                                |
| B    | Heat-absorbing stretch fiber for cool-feeling innerwear                         |
| B    | Sunfort™ photosensitive dry film  |
| B    | Hebel Haus™ two-generation homes  |
| B    | Asaclean™ plastic molding machine purging agent                                 |
| C    | Renovation to add solar panels  |
| C    | Polymer membrane for fuel cells   |
| C    | Renovation to improve window insulation   |

Rank A: LCA/CO<sub>2</sub> reduction of at least 500,000 t-CO<sub>2</sub>/y  
 Rank B: LCA/CO<sub>2</sub> reduction of at least 100,000 t-CO<sub>2</sub>/y  
 Rank C: LCA/CO<sub>2</sub> reduction of at least 10,000 t-CO<sub>2</sub>/y

### International contribution

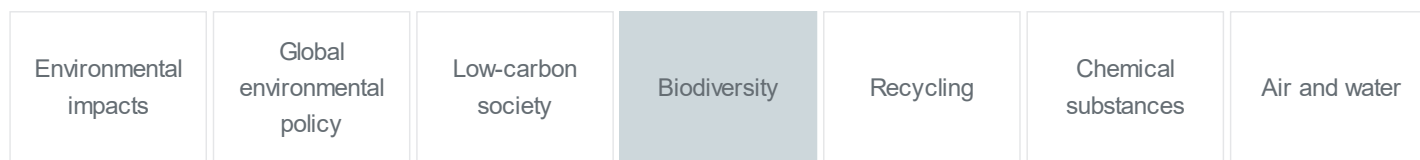
Hall ICs and Hall elements for air conditioner DC motors, ion-exchange membrane process for the caustic soda production, and synthetic rubber for fuel-efficient tires are used in the US, the EU, and Asia. These products and technologies produce less CO<sub>2</sub> when used compared to the conventional alternatives. We continue R&D to create new eco-friendly products and technologies that will increase our contribution to reduced CO<sub>2</sub> emissions.

### Development of innovative technologies

We are working to develop innovative technologies such as lithium-ion battery separators for electric vehicles that enable dramatically lower CO<sub>2</sub> emissions than conventional vehicles, and fuel cell membranes that enable lower CO<sub>2</sub> emissions than conventional use of city gas or propane at home.

# Environmental protection

Our environmental protection measures include efforts for the achievement of a low-carbon society, the establishment of a circular economy, and the preservation of biodiversity.



## Basic policy

To ensure the sustainable utilization of living resources, we give due consideration to reducing the impact of our business activities on biodiversity, and we have established guidelines for the preservation of biodiversity. Based on these guidelines, the Asahi Kasei Group began examining the impact of our business activities on biodiversity. In order to promote business activity mindful of biodiversity, we are working to raise awareness among personnel by various means including our RC education program.

## Notable actions in fiscal 2016

We examine the impact of our business activities on biodiversity when there is a newly used or a change in use of raw materials, and confirm that no problem will be caused. Our plants and offices are undertaking a variety of initiatives to preserve biodiversity in accordance with the ecosystem of each location.

## National network to promote the Satoyama Initiative in Japan

The Japan Network for Promoting the Satoyama Initiative, established in September 2013, is comprised of 108 organizations (as of February 2017) including companies, research institutions, governmental bodies, NGOs, NPOs, etc. Various organizations in Japan join together under the keyword "Satoyama" to bridge differences and build a platform to enable interactions, cooperation, and information exchange among the participants in order to make efforts to conserve and use biodiversity into a nationwide effort. Asahi Kasei is a founding corporate member of the Satoyama Initiative, and in fiscal 2016 we took part in leadership meetings, general meetings, seminars, liaison meetings, on-site observations, and the 1st Asian Conference on Biocultural Diversity in October.



**JAPAN NETWORK  
FOR PROMOTING  
THE SATOYAMA INITIATIVE**

## Actions in Moriyama

Conservation activity for endangered smallhead stickleback, a freshwater fish

In Moriyama, we draw groundwater for use as industrial water to cool equipment. Its quality is strictly monitored and it is discharged to nearby rivers after use. Part of the discharged water from our Moriyama Works is also used for agriculture, which has become vital for the local farmers as well as wildlife inhabiting the waterfront areas. Against this backdrop, we started activities to protect biodiversity from fiscal 2010 focusing on water, which is intrinsically related to our business operations.

In fiscal 2015, we started to revive the population of wildlife inhabiting waterways and their surround areas, including ex-situ conservation of the freshwater fish called smallhead stickleback which is designated as an endangered species. In the spring of 2016 we confirmed that smallhead stickleback were breeding in the conservation pond we prepared within the plant grounds. We held a nature observation tour to convey the intent of our conservation activities, and brought in an expert to explain the importance of protecting the biodiversity of the local area.



Smallhead stickleback

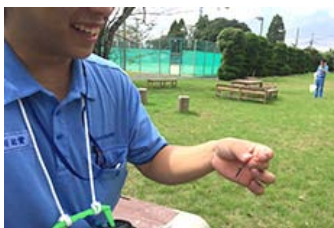


Nature observation tour

## “Mission 79 Dragonfly” project of the Kotou Area Biodiversity Network

Having established interactions with one another in relation to environmental concerns, the Shiga Plant of Sekisui Jushi Corp., Shiga Works of Daifuku Co., Ltd., Shiga Plant of Asahi Kasei Jyuko Co., Ltd., and Moriyama Works of Asahi Kasei Corp. began collaborative activities for protection of biodiversity in the local area. The collaboration aims to protect biodiversity in the Kotou area of Shiga by drawing together businesses, the people of the community, local government bodies, and experts.

The Kotou Area Biodiversity Network formed for this purpose has now launched “Mission 79 Dragonfly” as a project to protect the biodiversity of dragonflies in the area. There are 79 species of dragonfly confirmed to inhabit the Kotou area of Shiga. As the lifecycle of dragonflies is deeply related to water, the population of dragonflies is said to be a barometer of the quality of the local environment. We believe this project to protect and survey dragonflies will contribute to the protection of the overall biodiversity of the Kotou area.



Survey of conditions of dragonfly habitat within the Moriyama Works by specialists and employees (1)



Survey of conditions of dragonfly habitat within the Moriyama Works by specialists and employees (2)



Dragonfly observation event held by experts and employees from each company



## Actions in Fuji

In Fuji, the Asahi Woods of Life we created within the grounds of our plant and laboratory complex has grown vigorously over the past nine years since we planted trees together with members of the community. This pioneering effort to preserve biodiversity has drawn many visitors, and the annual firefly watching event was enjoyed by more than 3,000 people over three days. We are also working successfully with a nearby university to introduce and propagate rare species native to the area.



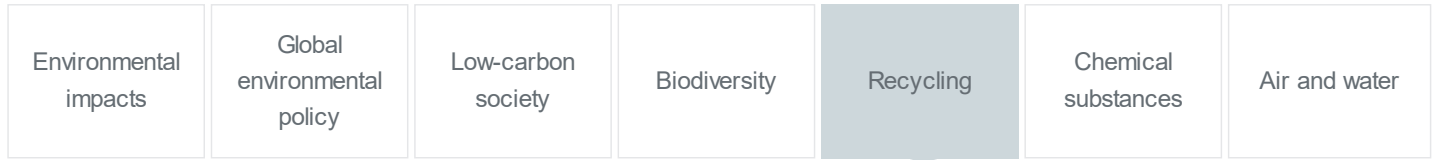
Releasing black snails



Fireflies at the Asahi Woods of Life

# Environmental protection

Our environmental protection measures include efforts for the achievement of a low-carbon society, the establishment of a circular economy, and the preservation of biodiversity.



The Asahi Kasei Group is working to reduce the amount of industrial waste for final disposal through the “3-Rs” of reduction, reuse, and recycling in order to help build a recycling-oriented society.

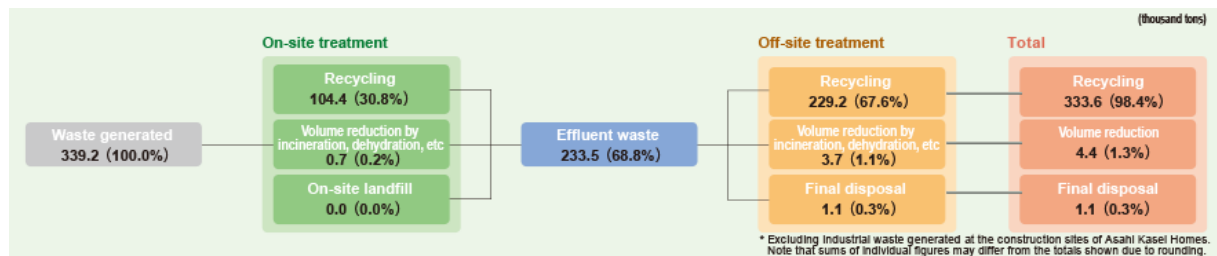
In fiscal 2016, we adopted targets of a final disposal rate of 0.3% or less and a recycling rate of 90% or more of the total amount of industrial waste generated. We achieved our targets, with a final disposal rate of 0.3% and a recycling rate of 98%. We are working to gain further improvements through increased separation and greater selectivity in disposal contractors.

Waste containing PCBs\* is stored under strict control in stainless steel vessels. Plans for disposal are advancing, including for waste with minimal amounts of PCBs.

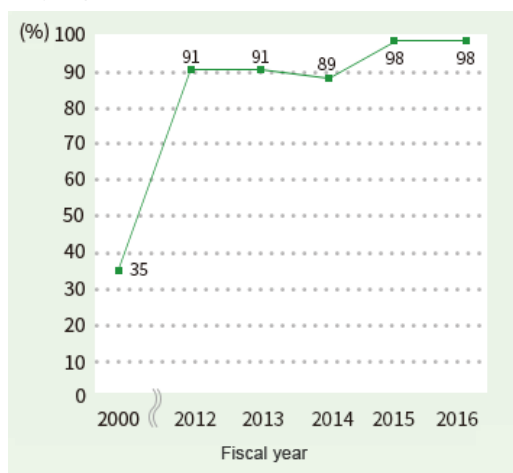
We enhanced our management of off-site treatment of industrial waste by expanding the use of electronic manifests. We also performed periodic on-site inspections of consigned firms to ensure that proper disposal is performed in accordance with sound systems of control.

\*PCBs (polychlorinated biphenyls) are persistent and pose a risk to the living environment and human health. Their manufacture and use is essentially prohibited in Japan.

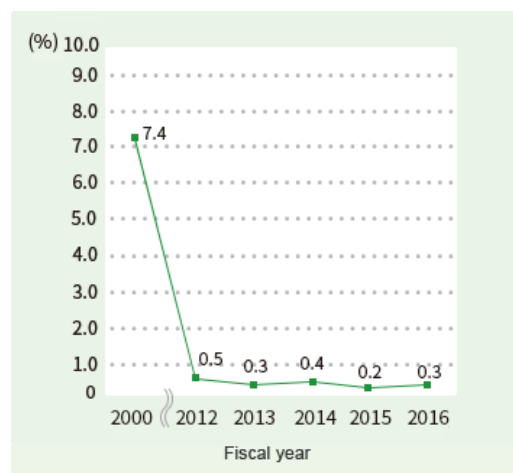
FY 2016 flow of industrial waste\*



Recycling rate

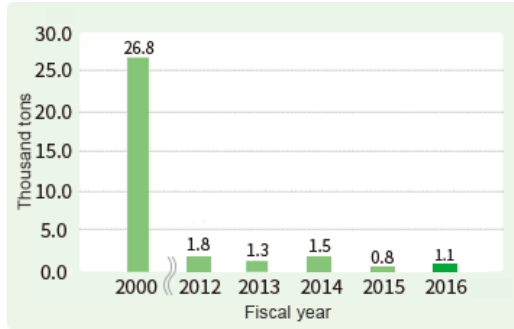


Final disposal rate

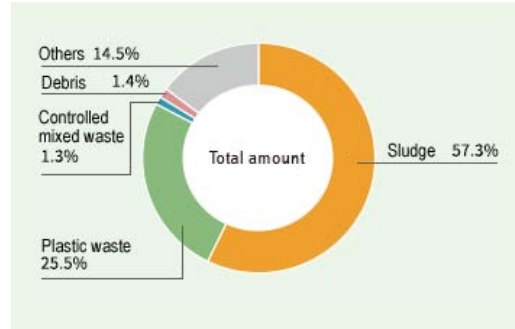




Off-site final disposal volume



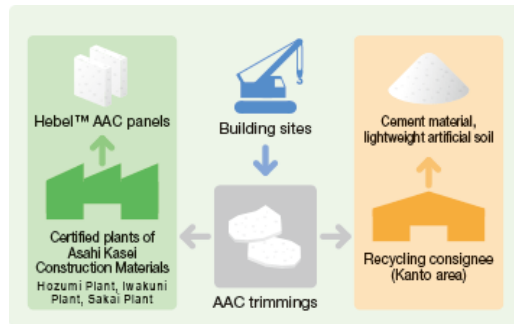
FY 2016 off-site final disposal by category of waste



## Reducing industrial waste from construction materials and housing businesses

Asahi Kasei Construction Materials recycles trimmings of Hebel™ autoclaved aerated concrete (AAC) panels in its own plants and others, utilizing its certification for “wide-area recycling”\* which permits the transport of waste from different construction sites. Asahi Kasei Homes is also reducing the volume of waste as well as implementing sorted waste collection at housing construction sites. With these measures, waste for final disposal has been reduced to zero at new construction sites.

Recycle flow for trimmings of Hebel™ AAC panels



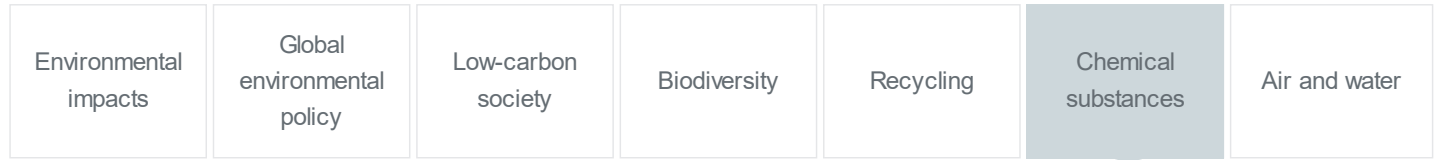
Final disposal industrial waste generated at construction sites



\* Certificate for wide-area recycling: For certain parties, who perform recycling in a wide-area, Japan’s Minister of the Environment eliminates the need to obtain separate waste transport permits for each local area. The system was established to promote further recycling of industrial waste.

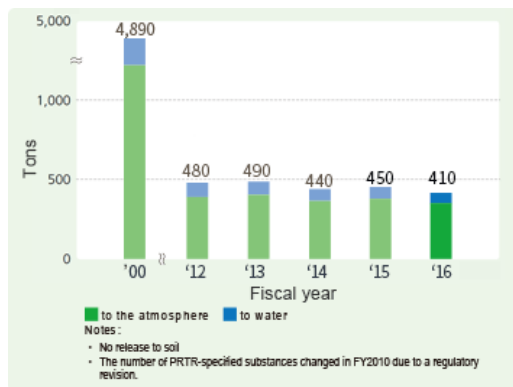
# Environmental protection

Our environmental protection measures include efforts for the achievement of a low-carbon society, the establishment of a circular economy, and the preservation of biodiversity.

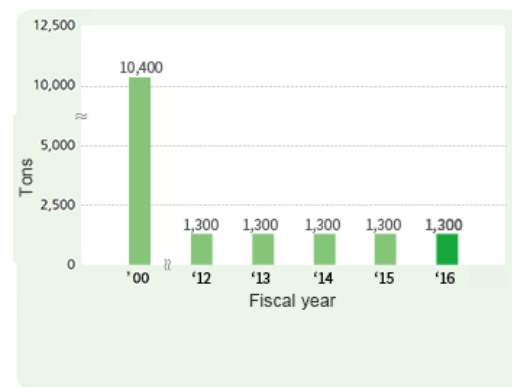


The Asahi Kasei Group makes an effort to reduce the release of chemical substances. These chemicals include substances specified in the PRTR<sup>1</sup> Law, and other substances which we have voluntarily designated for reduction. Priority for reduction is based on the degree of hazardousness and amount of release. As shown in the graphs below, releases of PRTR-specified substances and VOC<sup>2</sup> emissions were reduced by 92% and 87%, respectively from fiscal 2000. We will continue to enhance control of operation and equipment to prevent any accidental release.

Releases of PRTR-specified substances



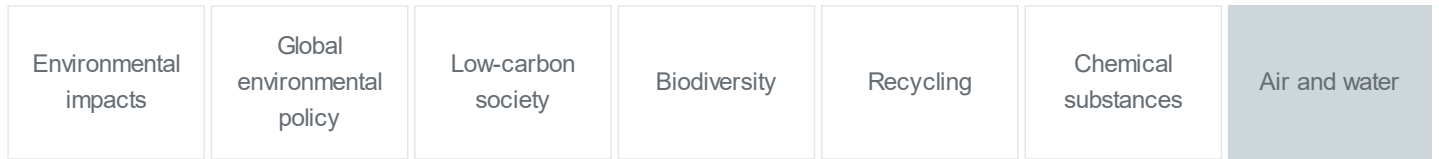
Releases of VOCs



- 1 PRTR: Pollutant release and transfer register. Under the PRTR Law, releases to the environment and off-site transfers of specific hazardous chemical substances must be monitored and recorded for each production facility and operating site. Results are reported to the government, which publishes aggregated results.
- 2 VOC: Volatile organic compound. Although the term generally applies to any organic compound which is in gaseous state at the time of release, regulations for the control of their release exclude methane and some fluorocarbons which do not form oxidants.

# Environmental protection

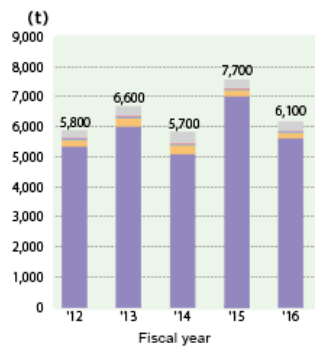
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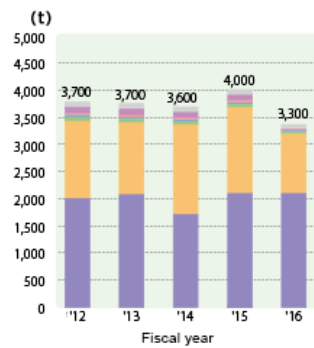
The Asahi Kasei Group works to control emissions and prevent spills in order to avoid the pollution of air, water, soil, or groundwater. Measures to prevent odors include the installation of exhaust gas absorption equipment and increasing the capacity of our wastewater treatment facilities. To prevent soil and groundwater pollution, we have performed investigation and taken appropriate measures in accordance with the Soil Contamination Countermeasures Act and related regulations.

We confirm the control of effluent water based on an internal guideline issued in 2012. Release of substances regulated by the Air Pollution Control Act and the Water Pollution Control Act are maintained below the permissible limits.

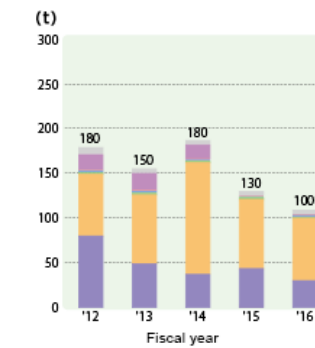
SOx emissions



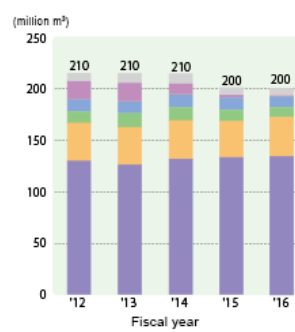
NOx emissions



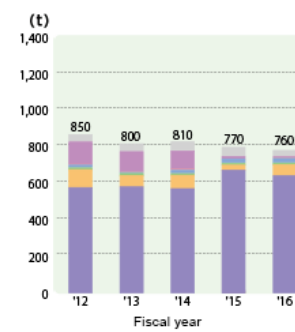
Soot and dust emissions



Effluent water volume

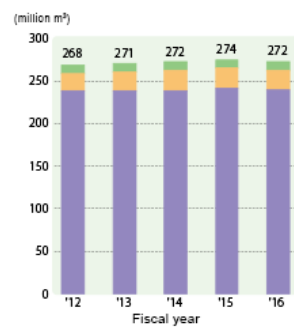


COD of effluent



■ Nobeoka ■ Mizushima ■ Moriama ■ Fuji ■ Ohito ■ Kawasaki ■ Other sites

Water usage



■ Industrial water ■ Groundwater ■ Municipal water

# Operational safety

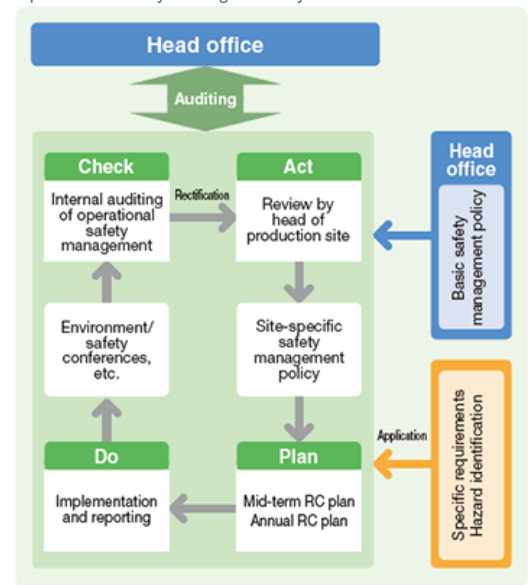
To achieve safe operations, it is essential to build highly safe plants based on process hazard assessment prior to construction, to perform sound plant maintenance, and to operate facilities in a stable and safe manner. The Asahi Kasei Group avoids operational accidents through risk assessments prior to the construction of new plants, periodic inspections of existing plants performed by auditors specialized in fire and explosion prevention, process reviews from the perspective of preventing abnormal reactions and ensuring interlock functions, and process reviews corresponding to the age of facilities.

In fiscal 2013, we completed a program of on-site confirmation to identify hazards from the perspective of preventing abnormal reactions and ensuring interlock functions. From fiscal 2013 onwards, we have been preparing technical documents on items with a high degree of hazard and on accidents and problems which occurred in the past. From fiscal 2015, we are implementing education and training for managers and operators to enable them to properly identify the cause and take appropriate action if problems occur, including problems that have not been previously encountered. There were no serious operational accidents inside or outside Japan during fiscal 2016.

## Management of operational safety

Our ongoing, autonomous program to ensure operational safety includes safety assessment and hazard identification in accordance with a basic safety management policy, and specific plans are implemented on both annual and multi-year cycles.

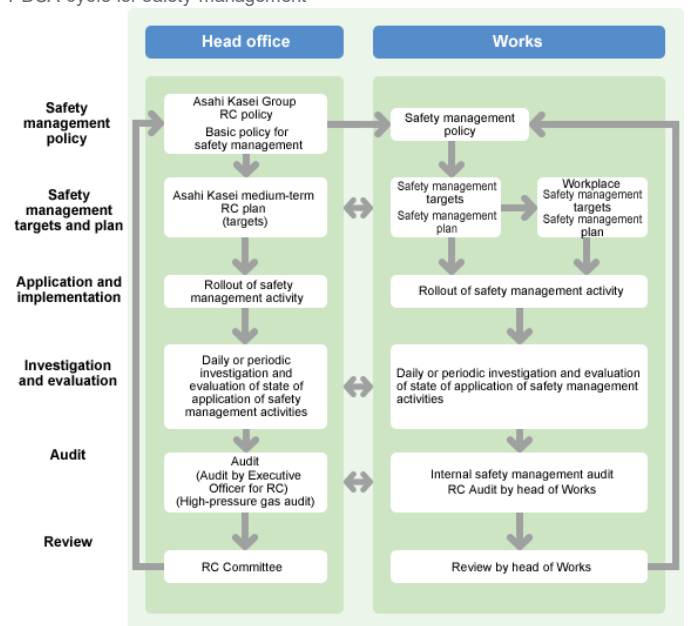
Operational safety management system



## Basic policy for high-pressure gas safety

- Safety is an important fundamental of management, and all of our business activities depend on safety.
- Each one of our employees is responsible for safety, and safety is ensured by all employees together.
- We apply a PDCA cycle to continuously improve the level of safety.
- Measures to assess risks, and to eliminate and mitigate them, are persistent and ongoing.

PDCA cycle for safety management



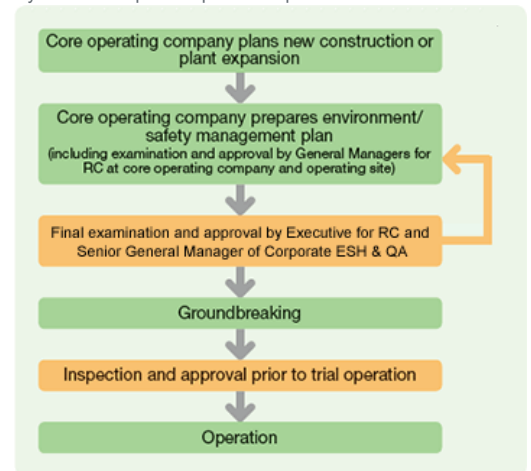
## Pre-investment inspection system

Internal regulations require a pre-investment inspection to verify plant safety when there are plans to invest in a new plant, plant expansion, or plant modification of a certain scale or larger. Inspection and approval prior to trial operation provides an additional confirmation of plant safety before commercial operation begins. The inspection system is applied not only in Japan, but also outside of Japan.

Safety assessment is performed as part of the pre-investment inspection. Ranks are assigned based on the degree of hazard, with methods such as HAZOP\* utilized in the risk assessment of high hazard facilities, and other risk assessment methods utilized for low-risk plants which are deemed to be vital.

\*Abbreviation of "hazard and operability study," a method of identifying and dealing with potential problems in industrial processes by assuming deviations from design intentions. This highly exhaustive method is widely utilized throughout the process industries.

System for inspection prior to capital investment



## Safe, stable plant operation

Given our diverse range of operations that include chemicals, fibers, homes, construction materials, electronics, and health care, the Asahi Kasei Group has plants with a wide variety of different characteristics. No single approach to safety would be appropriate for all plants.

We employ a systematic process to tailor the safety effort to each plant's specific requirements, including the use of PDCA cycles. One characteristic of process is the formulation of separate maintenance standards for each individual unit of equipment to ensure the appropriateness of the method and period of maintenance.

In addition, safety information and know-how are shared across the Asahi Kasei Group through a group-wide plant engineering council with 4 specialist panels: Formulation of optimum systematic maintenance programs, establishment of standards and criteria, formulation of training systems for maintenance engineers, and sharing engineering information.

## Process review

Reviewing processes at our existing plants has long been performed as part of our program to monitor for items in need of replacement and uninspected items, and beginning in fiscal 2009 we began specialized RC audits focused on the risk of fires and explosions as part of our effort to eliminate industrial accidents. Inspections from the perspective of preventing abnormal reactions and ensuring interlock functions began in fiscal 2012, and a program of on-site confirmation was performed in fiscal 2013. Results of this confirmation indicated that there were no major problems. From fiscal 2013 onwards, we have been preparing technical documents on items with a high degree of hazard and on accidents and problems which have occurred in the past, and obtained third-party verification in addition to verification by Corporate ESH & QA. These documents are used in training to ensure that personnel will be able to take appropriate action if problems occur.



Third-party verification of activity to pass on technological skills (Mizushima)

## Training for maintenance

We believe that maintenance means creating the condition of equipment necessary to accomplish production objectives. Although we use a PDCA cycle for the planned maintenance system, people are the most fundamental element. It is vital for each individual to gain the essential technology and contribute to the strength of the team.

The Asahi Kasei Group launched a training program in fiscal 2009 to nurture the skills of maintenance personnel. We clarified the training principles for maintenance technicians, formulated a training curriculum for each individual based on these principles, and applied the PDCA cycle. Currently some 530 personnel are using this system to develop their skills.

In fiscal 2014 we launched a new web-based system based on the experience gained. The new system tracks all training progress in a database that enables more efficient data entry and easier preparation of materials for training audits. Beginning in fiscal 2015, applications for classroom work are made via the website, and results of certifications acquired are managed online.



Maintenance training system

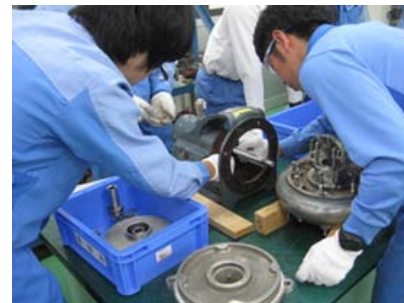
## Training for operational safety

At our petrochemical sites in Mizushima and Kawasaki, the Asahi Operation Academy (AOA) serves as the training center to cultivate the skills necessary to operate petrochemical plants. AOA teaches the principles and structures of equipment, heightening the ability to identify the cause of equipment failure and to respond appropriately. Miniature plants and simulators are used at AOA to provide hands-on experience with controls and instrumentation. Operators thereby gain the technical skills and practical understanding of chemical engineering necessary for safe and reliable plant operation, with the ability to respond appropriately in the event of any abnormality.

We carry out safety training exercises in which employees are given simulated experience of workplace dangers including being caught in/between machinery, contacting hazardous liquids, tripping and falling on the same level, suffering a burn, falling from height, etc. In conjunction with this, we provide education on human behavioral characteristics and accident case studies in order to instill greater sensitivity for safety among employees and obtain strict compliance to safety rules to avoid dangers.



AOA lecture



AOA practical training for pump disassembly/assembly



AOA safety training (simulated experience of being caught in a conveyer belt)

## Preparation for emergency situations

A comprehensive set of internal regulations guides the proper response to any industrial accidents or natural disasters which may occur.

The smooth operation of the emergency response system ensures that personal safety is secured, that effects of the situation are prevented from spreading to surrounding areas, and that damage is held to a minimum, through close communication between the plants, regional management, and the head office. The plants prepare annual plans for periodic training drills, and perform drills in coordination with the head office.



Joint emergency response training drill in Nobeoka (together with the Fire Brigade, Fire Department, and Police Department from Nobeoka, and the Coast Guard from Hyuga)

## Physical distribution safety

To prevent accidents in physical distribution, Asahi Kasei works closely with logistics providers contracted for storage, loading, unloading, and transportation to implement safety activities, which include physical distribution safety symposiums, safety liaison conferences, safety inspection, training, and many other safety measures. Furthermore, individual production sites hold joint training drills together with logistics providers to prepare for accidents that may occur and to ensure that damage from such accidents is minimized.

In January 2017, we signed an agreement with the Maritime Disaster Prevention Center and introduced HAZMATers (Hazardous Materials Emergency Response Service) to further strengthen the response capability in the case of an emergency. The engagement of HAZMATers makes a highly specialized emergency response available 24 hours a day, 365 days a year, ensuring swift action to prevent the spread of damage if an accident occurs.



Training drill for physical distribution safety with a vinyl chloride tank truck



# Workplace safety and hygiene

The effort to prevent workplace accidents is integrated in our comprehensive OHSMS\* program that combines conventional safety initiatives—such as tidiness/orderliness/cleanliness (3S), reporting of near-accidents and potential hazards, hazard prediction analysis, safety patrols, and case studies—with risk assessments and a prevention-oriented plan-do-check-act (PDCA) system.

\*Occupational Health and Safety Management System. A standardized management system used to confirm that continuous improvement is being applied to measures to minimize the risks of workplace injuries and to prevent the emergence of future risks

Integration of workplace safety initiatives



## Approach to workplace safety

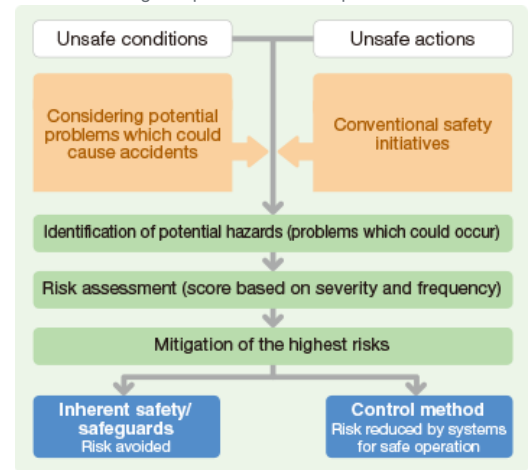
### Identification of potential hazards

Effective prevention of workplace accidents requires the identification of all potential hazards in a workplace. In addition to conventional safety initiatives, it is important to consider safety from the perspective of the problems which conceivably arise in a wide variety of situations—as a result of both potentially unsafe physical conditions (hazardous working environment due to equipment, materials, noise, etc.) and potentially unsafe actions of personnel.

### Risk assessment

Priority for mitigating the potential workplace hazards identified is assigned based on a scoring system that combines the severity of the impact of problems which could occur and the frequency with which such problems would be likely to occur.

Schematic image for prevention of workplace accidents



## Mitigation of the highest risks

Measures to achieve inherent safety by eliminating unsafe conditions (by eliminating dangerous procedures, automation, eliminating sources of problems, changeover to safe materials, etc.) and the application of safeguards are extremely effective in the effort to avoid risks. We focus on achieving inherent safety and applying safeguards (isolation and stoppage) to avoid risks associated with the use of machinery and equipment to prevent the “caught in/between machinery” category of accident, which can easily result in severe injury.

### Inherent safety and safeguards

Measures to achieve inherent safety and the application of safeguards to avoid risks are generally considered to provide the greatest level of safety, as shown in the following table. We incorporate such measures in the construction of new or replacement facilities, upon safety reviews of existing facilities, and to prevent the recurrence of accidents.

Formulation of safety measures

| Safety measures |                 | Degree of safety achieved       |
|-----------------|-----------------|---------------------------------|
| 1               | Inherent safety | 100%                            |
| 2               | Safeguards      | 80%                             |
| 3               | Control method  | Indications, warnings, etc.     |
| 4               |                 | Manuals, approved systems, etc. |

Source: Japan Industrial Safety and Health Association, “Shokuba no Risk Assessment no Jissai” (Realities of Workplace Risk Assessment), 1998, p.26

### Systems for safe operation

Operations for which the elimination of risks through equipment modification is impractical are classified as operations requiring special control. In such cases, risks are reduced through compliance with safe operating standards\*. In addition to double-checking that proper procedures are followed, a range of creative measures are employed to ensure that safe operating standards are observed from day to day.

\*Rather than individual rules for specific procedures, safe operating standards are a system of safety principles which define common safety practices that apply to categories of operation based on similarity of risk. For example, to prevent entanglement in machinery, our standard stipulates not to touch any exposed moving parts.

# Occurrence of workplace injuries

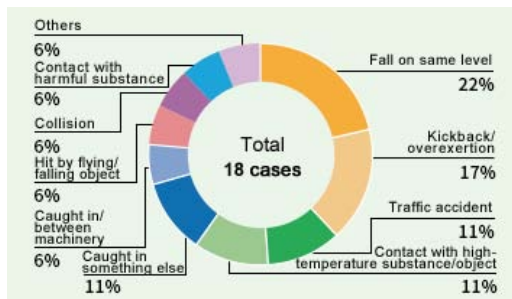
In fiscal 2016, 18 lost-workday injuries occurred. Although we have strived to eliminate injuries in the “caught in/between machinery” category, one of them was in that category for the first time since June 2013. We are applying the lessons from that accident to further reduce the risk of accidents in the “caught in/between machinery” category by eliminating sources of danger and enhancing safeguards. This type of accident tends to occur during irregular tasks which are only performed once every year or two. For the assessment of risks based on severity and frequency, we will prioritize measures to enhance the safety of tasks which, no matter how low their frequency scores, are likely to cause severe injury in the unlikely event that an accident does occur.

We also formulated a set of guidelines on machinery safety in accordance with ISO12100\* and in fiscal 2014 began machinery risk assessments by designers in the case of building new equipment or modifying existing equipment, with deliberation among related parties as part of the equipment inspection.

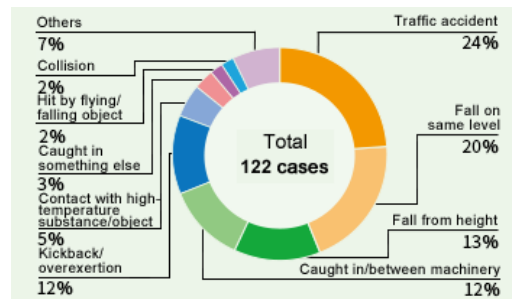
The 3 categories of fall on the same level, collision, and traffic accident accounted for 39% of all lost-workday injuries. To prevent these common accidents that could occur even in non-factory workplaces such as sales offices or headquarters, we are promoting safety activities in all workplaces such as basic safety compliance and renewing our emphasis on a culture of safety.

\*ISO12100 specifies principles for achieving safety in machinery design and principles of risk assessment and risk reduction.

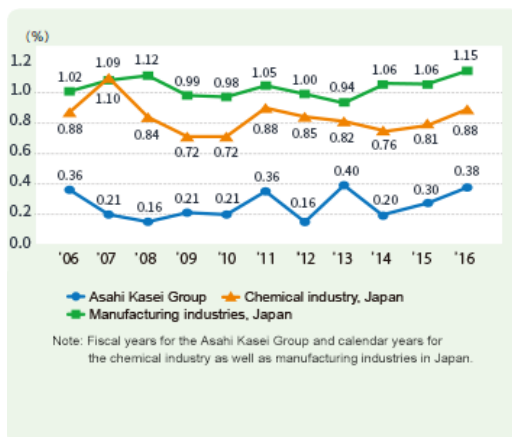
Incidence of workplace injury by event category (FY 2016 in Japan)



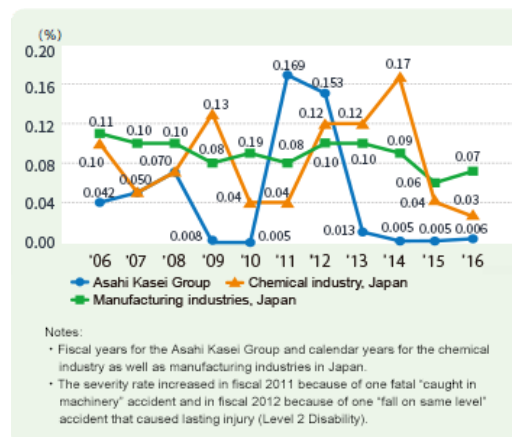
Incidence of workplace injury by event category (FY 2006 - 2015 in Japan)



Frequency rate<sup>1</sup>



Severity rate<sup>2</sup>



- 1 Frequency rate: Number of accidental deaths and injuries resulting in the loss of one or more workdays, per million man-hours worked. Our goal of 0.1 or less is extremely ambitious. At a plant with 100 workers, it would mean only one worker in 50 years suffered from a workplace injury which resulted in a day off.
- 2 Lost workdays, severity-weighted, per thousand man-hours worked.

## Occupational Health and Safety Management System (OHSMS)

In fiscal 2002, we began applying OHSMS in accordance with OHSAS 18001\* standards. In fiscal 2009, OHSMS was implemented at 90% of all plants and laboratories.

\*Occupational Health and Safety Assessment Series, number 18001. A standard for certification of OHSMS.

### Maintaining workplace hygiene

Workplaces where potential health hazards are present are subject to regular monitoring under the Working Environment Measurement Law. Additionally, risk management of chemicals is implemented to reduce risks due to chemical substances.

Noise and heat exposure data are recorded and maintained for all relevant personnel to enable each individual's exposure to be managed and minimized. We are advancing plant modification and reviewing work procedures to reduce exposure to noise and heat.

# Health maintenance

The Asahi Kasei Group implements various activities to help employees maintain and advance their mental and physical well-being in accordance with its health management guidelines, including screening for lifestyle-related diseases and mental health checkups.

## Enhanced health management framework

During fiscal 2016, interviews to monitor the effectiveness of the health management center were performed at 7 sites. The series of interviews launched in fiscal 2014 confirm whether the activities at each site, including the duties of our industrial physicians and health nurses, are being performed in accordance with the Industrial Safety and Health Law and our health management guidelines. Further guidance and support is being provided as necessary.

## Health maintenance and promotion for employees

The Asahi Kasei Group has provided employees with health guidance and exercise guidance by outside experts and health maintenance staff in each site.

In fiscal 2016, the results of annual checkups indicated that the proportion of employees with health warning signs and the ratio of employees with obesity slightly increased, while proportion of employees who smoke decreased

Since fiscal 2013, we have promoted the use of our health improvement program, a tool for health management that was revised to enable more easy use of specified health guidance. This program is especially useful for the maintenance and improvement of employees' health at independent plants where on-site health care staff is limited, and also as an outside resource for affiliated companies.

Ratio of employees with health warning signs



## Measures to prevent falling

Based on the falling risk assessment manual issued by the Japan Industrial Safety & Health Association, in fiscal 2013 we prepared a manual for physical fitness tests to prevent falling. In fiscal 2014 we began using this manual to assess falling risks of our employees, followed-up with guidance by industrial physicians. This was continued in fiscal 2016, and extended to other sites where the system is in place.



Manual for physical fitness tests to prevent falling

## Mental health and care

The Asahi Kasei Group is working to improve the workplace environment by enhancing its four complimentary approaches to care in accordance with its mental health care guidelines.

For self-care by individual employees and care by industrial medical staff, in fiscal 2013 we began full implementation of an intranet-based electronic diagnosis system developed by Fujitsu Software Technologies Ltd. Ongoing stress surveys will be performed annually at each location. In addition to surveying the stress level of individual employees, this system analyzes workplace stress to help improve the workplace environment as part of our effort for care by line of authority. The system has been used to survey stress at 31 sites, with appropriate follow-up implemented. Ongoing stress surveys are performed annually at each of our sites to comply with regulations which require their implementation.



Intranet-based electronic diagnosis system used to survey workplace stress

A provision for shortened working days is available for personnel returning from leave of absence for psychiatric convalescence as well as for any other injury or illness, enabling a gradual recovery of a full work load. At each plant site and office location, we provide care by specialists, including training sessions by external lecturers and referral of counseling services.

### Case of workplace revitalization

The Hozumi Plant of Asahi Kasei Construction Materials Corp. manufactures autoclaved aerated concrete (AAC) panels, with the number of employees peaking at around 350 in the 1990s. With declining demand for the product, operations were streamlined and the number of employees reduced to around 130. As few new employees were hired during this period of contraction, the proportion of workers aged 45 or older has risen to some 80%.

The stress survey in fiscal 2013 indicated that the rate of employees at risk was 10% higher than the national average. Since the workload is not heavy, we assume that the cause is lack of communication within the workplace where older workers may feel that it is no use talking about their problems, leading to a situation where little support is gained from supervisors or colleagues.

To address this issue, in fiscal 2014 we launched a program called “Lively and Active Hozumi Plant” and implemented action plans including one-on-one interviews with a counselor, improving the working environment for each process, raising employee skills, and sharing information. Additionally, managers regularly confirm the progress of the plan by monitoring improvements to the workplace environment. Thanks to such efforts, survey results in fiscal 2015 improved, with the rate at risk decreasing to below the national average. In fiscal 2016 the rate was reduced further. The company will continue to utilize the intranet-based electronic diagnosis system to support its ongoing effort to further advance the “Lively and Active Hozumi Plant” program.



Manager training by a counselor



# Quality assurance

Upon our transition to an operating holding company configuration in April 2016, we established a new Asahi Kasei Group Quality Policy and Group Quality Assurance Bylaws. At the same time, Corporate ESH & QA was reorganized, including the establishment of a new Quality Assurance Group to coordinate the reinforcement of quality assurance activities throughout the Asahi Kasei Group, ensuring the provision of safe and reliable products to our customers. In fiscal 2016, we once again met our target of no serious product safety incidents.

Perspective on quality assurance

**Asahi Kasei Group Quality Policy**

**The Asahi Kasei Group creates and provides products and services with the quality to meet the needs of customers and society and ensure safety and security.**

## Reinforcing the quality assurance system: maintaining zero serious product safety incidents

### Consumer satisfaction and safety

Products and services provided by the Asahi Kasei Group include materials, products, installations, various services, and after-sale support. We believe that providing products and services that satisfy our customers is our ultimate mission. We constantly strive to enhance our systems for quality assurance, including product safety.

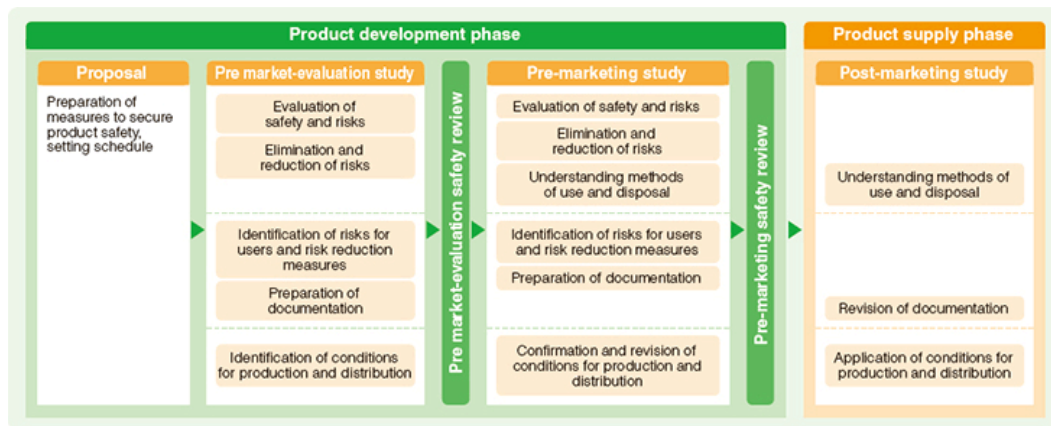
Monthly quality assurance meetings are held by the Executive for RC and the Quality Assurance Group to directly discuss information related to quality assurance based on a newly created Monthly Quality Assurance Report.

### Effort to maintain zero serious product safety incidents

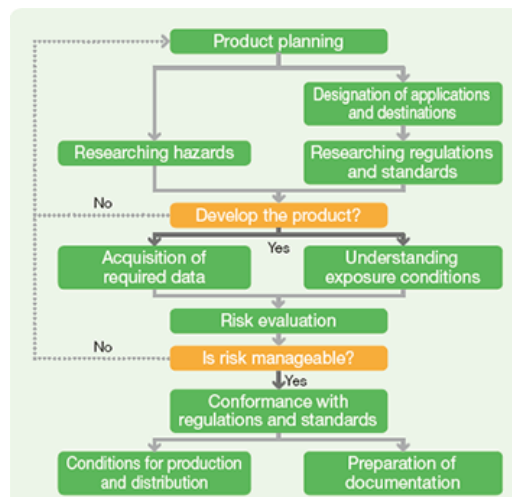
As part of the effort to prevent serious product safety incidents, we established new quality assurance bylaws that stipulate quality assurance activities for RC administrators to perform. The bylaws newly define the central role of quality assurance managers in activities to enhance quality assurance, and conferences are held three times a year to transmit and share information among the entire Asahi Kasei Group. This is applied in concert with our product safety guidelines to secure product safety and prevent the occurrence of serious product safety incidents.

All business units of the Asahi Kasei Group apply these uniform bylaws and guidelines to assure the quality of products and services.

Flow of product safety measures



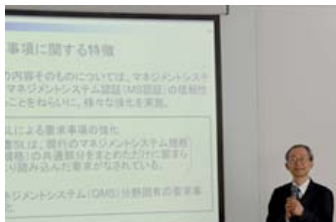
Product safety procedure for chemicals



## In-house seminars on quality assurance

We provided in-house training to adapt to the transition to the 2015 version of ISO9001. The newly revised ISO9001 emphasizes integration of the quality management system (QMS) with business processes, and involvement by senior management. Seminars were held corresponding to each level of management:

- (1) For upper management including the President of Asahi Kasei Corp., Vice President of Asahi Kasei Corp., core operating company Presidents, and SBU Presidents, a lecture was given by Prof. Takeshi Nakajyo of Chuo University, focusing on “integration of QMS with business.”
- (2) For Senior General Managers of Divisions, as the leaders of each business with ISO certification, a lecture was provided from the auditor’s point of view by a specialist invited from Union of Japanese Scientists and Engineers, in addition to a keynote lecture by Prof. Nakajyo.
- (3) For General Managers responsible for operations at each level, separate lectures were given by a specialist of the Japan Quality Assurance Organization outlining the 2015 revisions and effective actions for QMS.



Prof. Nakajyo giving his lecture to upper management

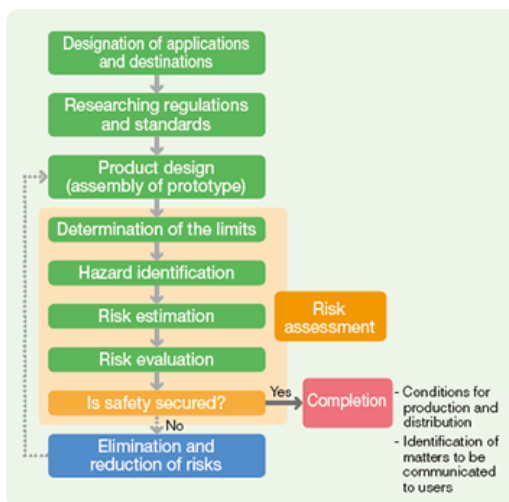


The seminar for Senior General Managers

## Outline of efforts for product safety

The Asahi Kasei Group routinely performs employee education on product liability (PL), chemical product safety, and equipment safety, along with risk assessment. In particular, we performed an in-house seminar in 2016 concerning responsibility for PL from the perspective of avoiding risks, including as related to supply contracts.

Product safety procedure for equipment



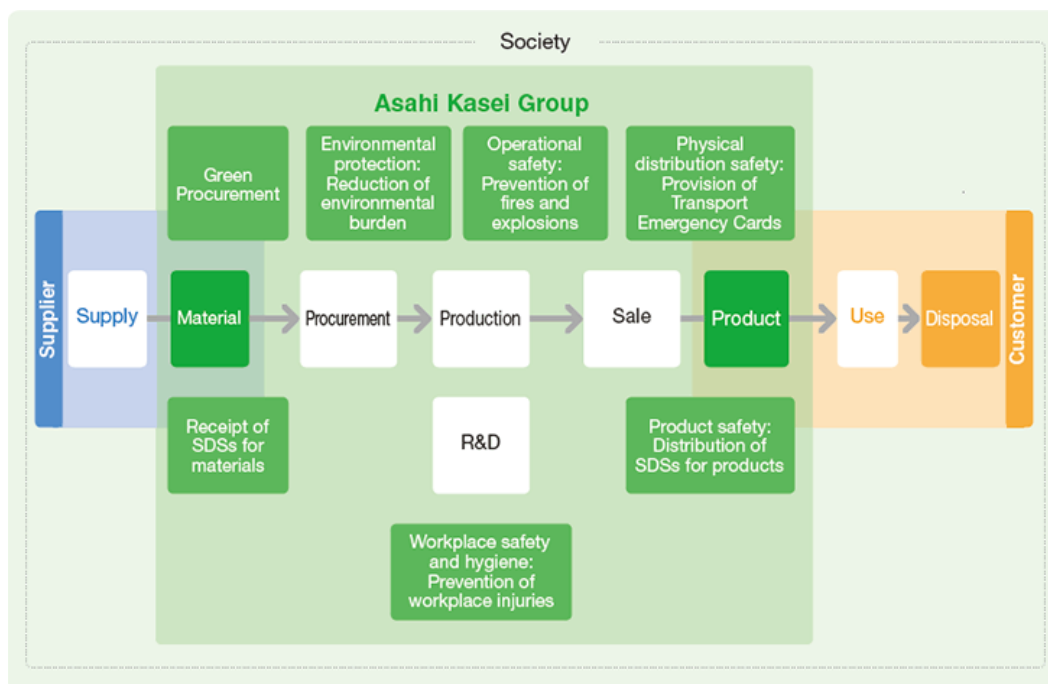
# Managing chemical substances

To ensure the safety of products and production processes in the Asahi Kasei Group, we maintain awareness of the properties of the chemical substances we use, and manage them strictly and appropriately throughout each phase, from materials procurement to production, use, and disposal.

## The Asahi Kasei Group's effort

Strict management and control of chemical substances is a key element in the effort to ensure environmental protection, operational safety, workplace safety and hygiene, health maintenance, and product safety. Chemical substances are managed at each stage from development to use and disposal, as shown below.

Chemical substance management flow



## Materials purchase

When purchasing materials, information related to the safety of chemical substances is received from the supplier. This information serves as a guide to safe storage and handling.

## Production

The safety of the local community and the protection of the environment are secured by proper handling of chemical substances, including intermediates, to suppress environmental release (see [Environmental protection](#)) and to prevent fires, explosions, and leaks (see [Operational safety](#)). The health of employees is protected by performing sound risk assessment for chemical substances and preventing workplace exposure to hazardous substances.

## Use and disposal

Guidance for proper use and disposal of chemical substances and chemical products is provided in Safety Data Sheets (SDSs), technical bulletins, and product brochures. Transport Emergency Cards are issued to guide the proper environmental and safety response in the event of an accident during physical distribution.

## Research and development, education and training

The management of chemical substances begins with R&D, which is guided throughout every stage by a commitment to developing products and process characterized by safe, environmentally sound production, handling, and use.

The Asahi Kasei Group conducts extensive education and training for all personnel in research, manufacturing, and sales, to share information on the latest chemical regulations\* both in Japan and overseas and study how to respond to them, and to introduce the latest chemical management subjects.

\* Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture etc. (Chemical Substance Control Law), Industrial Safety and Health Act, Product Liability Act, etc.

## Global trends on management of chemical substances

The Asahi Kasei Group is enhancing the management of chemical substances in accordance with relevant global trends. Many international organizations and private-sector associations are promoting chemical management based on risk assessment and advancing product stewardship in supply chains.

Developments in management of chemical substances

| Organization | Related Items  | Development   |
|--------------|--|---|
| UN           | Resolutions at international conferences concerning global environment | <ul style="list-style-type: none"> <li>● Resolution to minimize adverse effects on human health and the environment due to production, handling, and use of chemical substance; implementation of Action Plans to achieve certain targets by 2020</li> <li>● Implementation of Globally Harmonized System (GHS) for the classification and labeling of chemicals</li> </ul> |
| OECD         | Safety checks on existing chemicals                                    | <ul style="list-style-type: none"> <li>● Collection of safety data under the High Production Volume (HPV) Chemicals initiative by each member country and its chemical industry</li> </ul>  |
| EU           | Implement new regulation on chemicals                                  | <ul style="list-style-type: none"> <li>● REACH Regulation for the registration, evaluation, authorization, and restriction of chemicals</li> <li>● RoHS Directive for the restriction of the use of certain hazardous substances in electrical and electronic equipment</li> </ul>  |

### Committing to the RC Global Charter

On May 30, 2008, the President of Asahi Kasei Corp. signed a letter of commitment to the Responsible Care Global Charter (RCGC) on behalf of the Asahi Kasei Group, indicating our recognition of the importance of RC and especially chemical substance control. The RCGC was launched by the International Council of Chemical Associations (ICCA) with a UN resolution. When the RC Global Charter was amended in 2014, the President of Asahi Kasei Corp. again signed it on November 19, 2014.

## Industry-wide initiatives

### Japan Initiative of Product Stewardship

The Japan Initiative of Product Stewardship (JIPS)\* is a voluntary program by the JCIA to promote voluntary risk assessment and management of chemical substances, and to encourage enhanced product stewardship. In fiscal 2016, Asahi Kasei continued its active involvement in the JIPS Implementation Panel, supporting efforts to communicate information and taking part in activities in accordance with the panel's schedule.

Going forward, we will apply our guidance-based risk assessment work within the Asahi Kasei Group to promote further disclosures of risk assessments and safety summaries as we advance full-scale implementation. Through our involvement in JIPS activities, we will share information both internally and externally on the Asahi Kasei Group's chemical management activities, contributing to environmental protection.

\*JIPS (Japan Initiative of Product Stewardship) is a chemical industry initiative promoted by the Japan Chemical Industry Association to minimize chemical risks with the aim of achieving the 2020 targets set by the World Summit on Sustainable Development.

### Globally Harmonized System (GHS)\*

We are advancing a program to classify the hazards of all of our chemical products in accordance with GHS categories, and revise our SDSs and label our products with safety information accordingly.

\*Globally Harmonized System of Classification and Labeling of Chemicals (GHS): An international system of standardized hazard categories for chemical products, together with harmonized labeling.

## REACH compliance<sup>1</sup>

We conduct internal education and training on REACH requirements and periodically hold meetings among related parties. To fulfil our obligations related to SVHC<sup>2</sup> which include transmission of information, we gather information on chemical substances that are newly added as candidates for authorized regulation, and provide it to the users who request it. At the same time, we continue to move forward with preparations for CLP regulations<sup>3</sup>.

- 1 REACH compliance: Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) is a regulation in Europe on chemical substances. It obliges registration of the usage and safety of chemical substances imported to or produced in Europe. Substances judged to pose high risks are subject to authorization and restriction.
- 2 SVHC: Substances of Very High Concern. Substances added to a list of candidates for authorized regulation.
- 3 CLP regulations: CLP is a regulation in Europe on classification, labeling, and packaging of substances and mixtures in accordance with GHS.

## Joint Article Management Program (JAMP)

As an active member of JAMP, we participate in the development of systems to manage chemical substance information as well as revision of the list of applicable substances. We also convey relevant information throughout the supply chain to help establish JAMP as a widely used tool. In fiscal 2016, we started to use a tool of information transmission compatible with chemSHERPA, a new scheme by Ministry of Economy, Trade and Industry. We are working to smoothly transition from JAMP to chemSHERPA during the two-year period starting in fiscal 2016.

As a major upstream company, we will continue to work with the JAMP Office toward the greater adoption of the JAMP-IT platform as a means of information sharing.



## Organizations implementing Responsible Care

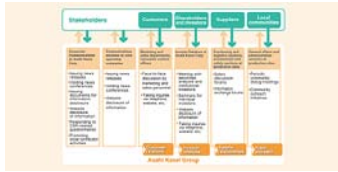
| Prefecture                            | Location                                 | Business category   | Company  | Plant, laboratory, or department  | Main products/business line  |
|---------------------------------------|--|---|--|---|--|
| Gunma                                 | Ota                                      | Chemicals   | Asahi Kasei Pax Corp.  | Gunma Plant   | Molded plastic containers  |
| Ibaraki                               | Kasama                                   | Chemicals   | Asahi Kasei Metals Ltd.  | Tomobe Plant  | Aluminum paste   |
|                                       |  |   | Asahi SKB Co., Ltd.  | –   | Shotgun cartridges, igniters   |
|                                       | Sakai                                    | Construction Materials  | Asahi Kasei Construction Materials Corp.                                     | Sakai Plant   | Autoclaved aerated concrete panels   |
|                                       |  |   | Sakai Kako Co., Ltd.   | Neoma Foam Plant<br>Materials Tech. Dept.   | Phenolic foam insulation panels<br>Improvement of construction materials and development of new products                                   |
| Tochigi                               | Mibu                                     | Chemicals   | Asahi Kasei Color Tech Co., Ltd.   | Mibu Plant  | Plastic coloring & compounding   |
| Saitama                               | Kamisato                                 | Chemicals   | Asahi Kasei Techno Plus Co., Ltd.  | Saitama Plant   | Molded plastic products  |
|                                       | Ageo                                     | Chemicals   | Asahi Kasei Pax Corp.  | Ageo Plant  | Film lamination  |
|                                       | Kawagoe                                  | Health Care   | Med-Tech Inc.  | –   | Manufacture and sale of medical devices  |
| Yamanashi                             | Fujiyoshida                              | Fibers  | Fuji Seisen Co., Ltd.  | –   | Dyeing and finishing of yarns and fabrics  |
| Chiba                                 | Chiba                                    | Chemicals   | Asahi Kasei Corp.  | Chiba Plant   | Acrylic resin and polystyrene resin  |
|                                       |  |   | –  | Compound Prod. Coordination Dept.   | Development of compound production technology, support for processing facilities   |
|                                       |  |   | –  | Performance Plastics Dev. Dept.   | Applied research for performance plastics and plastic processing   |
|                                       |  |   | Asahi Kasei Color Tech Co., Ltd.   | Sodegaura Plant   | R&D for plastic compounding technology   |
|                                       |  |   | PS Japan Corp.   | Chiba Plant   | Product management and production technology development for polystyrene   |
|                                       |  | Asahi Kasei Energy Service Corp.  | –  | Operation of power plant of Nakasode Clean Power Corp. and Shin Nakasode Power Corp.                      |  |
|                                       |  | Electronics   | Asahi Kasei Corp.  | Electronics & Functional Products Div.  | R&D for plastic optical fiber  |
|                                       |  | Asahi Kasei EMS Co., Ltd.   | Chiba Plant  | Plastic optical fiber   |  |
|                                       |  | Others  | Asahi Kasei Advance Corp.  | Kashiwa PDC   | Processing of construction materials   |
|                                       |  | Tokyo   | Tokyo  | Chemicals   | Asahi Kasei Home Products Corp.  |
| Electronics                           | Sun Delta Corp.                          |   |  | –   | Sale of synthetic resin products   |
| Construction Materials                | Asahi Kasei Foundation Systems Co., Ltd. |   |  | –   | Installation of piles  |
| Asahi Kasei Extech Corp.              | –  |   |  | Installation of exterior wall panels  |  |
| Others                                | Sun Associates Co., Ltd.                 |   |  | –   | Technical information searching, patent and trademark application and management   |
| Asahi Kasei Advance Corp.             | –  |   |  | Trading company handling fibers, resins, chemicals, construction materials, etc. of Asahi Kasei           |  |
| Asahi Kasei Create Co., Ltd.          | –  |   |  | Management and sales of real estate, insurance agency, subcontracted office work                          |  |
| Asahi Kasei Amidas Co., Ltd.          | –  |   |  | Personnel placement, agency and training; ISO consulting  |  |
| Asahi Kasei Ability Corp.             | –  |   |  | Printing, bookbinding, and office work  |  |
| Asahi Research Center Co., Ltd.       | –  |   |  | Information and analysis  |  |
| Asahi Kasei Benefits Management Corp. | –  | Company housing, recreational facilities                                  |  |   |  |
| Kanagawa                              | Kawasaki                                 | Chemicals   | Asahi Kasei Corp.  | Monomers Prod. Dept.  | Methyl methacrylate, cyclohexyl methacrylate, acetonitrile   |
|                                       |  |   | –  | ABS & SB Latex Prod. Dept.  | Styrene-acrylonitrile resin, styrene-butadiene latex   |
|                                       |  |   | –  | Synthetic Rubber Prod. Dept.  | Synthetic rubber, utilities (electricity, steam, water)  |
|                                       |  |   | –  | Ion Exchange Membranes Prod. Dept.  | Ion-exchange membranes   |
|                                       |  |   | –  | R&D units   | Creation of new high performance materials, R&D for performance products and systems, applied research for plastics and plastic processing |
|                                       |  | PS Japan Corp.  | R&D Dept.  | Polystyrene R&D   |  |
|                                       |  | R&D   | Asahi Kasei Corp.  | Clean Energy Project  | Development of water electrolysis system   |
|                                       |  | –   | Performance Polymers Tech. Ctr.  | Development of performance polymer, resin processing technology, application development                  |  |
|                                       |  | Electronics   | Asahi Kasei Corp.  | Dev. Project  | Development of energy-related materials  |
|                                       |  | Others  | Asahi Kasei Engineering Corp.  | –   | Development, design, installation, inspection, and maintenance of equipment and systems  |
|                                       | Kawasaki                                 | Others  | Asahi Kasei Engineering Corp.  | –   | Plant, equipment, process engineering, and related work/development  |
|                                       | Atsugi                                   | R&D   | Asahi Kasei Corp.  | Synergistic Solutions Initiative  | Establishment of new solution-oriented businesses  |
|                                       | Shizuoka                                 | Fuji  | Chemicals  | Asahi Kasei Corp.   | Microza Plant  |
| –                                     |  |   |  | Fuji Power Supply Dept.   | Utilities (electricity, steam, water)  |
| Homes                                 |  |   | Asahi Kasei Homes Corp.  | Housing Tech. R&D Labs.   | R&D to actualize and advance the Long Life Home  |
| Health Care                           |  |   | Asahi Kasei Pharma Corp.   | Fuji Pharmaceuticals Plant  | Bulk pharmaceuticals   |
|                                       |  |   | Asahi Kasei Medical Co., Ltd.  | Bioprocess Div./Product Dev. Dept.  | Development of filters and absorbents for separation and purification in manufacture of biopharmaceuticals                                 |
| Electronics                           |  |   | Asahi Kasei Corp.  | Photoproducts Plant   | Liquid photosensitive resin, photosensitive printing plates  |
|                                       |  |   |  | Electronics Materials Plant   | Photosensitive polyimide production and development  |
|                                       |  |   |  | Fuji 2nd Plant  | Photosensitive dry film, fuel cell materials   |
|                                       |  |   |  | WGF Project   | Optical materials and components   |
|                                       |  |   |  | R&D Planning and Business Dev.  | Development of products in the Material sector   |
|                                       |  | UVC Project   |  | Development of UVC LEDs   |  |
|                                       |  | Corporate Production Tech.  |  | Design/construction/development of facilities, inspection/maintenance, development of information systems |  |
|                                       |  | R&D units   |  | Development of products in the Material sector  |  |
| Asahi Kasei Microdevices Corp.        |  | R&D Ctr.  | R&D for compound semiconductors  |   |  |
| Asahi Kasei Epoxy Co., Ltd.           |  | Fab 3   | Wafers of Hall elements and infrared sensors                                 |   |  |
| Others                                |  | Asahi Kasei Engineering Corp.   | –  | Design, construction, and development of facilities and development of information systems                |  |
| Asahi Kasei Create Co., Ltd.          |  | –   | Insurance agency   |   |  |
| Asahi Kasei Amidas Co., Ltd.          |  | –   | Training, consulting, personnel placement                                    |   |  |
| Asahi Kasei Ability Corp.             |  | –   | Delivery of mail, guidance for obtaining qualifications and training         |   |  |
| Asahi Kasei Benefits Management Corp. |  | –   | Management of benefits   |   |  |
| R&D                                   | Asahi Kasei Corp.                        | R&D Ctr.  | Medium to long term R&D, advancement of synergy and creation of new business |   |  |
| –                                     | Healthcare R&D Ctr.                      | Health Care sector R&D (diagnostic reagents, regenerative medicine, etc.) |  |   |  |
| –                                     | Performance Materials Tech. Ctr.         | R&D for technologies and products related to Performance Materials        |  |   |  |
| –                                     | Analysis & Simulation Ctr.               | Analysis and computer simulation  |  |   |  |
| Ohito                                 | Health Care                              | Asahi Kasei Pharma Corp.  | Ohito Pharmaceuticals Plant  | Pharmaceutical intermediates  |  |
|                                       |  |   | Ohito Diagnostics Plant  | Diagnostic enzymes, diagnostic reagent kits   |  |
|                                       |  |   | Pharmaceuticals Research Ctr.  | New pharmaceuticals R&D   |  |
|                                       |  |   | –  | Management of benefits  |  |
| Asahi Kasei Benefits Management Corp. | –  | Measurement, evaluation, analysis, clinical testing                       |  |   |  |
| Toyo Kensa Center Co., Ltd.           | –  | Insurance agency  |  |   |  |
| Asahi Kasei Create Co., Ltd.          | –  | –   |  |   |  |
| Aichi                                 | Miyoshi                                  | Health Care   | Asahi Kasei Pharma Corp.   | Nagoya Pharmaceuticals Plant  | Pharmaceuticals  |
|                                       |  |   | –  | –   | –  |
| Gifu                                  | Hozumi                                   | Construction Materials  | Asahi Kasei Construction Materials Corp.                                     | Hozumi Plant  | Autoclaved aerated concrete panels   |
|                                       |  |   | Hozumi Kako Co., Ltd.  | –   | Construction materials processing  |
| Ishikawa                              | Hakui                                    | Others  | Daiwa Sizing Co., Ltd.   | –   | Processing and sale of synthetic fibers  |
| Fukui                                 | Echizen                                  | Fibers  | Kyokujitsu Textile Mills Co., Ltd.   | –   | Woven fabrics  |
|                                       | Fukui                                    | Others  | Asahi Kasei Advance Corp.  | –   | Trading company handling fibers, resins, chemicals, construction materials, etc. of Asahi Kasei  |
|                                       |  |   | Asahi Kasei Advance Fukui Corp.  | –   | Processing of industrial materials and nonwovens   |
|                                       | Awara                                    | Others  | Asahi Kasei Advance Corp.  | Kanazu Logistics Center   | Storage of fiber products  |



| Prefecture | Location                    | Business category                            | Company                                  | Plant, laboratory, or department                  | Main products/business line   |   |  |
|------------|-----------------------------|--|--|---|---|---|--|
| Shiga      | Moriyama                    | Chemicals                                    | Asahi Kasei Corp.                        | Moriyama Power Supply Dept.                       | Utilities (electricity, steam, water)   |   |  |
|            |                             | Fibers                                       | Asahi Kasei Corp.                        | Spunbond Plant                                    | Spunbond  |   |  |
|            |                             |  |  | Roica Plant                                       | Elastic polyurethane filament   |   |  |
|            |                             |  |  | R&D Lab. for Applied Product                      | Apparel and industrial functional textiles R&D  |   |  |
|            |                             | Electronics                                  | Asahi Kasei Corp.                        | Hipore Plant                                      | Microporous membrane  |   |  |
|            |                             |  |  | Electronics Materials Prod. Dept.                 | Photosensitive polyimide  |   |  |
|            |                             |  |  | Hipore R&D Dept.                                  | Development of electronic and energy-related materials  |   |  |
|            |                             |  | Asahi-Schwebel Co., Ltd.                 | Moriyama Plant                                    | Glass fabric  |   |  |
|            |                             |  | Asahi Kasei Amidas Co., Ltd.             | Moriyama Office                                   | Contract work   |   |  |
|            |                             |  | Asahi Kasei Engineering Co., Ltd.        | -   | Development, design, installation, inspection, and maintenance of equipment and systems         |   |  |
| Takashima  | Material                    | Asahi Kasei Corp.                            | Aibano Branch                            | Metal cladding                                    |   |   |  |
| Higashiomi | Homes                       | Asahi Kasei Jyuko Co., Ltd.                  | Shiga Plant                              | Steel frames, roofing, insulation, opening panels |   |   |  |
| Mie        | Suzuka                      | Chemicals                                    | Asahi Kasei Corp.                        | Suzuka Plant                                      | Cling film, plastic foam and film   |   |  |
|            |                             |  | Suzuka Sun Business Co., Ltd.            | -   | Plastic processing  |   |  |
|            |                             | Sundic Inc.                                  | Mie Plant                                | Polystyrene sheet                                 |   |   |  |
| Wakayama   | Gobo                        | Chemicals                                    | Asahi Kasei Corp.                        | Wakayama Plant                                    | Acrylic latex   |   |  |
| Osaka      | Osaka                       | Chemicals                                    | Asahi Kasei Finechem Co., Ltd.           | Osaka Plant                                       | Specialty chemicals   |   |  |
|            |                             | Others                                       | Asahi Kasei Advance Corp.                | -   | Trading company handling fibers, resins, chemicals, construction materials, etc. of Asahi Kasei |   |  |
| Hyogo      | Ono                         | Chemicals                                    | Asahi Kasei Pax Corp.                    | Ono Plant   | Molded plastic containers   |   |  |
| Okayama    | Mizushima                   | Chemicals                                    | Asahi Kasei Corp.                        | Monomers Prod. Dept. 1                            | Cyclohexanol, cyclohexane, cyclohexene, pyrolysis gasoline                                      |   |  |
|            |                             |  |  | Monomers Prod. Dept. 2                            | Acrylonitrile, methacrylonitrile, acetonitrile, styrene, polycarbonatediol                      |   |  |
|            |                             |  |  | Polymers Prod. Dept. 2                            | High density polyethylene, low density polyethylene, polyacetal                                 |   |  |
|            |                             |  |  | Polyolefins Development Dept.                     | R&D on polyolefins  |   |  |
|            |                             |  |  | Tenac Dev. Dept.                                  | R&D on polyacetal   |   |  |
|            |                             |  |  | Power Supply Dept.                                | Utilities (electricity, steam, water)   |   |  |
|            |                             | R&D  | Asahi Kasei Corp.                        | Chemistry & Chemical Process Lab.                 | Research on chemical processes and functional products  |   |  |
|            |                             |  | PS Japan Corp.                           | Mizushima Plant                                   | Polystyrene   |   |  |
|            |                             | Others                                       | Asahi Kasei Engineering Corp.            | -   | Development, design, installation, inspection, and maintenance of equipment and systems         |   |  |
|            |                             |  | Asahi Kasei AS Tech Co., Ltd.            | -   | Processing of polyethylene pipe   |   |  |
| Yamaguchi  | Iwakuni                     | Construction Materials                       | Asahi Kasei Construction Materials Corp. | Iwakuni Plant                                     | Autoclaved aerated concrete panels  |   |  |
|            |                             |  | Kyowa Kogyo Co., Ltd.                    | -   | Construction materials processing   |   |  |
|            |                             |  | Iwakuni Sun Products Co., Ltd.           | -   | Construction materials processing   |   |  |
| Fukuoka    | Chikushino                  | Chemicals                                    | Asahi Kasei Corp.                        | Chikushino Plant                                  | Metal cladding  |   |  |
| Oita       | Oita                        | Chemicals                                    | Asahi Kasei Corp.                        | Oita Plant  | Defense explosives  |   |  |
|            |                             |  | Japan Elastomer Co., Ltd.                | Oita Plant  | Synthetic rubber  |   |  |
|            |                             | Health Care                                  | Asahi Kasei Medical MT Corp.             | Sepacell Plant                                    | Leukocyte reduction filters   |   |  |
|            |                             |  |  | Planova Oita Plant                                | Virus removal filters   |   |  |
|            | Dialysis Products Plant     | Artificial kidneys and other medical devices |  |   |   |   |  |
|            | Therapeutic Apheresis Plant | Therapeutic apheresis devices                |  |   |   |   |  |
| Kumamoto   | Amakusa                     | Fibers                                       | Kyuasa Co., Ltd.                         | -   | Stockings and innerwear   |   |  |
|            | Yatsushiro                  | Others                                       | Asahi Kasei Advance Corp.                | Yatsushiro Chemical Center                        | Storage of caustic soda   |   |  |
| Miyazaki   | Nobeoka/Hyuga               | Chemicals                                    | Asahi Kasei Corp.                        | Atago Plant                                       | Nitric acid, caustic soda, chlorine, hydrochloric acid, vinylidene chloride resin and latex     |   |  |
|            |                             |  |  | Electrolysis Systems Tech. Dept.                  | Electrolyzers for chlor-alkali  |   |  |
|            |                             |  |  | Ceolus Plant                                      | Microcrystalline cellulose  |   |  |
|            |                             |  |  | Leona Plastics & Materials Plant                  | AH salt, adipic acid, hexamethylenediamine, polyamide 66  |   |  |
|            |                             |  |  | Fastening Prod. Planning & Tech. Dept.            | Resin anchors   |   |  |
|            |                             |  |  | Hyuga Chemicals Plant                             | Coating materials   |   |  |
|            |                             |  |  | Nobeoka Power Supply Dept.                        | Utilities (electricity, steam, water)   |   |  |
|            |                             |  |  |   | Asahi Kasei New Port Terminal Co., Ltd.   | -   | Receiving and storage of fuel and feedstocks             |
|            |                             |  |  |   | Nobeoka Plastic Processing Co., Ltd.  | -   | Polyamide 66 compounding                                 |
|            |                             |  |  |   | Asahi Chemitech Co., Ltd.   | -   | Resin anchors, detonator housings/leads                  |
|            |                             |  |  |   | Asahi Kasei NS Energy Corp.   | -   | Electricity and steam                                    |
|            |                             |  |  |   | Asahi Kasei Hydropower Technoservice Co., Ltd.  | -   | Operation and facilities management of hydropower plants |
|            |                             |  |  |   | Asahi Kasei Finechem Co., Ltd.  | Nobeoka Plant   | Specialty chemicals                                      |
|            |                             |  |  |   |   | Nobeoka Pharmaceuticals Plant   | Bulk pharmaceuticals                                     |
|            |                             |  |  |   | Kayaku Japan Co., Ltd.  | Tohmi Plant   | Industrial explosives                                    |
|            |                             |  |  |   |   | Detonator Plant   | Detonators   |
|            |                             |  |  | Health Care                                       | Asahi Kasei Medical Co., Ltd.   | Medical Tech. and Materials Lab.  | R&D for medical materials                                |
|            |                             |  |  |   | Asahi Kasei Medical MT Corp.  | Tsunetomi Plant   | Artificial kidneys and other medical devices             |
|            |                             |  |  |   |   | Okatomi Plant   | Artificial kidneys and other medical devices             |
|            |                             |  |  |   |   | Planova Plant   | Virus removal filters                                    |
|            |                             | Fibers                                       | Asahi Kasei Corp.                        | Leona Filament Plant                              | Nylon 66 filament   |   |  |
|            |                             |  |  | Bemberg Plant                                     | Cuprammonium rayon, nonwoven cellulose filament   |   |  |
|            |                             |  |  | Nonwovens Plant                                   | Artificial suede, melt-blown and spunlace nonwovens   |   |  |
|            |                             |  |  | R&D Lab. for Fibers & Textiles Tech.              | R&D for new fibers  |   |  |
|            |                             |  |  |   | Eltas Plant   | Spunbond  |  |
|            |                             |  |  |   | Asahi Kasei Fibers Nobeoka Co., Ltd.  | -   | Cellulosic filament, synthetic nonwovens                 |
|            |                             |  |  |   | Asahi Kasei Leona Filament Co., Ltd.  | -   | Nylon 66 filament  |
|            |                             |  |  |   | Asahi Cord Co., Ltd.  | -   | Processing of nylon 66 filament                          |
|            |                             |  |  |   | Asahiozu Corp.  | -   | Processing of nonwoven cellulosic filament               |
|            |                             |  |  | Electronics                                       | Asahi Kasei Corp.   | Hipore Hyuga Plant  | Microporous membrane                                     |
|            |                             | Asahi Kasei Microdevices Corp.               | Fab 1                                    |   |   | Hall elements   |  |
|            |                             |  | Fab 2                                    |   |   | LSIs  |  |
|            |                             |  | Fab FP                                   |   |   | Fine pattern coils  |  |
|            |                             |  | Asahi Kasei Electronics Co., Ltd         |   |   | Nobeoka Manufacturing   | Magnetic sensors   |
|            |                             |  | Asahi Kasei Microsystems Co., Ltd        |   |   | Nobeoka Manufacturing   | LSIs   |
|            |                             |  | Asahi Kasei FP Corp.                     |   |   | -   | Fine pattern coils                                       |
|            |                             |  | Asahi Kasei Technosystem Co., Ltd.       |   |   | Nobeoka Plant   | Plant diagnostic and environmental surveillance devices  |
|            |                             |  | Asahi Kasei EMS Co., Ltd.                |   |   | Nobeoka Plant   | Pellicles  |
|            |                             | Others                                       | Asahi Kasei Corp.                        |   |   | Asahi Kasei Kankyoujigyou Co., Ltd.   | -  |
|            |                             |  |  | Asahi Kasei Office One Co., Ltd.                  | -   | Utilization of Asahi Kasei Group assets, subcontracting                                 |  |
|            |                             |  |  | New Asahi Services Co., Ltd.                      | -   | Insurance agency, cellular phone sales, bowling alley                                   |  |
|            |                             |  |  | Asahi Kasei Engineering Corp.                     | -   | Development, design, installation, inspection, and maintenance of equipment and systems |  |
|            |                             |  |  | Asahi Kasei Networks Corp.                        | -   | Printing, bookbinding, and office work  |  |
|            |                             |  |  | Asahi Kasei Networks Corp.                        | -   | IT-related business   |  |
|            |                             |  |  | Cable Media Waiwai Co., Ltd.                      | -   | Cable TV  |  |
|            |                             |  |  | Asahi Kasei Advance Corp.                         | -   | Sale of pharmaceuticals (reagents)  |  |
|            |                             |  |  | R&D   | Asahi Kasei Corp.   | Fibers & Textiles Tech. Ctr.  | R&D for fibers & textiles                                |
|            |                             |  |  | Miyazaki  | Others  | Asahi Kasei Advance Corp.   | Miyazaki Chemical Center                                 |

# Corporate Citizenship

We are committed to advancing in harmony with society from a global perspective through fair information disclosure and the proactive employment of management resources for corporate responsibility and citizenship.



## Stakeholder dialog

Different corporate organs hold responsibility for fair and open dialog with each of our different groups of stakeholders.



## Customer relations

We strive for sincere communication with the customer as vital to the provision of valuable products, technologies, and services.



## Investor relations

We strive to disclose information in a timely and fair manner to enable our investors to gain an accurate understanding of the Asahi Kasei Group.



## Supplier relationships

A relationship of mutual trust with our suppliers is fostered through fair and principled purchasing practices based on respect for the environment and human rights.



## Public outreach

We work to maintain effective dialog and communication with community members.

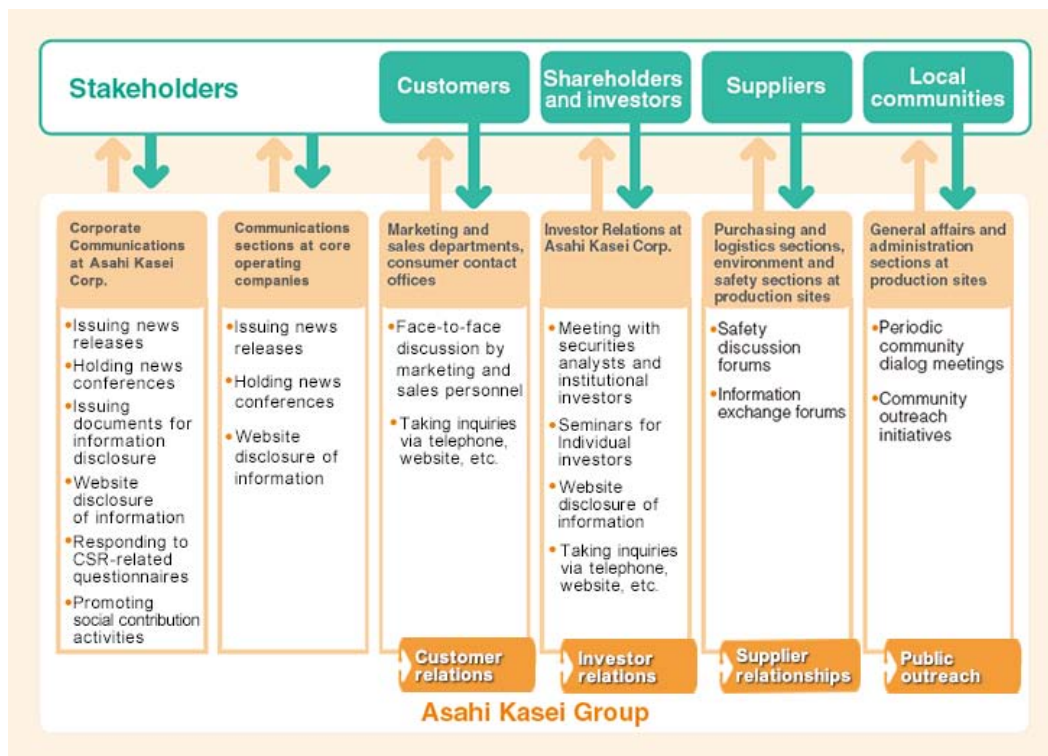


## Community fellowship

The Asahi Kasei Group is involved in a wide range of community-focused activities inside and outside Japan, under our Community Fellowship Policy.

# Stakeholder dialog

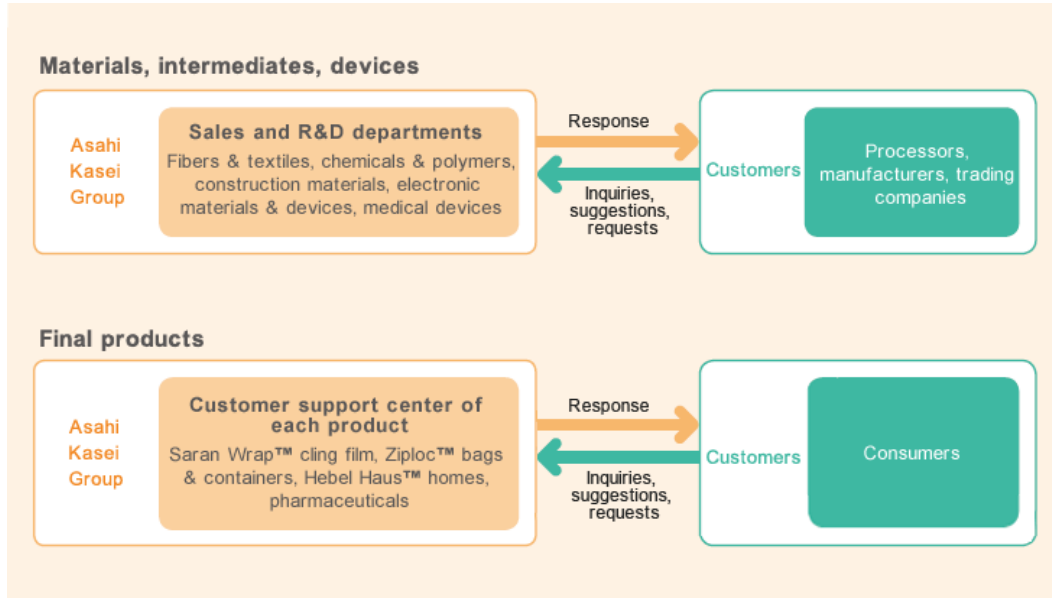
Different corporate organs hold responsibility for fair and open dialog with each of our different groups of stakeholders.



# Customer relations

We highly appreciate frank and honest feedback from the customer, considering it vital to our effort to enhance the quality and value of our products and services. We believe that it is by maintaining customer satisfaction that our products and services contribute to society.

Communication with customers



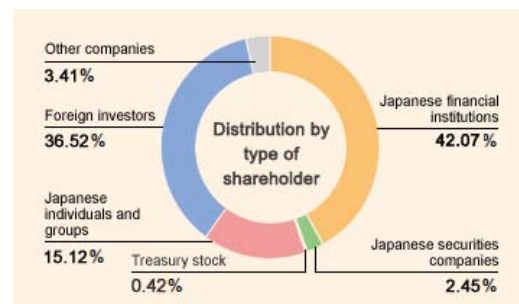
## Investor relations

We strive to disclose information in a timely and fair manner to enable our domestic and international investors to gain an accurate understanding of the Asahi Kasei Group.

### Shareholder distribution

Asahi Kasei Corp. has some 80 thousand shareholders. At the end of March 2017, approximately 42% of our shares were held by Japanese financial institutions, 15% by Japanese individuals and groups, and 37% by foreign investors. The total dividend for fiscal 2016 was 24 yen per share.

Distribution by type of shareholder (as of March 31, 2017)



### IR Meetings with institutional investors and securities analysts

In fiscal 2016, Investor Relations (IR) held 210 meetings with institutional investors and securities analysts in Japan, including quarterly results briefings and an annual management briefing with the President. To deepen understanding of Asahi Kasei among investors, we held a briefing on the Material sector as well as individual meetings. In addition, 79 meetings were held overseas.

We directly provided information to institutional investors and securities analysts through such meetings, with cumulative attendance of 1,308 during fiscal 2016. We also provide a wide variety of information for investors on our website.

### Seminars for individual investors

To provide individual investors with a better understanding of the operations of the Asahi Kasei Group, 5 seminars were held in fiscal 2016, with cumulative attendance of 1,111 individual investors\*. We will continue to provide accurate and timely information to individual investors through direct communications, the corporate website, and articles published in magazines for individual investors.

\*Excluding participants of the 125th Ordinary General Meeting of Shareholders.



President Hideki Kobori speaks at a seminar held in Osaka for individual investors

# Supplier relationships

A relationship of mutual trust with our suppliers is fostered through fair and principled purchasing practices based on regulatory compliance and respect for the environment and human rights.

## The Asahi Kasei Group Purchasing and Procurement Policy

Purchasing departments throughout the Asahi Kasei Group regard suppliers as important partners and work to build relationships with them based on sincerity in accordance with our Group Philosophy. To this end, we are placing greater emphasis on CSR in accordance with our Procurement Policy.

The Asahi Kasei Group Purchasing and Procurement Policy

### Basic Policy

#### 1 Compliance

We uphold all laws relevant to purchasing transactions as well as the Asahi Kasei Group's internal regulations.

#### 2 Fairness and impartiality

Selection of bids and conclusion of contracts are performed in a fair and impartial manner.

#### 3 Open door principle

We provide fair opportunities to any potential supplier, both domestic and overseas.

#### 4 CSR-focused procurement

We perform purchasing in close coordination with our group-wide activities for CSR.

#### 5 Partnership

We strive to deepen mutual understanding and build relationships of trust with our suppliers.

## Focus on CSR in purchasing and procurement

Our purchasing departments conduct a CSR survey every year in order to better understand our suppliers' efforts to promote CSR, and identify any areas where improvement may be requested.

In fiscal 2016, we asked 184 major suppliers of materials to participate in a CSR survey, and 177 of them responded. Survey results were scored on a scale, and feedback was given to the 177 responding suppliers including requests for improvement.

Survey items covered:

- CSR promotion systems
- Ethics and compliance
- Operational safety and environmental safety
- Risk management
- Stakeholder dialog
- Product safety and quality assurance
- Human rights and labor
- Information security management
- Intellectual property management

## Supplier relations at production sites

Safety seminars are periodically held at our principal production sites to discuss accident prevention and exchange information with suppliers.



A safety seminar in Nobeoka, Miyazaki Prefecture



## Public outreach

We work to honor and respect the local culture of each community where our operations are based, and to maintain effective dialog and communication with community members.

### Plant tours

We offer plant tours to provide better understanding of our operations and the measures we implement for the environment and safety. (Tours are not available at all plants.)



Plant tour for community members in Fuji, Shizuoka



Plant tour for students in Kawasaki, Kanagawa

### Dialog and interaction

Measures for community dialog and interaction include regularly held forums and meetings with representatives of local governments and members of local residents associations. We also open our gymnasiums, sports fields, parking lots, and other facilities for public use and enjoyment, and host a variety of events.



Community dialog meeting (Kawasaki, Kanagawa)



Local residents at a cherry blossom event (Suzuka, Mie)



Local residents enjoying the plant grounds (Izunokuni, Shizuoka)

## Neighborhood clean-up and greenery planting

Employees at our main production sites periodically clear the plant vicinities and nearby areas of litter, rubbish, and weeds as part of our interaction with the surrounding communities. We also actively participate in a variety of projects for planting trees and greenery both within plant grounds and in the surrounding area. Volunteer employees working at the Tokyo head office located in Chiyoda ward join the ward-wide cleaning activities.



Clean-up around the factory (Kawasaki, Kanagawa)



Clean-up at Lake Biwa (Moriyama, Shiga)



Clean-up at the head office (Chiyoda, Tokyo)



Tree planting in the community (Suzuka, Mie)

## Local emergency response initiatives

### Construction of evacuation towers

In fiscal 2013 we constructed two evacuation towers within our plant grounds in Nobeoka and Hyuga, Miyazaki Prefecture, to enable people to quickly reach a safe height in the event of a tsunami. The evacuation towers are available for use not only by our personnel, but also by nearby community members.



Evacuation tower in Nobeoka, Miyazaki Prefecture

### Installation of independent drinking water supply systems

We have installed independent drinking water supply systems at Asahi Kasei Group plant sites in Moriyama, Suzuka, and Nobeoka. The systems utilize our microfiltration membranes to purify deep well water. While serving to supply drinking water to personnel working at these sites on a daily basis, these systems also provide a vital independent backup as a secure source of safe drinking water for local communities in the event of a disaster.



Independent drinking water supply system in Moriyama, Shiga Prefecture

## Disaster volunteer organization

In Nobeoka, we have a disaster volunteer organization consisting of our personnel and retirees to perform disaster drills and emergency response support for the local community.



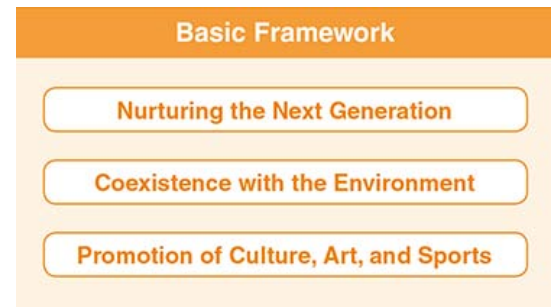
Training to use an automated external defibrillator (AED) in Nobeoka, Miyazaki Prefecture

# Community fellowship

The Asahi Kasei Group is involved in a wide range of community-focused activities in accordance with its Basic Framework focused on the three themes of Nurturing the Next Generation, Coexistence with the Environment, and Promotion of Culture, Art, and Sports, under our Community Fellowship Policy.

## Community Fellowship Policy

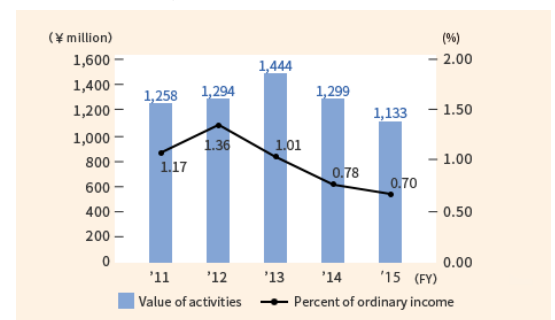
1. Effective utilization of our human resources and technologies to advance community fellowship based on the unique characteristics of the Asahi Kasei Group.
2. Striving for meaningful community fellowship actions with a constant awareness of our objectives and effectiveness.
3. Supporting and nurturing participation in community fellowship by employees, encouraging volunteerism and individual initiative.



## Value of community fellowship activities

We participate in the One-Percent Club of the Keidanren (Japan Business Federation), and convert our social contribution activities into monetary value by a method set forth in its annual Survey of Expenditure for Corporate Philanthropic Activities.

Value of community fellowship activities





## Nurturing the Next Generation

### School visits and science lab for students

To promote understanding and heighten interest in science and technology among elementary, junior high, and high school students, we visit schools and host visits by students at our plants to give explanations and demonstrations of science and technology and on environmental issues. We also support career development with occupational lectures and problem-solving training, and host visits by students to our offices. In fiscal 2016, a total of 3,408 students from 83 schools participated.



Nobeoka, Miyazaki Prefecture



Kurashiki, Okayama Prefecture



Kawasaki, Kanagawa Prefecture



Fuji, Shizuoka Prefecture



Moriyama, Shiga Prefecture



Izunokuni, Shizuoka Prefecture



Higashiomi, Shiga Prefecture



Zushi, Kanagawa Prefecture



Chiyoda Ward, Tokyo

## Holding exhibits and sponsoring science-related events

The Asahi Kasei Group provides sponsorship for science-related events that give children and their parents an opportunity to learn about science and chemistry in a fun way. In fiscal 2016, we exhibited at a children's chemistry experiment show. On October 23, we again exhibited at the Chemistry Day Children's Chemistry Experiment Show in Osaka.

We also continued to sponsor the Japan Science and Technology Agency's high-school chemistry tournament, which began in fiscal 2011. In fiscal 2016, 361 representative high school students from each of Japan's prefectures competed in chemistry knowledge and skills. We presented the Asahi Kasei Award, recognizing the school that had the best teamwork, to Akita High School.



Exhibit at the children's chemistry experiment show in Tokyo



Chemistry Day Children's Chemistry Experiment Show in Osaka



The award ceremony at the high-school chemistry tournament in Ibaraki

## Miraikan corporate partnership

Since fiscal 2008, the Asahi Kasei Group has been a corporate partner of the National Museum of Emerging Science and Innovation (Miraikan) led by scientist and former astronaut Dr. Mamoru Mohri. As a corporate partner, we work together with Miraikan to help cultivate interest in science and technology among children and other visitors.

Under this partnership, we have exhibited at exhibitions held by the Miraikan, donated products for use in demonstrations, and participated in various events.



The National Museum of Emerging Science and Innovation (Miraikan)

## Sponsoring educational programs on science and the environment by newspaper companies

The Asahi Kasei Group sponsors educational events organized by newspaper companies that provide children with an opportunity to learn about science and the environment.

## Supporting the Japan Student Science Awards

The Asahi Kasei Group was again the sole sponsor of The Yomiuri Shimbun newspaper's Japan Student Science Awards for fiscal 2016, including the Asahi Kasei Award, which are given in recognition of outstanding study of science at junior high schools and high schools.



Asahi Kasei President Hideki Kobori presenting the Asahi Kasei Award at the Japan Student Science Awards in Tokyo

## Planet Earth Classroom

We again provided sponsorship in fiscal 2016 for "Planet Earth Classroom," a series of environmentally themed events for elementary school students planned and managed by the Asahi Shimbun newspaper. We supported the events by editing an environmental study textbook for distribution to about 2,400 elementary schools and other educational institutions nationwide (215 thousand copies distributed), giving lectures focused on energy conservation at elementary schools, and dispatching personnel as instructors for environmental study events for families.



Lecture at "Planet Earth Classroom"



Environmental study event for elementary school students in Tokyo, and environmental study textbook



## Supporting young women in science and technology careers

In support of a national campaign to encourage young women to pursue careers in science and technology, we held an event for female high school students who are interested in such careers. The campaign led by Japanese government agencies and supported by the Keidanren aims to inform young women of career options in science and technology and support them in pursuing careers in these fields. Asahi Kasei endorses the objectives of this campaign, and began participating from the beginning.

On August 24, 2016, we held a laboratory tour for female high school students at our research complex in Fuji, Shizuoka, together with informal discussion with our female researchers, as part of this campaign. The event was attended by 17 students and 5 of their guardians from the Tokyo metropolitan area and the region around Fuji.

On August 26, 2016, we held a seminar at our head office in Tokyo attended by 12 female high school students interested in science and technology. Young female personnel working in pharmaceuticals gave presentations on the content of their work, which were followed by informal discussions in two groups.



Operating laboratory equipment



Discussion with female researchers

## Support for career education

Under the "Twice Plan" initiative of Twice Research Institute Co., Ltd., we took part in a "company intern" work program to support career education for junior high and high school students. In this program, about 5 companies visit a school, and the students form groups which pretend to be employees of the company they choose. Then, they are given tasks to solve by performing research and proposing product ideas, followed by presentations of results. Fiscal 2015 was our first year to take part, with 8 junior high and high schools choosing Asahi Kasei for their work program.



## Training programs and factory tours for school teachers

Asahi Kasei Group participates in a program by the Japan Institute for Social and Economic Affairs to provide school teachers with training at private-sector firms.

On July 26, 2016, 9 teachers from the board of education of Yokohama, Kanagawa, visited our Tokyo head office for an overall description of the Asahi Kasei Group and our CSR activities. On the following day, the teachers were given a tour of our Kawasaki Works, with a focus on disaster response facilities. Following an explanation of our research and production sections, we introduced our program to obtain improvements in people, systems, and equipment through the participation of all personnel. Lastly, we showed the teachers our safety training center and had them experience the training we provide to employees to secure safety in the operation of petrochemical production equipment.



Touring the drinking water supply system



Experiencing the training provided to employees at the safety training center

## Scholarship program

The Asahi Kasei Group established a scholarship program to help foster talent that will contribute to the advancement of science and technology in new fields. Applications are taken from students in masters courses, doctoral courses, and 6-year university courses specializing in chemistry, chemical engineering, mechanical engineering, civil engineering, architecture, control engineering, electrical engineering, electronics, high-current electricity, physics, IT, biology, pharmacology, medical science, and veterinary science.



## Coexistence with the Environment

### Forest planting at the Asahi Forest in Miyazaki

On April 8, 2017, Asahi Kasei planted trees at the Asahi Forest in Takachiho as part of a reforestation program organized by Miyazaki Prefecture. This was the 6th year of the project which aims to regenerate a broad-leaf forest where cedar and cypress had been cultivated previously. Some 530 people including Asahi Kasei Group employees, retirees, and local residents participated in the program, planting 2,050 trees such as oak, Japanese zelkova, maple, and Japanese chestnut oak over a 1 hectare area at an elevation of 1,300 meters.



### Firefly Watching Festival at the Asahi Woods of Life

Asahi Kasei held the 9th Firefly Watching Festival at the Asahi Woods of Life at its site in Fuji, Shizuoka Prefecture, on May 26–28, 2016. During the 3 days, some 3,100 people enjoyed the flickering lights of flying fireflies nurtured by Asahi Kasei employees in the biotope.



### Exhibiting at EcoPro 2016

The Asahi Kasei Group exhibited at "EcoPro 2016" organized by the Environmental Management Association for Industry and Nikkei Inc. The event was attended by some 170,000 people including businesspeople, consumers, elementary, junior high, high school, and college students, educators, government officials, and members of NPOs and NGOs. The Asahi Kasei exhibit focusing on our environmental products, technologies, and services, drew over 6,500 visitors.



The Asahi Kasei Group exhibit at EcoPro 2016

### Exhibiting at Biwako Business Messe 2016

In October 2016, the Asahi Kasei Group exhibited at "Biwako Business Messe 2016," an environmental business exhibition in Nagahama, Shiga Prefecture. Our exhibit was themed on environmental solutions of the Asahi Kasei Group that contribute to the preservation of water quality in Shiga Prefecture, showcasing products and technologies such as our phosphorus recovery systems, bipolar electro dialysis equipment to desalinate aqueous solutions and recover and concentrate valuable substances, oil leak detectors, and oil-water separation filters.



The Asahi Kasei Group exhibit at Biwako Business Messe 2016

## Disaster relief

### Support for areas affected by the 2017 flooding in northern Kyushu

To support the relief effort in areas affected by the 2017 flooding in northern Kyushu, we made donations of ¥5 million to the government of Oita Prefecture and to the Community Chest of Fukuoka, for a total of ¥10 million.

#### Blood donation

In fiscal 2016 we cooperated with the Japan Red Cross Society by hosting 30 blood donation drives at 16 of our office and plant locations around Japan. Each year, we aim to hold the blood donation drive at our Tokyo head office between February and March, when donated blood tends to be in short supply.



Blood donation at the Tokyo head office

## Community fellowship around the world

Many offices and production sites of the Asahi Kasei Group in the United States, Europe, China, Korea, Taiwan, and Southeast Asia, engage in a variety of community fellowship activities as suited to their individual circumstances and locations. These include neighborhood clean-up, support for welfare and education, and donation to local organizations and schools.

### Asahi Kasei Water Environment Preservation Foundation

We established the Asahi Kasei Water Environment Preservation Foundation in August 2009 to promote youth education and to support research in China related to the water environment. Since 2010 we have presented Water Environment Preservation Awards each year to people and companies that have contributed to preservation of the water environment in China.

In fiscal 2016, the China Foundation for Guangcai Program supported the commendation of individuals and groups for their contribution to preservation of the water environment in China. Four people from Asahi Kasei attended the award ceremony in Beijing, and in his address Shigetaka Yuki, General Manager of our Beijing Office, expressed his esteem for the award recipients while reviewing Asahi Kasei's environmental protection activities in China over the years. Established jointly with the China Foundation for Guangcai Program in 2009, the Asahi Kasei Water Environment Preservation Foundation awarded many individuals and groups in recognition of their contribution to protecting the water environment and prevention of pollution in China. The original plan was completed in 2015, and the activity of the Asahi Kasei Water Environment Preservation Foundation drew to a close. Henceforth we will continue to cooperate with efforts to support environmental protection in China.



Award Ceremony for the 2016 Best Public Service Award and 2016 Special Award from the Evaluation Committee

### Forest planting in China

Since June 2011, the Asahi Kasei Group and China Business News, China's leading business media group, have jointly advanced an environmental public service project to raise awareness in China for the preservation of natural forest and water environments. As part of the project, we participated in an afforestation program in the Horqin Desert of Inner Mongolia, planting 6,500 trees on April 15 and 16, 2016. This was the 6th year of the program, in which 33,000 trees have been planted in total.



Forest planting in China

## Promotion of Culture, Art, and Sports

### Corporate sports activities

Asahi Kasei has long supported athletic activity and maintains top-tier distance running and judo teams, with employees having competed in the Olympics nearly 50 times over the years. Our support for sports and athletics also includes sponsorship of the Golden Games in Nobeoka, a notable long-distance track competition in Japan, and provision of running and judo lessons for local students by members of our corporate distance running and judo teams. Also, we held community fellowship activities for children in the city of Nobeoka, where the Asahi Kasei's distance running and judo teams are based.

In March 2017 we held a long-distance relay for junior high students in the Miyazaki and Oita areas to run alongside young members of our distance running team. In February 2017 we held a judo workshop in Dusseldorf, Germany, our first judo workshop overseas. Shohei Ono and Takanori Nagase, members of our judo team and medalists at the Rio Olympics, served as instructors for the 184 attendees, mainly elementary school students.



The Golden Games in Nobeoka



Long-distance relay for junior high students



Takanori Nagase (left) and Shohei Ono (right) give students guidance at the judo workshop

### Asahi Kasei Himuka Cultural Foundation

The Asahi Kasei Himuka Cultural Foundation was established in 1985 to enrich the environment of day-to-day life and culture in Miyazaki Prefecture, the cradle of Asahi Kasei. A wide range of cultural activities include musical and dramatic events, support for local cultural promotion, and fostering familiarity with and understanding of folk culture.

In fiscal 2016, the foundation sponsored a concert by IlluminArt Philharmonic Orchestra, conducted by Ms. Tomomi Nishimoto, on October 16, 2016, and a special performance of "Rooting for Kumamoto!" by the Seiwa Bunraku traditional puppet show troupe on September 10, 2016, with all proceeds donated to the Seiwa Bunraku Preservation Society. The foundation also sponsored a performance at the Miyazaki International Music Festival on May 14, 2016, and a performance by the Shiki Theatre Company on February 2, 2017, for which 1,588 tickets were given free of charge to 5th year elementary school students in the northern part of Miyazaki Prefecture, together with their supervisors.



IlluminArt Philharmonic Orchestra, conducted by Ms. Tomomi Nishimoto  
© Hideki Shiozawa



Seiwa Bunraku traditional puppet show troupe performs "Rooting for Kumamoto!"  
(Photo by Seiwa Bunraku Preservation Society)



The Orchestra of Passion and the Earth performs at the 21st Miyazaki International Music Festival  
© K. Miura



A theatrical performance by the Shiki Theatre Company  
© Akihito Abe



# Respect for Employee Individuality

The Asahi Kasei Group considers fulfilling and satisfying working conditions and workplace culture, in which personnel feel motivated to achieve and take pride in their career, to be a key to business performance.

Our human resources policies are focused on the maintenance and reinforcement of a corporate culture emphasizing Asahi Kasei characteristics, the personal growth of each employee, and the creation and expansion of business through superior people and organizations, based on the understanding that the exceptional power of our people and organizations is the source of our competitive strength.

## Human Resources Principles

The Human Resources Principles of the Asahi Kasei Group are a distillation of the values and beliefs held in common by all employees, a key aspect of a corporate culture where personal growth and corporate development are mutually reinforcing.

## Corporate Commitment

The basic commitment to human resources is to provide the venue for a dynamic and fulfilling career as a part of a lively and growing corporate group.

## Basic Expectations

- Enterprise and growth through challenge and change
- Integrity and responsibility in action
- Respect for diversity

## Expectations of Leaders

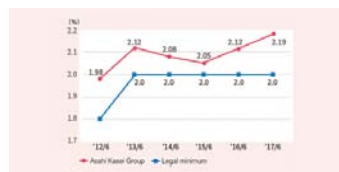
- Building the team, heightening performance and achievement
- Going beyond conventional boundaries, in thought and action
- Contributing to mutual development and growth

(Established March 2006)



### Human resources development

We provide various forms of support and opportunities for personnel to enhance their skill and ability to perform their duties.



### Valuing human rights and diversity

We prohibit unreasonable discrimination on the basis of gender, nationality, age, or otherwise, and strive to maintain a lively workplace culture which enables personnel to perform at their best.



### Balancing work and family life

We encourage personnel to reevaluate their working habits from the perspective of balancing work and family life, to raise productivity.



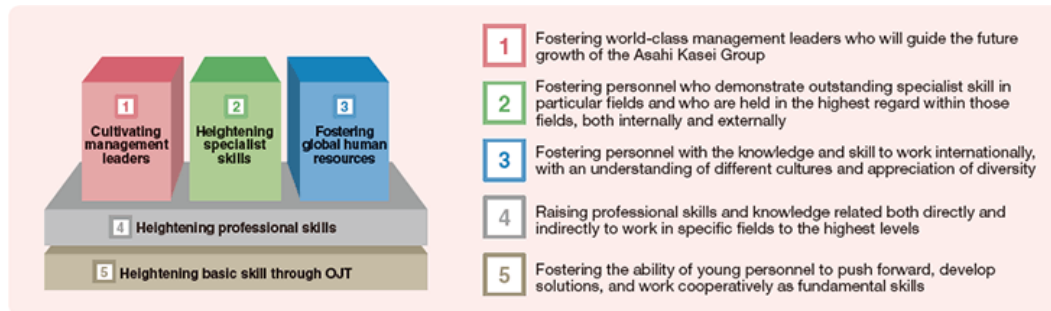
### Communication between management and labor

Discussions between management and labor are held on a regular basis to ensure that a constructive partnership is maintained.

# Human resources development

Human resources development at the Asahi Kasei Group is focused on the mutual growth of individuals and organizations. From fiscal 2016 we are placing greater emphasis on management by objectives (MBO) in training to enhance the management skills of section managers and general managers.

Two-foundation, three-pillar structure



## Human resource development

### A wide range of training programs

The human resources development program at the Asahi Kasei Group is structured with enhancing basic skills through OJT and heightening professional skills as a 2-layer foundation, with 3 pillars of cultivating management leaders, heightening specialist skills, and fostering global human resources. Employees are given a wide range of training to develop the skills needed to successfully advance their careers. A regular program of training is applied at key career stages beginning with hiring and extending through promotion to managerial positions. Other individual training programs such as for global management are implemented according to business need. Each core operating company also implements training programs to support the development of employee skills required for its specific field of business.

### Group Masters

The Asahi Kasei Group employs a "Group Masters" program to recognize employees who have developed and exercised extraordinary expertise and skills that hold universal value, and to facilitate their application throughout the Group. As of May 2017, 88 Group Masters are designated: 30 as Senior Group Experts, and 58 as Group Experts, with rank and remuneration commensurate with general manager and section manager, respectively.

To accelerate the creation of new businesses as a basic strategy of the "Cs for Tomorrow 2018" management initiative, we revised the system in fiscal 2017 for greater emphasis on the development and growth of engineers and technical personnel. The program is focused on reinforcing the specialized technical abilities of such personnel who will drive the creation of new businesses and the enhancement of established businesses.

### Development of global human resources

To support the acceleration of globalization under our "Cs for Tomorrow 2018" medium-term management initiative from the perspective of human resources, we are implementing measures such as internship programs for young personnel, and holding training sessions for personnel at overseas subsidiaries on subjects such as dissemination of corporate philosophy, intercultural communication, and management skills.

### Supporting independent study

In October 2003, the Asahi Kasei Group instituted a program to support independent study by employees. To encourage employees to acquire high level specialized or technological ability, the company will pay part of the cost of attending courses or lectures.

# Valuing human rights and diversity

## Basic policy

The Asahi Kasei Group Code of Conduct clearly stipulates that “we must respect individuals’ basic human rights and diversify, not discriminate on the basis of nationality, ancestry, race, ethnicity, religion, gender, ideology, age, physical characteristics, sexual orientation, employment status, form of contract, etc., nor condone such discrimination.” Human Resources leads the effort to ensure that there will be no unreasonable discrimination, to maintain a lively workplace culture which enables personnel to perform at their best, to advance employment of persons with disabilities, and to rehire personnel after mandatory retirement.

To prevent any harassment or discrimination, we implement training on corporate ethics to employees at each level—new hires, assistant managers, and managers. Ethics training is also implemented by business unit and by geographical area.

## Hiring

The Asahi Kasei Group is working to create new value for society by enabling living in health and comfort and harmony with the natural environment. We strive to hire motivated and capable personnel who will successfully execute our strategy on a global scale.

We continue to hire graduates from overseas universities every year, and the overall makeup of our personnel is becoming more global. We are also strengthening our ties to universities both in Japan and overseas, through career briefing sessions and student internships, as part of an ongoing effort to attract talent.

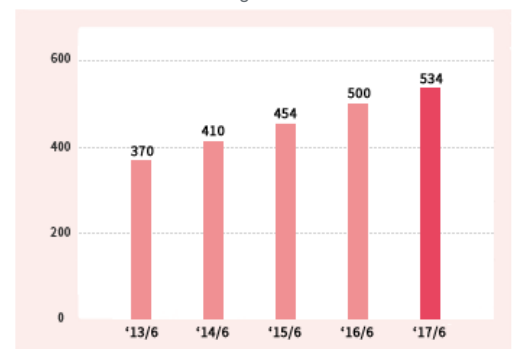
In April 2017, 379 new graduates were hired: 296 men and 83 women. In addition, 108 persons joined the Asahi Kasei Group as mid-career hires between April 2016 and March 2017.

## Expansion of opportunities for women

In 1993, we established a dedicated corporate organ (now Diversity Promotion Group) to promote equal opportunity, and have proactively increased the proportion of women hired and expanded the distribution of job assignments for women. While only five employees at the rank of manager or above were women in 1993, this has risen to 596 in June 2017. The variety of posts where women are assigned also continues to expand. To support female personnel in their careers, we provide a mentoring program, hold seminars on returning to work after maternity leave, and publish diversity-related articles in our internal magazine.

In fiscal 2016, we also formulated an action plan and targets in accordance with the Act to Advance Women’s Success in Their Working Life.

Number of women as managers\*



\*Results as of June 30 each year for personnel employed by Asahi Kasei Corp., Asahi Kasei Microdevices Corp., Asahi Kasei Homes Corp., Asahi Kasei Construction Materials Corp., Asahi Kasei Pharma Corp., and Asahi Kasei Medical Co., Ltd. (Asahi Kasei Chemicals Corp., Asahi Kasei Fibers Corp., Asahi Kasei E-materials Corp. are included up to June 30, 2015).

### ■ Asahi Kasei Group Action Plan\*

We will nurture employees and provide an employment environment to enable women to perform in managerial positions equivalently to men in accordance with the following Action Plan.

### ■ Term

April 1, 2016 – March 31, 2021

### ■ Content

Objective 1: Aim to have women performing in managerial positions equivalently to men; double the number of women in managerial positions from March 31, 2015, to March 31, 2021

Objective 2: Provide a workplace environment that enables both men and women to maintain their careers while raising children

As of June 2017, regarding Objective 1, the number of women in managerial positions has increased by a factor of 1.4 times compared to the end of March 2015. Regarding Objective 2, we began a variety of measures in fiscal 2016 to raise awareness among both male and female employees with respect to maintaining careers while raising children. These include seminars for employees prior to maternity leave and parental leave, training for managers who have subordinates working limited hours, and a contest for ironical haiku poems on the theme of men performing child-rearing duties.

\*Action Plan for Asahi Kasei Corp., Asahi Kasei Microdevices Corp., Asahi Kasei Pharma Corp., Asahi Kasei Medical Co., Ltd., Asahi Kasei Homes Corp., and Asahi Kasei Construction Materials Corp.



## Preventing harassment

Sexual harassment, discriminatory words and deeds, and other forms of harassment are clearly prohibited in the Asahi Kasei Group Code of Conduct and by our corporate employment regulations. Prevention is reinforced through training at each level of promotion in rank, and through periodic company-wide training within each core operating company for conformance with corporate ethics. A central point of contact is established for consultation about related issues and concerns in the Asahi Kasei Group.

Training and consultation are also provided for staff from placement agencies and employees of affiliated companies, as part of a comprehensive effort to prevent the occurrence of harassment.

## Employment of persons with disabilities

Asahi Kasei Ability Corp. was established in 1985 for the employment of persons with disabilities, performing a wide range of services for the Asahi Kasei Group, including data entry, digitizing documents, website design, printing of business cards, document printing and binding, dispatch of sample products, cleaning, copying, and planter box gardening.

On April 1, 2013, the legal minimum proportion for employment of persons with disabilities was revised upward from 1.8% to 2.0%. As of June 1, 2017, the proportion for applicable companies of the Asahi Kasei Group stood at 2.19% (550.0 persons), exceeding the legal requirement.

This calculation is based on 21 applicable companies of the Asahi Kasei Group, including Asahi Kasei Corp., core operating companies, and other subsidiaries. We continue recruitment activities to further increase the employment of persons with disabilities at group companies other than Asahi Kasei Ability.

Rate of employment of disabled persons at applicable Group companies\*



\*Results as of June 1 each year at applicable Group companies. Calculation based on total employment of 25,073.0 persons in the 21 applicable companies. As of June 1, 2017, the number of persons with disabilities employed by Asahi Kasei Ability Corp. stood at 333.0 of the total 550.0 employees with disabilities. Calculated in accordance with the Act on Employment Promotion etc. of Persons with Disabilities.

## FY 2016 City Human Rights Promotion Award

In the city of Nobeoka, Miyazaki, Japan, where its head office is located, Asahi Kasei Ability received the City Human Rights Promotion Award from the Nobeoka City Human Rights Promotion Council (chaired by Mr. Masaharu Sudo, Mayor of Nobeoka, and comprising 157 groups and businesses). The award is presented to groups and organizations in Nobeoka which implement proactive measures regarding human rights, which proactively employ and support persons with disabilities and other persons who have difficulty in finding employment, and which support rehabilitation. The selection of Asahi Kasei Ability was made in recognition of the company's understanding for participation in society by persons with disabilities, proactive effort to employ persons with disabilities, and receipt of Platinum Kurumin certification from the government of Japan as a company that provides high-level support for rearing children while maintaining working careers.



## Competing in the Abilympics

Employees of Asahi Kasei Ability compete in several prefectural Abilympics each year, often winning medals. Gold medal winners from each prefecture qualify to compete in the National Abilympics in Japan. Of the 11 employees of Asahi Kasei Ability who competed in the fiscal 2016 National Abilympics held in Yamagata prefecture, one won the gold medal in the sewing competition and one won the silver medal in the building cleaning competition.

A total 41 employees competed in the fiscal 2017 Prefectural Abilympics in Miyazaki, Okayama, and Shizuoka, winning 9 gold medals, 14 silver medals, and 5 bronze medals. The gold medalists qualified to compete in the National Abilympics in Tochigi in November 2017.



Winning the gold medal



Winning the silver medal

# Balancing work and family life

## Basic policy

We provide various forms of support for personnel to work with security and vitality in accordance with their individual circumstances and values from the perspective of balancing work and family life.

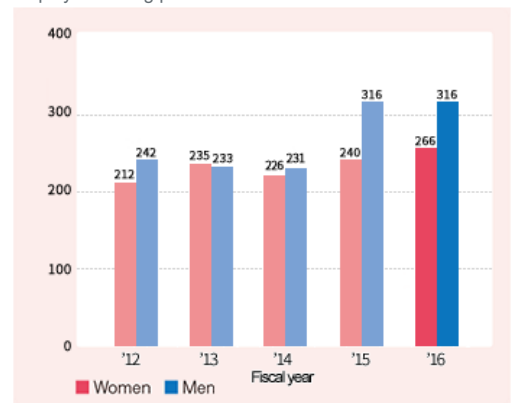
## Helping employees balance work and family life

We encourage personnel to take advantage of a full complement of provisions and benefits to enable the flexibility to maintain a career while raising a family. The corporate intranet is used to raise awareness of the available provisions and benefits, and to support managers whose personnel utilize them.

## Parental leave

Our parental leave is available through the fiscal year in which the child turns 3 years old. In fiscal 2016, parental leave was utilized by 582 personnel. This is included 316 men, 43% of those who were qualified, and 266 women. Among the employees on parental leave scheduled to return to work in fiscal 2016, 100% of men and 96% of women returned to work on schedule.

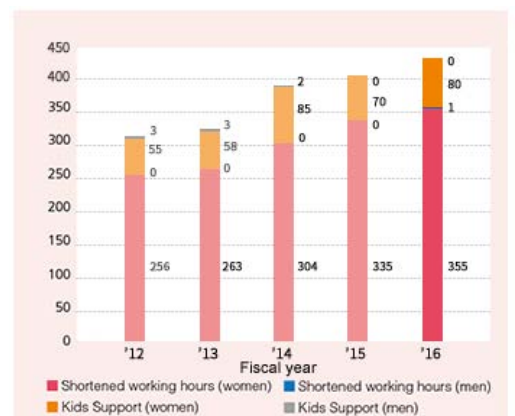
Employees using parental leave



## Shortened working hours for child care

Personnel are able to utilize shortened working hours to care for preschoolers, with the working day shortened by up to 2 hours until the child enters elementary school. In September 2007, a provision called "Kids Support" was added to enable personnel with children in the first and second grades to work shortened hours as well. These provisions may be used concurrently with a "flex-time" system for flexible working hours.

Utilization of shortened working hours and Kids Support for child care



### Platinum Kurumin certification mark

In 2016, we received the Platinum Kurumin certification mark from the Ministry of Health, Labor and Welfare.\* Platinum Kurumin certification is awarded in recognition of proactive support for the development of the next generation which is superior to the previously received Kurumin certification.

\* Certification received for Asahi Kasei Corp., Asahi Kasei Microdevices Corp., Asahi Kasei Homes Corp., Asahi Kasei Pharma Corp., Asahi Kasei Medical Co., Ltd., and Asahi Kasei Ability Corp. Asahi Kasei Ability Corp. is the first company in Miyazaki prefecture to receive Platinum Kurumin certification.



## Support for family care

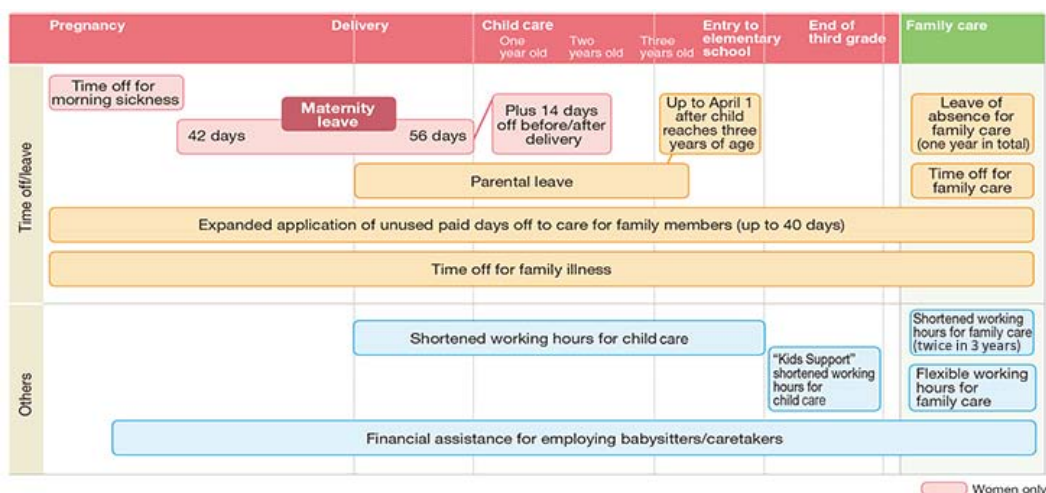
In fiscal 2016, leave of absence for family care was utilized by 4 personnel. Our personnel are allowed to take leave of up to 1 year for the purpose of attending to any family member who requires care. Personnel are also allowed to utilize shortened working hours for family care twice in a three-year period. Enhanced provisions for days off and flexible working hours are also available to help personnel continue working while providing care for family members. Information about these provisions and how to balance work and family care is provided through our enhanced corporate intranet as well.

In January 2013, we distributed a booklet on balancing work with care for family members. We have also brought in an outside expert for seminars on family care each year since fiscal 2011.



Booklet on balancing work with care for family members

Main provisions to support balance in work and family life



## Leave of absence to accompany spouse on overseas assignment

As globalization continues to advance, an increasing number of personnel have a spouse who is transferred to an overseas assignment. In fiscal 2013 we adopted a provision for such personnel to take a leave of absence to accompany their spouses living overseas. In fiscal 2016, this provision was utilized by 16 personnel.

## Employee survey

Management and labor work in concert to resolve people-related issues based on mutual understanding and awareness. We regularly perform a survey of employees to gauge improvements to previously identified problems and track changes in employee perceptions over time. Survey results are also utilized in the evaluation of various measures and the consideration of new measures.

## Communication between management and labor

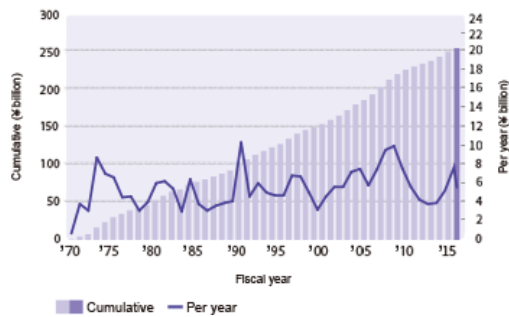
Discussions between management and labor union representatives are held on a regular basis to ensure that a constructive partnership based on mutual understanding is maintained. Annual discussions are held between the management of Asahi Kasei Corp. and labor union representatives. Discussions between the management of the core operating companies and representatives of the respective labor unions are also held on a regular basis.

# Environmental and safety data

## Expenditure for environment and safety

Investments in modification for environmental protection and safety in fiscal 2016 were as shown below.

Investment in environmental and safety modification



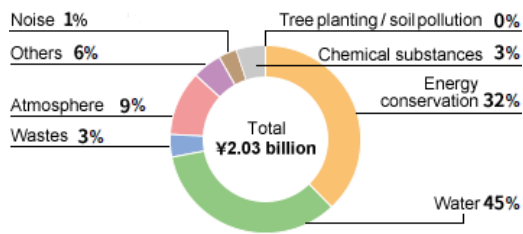
Breakdown of investment

| Fiscal year   | 2012        | 2013        | 2014        | 2015        | 2016        |
|---------------|-------------|-------------|-------------|-------------|-------------|
| Environmental | 1.77        | 2.16        | 2.42        | 2.63        | 2.03        |
| Safety        | 2.03        | 1.75        | 2.78        | 5.25        | 3.35        |
| <b>Total</b>  | <b>3.80</b> | <b>3.90</b> | <b>5.20</b> | <b>7.88</b> | <b>5.38</b> |

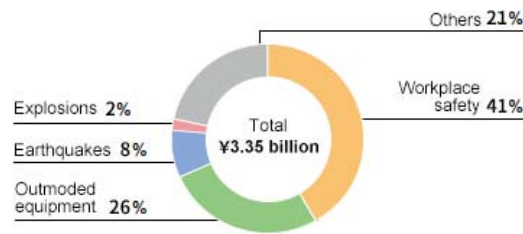
(¥ billion)

Note: Sums may not equal totals due to rounding, also with other tables hereinafter.

FY 2016 environmental investment



FY 2016 safety investment



## Environmental accounting

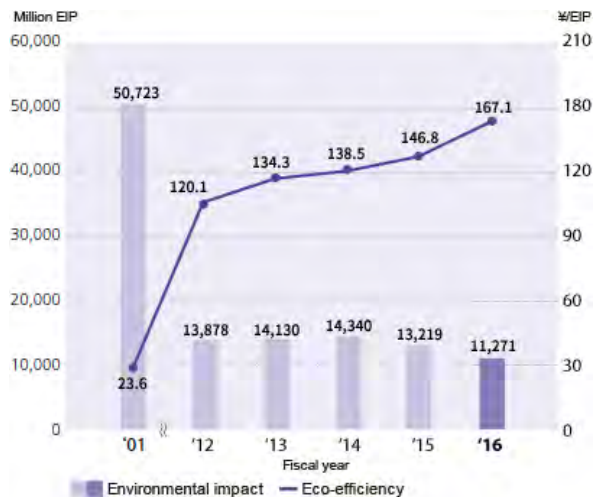
We classify the cost of our measures for environmental protection in accordance with cost classification standards promulgated by the Ministry of the Environment.

Environmental accounting by fiscal year

| Cost                            | 2012                   |                     | 2013                   |                     | 2014                   |                     | 2015                   |                     | 2016                   |                     |
|---------------------------------|------------------------|---------------------|------------------------|---------------------|------------------------|---------------------|------------------------|---------------------|------------------------|---------------------|
|                                 | Investment (¥ million) | Expense (¥ million) | Investment (¥ million) | Expense (¥ million) | Investment (¥ million) | Expense (¥ million) | Investment (¥ million) | Expense (¥ million) | Investment (¥ million) | Expense (¥ million) |
| Combined operating area         | 1,465                  | 7,840               | 1,920                  | 8,030               | 2,324                  | 10,345              | 2,041                  | 7,339               | 1,943                  | 7,320               |
| Pollution prevention            | 975                    | 5,592               | 982                    | 5,645               | 1,058                  | 5,290               | 1,408                  | 4,466               | 1,080                  | 4,340               |
| Global environmental protection | 415                    | 573                 | 355                    | 569                 | 513                    | 2,586               | 421                    | 689                 | 502                    | 808                 |
| Resource circulation            | 75                     | 1,675               | 583                    | 1,816               | 753                    | 2,470               | 212                    | 2,184               | 360                    | 2,173               |
| Upstream and downstream         | 12                     | 139                 | 1                      | 135                 | 0                      | 131                 | 0                      | 131                 | 0                      | 115                 |
| Management                      | 65                     | 1,302               | 47                     | 3,053               | 49                     | 3,374               | 11                     | 1,078               | 54                     | 1,266               |
| Research and development        | 264                    | 2,256               | 169                    | 2,755               | 471                    | 5,661               | 329                    | 5,781               | 158                    | 2,591               |
| Community outreach              | 8                      | 55                  | 7                      | 82                  | 5                      | 48                  | 11                     | 38                  | 0                      | 36                  |
| Environmental damage            | 2                      | 230                 | 0                      | 883                 | 0                      | 190                 | 44                     | 195                 | 49                     | 192                 |
| <b>Total</b>                    | <b>1,816</b>           | <b>11,822</b>       | <b>2,145</b>           | <b>14,938</b>       | <b>2,850</b>           | <b>19,749</b>       | <b>2,435</b>           | <b>14,560</b>       | <b>2,203</b>           | <b>11,520</b>       |

## Environmental performance data

### JEPPIX performance\*



\*Japan Environmental Policy Index, developed by teams under the leadership of Professor Nobuyuki Miyazaki at the Japan Science and Technology Agency and Sustainable Management Forum Japan. Environmental performance data are converted to an environmental impact point (EIP) scale and aggregated to determine total environmental impact. Eco-efficiency is determined by dividing an economic indicator, in our case consolidated net sales, by total EIP. Eight aspects of environmental impact (including chemical releases, greenhouse gas emissions, landfill wastes, and COD load) are evaluated. A new accounting policy is applied to net sales from fiscal 2011.

### JEPPIX-method eco-efficiency

| Fiscal year                        | 2001      | 2012      | 2013      | 2014      | 2015      | 2016      |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Environmental impact (million EIP) | 50,723    | 13,878    | 14,130    | 14,340    | 13,219    | 11,271    |
| Sales (¥ million)                  | 1,195,393 | 1,666,640 | 1,897,766 | 1,986,405 | 1,940,914 | 1,882,991 |
| Eco-efficiency (¥/EIP)             | 23.6      | 120.1     | 134.3     | 138.5     | 146.8     | 167.1     |

### Treatment and disposal of industrial waste\* by business unit

|                                    | On-site         |           |                  |          | Effluent | Off-site  |                  |                |
|------------------------------------|-----------------|-----------|------------------|----------|----------|-----------|------------------|----------------|
|                                    | Waste generated | Recycling | Volume reduction | Landfill |          | Recycling | Volume reduction | Final disposal |
| Asahi Kasei Corp.                  | 174.4           | 0.2       | 0.0              | 0.0      | 174.3    | 173.2     | 0.9              | 0.1            |
| Asahi Kasei Microdevices           | 18.3            | 10.9      | 0.0              | 0.0      | 7.5      | 7.3       | 0.0              | 0.2            |
| Asahi Kasei Homes                  | 61.2            | 44.6      | 0.0              | 0.0      | 16.2     | 16.6      | 0.0              | 0.0            |
| Asahi Kasei Construction Materials | 36.2            | 28.0      | 0.0              | 0.0      | 8.3      | 8.2       | 0.0              | 0.1            |
| Asahi Kasei Pharma                 | 7.7             | 0.0       | 0.0              | 0.0      | 7.7      | 7.0       | 0.0              | 0.7            |
| Asahi Kasei Medical                | 41.2            | 20.9      | 0.7              | 0.0      | 19.6     | 16.9      | 2.7              | 0.0            |
| FY2016                             | 339.2           | 104.4     | 0.7              | 0.0      | 233.5    | 229.2     | 3.7              | 1.1            |
| FY2015                             | 356.5           | 123.7     | 3.3              | 0.0      | 229.6    | 225.3     | 3.4              | 0.8            |
| FY2014                             | 388.5           | 114.6     | 36.4             | 0.0      | 237.3    | 231.7     | 4.1              | 1.5            |
| FY2013                             | 386.3           | 112.4     | 29.0             | 0.0      | 244.7    | 240.3     | 3.1              | 1.3            |
| FY2012                             | 387.9           | 99.0      | 27.2             | 0.0      | 261.6    | 255.4     | 4.4              | 1.8            |
| FY2011                             | 441.8           | 105.1     | 73.5             | 0.0      | 263.1    | 254.1     | 7.8              | 1.3            |
| FY2000                             | 361.9           | 3.5       | 187.5            | 0.1      | 170.8    | 122.0     | 21.9             | 26.8           |

\*Not including waste generated from non-recurring events such as dismantling closed plants or waste generated from dismantling old homes when constructing new homes.



## FY 2016 off-site final disposal by category of waste\*

|                        | Sludge | Plastic waste | Controlled mixed waste | Debris | Others | Total |
|------------------------|--------|---------------|------------------------|--------|--------|-------|
| Volume (thousand tons) | 0.6    | 0.3           | 0.0                    | 0.0    | 0.2    | 1.1   |
| Percent of total       | 57.3   | 25.5          | 1.3                    | 1.4    | 14.5   | 100.0 |

\*Excluding waste generated at the construction sites of Asahi Kasei Homes.

## Final disposal of industrial waste generated at construction sites of Asahi Kasei Homes

| Fiscal year      | 2000 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------|------|------|------|------|------|------|
| New construction | 16.6 | 0    | 0    | 0    | 0    | 0    |
| Dismantling      | 39.1 | 12.3 | 12.3 | 12.3 | 10.2 | 11.8 |
| Total            | 55.7 | 12.3 | 12.3 | 12.3 | 10.2 | 11.8 |

## ALC trimmings recycled by Asahi Kasei Construction Materials

| Fiscal year                 | 2012  | 2013  | 2014  | 2015  | 2016  |
|-----------------------------|-------|-------|-------|-------|-------|
| Hebel™ panels               | 520   | 310   | 370   | 450   | 300   |
| Cement material             | 4,200 | 3,900 | 3,400 | 2,300 | 1,800 |
| Lightweight artificial soil | 0     | 0     | 0     | 0     | 0     |
| Total                       | 4,720 | 4,210 | 3,700 | 2,800 | 2,100 |

## FY 2016 release and transfer of PRTR-specified substances

| Company                              | Sites     | Substance   | Release to |        |       | Total  | Transfer |
|--------------------------------------|-----------|---|------------|--------|-------|--------|----------|
|                                      |           |   | Air        | Water  | Soil  |        |          |
| Asahi Kasei Corp.                    | Others    | Toluene   | 22,037     | 0      | 0     | 22,037 | 0        |
|                                      |           | Toluene   | 6,874      | 420    | 0     | 7,094  | 19,555   |
|                                      |           | n-Hexane  | 5,810      | 0      | 0     | 5,810  | 15,780   |
|                                      |           | 1,1-Dichloroethylene (vinylidene chloride)        | 31,900     | 14     | 0     | 31,914 | 227,000  |
|                                      |           | Chloroethylene (vinyl chloride)                   | 15,061     | 0      | 0     | 15,061 | 38,080   |
|                                      |           | Chlorodifluoromethane (HFC-22)                    | 8,100      | 0      | 0     | 8,100  | 0        |
|                                      |           | Boron compounds                                   | 0          | 5,914  | 0     | 5,914  | 182      |
|                                      |           | Water-soluble copper salts (except complex salts) | 0          | 8,386  | 0     | 8,386  | 164      |
|                                      |           | Dichloromethane (methylene chloride)              | 5,808      | 1      | 0     | 5,809  | 0        |
|                                      |           | Dichloromethane (methylene chloride)              | 6,131      | 0      | 0     | 6,131  | 259      |
|                                      | Moriyama  | N,N-dimethylacetamide                             | 7,850      | 0      | 0     | 7,850  | 194,091  |
|                                      |           | n-Hexane  | 62,300     | 0      | 0     | 62,300 | 10,500   |
|                                      | Mizushima | Molybdenum and its compounds                      | 0          | 8,871  | 0     | 8,871  | 0        |
|                                      |           | n-Hexane  | 87,424     | 0      | 0     | 87,424 | 16,398   |
|                                      | Kawasaki  | Methyl methacrylate                               | 16,238     | 0      | 0     | 16,238 | 323      |
|                                      |           | Dichloromethane (methylene chloride)              | 8,584      | 0      | 0     | 8,584  | 4,025    |
|                                      | Fuji      | Dichloromethane (methylene chloride)              | 8,584      | 0      | 0     | 8,584  | 4,025    |
| Dichloromethane (methylene chloride) |           | 8,584   | 0          | 0      | 8,584 | 4,025  |          |
| Asahi Kasei Microdevices             | Nobeoka   | Hydrogen fluoride and its water-soluble salts     | 0          | 6,957  | 0     | 6,957  | 129      |
| Asahi Kasei Homes                    | Others    | Xylene  | 8,047      | 0      | 0     | 8,047  | 0        |
|                                      |           | Toluene   | 10,369     | 0      | 0     | 10,369 | 0        |
| Asahi Kasei Medical                  | Nobeoka   | N,N-dimethylacetamide                             | 2,395      | 16,087 | 0     | 18,462 | 644,376  |

Note: Substances listed are those of which total release was 5 tons or more. Amounts are rounded to the nearest ton.

## Release and transfer of PRTR-specified substances by fiscal year

| Fiscal year | 2000  | 2012  | 2013  | 2014  | 2015  | 2016  |
|-------------|-------|-------|-------|-------|-------|-------|
| Air         | 4,720 | 390   | 400   | 360   | 390   | 350   |
| Water       | 170   | 90    | 86    | 80    | 70    | 60    |
| Soil        | 0     | 0     | 0     | 0     | 0     | 0     |
| Total       | 4,890 | 480   | 490   | 440   | 450   | 410   |
| Transfer    | 2,100 | 3,200 | 3,300 | 3,100 | 2,300 | 2,900 |

## VOC\* emissions

| Fiscal year        | 2000 baseline year | 2012  | 2013  | 2014  | 2015  | 2016  |
|--------------------|--------------------|-------|-------|-------|-------|-------|
| Volume (tons)      | 10,400             | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 |
| Reduction rate (%) | —                  | 88    | 87    | 87    | 87    | 87    |

\*Volatile organic compound. Although the term generally applies to any organic compound which is in gaseous state at the time of release, regulations for the control of their release exclude methane and some fluorocarbons which do not form oxidants.

## Release of air and water pollutants by fiscal year

|                            | Unit                   | 2012  | 2013  | 2014  | 2015  | 2016  |
|----------------------------|------------------------|-------|-------|-------|-------|-------|
| SOx <sup>1</sup>           | tons                   | 5,800 | 6,600 | 5,700 | 7,700 | 6,100 |
| NOx <sup>2</sup>           | tons                   | 3,700 | 3,700 | 3,600 | 4,000 | 3,300 |
| Soot and dust <sup>3</sup> | tons                   | 180   | 150   | 180   | 130   | 100   |
| Waste water effluence      | million m <sup>3</sup> | 210   | 210   | 210   | 200   | 200   |
| COD <sup>4</sup>           | tons                   | 850   | 800   | 810   | 770   | 760   |
| Nitrogen                   | tons                   | 6,200 | 6,000 | 5,900 | 6,300 | 6,500 |
| Phosphorus                 | tons                   | 25    | 26    | 32    | 27    | 20    |

## FY 2016 release of air and water pollutants by site

|                       | Unit                   | Nobeoka | Mizushima | Moriyama | Fuji | Ohito | Kawasaki | Others | Total |
|-----------------------|------------------------|---------|-----------|----------|------|-------|----------|--------|-------|
| SOx                   | tons                   | 5,600   | 170       | 0        | 10   | 2     | 0        | 300    | 6,100 |
| NOx                   | tons                   | 2,100   | 1,100     | 30       | 10   | 10    | 6        | 70     | 3,300 |
| Soot and dust         | tons                   | 30      | 70        | 1        | 1    | 0     | 0        | 4      | 100   |
| Waste water effluence | million m <sup>3</sup> | 140     | 40        | 10       | 10   | 0     | 0        | 7      | 200   |
| COD                   | tons                   | 640     | 60        | 9        | 20   | 0     | 5        | 30     | 760   |
| Nitrogen              | tons                   | 6,200   | 220       | 9        | 70   | 1     | 2        | 5      | 6,500 |
| Phosphorus            | tons                   | 7       | 3         | 1        | 7    | 0     | 0        | 0      | 20    |

- Sulfur oxides are formed when crude oil, fuel oil, or coal containing sulfur are used as fuel, or when industrial wastes containing sulfur are incinerated. Sulfur dioxide (SO<sub>2</sub>) is most common, but some sulfur trioxide (SO<sub>3</sub>) also forms. The term SOx is inclusive of both of these.
- Nitrogen oxides are formed in nature and during combustion at thermal power plants, factory boilers, internal combustion engines, and incinerators. The term NOx is inclusive of both nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>).
- Soot and dust are fine particles formed in the combustion of fuel and other materials.
- Chemical oxygen demand. An indicator of water pollution by organic substances, COD is expressed in terms of the amount of oxygen required by an oxidizer to chemically oxidize the organic substances contained in the water.



## Water usage and effluence

|          |           | (million m <sup>3</sup> ) |      |      |      |      |
|----------|-----------|---------------------------|------|------|------|------|
|          |           | 2012                      | 2013 | 2014 | 2015 | 2016 |
| Domestic | Usage     | 268                       | 271  | 272  | 274  | 272  |
|          | Effluence | 210                       | 210  | 210  | 200  | 199  |
| Overseas | Usage     | —                         | 6    | 6    | 6    | 23   |
|          | Effluence | —                         | 6    | 6    | 6    | 17   |

## Water usage and sources by fiscal year

|                  |  | (million m <sup>3</sup> ) |            |            |            |            |
|------------------|--|---------------------------|------------|------------|------------|------------|
|                  |  | 2012                      | 2013       | 2014       | 2015       | 2016       |
| <b>Total</b>     |  | <b>268</b>                | <b>271</b> | <b>272</b> | <b>274</b> | <b>272</b> |
| Municipal water  |  | 10                        | 10         | 10         | 9          | 10         |
| Groundwater      |  | 20                        | 22         | 24         | 24         | 23         |
| Industrial water |  | 238                       | 238        | 238        | 241        | 239        |

## Greenhouse gas emissions in Japan by fiscal year

|                      |              | (million tons CO <sub>2</sub> equivalent) |                 |             |             |             |             |      |
|----------------------|--------------|---|-----------------|-------------|-------------|-------------|-------------|------|
|                      |              | Index set at Kyoto Protocol (1990)        | Baseline (2009) | 2012        | 2013        | 2014        | 2015        | 2016 |
| Carbon dioxide       | 5.06         | 4.96                                      | 3.74            | 3.77        | 3.76        | 3.53        | 2.71        |      |
| Nitrous oxide        | 6.82         | 0.76                                      | 0.19            | 0.22        | 0.15        | 0.12        | 0.13        |      |
| Methane              | 0            | 0.01                                      | 0               | 0           | 0           | 0           | 0           |      |
| HFCs                 | 0.16         | 0.02                                      | 0.02            | 0.03        | 0.03        | 0.03        | 0.03        |      |
| PFCs                 | 0.01         | 0.14                                      | 0.13            | 0.12        | 0.10        | 0.12        | 0.14        |      |
| Sulfur hexafluoride  | 0            | 0.04                                      | 0.03            | 0.02        | 0.01        | 0.01        | 0.02        |      |
| Nitrogen trifluoride | —            | —   | —               | —           | 0           | 0           | 0           |      |
| <b>Total</b>         | <b>12.06</b> | <b>5.92</b>                               | <b>4.11</b>     | <b>4.16</b> | <b>4.06</b> | <b>3.82</b> | <b>3.03</b> |      |

Calculation standards for greenhouse gas emissions: For greenhouse gases covered by the Act on Rationalizing Energy Use and the Act on Promotion of Global Warming Countermeasures, calculations are in accordance with the methods stipulated by these laws. For gases not covered by either law, calculation methods are based on considerations such as chemical reactions.

## Overseas greenhouse gas emissions by fiscal year

|  |       | 2012  | 2013  | 2014  | 2015  | 2016 |
|--|-------|-------|-------|-------|-------|------|
| Energy consumed (thousand GJ)                    | 4,426 | 5,420 | 5,986 | 9,053 | 9,558 |      |
| GHG emissions (million tons CO <sub>2</sub> -eq) | 0.40  | 0.49  | 0.67  | 0.79  | 0.83  |      |

Calculation standards for overseas GHG emissions: Overseas GHG emissions are calculated, in principle, based on the provisions given by the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures. CO<sub>2</sub> emissions from the burning of by-product gases are mainly calculated by material balance. CO<sub>2</sub> emissions associated with purchased electricity are calculated with the latest available coefficients given in International Energy Agency's CO<sub>2</sub> Emissions from Fuel Combustion.

## FY2016 greenhouse gas emissions in Japan by company

|                      |             | (million tons CO <sub>2</sub> equivalent) |                          |                   |                                    |                    |                     |       |
|----------------------|-------------|---|--------------------------|-------------------|------------------------------------|--------------------|---------------------|-------|
|                      |             | Asahi Kasei Corp.                         | Asahi Kasei Microdevices | Asahi Kasei Homes | Asahi Kasei Construction Materials | Asahi Kasei Pharma | Asahi Kasei Medical | Total |
| Carbon dioxide       | 2.37        | 0.08                                      | 0.01                     | 0.10              | 0.02                               | 0.13               | 2.71                |       |
| Nitrous oxide        | 0.13        | 0   | 0                        | 0                 | 0                                  | 0                  | 0.13                |       |
| Methane              | 0           | 0   | 0                        | 0                 | 0                                  | 0                  | 0                   |       |
| HFCs                 | 0.03        | 0   | 0                        | 0                 | 0                                  | 0                  | 0.03                |       |
| PFCs                 | 0           | 0.14                                      | 0                        | 0                 | 0                                  | 0                  | 0.14                |       |
| Sulfur hexafluoride  | 0           | 0.02                                      | 0                        | 0                 | 0                                  | 0                  | 0.02                |       |
| Nitrogen trifluoride | 0           | 0   | 0                        | 0                 | 0                                  | 0                  | 0                   |       |
| <b>Total</b>         | <b>2.53</b> | <b>0.23</b>                               | <b>0.01</b>              | <b>0.10</b>       | <b>0.02</b>                        | <b>0.13</b>        | <b>3.03</b>         |       |

## FY 2016 greenhouse gas emissions by overseas affiliates

| Company affiliation                              | Asahi Kasei Corp. | Asahi Kasei Homes | Asahi Kasei Medical | Total |
|--|-------------------|-------------------|---------------------|-------|
| Energy consumed (thousand GJ)                    | 9,497             | 8                 | 53                  | 9,558 |
| GHG emissions (million tons CO <sub>2</sub> -eq) | 0.83              | 0.0               | 0.004               | 0.83  |

CO<sub>2</sub> emissions from product shipment

| Company                            | FY 2012                          |                                  | FY 2013                          |                                  | FY 2014                          |                                  | FY 2015                          |                                  | FY 2016                          |                                  |
|------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|                                    | Shipment volume (million ton-km) | CO <sub>2</sub> emissions (tons) | Shipment volume (million ton-km) | CO <sub>2</sub> emissions (tons) | Shipment volume (million ton-km) | CO <sub>2</sub> emissions (tons) | Shipment volume (million ton-km) | CO <sub>2</sub> emissions (tons) | Shipment volume (million ton-km) | CO <sub>2</sub> emissions (tons) |
| Asahi Kasei Corp.                  | 794                              | 47,800                           | 838.5                            | 49,400                           | 751.4                            | 49,500                           | 891.8                            | 59,300                           | 865.60                           | 54,100                           |
| Asahi Kasei Microdevices           | 2                                | 800                              | 1.2                              | 890                              | 0.7                              | 850                              | 1                                | 830                              | 1.1                              | 700                              |
| Asahi Kasei Homes                  | 187                              | 23,400                           | 229                              | 26,300                           | 258                              | 29,000                           | 276                              | 30,100                           | 260.4                            | 28,300                           |
| Asahi Kasei Construction Materials | 112                              | 10,800                           | 120                              | 10,600                           | 121                              | 11,400                           | 116                              | 11,100                           | 124.4                            | 12,400                           |
| Asahi Kasei Pharma                 | 8                                | 700                              | 6.8                              | 850                              | 5.9                              | 710                              | 4.8                              | 600                              | 2.8                              | 300                              |
| Asahi Kasei Medical                | 24                               | 1,200                            | 24                               | 1,200                            | 28                               | 1,500                            | 2                                | 250                              | 1.9                              | 200                              |
| <b>Total</b>                       | <b>1,125</b>                     | <b>84,500</b>                    | <b>1,219</b>                     | <b>88,800</b>                    | <b>1,165</b>                     | <b>92,700</b>                    | <b>1,291</b>                     | <b>99,000</b>                    | <b>1,246</b>                     | <b>85,900</b>                    |

## Low-pollution vehicles\*

| Fiscal year                              |                           | 2012  | 2013  | 2014  | 2015  | 2016  |
|--|---------------------------|-------|-------|-------|-------|-------|
| Used on public roads                     | Low-pollution vehicles    | 1,029 | 1,046 | 1,035 | 1,170 | 1,238 |
|  | Other vehicles            | 89    | 88    | 89    | 93    | 85    |
|  | Subtotal                  | 1,118 | 1,134 | 1,124 | 1,263 | 1,323 |
| Used within plant grounds                | Low-pollution vehicles    | 251   | 317   | 373   | 398   | 456   |
|  | Other vehicles            | 448   | 316   | 322   | 297   | 280   |
|  | Subtotal                  | 699   | 633   | 695   | 695   | 736   |
| Total                                    | Low-pollution vehicles    | 1,280 | 1,363 | 1,408 | 1,568 | 1,694 |
|  | Other vehicles            | 537   | 404   | 411   | 390   | 365   |
|  | Total vehicles            | 1,817 | 1,767 | 1,819 | 1,958 | 2,059 |
| Proportion of low-pollution vehicles (%) | Used on public roads      | 92    | 92    | 90    | 93    | 94    |
|  | Used within plant grounds | 36    | 50    | 54    | 57    | 62    |
|  | Total                     | 70    | 77    | 77    | 80    | 82    |

\*Hybrid-electric vehicles, low-emission vehicles, fuel-efficient vehicles, and all-electric vehicles.

## Referenced guidelines:

Our Scope 3 GHG emissions are calculated in accordance with the Corporate Value Chain (Scope 3) Accounting and Reporting Standard and its technical guidance issued by the Greenhouse Gas Protocol. For the greenhouse gas emission factors, we use data available in the Carbon Footprint Communication Program database prepared by the Japan Environmental Management Association for Industry and the Embodied Energy and Emission Intensity Data for Japan Using Input-Output Tables (3EID): Inventory Data for LCA prepared by the National Institute for Environmental Studies, Japan.

## Calculation method for Category 1 (purchased goods and services):

For fiscal years from 2012 to 2015, Category 1 emissions were calculated by multiplying the amounts, either in physical or monetary units, of the largest 20 raw materials and services (30 in the case of Asahi Kasei Chemicals), in terms of GHG emissions or purchase amount, purchased from outside the Asahi Kasei Group by Asahi Kasei Chemicals, Asahi Kasei Fibers, Asahi Kasei Homes, Asahi Kasei Construction Materials, Asahi Kasei Microdevices, Asahi Kasei E-materials, and Asahi Kasei Medical, by the respective emission factor for each type of raw material or service. For fiscal year 2016, items with emissions equal to or greater than 4,000 tons of CO<sub>2</sub>-eq were included. The emissions were calculated by multiplying the amounts, either in physical or monetary units, of raw materials and services purchased from outside the Asahi Kasei Group by Asahi Kasei Corp., Asahi Kasei Homes, Asahi Kasei Construction Materials, Asahi Kasei Microdevices, and Asahi Kasei Medical, by the respective emission factor for each type of raw material or service.

## Lost workday injury indices

|                |                                 | (calendar year) |       |       |       |       |
|----------------|---------------------------------|-----------------|-------|-------|-------|-------|
|                |                                 | 2012            | 2013  | 2014  | 2015  | 2016  |
| Frequency rate | Asahi Kasei Group               | 0.24            | 0.40  | 0.16  | 0.32  | 0.35  |
|                | Chemical industry, Japan        | 0.85            | 0.82  | 0.76  | 0.81  | 0.88  |
|                | Manufacturing industries, Japan | 1.00            | 0.94  | 1.06  | 1.06  | 1.15  |
| Severity rate  | Asahi Kasei Group               | 0.306           | 0.015 | 0.002 | 0.007 | 0.005 |
|                | Chemical industry, Japan        | 0.12            | 0.12  | 0.17  | 0.04  | 0.03  |
|                | Manufacturing industries, Japan | 0.10            | 0.10  | 0.09  | 0.06  | 0.07  |

# GRI G4 and ISO 26000 Content Index

## General Standard Disclosures

|                                      |   |
|--------------------------------------|---|
| ISO26000<br>Core Subjects and Issues | 7.2: The relationship of an organization's characteristics to social responsibility |
|--------------------------------------|---|

### Strategy and Analysis

|                                      |   |
|--------------------------------------|---|
| ISO26000<br>Core Subjects and Issues | 4.7: Respect for international norms of behavior<br>6.2: Organizational governance<br>7.4.2: Setting the direction of an organization for social responsibility |
|--------------------------------------|---|

G4-1 Statement from the most senior decision-maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability

|                           |   |
|---------------------------|---|
| Corresponding content in: | Management Commitment ><br>Asahi Kasei Report > |
|---------------------------|---|

G4-2 Description of key impacts, risks, and opportunities

|                           |  |
|---------------------------|--|
| Corresponding content in: | Risk Analysis ><br>Feature: Global Executives Interviews > |
|---------------------------|--|

### Organizational Profile

|                                      |  |
|--------------------------------------|--|
| ISO26000<br>Core Subjects and Issues | 6.3.10: Fundamental principles and rights at work<br>6.4.1-6.4.2: Labour practices<br>6.4.3: Employment and employment relationships<br>6.4.4: Conditions of work and social protection<br>6.4.5: Social dialogue<br>6.8.5: Employment creation and skills development<br>7.8: Voluntary initiatives for social responsibility |
|--------------------------------------|--|

G4-3 Name of the organization

|                           |  |
|---------------------------|--|
| Corresponding content in: | Corporate Profile ><br>Group Companies > |
|---------------------------|--|

G4-4 Primary brands, products, and services

|                           |  |
|---------------------------|--|
| Corresponding content in: | Asahi Kasei Products and Technologies in Everyday Life ><br>Products > |
|---------------------------|--|

## G4-5 Location of organization's headquarters

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Corporate Profile &gt;</a> |
|---------------------------|--|

## G4-6 Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Asahi Kasei Worldwide &gt;</a> |
|---------------------------|--|

## G4-7 Nature of ownership and legal form

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Group Companies &gt;</a><br><a href="#">Corporate Governance &gt;</a> |
|---------------------------|---|

## G4-8 Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Asahi Kasei Worldwide &gt;</a><br><a href="#">Products &gt;</a> |
|---------------------------|---|

## G4-9 Scale of the organization

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Corporate Profile &gt;</a><br><a href="#">Financial Information &gt;</a> |
|---------------------------|--|

## G4-10

- Total number of employees by employment contract and gender
- Total number of permanent employees by employment type and gender
- Total workforce by employees and supervised workers and by gender
- Total workforce by region and gender
- Whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors
- Any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries)

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Corporate Profile &gt;</a> |
|---------------------------|--|

## G4-13 Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain

|                           |                                       |
|---------------------------|---------------------------------------|
| Corresponding content in: | <a href="#">Editorial policy &gt;</a> |
|---------------------------|---------------------------------------|

## Commitments to External Initiatives

## G4-14 Whether and how the precautionary approach or principle is addressed by the organization

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">CSR at the Asahi Kasei Group &gt;</a><br><a href="#">Compliance &gt;</a><br><a href="#">Responsible Care at Asahi Kasei &gt;</a> |
|---------------------------|--|

G4-15 Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">CSR &gt;</a><br><a href="#">Managing chemical substances &gt;</a><br><a href="#">Biodiversity &gt;</a> |
|---------------------------|--|

G4-16 Memberships of associations (such as industry associations) and national or international advocacy organizations in which the organization:

- Holds a position on the governance body
- Participates in projects or committees
- Provides substantive funding beyond routine membership dues
- Views membership as strategic

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Responsible Care at Asahi Kasei &gt;</a><br><a href="#">Managing chemical substances &gt;</a><br><a href="#">Biodiversity &gt;</a> |
|---------------------------|--|

## Identified Material Aspects and Boundaries

|                                      |  |
|--------------------------------------|--|
| ISO26000<br>Core Subjects and Issues | <a href="#">5.2: Recognizing social responsibility</a><br><a href="#">7.3.2: Determining relevance and significance of core subjects and issues to an organization</a><br><a href="#">7.3.3: An organization's sphere of influence</a><br><a href="#">7.3.4: Establishing priorities for addressing issues</a> |
|--------------------------------------|--|

G4-17

- All entities included in the organization's consolidated financial statements or equivalent documents
- Whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Group Companies &gt;</a><br><a href="#">Asahi Kasei Worldwide &gt;</a> |
|---------------------------|--|

G4-18

- The process for defining the report content and the Aspect Boundaries
- How the organization has implemented the Reporting Principles for Defining Report Content

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Editorial policy &gt;</a><br><a href="#">CSR at the Asahi Kasei Group &gt;</a> |
|---------------------------|--|

G4-22 The effect of any restatements of information provided in previous reports, and the reasons for such restatements

|                           |                                       |
|---------------------------|---------------------------------------|
| Corresponding content in: | <a href="#">Editorial policy &gt;</a> |
|---------------------------|---------------------------------------|

## Stakeholder Engagement

ISO26000  
Core Subjects and Issues

5.3: Stakeholder identification and engagement

G4-24 List of stakeholder groups engaged by the organization

Corresponding content in:

CSR at the Asahi Kasei Group >  
Stakeholder dialog >

G4-26 The organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group

Corresponding content in:

Stakeholder dialog >

G4-27 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting

Corresponding content in:

Corporate Citizenship >

## Report Profile

ISO26000  
Core Subjects and Issues

7.5.3: Types of communication on social responsibility  
7.6.2: Enhancing the credibility of reports and claims about social responsibility

G4-28 Reporting period (such as fiscal or calendar year) for information provided

Corresponding content in:

Editorial policy >

G4-29 Date of most recent previous report (if any)

Corresponding content in:

Editorial policy >

G4-30 Reporting cycle (such as annual, biennial)

Corresponding content in:

Editorial policy >

G4-31 The contact point for questions regarding the report or its contents

Corresponding content in:

Inquiries >



## GRI Content Index

## G4-32

- The 'in accordance' option the organization has chosen
- The GRI Content Index for the chosen option
- The reference to the External Assurance Report, if the report has been externally assured

|                           |  |
|---------------------------|--|
| Corresponding content in: | Correspondence with GRI G4 and ISO 26000 > |
|---------------------------|--|

## Assurance

## G4-33

- The organization's policy and current practice with regard to seeking external assurance for the report
- If not included in the assurance report accompanying the sustainability report, the scope and basis of any external assurance provided
- The relationship between the organization and the assurance providers
- Whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report

|                           |                                 |
|---------------------------|---------------------------------|
| Corresponding content in: | Independent review and report > |
|---------------------------|---------------------------------|

## Governance

|                                      |   |
|--------------------------------------|---|
| ISO26000<br>Core Subjects and Issues | 6.2: Organizational governance<br>7.4.3: Building social responsibility into an organization's governance, systems and procedures<br>7.7.5: Improving performance |
|--------------------------------------|---|

## Governance Structure and Composition

G4-34 The governance structure of the organization, including committees of the highest governance body

|                           |                        |
|---------------------------|------------------------|
| Corresponding content in: | Corporate Governance > |
|---------------------------|------------------------|

G4-35 The process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees

|                           |  |
|---------------------------|--|
| Corresponding content in: | Corporate Governance ><br>CSR at the Asahi Kasei Group > |
|---------------------------|--|

G4-36 Whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body

|                           |                                |
|---------------------------|--------------------------------|
| Corresponding content in: | CSR at the Asahi Kasei Group > |
|---------------------------|--------------------------------|

G4-37 Processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics

|                           |                        |
|---------------------------|------------------------|
| Corresponding content in: | Corporate Governance > |
|---------------------------|------------------------|

## G4-38 The composition of the highest governance body and its committees

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Corporate Governance &gt;</a> |
|---------------------------|---|

## G4-39 Whether the Chair of the highest governance body is also an executive officer

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Corporate Governance &gt;</a> |
|---------------------------|---|

## G4-40 The nomination and selection processes for the highest governance body and its committees

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Corporate Governance &gt;</a> |
|---------------------------|---|

## G4-41 Processes for the highest governance body to ensure conflicts of interest are avoided and managed

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Corporate Governance &gt;</a> |
|---------------------------|---|

## Highest Governance Body's Role in Setting Purpose, Values, and Strategy

G4-42 The highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">CSR &gt;</a><br><a href="#">CSR at the Asahi Kasei Group &gt;</a> |
|---------------------------|---|

## Highest Governance Body's Competencies and Performance Evaluation

## G4-44

- The processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics
- Actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Corporate Governance &gt;</a> |
|---------------------------|---|

## Highest Governance Body's Role in Risk Management

## G4-45

- The highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities
- Whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">Corporate Governance &gt;</a><br><a href="#">Risk management &gt;</a> |
|---------------------------|---|

G4-46 The highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">CSR at the Asahi Kasei Group &gt;</a> |
|---------------------------|---|

G4-47 The frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities

|                           |                                      |
|---------------------------|--------------------------------------|
| Corresponding content in: | <a href="#">Risk management &gt;</a> |
|---------------------------|--------------------------------------|

### Highest Governance Body's Role in Sustainability Reporting

G4-48 The highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered

|                           |   |
|---------------------------|---|
| Corresponding content in: | <a href="#">CSR at the Asahi Kasei Group &gt;</a> |
|---------------------------|---|

### Highest Governance Body's Role in Evaluating Economic, Environmental and Social Performance

G4-49 The process for communicating critical concerns to the highest governance body

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Compliance system &gt;</a> |
|---------------------------|--|

### Remuneration and Incentives

G4-51 Remuneration policies for the highest governance body and senior executives

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Corporate Governance Report &gt;</a> |
|---------------------------|--|

G4-52 The process for determining remuneration

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Corporate Governance Report &gt;</a> |
|---------------------------|--|

## Ethics and Integrity

|                                      |  |
|--------------------------------------|--|
| ISO26000<br>Core Subjects and Issues | 4.4: Ethical behaviour<br>6.6.3: Anti-corruption |
|--------------------------------------|--|

G4-56 The organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Group Philosophy &gt;</a><br><a href="#">CSR &gt;</a><br><a href="#">Compliance system &gt;</a><br><a href="#">Responsible Care at Asahi Kasei &gt;</a><br><a href="#">Supplier relationships &gt;</a><br><a href="#">Community fellowship &gt;</a><br><a href="#">Respect for Employee Individuality &gt;</a> |
|---------------------------|--|

G4-57 The internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines

|                           |  |
|---------------------------|--|
| Corresponding content in: | <a href="#">Compliance system &gt;</a> |
|---------------------------|--|

G4-58 The internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines

|                           |                                     |
|---------------------------|-------------------------------------|
| Corresponding content in: | <a href="#">Compliance system</a> > |
|---------------------------|-------------------------------------|

## Specific Standard Disclosures

Category: Economic

Aspect: Economic Performance

G4-EC1 Direct economic value generated and distributed

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | <a href="#">Financial Information</a> >   |
| ISO26000<br>Core Subjects and Issues | 6.8.1-6.8.2: Community involvement and development<br>6.8.3: Community involvement<br>6.8.7: Wealth and income creation<br>6.8.9: Social investment |

G4-EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | <a href="#">Environmental protection</a> >      |
| ISO26000<br>Core Subjects and Issues | 6.5.5: Climate change mitigation and adaptation |

G4-EC4 Financial assistance received from government

|                           |                |
|---------------------------|----------------|
| Corresponding content in: | Not applicable |
|---------------------------|----------------|

Aspect: Indirect Economic Impacts

G4-EC7 Development and impact of infrastructure investments and services supported

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | <a href="#">Public outreach</a> ><br><a href="#">Community fellowship</a> >  |
| ISO26000<br>Core Subjects and Issues | 6.3.9: Economic, social and cultural rights<br>6.8.1-6.8.2: Community involvement and development<br>6.8.7: Wealth and income creation<br>6.8.9: Social investment |

## Aspect: Procurement Practices

## G4-EC9 Proportion of spending on local suppliers at significant locations of operation

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Supplier relationships >   |
| ISO26000<br>Core Subjects and Issues | 6.4.3: Employment and employment relationships<br>6.6.6: Promoting social responsibility in the value chain<br>6.8.1-6.8.2: Community involvement and development<br>6.8.7: Wealth and income creation |

## Category: Environmental

## Aspect: Materials

## G4-EN1 Materials used by weight or volume

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Corresponding content in:            | Environmental protection >      |
| ISO26000<br>Core Subjects and Issues | 6.5.4: Sustainable resource use |

## G4-EN2 Percentage of materials used that are recycled input materials

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Corresponding content in:            | Recycling >                     |
| ISO26000<br>Core Subjects and Issues | 6.5.4: Sustainable resource use |

## Aspect: Energy

## G4-EN3 Direct energy consumption within the organization

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Corresponding content in:            | Environmental protection >      |
| ISO26000<br>Core Subjects and Issues | 6.5.4: Sustainable resource use |

## G4-EN7 Reductions in energy requirements of products and services

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Low-carbon society >   |
| ISO26000<br>Core Subjects and Issues | 6.5.4: Sustainable resource use<br>6.5.5: Climate change mitigation and adaptation |

## Aspect: Water

## G4-EN8 Total water withdrawal by source

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Corresponding content in:            | <a href="#">Air and water &gt;</a> |
| ISO26000<br>Core Subjects and Issues | 6.5.4: Sustainable resource use    |

## G4-EN9 Water sources significantly affected by withdrawal of water

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Corresponding content in:            | Not applicable                  |
| ISO26000<br>Core Subjects and Issues | 6.5.4: Sustainable resource use |

## Aspect: Biodiversity

## G4-EN11 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Not applicable   |
| ISO26000<br>Core Subjects and Issues | 6.5.6: Protection of the environment, biodiversity and restoration of natural habitats |

## G4-EN12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | <a href="#">Biodiversity &gt;</a>  |
| ISO26000<br>Core Subjects and Issues | 6.5.6: Protection of the environment, biodiversity and restoration of natural habitats |

## G4-EN13 Habitats protected or restored

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | <a href="#">Biodiversity &gt;</a>  |
| ISO26000<br>Core Subjects and Issues | 6.5.6: Protection of the environment, biodiversity and restoration of natural habitats |

## G4-EN14 Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Not applicable   |
| ISO26000<br>Core Subjects and Issues | 6.5.6: Protection of the environment, biodiversity and restoration of natural habitats |



## Aspect: Emissions

## G4-EN15 Direct greenhouse gas (GHG) emissions (Scope 1)

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Low-carbon society ><br>Environmental and safety data > |
| ISO26000<br>Core Subjects and Issues | 6.5.5: Climate change mitigation and adaptation         |

## G4-EN16 Energy indirect greenhouse gas (GHG) emissions (Scope 2)

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Low-carbon society ><br>Environmental and safety data > |
| ISO26000<br>Core Subjects and Issues | 6.5.5: Climate change mitigation and adaptation         |

## G4-EN17 Other indirect greenhouse gas (GHG) emissions (Scope 3)

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Low-carbon society >                            |
| ISO26000<br>Core Subjects and Issues | 6.5.5: Climate change mitigation and adaptation |

## G4-EN19 Reduction of greenhouse gas (GHG) emissions

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | RC objectives and results ><br>Low-carbon society ><br>Environmental and safety data > |
| ISO26000<br>Core Subjects and Issues | 6.5.5: Climate change mitigation and adaptation  |

## G4-EN20 Emissions of ozone-depleting substances (ODS)

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Not applicable  |
| ISO26000<br>Core Subjects and Issues | 6.5.3: Prevention of pollution<br>6.5.5: Climate change mitigation and adaptation |

G4-EN21 NO<sub>x</sub>, SO<sub>x</sub>, and other significant air emissions

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Environmental protection ><br>Managing chemical substances ><br>Air and water ><br>Environmental and safety data > |
| ISO26000<br>Core Subjects and Issues | 6.5.3: Prevention of pollution   |

## Aspect: Effluents and Waste

## G4-EN22 Total water discharge by quality and destination

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Air and water ><br>Environmental and safety data >                |
| ISO26000<br>Core Subjects and Issues | 6.5.3: Prevention of pollution<br>6.5.4: Sustainable resource use |

## G4-EN23 Total weight of waste by type and disposal method

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Recycling ><br>Environmental and safety data > |
| ISO26000<br>Core Subjects and Issues | 6.5.3: Prevention of pollution                 |

## G4-EN24 Total number and volume of significant spills

|                                      |                                |
|--------------------------------------|--------------------------------|
| Corresponding content in:            | Not applicable                 |
| ISO26000<br>Core Subjects and Issues | 6.5.3: Prevention of pollution |

## Aspect: Products and Services

## G4-EN27 Extent of impact mitigation of environmental impacts of products and services

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Low-carbon society >   |
| ISO26000<br>Core Subjects and Issues | 6.5.3: Prevention of pollution<br>6.5.4: Sustainable resource use<br>6.5.5: Climate change mitigation and adaptation<br>6.7.5: Sustainable consumption |

## G4-EN28 Percentage of products sold and their packaging materials that are reclaimed by category

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Recycling ><br>Environmental and safety data >  |
| ISO26000<br>Core Subjects and Issues | 6.5.3: Prevention of pollution<br>6.5.4: Sustainable resource use<br>6.7.5: Sustainable consumption |

## Aspect: Compliance

## G4-EN29 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Corresponding content in:            | Not applicable                   |
| ISO26000<br>Core Subjects and Issues | 4.6: Respect for the rule of law |

## Aspect: Transport

G4-EN30 Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | <a href="#">Low-carbon society &gt;</a>  |
| ISO26000<br>Core Subjects and Issues | 6.5.4: Sustainable resource use<br>6.6.6: Promoting social responsibility in the value chain |

## Aspect: Overall

G4-EN31 Total environmental protection expenditures and investments by type

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | <a href="#">Environmental and safety data &gt;</a> |
| ISO26000<br>Core Subjects and Issues | 6.5.1-6.5.2: The environment                       |

## Category: Social

### Sub-Category: Labor Practices and Decent Work

## Aspect: Employment

G4-LA1 Total number and rate of new employee hires and employee turnover by age group, gender, and region

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | <a href="#">Valuing human rights and diversity &gt;</a> |
| ISO26000<br>Core Subjects and Issues | 6.4.3: Employment and employment relationships          |

G4-LA2 Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | <a href="#">Human resources development &gt;</a><br><a href="#">Balancing work and family life &gt;</a> |
| ISO26000<br>Core Subjects and Issues | 6.4.4: Conditions of work and social protection<br>6.8.7: Wealth and income creation                    |

G4-LA3 Return to work and retention rates after parental leave, by gender

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | <a href="#">Balancing work and family life &gt;</a> |
| ISO26000<br>Core Subjects and Issues | 6.4.4: Conditions of work and social protection     |

## Aspect: Occupational Health and Safety

G4-LA5 Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Corresponding content in:            | Not applicable                   |
| ISO26000<br>Core Subjects and Issues | 6.4.6: Health and safety at work |

G4-LA6 Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Workplace safety and hygiene >                    |
| ISO26000<br>Core Subjects and Issues | 6.4.6: Health and safety at work<br>6.8.8: Health |

G4-LA7 Workers with high incidence or high risk of diseases related to their occupation

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Health maintenance >                              |
| ISO26000<br>Core Subjects and Issues | 6.4.6: Health and safety at work<br>6.8.8: Health |

G4-LA8 Health and safety topics covered in formal agreements with trade unions

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Corresponding content in:            | Workplace safety and hygiene >   |
| ISO26000<br>Core Subjects and Issues | 6.4.6: Health and safety at work |

## Aspect: Training and Education

G4-LA9 Average hours of training per year per employee by gender, and by employee category

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Human resources development >                          |
| ISO26000<br>Core Subjects and Issues | 6.4.7: Human development and training in the workplace |

G4-LA10 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career ending

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Human resources development >   |
| ISO26000<br>Core Subjects and Issues | 6.4.7: Human development and training in the workplace<br>6.8.5: Employment creation and skills development |

## Aspect: Diversity and Equal Opportunity

G4-LA12 Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | <a href="#">Corporate Governance Report</a> ><br><a href="#">Corporate Profile</a> ><br><a href="#">Valuing human rights and diversity</a> >  |
| ISO26000<br>Core Subjects and Issues | 6.2.3: Decision-making processes and structures<br>6.3.7: Discrimination and vulnerable groups<br>6.3.10: Fundamental principles and rights at work<br>6.4.3: Employment and employment relationships |

G4-LA14 Percentage of new suppliers that were screened using labor practices criteria

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | <a href="#">Supplier relationships</a> >  |
| ISO26000<br>Core Subjects and Issues | 6.3.5: Avoidance of complicity<br>6.4.3: Employment and employment relationships<br>6.6.6: Promoting social responsibility in the value chain<br>7.3.1: Due diligence |

## Sub-Category: Human Rights

## Aspect: Child Labor

G4-HR5 Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Not applicable   |
| ISO26000<br>Core Subjects and Issues | 6.3.3: Due diligence<br>6.3.4: Human rights risk situations<br>6.3.5: Avoidance of complicity<br>6.3.7: Discrimination and vulnerable groups<br>6.3.10: Fundamental principles and rights at work<br>6.6.6: Promoting social responsibility in the value chain<br>6.8.4: Education and culture |

## Aspect: Forced or Compulsory Labor

G4-HR6 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Not applicable  |
| ISO26000<br>Core Subjects and Issues | 6.3.3: Due diligence<br>6.3.4: Human rights risk situations<br>6.3.5: Avoidance of complicity<br>6.3.10: Fundamental principles and rights at work<br>6.6.6: Promoting social responsibility in the value chain |

## Aspect: Indigenous Rights

## G4-HR8 Total number of incidents of violations involving rights of indigenous peoples and actions taken

|                            |  |
|----------------------------|--|
| Corresponding content in:  | Not applicable   |
| ISO26000<br>Not applicable | 6.3.4: Human rights risk situations<br>6.3.6: Resolving grievances<br>6.3.7: Discrimination and vulnerable groups<br>6.3.8: Civil and political rights<br>6.6.7: Respect for property rights<br>6.8.3: Community involvement |

## G4-HR10 Percentage of new suppliers that were screened using human rights criteria

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Supplier relationships >   |
| ISO26000<br>Core Subjects and Issues | 6.3.3: Due diligence<br>6.3.4: Human rights risk situations<br>6.3.5: Avoidance of complicity<br>6.6.6: Promoting social responsibility in the value chain |

## Sub-Category: Society

## Aspect: Local Communities

## G4-SO1 Percentage of operations with implemented local community engagement, impact assessments, and development programs

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Public outreach ><br>Community fellowship >   |
| ISO26000<br>Core Subjects and Issues | 6.3.9: Economic, social and cultural rights<br>6.5.1-6.5.2: The environment<br>6.5.3: Prevention of pollution<br>6.8: Community involvement and development |

## G4-SO2 Operations with significant potential or actual negative impacts on local communities

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Not applicable  |
| ISO26000<br>Core Subjects and Issues | 6.3.9: Economic, social and cultural rights<br>6.5.3: Prevention of pollution<br>6.8: Community involvement and development |

## G4-SO4 Communication and training on anti-corruption policies and procedures

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Compliance system >  |
| ISO26000<br>Core Subjects and Issues | 6.6.1-6.6.2: Fair operating practices<br>6.6.3: Anti-corruption<br>6.6.6: Promoting social responsibility in the value chain |



## Sub-Category: Product Responsibility

### Aspect: Customer Health and Safety

G4-PR1 Percentage of significant product and service categories for which health and safety impacts are assessed for improvement

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Quality assurance >   |
| ISO26000<br>Core Subjects and Issues | 6.7.1-6.7.2: Consumer issues<br>6.7.4: Protecting consumers' health and safety<br>6.7.5: Sustainable consumption<br>6.8.8: Health |

G4-PR2 Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes

|                                      |   |
|--------------------------------------|---|
| Corresponding content in:            | Quality assurance >   |
| ISO26000<br>Core Subjects and Issues | 4.6: Respect for the rule of law<br>6.7.1-6.7.2: Consumer issues<br>6.7.4: Protecting consumers' health and safety<br>6.7.5: Sustainable consumption<br>6.8.8: Health |

### Aspect: Product and Service Labeling

G4-PR3 Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Managing chemical substances >   |
| ISO26000<br>Core Subjects and Issues | 6.7.1-6.7.2: Consumer issues<br>6.7.3: Fair marketing, factual and unbiased information and fair contractual practices<br>6.7.4: Protecting consumers' health and safety<br>6.7.5: Sustainable consumption<br>6.7.9: Education and awareness |

### Aspect: Marketing Communications

G4-PR7 Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes

|                                      |  |
|--------------------------------------|--|
| Corresponding content in:            | Not applicable   |
| ISO26000<br>Core Subjects and Issues | 4.6: Respect for the rule of law<br>6.7.1-6.7.2: Consumer issues<br>6.7.3: Fair marketing, factual and unbiased information and fair contractual practices |

# Independent Review and Independent Assurance Report

An Independent Review and Independent Assurance Report with respect to the *Asahi Kasei Group CSR Report* are available below.

## Independent Review (Japan Chemical Industry Association)

### Independent review

[translation from Japanese]

Asahi Kasei Group CSR Report 2017 Internet Edition  
Independent Review

August 22, 2017

Hideki Kobori  
President  
Asahi Kasei Corporation

Shigeki Nagamatsu  
Chief Director  
Responsible Care Verification Center  
Japan Chemical Industry Association

### Objectives of Verification

Responsible Care Report Verification was performed by the Responsible Care Verification Center with respect to the *Asahi Kasei Group CSR Report 2017 Internet Edition* (the "Report") prepared by Asahi Kasei Corporation, with the objective of expressing an opinion as a chemical industry specialist on the matters as stated below.

- 1) Reasonableness of methods of calculation and aggregation of performance metrics (numerical values), and the accuracy of numerical values.
- 2) Accuracy of reported information other than numerical values.
- 3) Evaluation of Responsible Care (RC) and Corporate Social Responsibility (CSR) activities.
- 4) Characteristics of the Report.

### Verification Procedure

- At the head office: Examination of the reasonableness of methods to aggregate numerical values reported from each site (office, plant) and examination of the accuracy of reported information other than numerical values were performed through interviews of responsible parties and compilers of the Report as well as receipt of internal documents and explanations thereof from each of the responsible parties and compilers.
- At the Suzuka Works: Examination of the reasonableness of methods of calculation and aggregation of the accuracy of reported information other than numerical values were performed through interviews of responsible parties and compilers of the Report, receipt of internal documents and explanations thereof from each of the responsible parties and compilers, cross-check of reported information with supporting materials, and on-site visits for confirmation.
- Numerical values and reported information were verified by sampling.

### Opinion

- 1) Reasonableness of methods of calculation and aggregation of performance metrics (numerical values); accuracy of numerical values
  - A reasonable method is adopted for the calculation and aggregation of numerical values at the head office and the Suzuka Works.
  - It is noteworthy that the RC Performance Data Collection System used throughout the company for accurate and efficient aggregation has been improved by increasing the items for confirming differences from the previous year and introducing a FAQ list for inquiries.
  - Numerical values within the scope of our examination have been calculated and aggregated accurately.

- 2) Accuracy of reported information other than numerical values
  - Information contained in the Report was confirmed to be accurate. Some minor issues related to appropriateness of expression and ease of understanding were identified in the draft stages, but these have been revised in the present Report.
- 3) Evaluation of RC and CSR activities
  - It is noteworthy that the company has improved its substantial framework for CSR advancement under the leadership of the President.
  - It is noteworthy that the company makes efforts for respect for employee individuality that include human resources development, balancing work and family life, and especially enriched measures for balancing work and childrearing or family care.
  - The company makes systematic and concrete efforts to prevent workplace accidents, operational accidents, and environmental accidents as part of its RC program with a PDCA cycle, and further improvements are expected.
  - The Suzuka Works has maintained zero lost-workday injuries for 20 years, and also sponsors “Suzuka Cherry Blossom Festival” at a shopping area in the city as a public outreach activity.
- 4) Characteristics of the Report
  - The content of the Report regarding community fellowship activities has been enriched year by year, and it is particularly notable that this year’s Report provides details concerning the company’s support of a national campaign to encourage young women to pursue careers in science and technology.

## Independent Assurance Report (KPMG AZSA Sustainability Co., Ltd.)



## Independent Assurance Report

To the President & Representative Director of Asahi Kasei Corp.

We were engaged by Asahi Kasei Corp. (the "Company") to undertake a limited assurance engagement of the Asahi Kasei Group's greenhouse gas emissions (total of Scopes 1 and 2) in Japan, global greenhouse gas emissions (in Scopes 1 and 2), overseas greenhouse gas emissions (total of Scopes 1 and 2) and Scope 3 greenhouse gas emissions from Category 1 in Japan (the "GHG emissions") for the period from April 1, 2016 to March 31, 2017 included in its CSR report 2017 (Internet Edition) (the "Report").

#### The Company's Responsibility

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

#### Our Responsibility

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

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

#### Conclusion

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

#### Our Independence and Quality Control

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

*KPMG AZSA Sustainability Co., Ltd.*

KPMG AZSA Sustainability Co., Ltd.

Tokyo, Japan

January 19, 2018