**Zeon Group**
**Sustainability Report 2023**

# ZEON

**ZEON  SUSTAINABILITY REPORT 2023**

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# Contents

# Editorial Policy

Zeon Corporation and Zeon Group ("Zeon") publish an Integrated Report, which provides stakeholders with an overview of Zeon's business activities. Zeon also publishes a Sustainability Report, which is intended to help stakeholders understand Zeon's approach to sustainability and its environmental activities.

Besides bringing together information about Zeon's sustainability approach and measures, this Sustainability Report is also intended to function as a communication tool, with the aim of fostering dialog with Zeon's stakeholders, so that Zeon can play an even more useful role in the world. We look forward to hearing your frank comments and suggestions regarding the Sustainability Report, which can provide a useful reference for us in our future activities.

## Reporting Period

April 2022 to March 2023 (includes some information relating to the period in and after April 2023)

## Reporting Scope

Zeon Corporation and Zeon Group companies inside and outside Japan.
Some data covers only Zeon Corporation.

## Reporting Scope for Environmental Data

Takaoka Plant, Kawasaki Plant, Mizushima Plant, Tokuyama Plant, Himi Futagami Plant, Tsuruga Plant, Zeon Kasei Co., Ltd., Zeon Polymix Inc., Zeon Medical Inc., Zeon North Co., Ltd., Tokyo Zairyo Co., Ltd., RIMTEC Corporation, Zeon Yamaguchi Co., Ltd., Zeon Chemicals Yonezawa Co., Ltd., Tohpe Corporation, Zeon Opto Bio Lab Co., Ltd.

## Reference Guidelines

Determined with reference to the 2018 Environmental Reporting Guidelines promulgated by Japan's Ministry of the Environment (MOE), and with reference to GRI Standards.

## Date of Publication

March 2024 (previously published in April 2023)
Revised June 2024 (P.56)

# Messages from Management

## Message from the President

At the Zeon Group, our mission has been embodied in our corporate philosophy of "contributing to the preservation of the Earth and the prosperity of the human race." We conduct our business aspiring to realize a "Sustainable Earth" and a "Safe and Comfortable Life" by providing products and services created using our original technology. Our corporate philosophy also ties into our company name, derived from the Greek words "geo" (Earth) and "eon" (eternity), encompassing the very concept of sustainability. Achieving sustainability is therefore synonymous with putting this corporate philosophy into practice.

However, against the backdrop of various increasingly grave challenges such as the pressing need to combat climate change and growing instability in world affairs, concerns over our collective ability to achieve sustainability in society are rising. We at the Zeon Group need to reaffirm our principles and put our mission into practice with even greater conviction and commitment.

In STAGE30, the Zeon Group's Medium-Term Business Plan with a target year of FY 2030, we set our Vision for 2030 as to be "A company that lives up to societal expectations and the aspirations of employees" and established our group-wide strategy accordingly. We aim to realize our vision through our initiatives to contribute to the SDGs, in other words, through realizing sustainability management.

Innovation is key to our Group fulfilling the expectations of society. We believe that the innovative materials and services created by the power of chemistry have the ability to resolve social challenges and fundamentally change the future of the planet and the human race. It is most definitely people that will create this innovation. As long as you have ideas and are willing to act on them, anyone can make innovation happen. Innovation is not sparked by only select geniuses. Our human resource strategy is about creating systems and a company culture to spark innovation and developing people who will spark innovation. Put another way, our human resource strategy is to have all employees create "stages" that allow every employee to demonstrate their talents. By giving employees stages for their motivation, we will generate innovation that lives up to societal expectations and contribute to sustainability in society.

**Tetsuya Toyoshima**
President and CEO

# Message from the Corporate Sustainability Division Manager

"Based on our corporate philosophy of 'contributing to the preservation of the Earth and the prosperity of the human race,' sustainability at Zeon means achieving sustainable growth together with society. To achieve this, we will provide products and services that are valuable for solving global and social issues, build trust with our stakeholders through fairness and integrity and have each one of us act proactively thinking how to create a better future for the society and ourselves."

This is how the Zeon Group defined sustainability in its Sustainability Policy established in July 2022. It is both the Zeon Group's basic approach to advancing its business, and at the same time a promise to our stakeholders of the attitude we most value in our relationships with them.

We have set the goal of contributing to the SDGs in our Medium-Term Business Plan: STAGE30 and aim to deliver both solutions to social issues and sustained growth for the Zeon Group through our business activities. We are implementing a variety of initiatives to improve sustainability, including providing original technologies, products, and services to help solve social issues, achieving our 2050 target of carbon neutrality, increasing employee engagement, and conducting human rights due diligence and sustainable procurement. We established the Sustainability Conference and the Sustainability Committee in December 2022, thereby building a framework to respond cross-functionally and dynamically to sustainability-related issues.

To achieve sustainable growth for our Group and society, we are defining the materiality (priority issues) that underpins our sustainability management. Going forward, we will organically link the initiatives and indicators in STAGE30 based on this materiality and aim to make it a driver for achieving our Vision for 2030 of being "A company that lives up to societal expectations and the aspirations of employees" as well as further sustainability.

We will continue aiming for sustained growth in our Group and society. Employees will conduct activities with a focus on sustainability, and through dialogue and collaboration with stakeholders, we will work to realize a brighter future for all.

**Erisa Watanabe**
Director & Corporate Officer
Corporate Sustainability Division Manager

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# Zeon's Sustainability

# Basic Approach

## Corporate Philosophy

**Contributing to the preservation of the Earth and the prosperity of the human race**

In keeping with its name, derived from the Greek words "geo" (Earth) and "eon" (eternity),

**Zeon will contribute to a "Sustainable Earth" and "Safe and Comfortable Life for People"** by providing original technologies, products, and services.

## Sustainability Policy

On July 1, 2022, we adopted a new Sustainability Policy to replace our existing CSR Policy.

**Sustainability Policy (Adopted on July 1, 2022)**

• We aspire to realize a "Sustainable Earth" and "Safe and Comfortable Life".
• We will firmly maintain fairness and integrity in our activities to be a trustworthy company.
• Each of us will think and act proactively for a better future.

Based on our corporate philosophy of "contributing to the preservation of the Earth and the prosperity of the human race", sustainability at Zeon means achieving sustainable growth together with society. To achieve this, we will provide products and services that are valuable for solving global and social issues, build trust with our stakeholders through fairness and integrity and have each one of us act proactively thinking how to create a better future for the society and ourselves.



**Explanation of the schematic diagram**

Zeon's Sustainability Policy can be explained with reference to the schematic diagram shown above. Firstly, the inner arrows (① and ②) represent how, by helping to solve social issues and providing new value for society, Zeon itself can also obtain profits in return for providing this value. Arrows ③ and ④ show how continuing to implement a "virtuous circle" can lead to sustainable development for society and continued growth for Zeon. The image in the middle representing two people shaking hands denotes how, by realizing this kind of virtuous circle, the relationship of trust between society and Zeon can be further strengthened.

## CSR Code of Conduct

Based on the Zeon Corporate Philosophy and Sustainability Policy, we have established the CSR Code of Conduct, to serve as a guideline for each and every employee to earn the trust of society and act in accordance with its expectations.

CSR Code of Conduct

https://www.zeon.co.jp/en/csr/concept/pdf/000257956.pdf

# Sustainability Management

## Organizational Bodies and Committees

In December 2022, we newly established the Sustainability Conference and Sustainability Committee as organizational bodies tasked with reviewing and promoting group-wide sustainability initiatives. Both the Sustainability Conference and the CSR Conference are chaired and overseen by the President, with reports delivered to the Board of Directors on an as-needed basis. Risk management and compliance are handled by the CSR Conference, while general sustainability issues besides these are handled by the Sustainability Conference.

**Conferences and Committees Promoting Sustainability**

- Board of Directors
- Representative Director
  - Executive Committee
  - Department of Internal Auditing
  - Sustainability Conference — Sustainability Committee
  - CSR Conference
    - Risk Management Committee
    - Compliance Committee
    - Information Management Committee
    - Environmental and Safety Affairs Committee
    - Quality Assurance Committee
    - PL Committee
    - Public Relations Committee
  - Business divisions, indirect departments, laboratories, and plants/ Subsidiaries and affiliates

### Sustainability Conference

Purpose of establishment: Established as the highest decision-making body to address sustainability and related issues

Function: Deliberates on and finalizes decisions related to the various activities and policies of the Sustainability Committee. In addition, fields progress reports and issues instructions as needed.

### CSR Conference

Purpose of establishment: Established as the highest decision-making body for CSR activities, with a focus on risk management and compliance, which comprise the foundation for achieving sustainability

Function: Deliberates on and finalizes decisions related to the various activities and measures of the Compliance Committee, Risk Management Committee, Public Relations Committee, Quality Assurance Committee, PL Committee, Environmental and Safety Affairs Committee, and the Information Management Committee. In addition, fields progress reports and issues instructions as needed.

## Sustainability Committee

Purpose of establishment: Promotion of initiatives to engage with various sustainability issues

Function: Formulates policies for medium- to long-term activities relating to sustainability; develops annual plans and targets/indicators; considers important promotional measures; and performs checks on implementation status. These activities are also discussed with and reported to the Sustainability Conference. Thematic subcommittees under the jurisdiction of the Sustainability Committee will also be established as needed.

## Risk Management Committee

Purpose of establishment: Manage business continuity risks

Function: The committee is responsible for systematically preventing potential risks and managing risks that emerge. It also aims to provide disciplined response to minimize loss in the event that a crisis does occur. For details on its activities, see Risk Management. (→P. 62)

## Compliance Committee

Purpose of establishment: Prevent violations of laws and regulations

Function: The Compliance Committee is responsible for creating compliance education and training programs to be implemented by managing business divisions. The Compliance Committee has the following three subcommittees: the Anti-trust Law Regulatory Subcommittee, the Export Security Control Subcommittee, and the Corporate Governance Subcommittee. For more information about its activities, see Compliance. (→P. 63)

## Information Management Committee

Purpose of establishment: Appropriate management of information

Function: Planning, implementation status management, and formulation of proposals for improvement, in regard to the appropriate management of information.

## Environmental and Safety Affairs Committee

Purpose of establishment: Reduce environmental impacts, establish and maintain safe working environments

Function: The Environmental and Safety Affairs Committee plans and proposes specific environmental and safety initiatives and monitors the progress of addressing environmental and safety issues. For more information about its activities, see Environment (→P. 12) and Occupational Health and Safety. (→P. 44)

## Quality Assurance Committee

Purpose of establishment: Implement and improve quality assurance

Function: The Quality Assurance Committee reviews quality assurance activities and their implementation, and examines and takes action to improve issues related to quality assurance. For more information about its activities, see Quality Assurance. (→P. 51)

## PL Committee

Purpose of establishment: Implement fulfillment activities related to product liability

Function: Formulates plans for product liability related prevention activities and training, and monitors the implementation of emergency response measures. For more information about its activities, see Quality Assurance. (→P. 51)

## Public Relations Committee

Purpose of establishment: Effectively communicate information about Zeon

Function: The Public Relations Committee aims to enhance Zeon's profile and image through accurate communication of our corporate philosophy, approaches, and activities. The Committee also ensures timely and appropriate disclosure of information by Zeon Group. For more information about its activities, see Information Disclosure (→P. 59) and IR Communications. (→P. 64)

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## Sustainability Promotion Structure

With the aim of realizing carbon neutrality by 2050, in April 2022 the Carbon Neutral Endeavor Department which previously reported directly to the President was placed under the Corporate Sustainability Division. In July 2022, we established a new Carbon Neutral Division to strengthen organizational functions such as strategy formulation, and the Carbon Neutral Endeavor Department was placed under it. In addition, a new Carbon Neutral Laboratory has been established under the Research and Development Center, and we have put in place a system for promoting R&D that is oriented toward *monozukuri* manufacturing that helps to realize carbon neutrality and the circular economy.

In May 2022, we implemented an organizational reform, with the existing Raw Material Division and Logistics Division that had been under the Elastomers and Chemicals Business Headquarters being brought together to form the new Supply Chain Division, which is under the Administrative Headquarters. The Supply Chain Division undertakes the comprehensive collection and analysis of all supply chain related information, and implements measures intended to reduce Scope 3 $CO_2$ emissions in the supply chain. It also puts in place the systems needed for the formulation, proposal, adjustment and implementation of supply chain related policies to help ensure the building of the foundations needed for business growth, and accelerating initiatives aimed at realizing carbon neutrality.

**Sustainability Promotion Structure**

# Sustainability Promotion Plan

Since 2011, we have instituted our "Vision for 2020" in respective fields based on our CSR Matrix, and have been engaged with CSR issues at the Zeon Group level.

In 2021, we presented our "Vision for 2030," formulating the Three Group-wide Strategies to help us achieve our goals for the year 2030, and which represent the embodiment of that vision. We then established our "Targets for 2030," corresponding to these Three Group-wide Strategies. These include those relating to sustainability objectives, such as: "a 50% reduction in $CO_2$ emissions"; "50% of turnover from products which contribute to the SDGs"; "75% employee engagement"; and "a 30% ratio of foreign-national and female directors and officers."

In FY 2023, we started Phase 2 (FY 2023–26) of STAGE30, our Medium-Term Business Plan. These four years are designated as the time to shift to implementing the specific activities that we devised in Phase 1 to achieve our Vision for 2030, to be "A company that lives up to societal expectations and the aspirations of employees." We are promoting Four Group-wide Strategies in Phase 2, adding the new fourth strategy of "'Polish up' the management base" to our original Three Group-wide Strategies. Target values for FY 2026 have been set for each of these Group-wide Strategies, and we are broadly sharing our progress toward them with stakeholders. Through this, we will make steady progress toward realizing our Vision for 2030.

**Medium-Term Business Plan: STAGE30  Targets Related to Sustainability in Phase 2**

| Strategies | Targets for FY 2026 Related to Sustainability |
|---|---|
| 1. Promote a transformation of *monozukuri* to realize carbon neutrality and a circular economy | Ratio of reduction in $CO_2$ emissions: 29% (non-consolidated, compared to FY 2019 levels) |
| 2. Contribute to solving social issues by both "polishing up" existing businesses and "exploring" new businesses | Sales ratio of products that contribute to the SDGs: 40% |
| 3. Work together to create "stages" to be active on | Employee engagement: 56%<br>Zeon Healthy Behavior Indicator: 65%<br>Paid leave utilization rate: 70% |
| 4. "Polish up" the management base | Ratio of foreign-national and female directors and officers: 25%<br>Ratio of outside directors and officers: Majority<br>Ratio of female managers: 12% |

# Timeline of CSR/Sustainability Initiatives

1995:   Joined the Japan Responsible Care Council and declared our commitment to Responsible Care
          Established Zeon's Responsible Care Policy
1996:   Revised the group-wide safety management system and established the Plant Technology Audit System
1997:   Established the Safety Philosophy
          Held the first Zeon Safety Month and the All-Zeon Safety Conference (subsequently held each year in April)
          Established the Code of Conduct (Zeon's Seven Articles)
1998:   Established the Responsible Care Policy
1999:   Established the Risk Management Rules
2000:   Published the first Responsible Care Activity Report (1999 edition)
2001:   Established the Environmental Philosophy
2003:   Amended the Risk Management Rules and renamed them as the Risk Management and Compliance Rules
          Established Zeon's Seven Articles Code of Conduct
2004:   Implemented the Internal Reporting System
          Published the Compliance Textbook I
2005:   Published an English version of the Responsible Care Activity Report
          Conducted third-party verification for the Responsible Care Activity Report
          Published the Compliance Textbook II (Q&A Edition)
2006:   Switched from publishing the Responsible Care Activity Report to publishing the CSR Report
2008:   Published the Compliance Textbook I (Revised Edition)
2009:   Signed the Responsible Care Global Charter
2010:   Established the CSR Policy and CSR Code of Conduct
          Published the Compliance Textbook (Q&A Edition)
          Revised the CSR Implementation System and established a new System
          Published the CSR Textbook
2011:   Began using the CSR Matrix
2012:   Started the CSR Core Projects (comprehensive Zeon social contributions package)
2013:   Switched from publishing the CSR Report to publishing the Corporate Report
2017:   Revised the CSR Matrix based on ISO 26000
          Along with publishing the Corporate Report, also published a PDF version of the CSR Report on the corporate
          website
2018:   Revised the CSR Code of Conduct
2019:   Became a signatory to the United Nations Global Compact
          Established the Zeon Group Human Rights Policy
2020:   Expressed its support for the TCFD
2021:   Established the Declaration for Health and Productivity Management
2022:   Established the Sustainability Policy
          Switched from the Corporate Report to the Integrated Report; and from the CSR Report to the Sustainability
          Report
          Newly established the Sustainability Conference and Sustainability Committee
2023:   Revised the Zeon Group Human Rights Policy

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# Environment

## Environmental Philosophy and Safety Philosophy

### Philosophy and Policy for Safety and Environmental Activities

Responsible Care: A voluntary initiative by businesses that manufacture or handle chemical substances to achieve continuous improvement in health, safety, and environmental (HSE) performance across the entire lifecycle of such substances—from development and manufacture, through distribution and use, and ending in final consumption or disposal—based on the principles of independent decision-making and personal responsibility. These businesses publicly commit to Responsible Care in their business policies, implement HSE-related actions, and strive to improve their HSE performance.

At Zeon, we have practiced the Responsible Care philosophy as a member of the Japan Responsible Care Council (now the Japan Chemical Industry Association Responsible Care Committee) since its inception in 1995. In 1998, we established our own Responsible Care Policy to define our conduct guidelines based on the Responsible Care.

Our Responsible Care Policy is included in our Environmental and Safety Regulations. We regularly examine the need for revisions to our regulations every three years and as needed.

### Environmental Philosophy

Established in 2001, our Environmental Philosophy guides our efforts to deliver products with consistent quality through safe and reliable production while reducing our environmental impacts.

> **Environmental Philosophy (Established August 2001)**
>
> 1. Environmental protection is a mission of a socially responsible organization
> 2. Our basic belief is that environmental protection can be achieved with innovative technology
> 3. Environmental protection will be achieved when all employees work together with a sense of mission to overcome challenges

### Safety Philosophy

A consistently safe work environment is the foundation of all production activities. We formulated our Safety Philosophy in 1997 to guide our safety activities.

> **Safety Philosophy (Established March 1997)**
>
> 1. Safety is the foundation of all business activities and the greatest priority
> 2. Our basic belief regarding safety is that we can prevent all accidents
> 3. Safety will be achieved by performing the 5Ss* and when everyone takes responsibility for their own actions

*5Ss:
Seiri (sort), Seiton (straighten), Seisou (scrub), Seiketsu (systematize), and Shitsuke (sustain)

## Responsible Care Policy

**Responsible Care Policy (Established June 1998)**

**1. Prioritize the environment and safety**
Protecting the environment and ensuring safety are preconditions for all business activities and are the most important priorities. We will work continuously to enact full accident prevention countermeasures, and provide education and training for all employees to prevent safety and environmental accidents.

**2. Collect and distribute the latest information on chemical products**
We will collect, store and manage the latest information required for the appropriate handling, use and disposal of chemical products, and distribute this information to employees and users.

**3. Minimize the discharge of toxic chemicals and waste**
We will work to reduce the discharge of hazardous chemical substances, minimize waste, and develop technology for recycling and reusing materials.

**4. Promote activities for conserving resources and energy**
We will aim to dramatically reduce the amount of energy we use and help alleviate global warming by developing innovative technology and actively promoting resource and energy conservation activities that involve all employees.

**5. Take the environment and safety into account when developing new processes and products and performing quality assurance**
We will perform thorough environmental and safety evaluations from the initial stages of research, develop technology and products that take the environment and safety into account, and work to maintain and improve the quality of technology and products.

**6. Live together with society**
We will strictly observe regulations related to the environment and safety, whether the regulations come from the local community, the national government, overseas, or organizations to which we belong. While cooperating in these activities, we will work to enhance our communication with the local community and society in order to convey a better understanding of Zeon's activities and further strengthen the trust that society has in our company.

**7. Perform continuous improvements**
We will continuously improve our environment safety management and technology by operating a Responsible Care Audit, the Safety Management System, an Environment Management System based on ISO 14001, and an Occupational Health and Safety Management System.

# Environmental and Safety Management

We have built Environmental and Safety Management Systems based on the Responsible Care philosophy, and are working toward the goal of ensuring the safety of all persons at our worksites and plants. We have also obtained ISO 14001 external certification related to the environment.

## Overview of Environmental and Safety Management Systems

**President's Annual Policy and Safety Management Improvement Master Plan**
These documents are created by top management.

**Annual Environment and Safety Policy**
The Environmental and Safety Affairs Department General Manager creates this policy after the President's Annual Policy and the Safety Management Improvement Master Plan are released. The Annual Environment and Safety Policy is reviewed by the CSR Conference and finalized by the President.

**Annual Worksite Manager's Policy and Annual Worksite Safety Management Improvement Master Plan**
Worksite managers create these documents after the President's Annual Policy and the Safety Management Improvement Master Plan are released.

**Annual Worksite Environmental and Safety (Responsible Care) Activities Plans**
Worksite managers create the Activities Plans after the group-wide Annual Environment and Safety Policy is released.

- **Progress Management**
- **Safety Management Improvement Master Plan:** Progress verified by the CSR Conference
- **Annual Worksite Safety Management Improvement Master Plan:** Progress verified by the worksite manager during worksite inspections
- **Annual Worksite Environmental and Safety Activities Plans:** Progress verified by the worksite manager during worksite inspections

## Audits

Audits assess whether our management systems are functioning normally.
Worksite Responsible Care audits cover environmental and safety matters and are headed by the Environmental and Safety Affairs Department General Manager. These audits have two parts: the Responsible Care Audit and the Responsible Care Dialogue.

**Responsible Care Audits**
- Audits using specialized indicators to monitor the progress of Responsible Care activities.
- These audits also include auditing conducted for worksites that have Certified Completion and Process Safety Inspectors for High-Pressure gas.
- The progress of improvements in areas where audits uncovered such needs is verified using the Audit Findings Improvement Plan and Progress Report.

**Responsible Care Dialogues**
- A venue for worksite members and management to consider, discuss, and resolve worksite environmental and safety issues that are difficult to identify through audits.

**Responsible Care Audits at Group Companies**
Group Company Responsible Care Audits cover Group company Responsible Care activities and are headed by the Environmental and Safety Affairs Department General Manager. The progress of improvements in areas where audits uncovered such needs is verified using the Audit Findings Improvement Plan and Progress Report.

**Internal Plant Audits**
Internal plant audits are conducts at plants.
- Plant manager inspections: Inspections of the progress of Responsible Care implementation conducted by the plant manager (at least once/year)
- Environmental Management System (EMS) internal audits, Safety Management System internal audits

### Environmental and Safety Management Systems
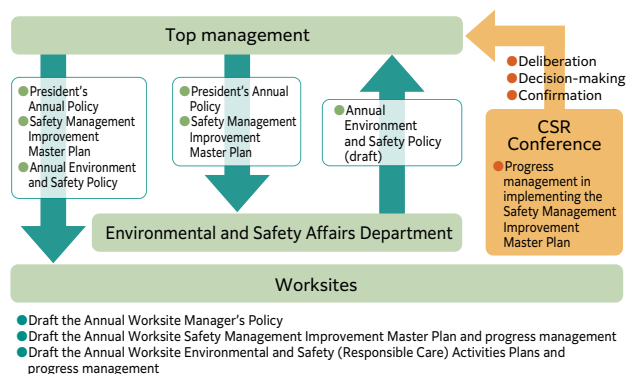


- Draft the Annual Worksite Manager's Policy
- Draft the Annual Worksite Safety Management Improvement Master Plan and progress management
- Draft the Annual Worksite Environmental and Safety (Responsible Care) Activities Plans and progress management

# Overview of Environmental Impacts

We procure raw materials for chemical substances, and consume energy and water resources in the production and sales of our materials and chemical substance products. When manufacturing products, in terms of inputs, we evaluate our reduced use of resources and energy while maintaining quality. In terms of outputs, while emitting substances that impact water and atmospheric environments is unavoidable, we are implementing an ongoing cycle of improvements to minimize these emissions.

**Overview of Environmental Impacts (FY 2022)**
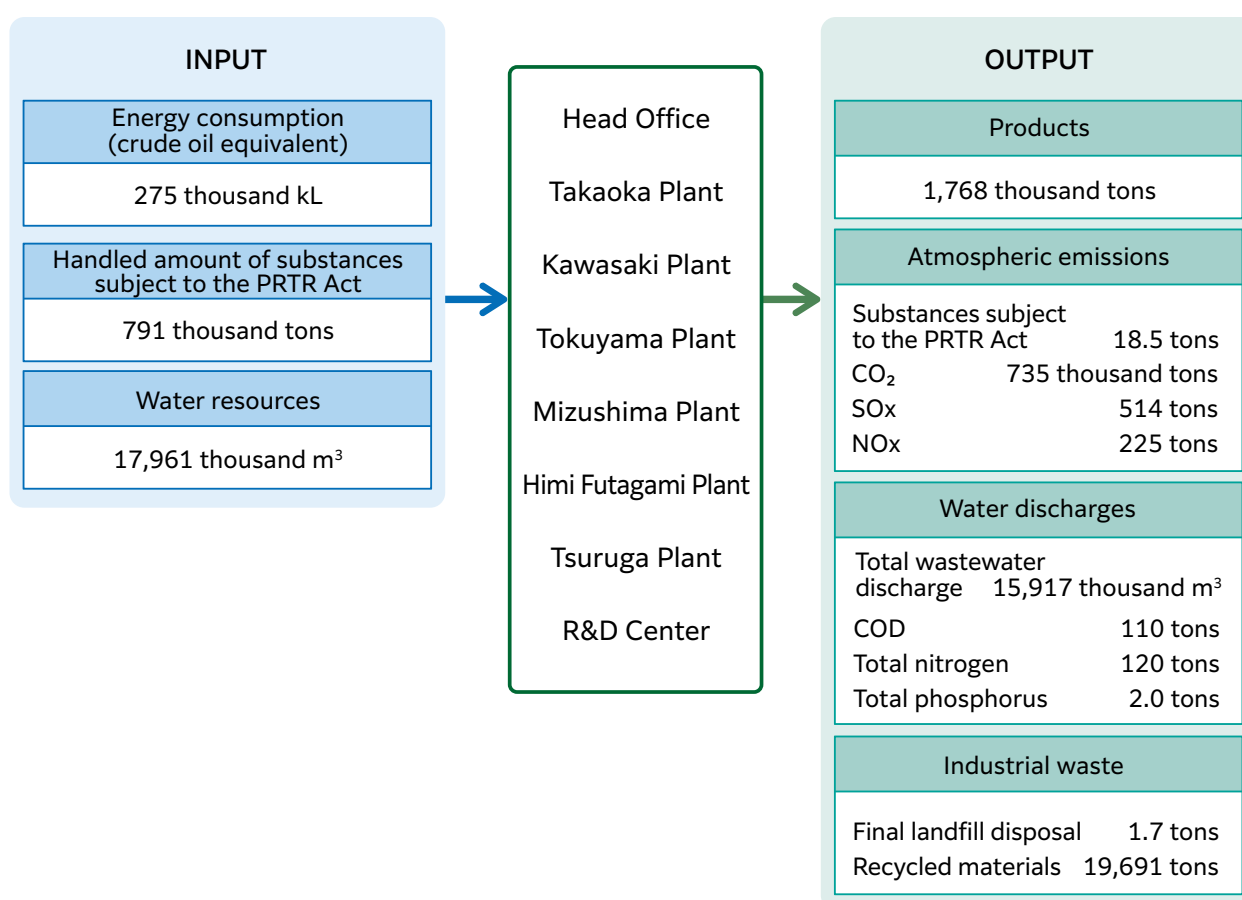
| INPUT | | OUTPUT |
|---|---|---|

**INPUT**

Energy consumption (crude oil equivalent)
275 thousand kL

Handled amount of substances subject to the PRTR Act
791 thousand tons

Water resources
17,961 thousand m³

**Plants**
- Head Office
- Takaoka Plant
- Kawasaki Plant
- Tokuyama Plant
- Mizushima Plant
- Himi Futagami Plant
- Tsuruga Plant
- R&D Center

**OUTPUT**

Products
1,768 thousand tons

Atmospheric emissions
- Substances subject to the PRTR Act        18.5 tons
- $CO_2$        735 thousand tons
- SOx        514 tons
- NOx        225 tons

Water discharges
- Total wastewater discharge        15,917 thousand m³
- COD        110 tons
- Total nitrogen        120 tons
- Total phosphorus        2.0 tons

Industrial waste
- Final landfill disposal        1.7 tons
- Recycled materials        19,691 tons

# Economic Indicators of Environmental Performance (Environmental Accounting)

We began introducing environmental accounting into our operations in FY 2000 in accordance with the Guidelines for Introducing an Environmental Accounting System (Ver. 2000) published by Japan's Ministry of the Environment (MOE), and have released environmental accounting statements since the 2001 edition of the Responsible Care Activity Report. This CSR report presents key data from our environmental accounting statements in FY 2018 as recommended in the Environmental Accounting Guidelines 2005 (MOE), Environmental Accounting Guidelines for Chemical Companies (JCIA, 2003), and Environmental Conservation Cost Categories 2003 (MOE).

Scope: Zeon Corporation in Japan (Head Office, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant, Himi Futagami Plant, Tsuruga Plant, R&D Center)
Period: April 1, 2022 to March 31, 2023

## Environmental Conservation Costs

### Environmental Conservation Expenses

We are developing technologies to minimize the environmental impact of our wastewater and reduce the amount of residual volatile substances in our products. We are focused in particular on developing technologies, designing equipment, and standardizing operating procedures to reduce emissions of butadiene and acrylonitrile, both hazardous air pollutants, and to reduce the environmental impact of our wastewater based on such parameters as total nitrogen (TN) and chemical oxygen demand (COD).

We are also working to develop eco-friendly products and innovative, energy-efficient processes.

| Environmental conservation costs | FY 2022 (million JPY) | |
|---|---|---|
| Category | Investment amount | Expense |
| (1) Costs within the business area | 455 | 3,122 |
| Breakdown | | |
| • Pollution prevention costs | 18 | 2,045 |
| • Global environmental protection costs | 437 | 380 |
| • Resource recycling costs | 0 | 697 |
| (2) Upstream and downstream costs | 0 | 0 |
| (3) Management costs | 23 | 144 |
| (4) R&D costs | 165 | 3,220 |
| (5) Social activities costs | 0 | 53 |
| (6) Environmental damage response costs | 0 | 81 |
| Total | 644 | 6,620 |

## Environmental Conservation Outcomes

### Environmental Conservation Outcomes (Physical Outcomes)

| Environmental impact indicators | FY 2022 results | Compared to FY 2021 |
|---|---|---|
| $CO_2$ emissions (tons) | 462,156 | -61,384 |
| SOx emissions (tons) | 514 | -283 |
| NOx emissions (tons) | 225 | -56 |
| COD emissions (tons) | 110 | -31 |
| Industrial waste sent to landfills (tons) | 1.7 | -2.1 |
| Total emissions of substances subject to the PRTR Act (tons) | 18.5 | -4.9 |

## Economic Effects

We strive to use oils and other byproducts from our production and manufacturing processes in economically effective ways such as converting them to fuel and recycling them, or by other means. We are also working to recycle the metal resources in empty drums and containers. To conserve energy, we recover heat generated in heat-intensive distillation processes.

### Economic Effects Resulting from Environmental Conservation Measures

| Effects | Unit: million JPY |
|---|---|
| Effects obtained from recycling of resources, fuel conversion, etc. | 45.0 |
| Cost reductions from energy savings | 0.5 |
| Cost reductions from reducing emissions, recovery, and reuse of solvents and catalysts | 5,863 |
| Total | 5,908 |

## Environmental and Safety Investment

In addition to environmental investment related to facilities to prevent pollution and conserve energy and resources, we strive to improve safety through ongoing safety investment aimed at improving safety and eliminating hazards.

| | Unit: million JPY |
|---|---|
| Environmental conservation | 1,224 |
| Safety related | 5,725 |
| Total | 6,948 |

# Climate Change

## Expressing Support for the TCFD Recommendations and CO₂ Emission Reduction Initiatives

In August 2020, Zeon Corporation expressed its support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Based on the TCFD recommendations, we are analyzing the risks and opportunities that climate change poses to our business and reflecting them in our business strategies to strengthen our business foundation, aiming to realize a sustainable society and improve Zeon's corporate value.

These initiatives are reflected in the group-wide strategy of "Promote a transformation of *monozukuri* to realize carbon neutrality and a circular economy" that is outlined in our Medium- Term Business Plan. In the medium- to long-term, we will formulate a Carbon Neutrality Master Plan with 2050 as the target year, and disclose the measures that will be adopted to realize this plan and the progress made in reducing CO₂ emissions.

## Disclosure of Zeon's Activities in Response to TCFD Recommendations

### Governance
#### a) Board's oversight of climate related risks and opportunities

In July 2021, we established the Corporate Sustainability Headquarters to promote our sustainability efforts and disclose progress and results. In July 2022, we established a new Carbon Neutral Division under the headquarters, and are promoting a transformation in *monozukuri* to realize carbon neutrality and a circular economy as a Group strategy under our Medium-Term Business Plan. These systems have been established with the approval of the Board of Directors.

Our Sustainability Conference and Sustainability Committee have a system to hold discussions on "response to climate change" as one of the important sustainability issues, and to report on the contents to the Board of Directors as necessary.

We recently revised our executive compensation system to provide greater incentives for creating and improving medium- to long-term corporate value. For internal directors and executive officers, we expanded the performance-linked share of total compensation and introduced the Board Benefit Trust-Restricted Stock (BBT-RS), a performance-linked stock compensation plan, to more clearly define the linkage between compensation and Zeon's sales performance and stock value. These steps are intended to raise awareness of the need to contribute to the enhancement of medium- to long-term performance and corporate value.

Though directors remain accountable for short-term performance, the indicators are closely tied to Medium-Term Business Plan targets. This evaluation system will increase the likelihood of creating and enhancing corporate value over the medium to long term.

#### b) Management's role in assessing and managing climate-related risks and opportunities

The head of the Corporate Sustainability Headquarters, a company director, oversees the organizational structure described above to address sustainability issues that including climate change to live up to our corporate philosophy of "contributing to the preservation of the Earth and the prosperity of the human race." The reporting and deliberation on the Group's actions being taken on the issues are conducted by the Sustainability Conference, and ultimate responsibility for the realization of sustainability is assumed by the representative director, who chairs the body.

### Strategy
#### a) Climate-related risks and opportunities the organization has identified over the short, medium, and long term

To understand risks and opportunities related to climate change, in FY 2020 we analyzed the impact on Zeon's rubber business of the 2°C and 4°C scenarios. Further, in FY 2021 we conducted the same scenario analyses group-wide.

#### b) Impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning
**Business impact evaluation (impact on financial planning)**

The anticipated financial impact on Zeon's business was analyzed for the 2°C and 4°C scenarios. It was found that, for the 4°C scenario, earnings would fall due to the impact of physical risks and because of rising procurement costs, while for the 2°C scenario, earnings would fall because of the adoption of carbon taxes and the widespread adoption of EVs, but there would also be a positive contribution to earnings from new business opportunities.

#### c) Resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

We are currently analyzing the 1.5°C scenario, and based on the results, we will be implementing response strategies in coordination with the group-wide strategy outlined in the Medium-Term Business Plan. Regarding the decarbonization strategy, we will be undertaking group-wide examination of policies aimed at making Zeon carbon neutral. With regard to the resource strategy, we will be promoting the circular economy and proceeding with development of products that make use of biomass as raw material. We will also be aiming to expand our businesses by undertaking product development and product portfolio management based on assumptions regarding changes in customers' behavior.
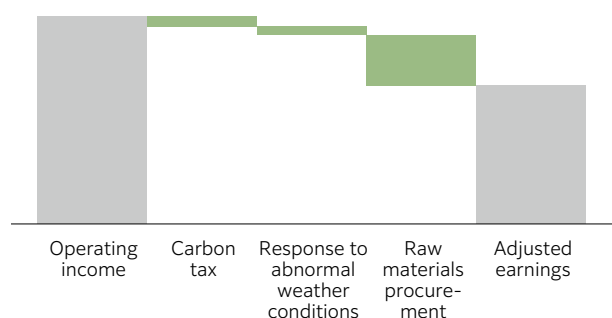
## Zeon Group's Climate-Related Risks and Opportunities

| Type | Evaluation item — Category | Evaluation item — Sub-category | Observations: Risks | Observations: Opportunities | Importance |
|---|---|---|---|---|---|
| Transition | Policy/Legal | Carbon pricing and carbon tax | • Adoption of carbon taxes (resulting in increased operating costs) | • Increased opportunities for sale of products that contribute toward reducing $CO_2$ emissions (resulting in increased sales) | Major |
| | | Individual countries' carbon emissions targets/policies | • Increased emissions controls compliance costs (resulting in increased operating costs) | As above | Major |
| | Industry/Market | Key products/Increase or decrease in product prices > Changes in raw materials procurement costs | • Rising raw material prices (resulting in increased operating costs) | • Falling raw material prices (resulting in reduced operating costs) | Major |
| | | Changes in energy demand > Changes in utility costs (fuel and electric power) | • Rising energy prices (resulting in increased operating costs) | • Increased demand for energy (resulting in increased sales) | Major |
| | | Evolution of next-generation technologies | — | Enhanced competitiveness due to technological advances (resulting in increased sales)<br>• Increased competitiveness in the event of successful future development of efficient manufacturing technologies or manufacturing methods that do not use fossil fuels<br>• Securing an advantageous position in the market through the development of biomass-based raw materials, etc.<br>• Development of technologies and products (such as chemical recycling) oriented toward the low-carbon society and the circular economy | Major |
| | Reputation | Changes in customer behavior | Deteriorating reputation of the company's products and of the company itself (resulting in reduced sales) | • Increased opportunities for sale of products that contribute toward reducing $CO_2$ emissions (resulting in increased sales) | Major |
| Physical | Chronic | Rising sea levels | Negative impacts on operations from rising sea levels (reduced sales due to production stoppages and delays and/or increased maintenance and repair costs) | — | Major |
| | | Rising average temperatures | Increased burden of responding to rising temperatures (resulting in increased operating costs)<br>• Reduced capacity utilization rate due to an increase in the incidence of operatives suffering heatstroke<br>• Increased plant restoration costs and safety measures costs<br>• Reduced productivity (due to reduced cooling capability, or reduced GPB and GPI extraction capability)<br>• Higher storage and transportation costs due to increased need for low-temperature storage and transportation of raw materials and products (affecting business divisions) | Increased sales accompanying rising temperatures<br>• Increased demand for medical products due to the spread of certain diseases, heatstroke, etc.<br>• Increased demand for Zeon products due to reduced supply of natural products<br>• Increased demand for plant growth regulators and fragrances<br>• Increased demand for thermal interface materials (TIM) to solve problems with excessive heat generation | Major |
| | Acute | Increasing seriousness of abnormal weather conditions (trend toward larger typhoons and hurricanes, etc.) | Disruption caused to operations by severe natural disasters (resulting in reduced sales and increased operating costs) | Increased sales opportunities resulting from large-scale natural disasters<br>• Increased demand for gloves resulting from a worsening hygiene environment<br>• Emergence of concerns regarding the existing electric power network as a result of disasters Diversification of the electric power grid, increased demand for storage batteries, and increased sales of battery materials, due to concerns regarding industrial operations and lifestyles | Major |

## Group-Wide Impact Assessment

### Under the 4°C scenario
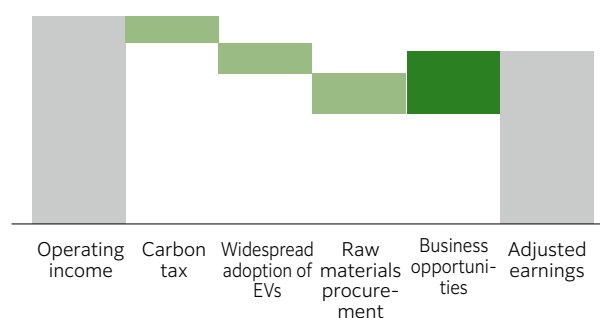


Operating income · Carbon tax · Response to abnormal weather conditions · Raw materials procurement · Adjusted earnings

### Under the 2°C scenario



Operating income · Carbon tax · Widespread adoption of EVs · Raw materials procurement · Business opportunities · Adjusted earnings

## Risk management

### a) Processes for identifying and assessing climate-related risks

Based on the 4°C and 2°C scenario analyses, transitional and physical risks associated with climate change for 2030 and beyond have been identified and classified according to importance.

### b) Processes for managing climate-related risks

With regard to climate-related risk, we have established a Risk Management office, and climate-related risk is recognized in the group-wide risk management table. As regards the response to risk, the Risk Management office performs risk management, including risk assessment and clarification of appropriate response strategies.

### c) How processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management
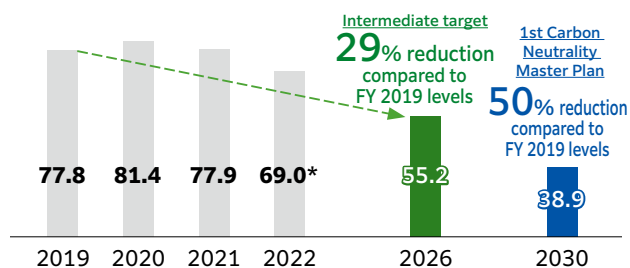
We have a system in place that takes the identified climate change risks and links them to impact assessment results and R&D policies. These influence management policies and the business plans we set up to achieve our vision for the future, taking the form of specific numerical targets incorporated into our three-year plans and annual budgets.

## Metrics and targets

### a) Metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process
### Metrics and targets

In 2021, we formulated our initial Carbon Neutral Master Plan, which set reduction targets for FY 2030 to achieve carbon neutrality by 2050. These targets call for a 50% reduction by FY 2030 in the Scope 1+2 $CO_2$ emissions of Zeon Corporation (unconsolidated) as compared to FY 2019. As an intermediate target, we aim to achieve a 29% reduction in FY 2026 compared to FY 2019. We will update the plan as required in the future.



**Intermediate target**
**29**% reduction compared to FY 2019 levels

**1st Carbon Neutrality Master Plan**
**50**% reduction compared to FY 2019 levels

| 2019 | 2020 | 2021 | 2022 | 2026 | 2030 |
| --- | --- | --- | --- | --- | --- |
| 77.8 | 81.4 | 77.9 | 69.0* | 55.2 | 38.9 |

*Calculation based on greenhouse gas protocol: 735,000 tons

### b) Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks

In order to be able to disclose Scope 1, 2 and 3 emissions data for the Zeon Group as a whole, we have established a system for determining Scope 1, 2 and 3 data, including that of group companies, and we are implementing CDP disclosure and aiming to secure SBT certification.

In addition, we are focusing in particular on setting metrics and targets for Goal 13 of the SDGs (Take urgent action to combat climate changes and its impacts).

### c) Targets used by the organization to manage climate-related risks and opportunities and performance against targets
### Initiatives to achieve targets

We are promoting various initiatives to achieve our goal of reducing $CO_2$ emissions by 50% in FY 2030 from FY 2019 levels.

Our strategy for reducing Scope 1+2 emissions combines three approaches: (1) Energy saving, (2) Process innovation, and (3) Energy shift.

The anticipated reduction rates are 10% for energy saving, 10% for process innovation, and 80% for energy shift, so the greatest benefits are expected to be achieved through the shift to new energy sources. Energy shift involves switching over to renewable energy or to fuels that has a non-fossil certificate* for the fuel used in boilers, etc.

\* Non-fossil certificate: With a non-fossil certificate, the greenhouse gases generated in all processes from extraction through to fuel usage are offset by carbon credits, so on a global scale, use of the fuel in question can be deemed to not generate $CO_2$ emissions.

## FY 2022 initiatives

### (1) Energy conversion in plants in Japan

We have switched to 100% renewable energy sources for the electric power purchased for all four production facilities in Japan (Takaoka, Himi Futagami, Tsuruga and Tokuyama plants). The Takaoka Plant has contracted to purchase carbon-neutral LNG, which produces virtually zero $CO_2$ emissions. The Tokuyama Plant has contracted to purchase Renewable Energy Certificates to reduce $CO_2$ emissions from steam.

The Kawasaki Plant began using carbon-neutral city gas supplied by Tokyo Gas and joined the Carbon Neutral LNG Buyers Alliance.
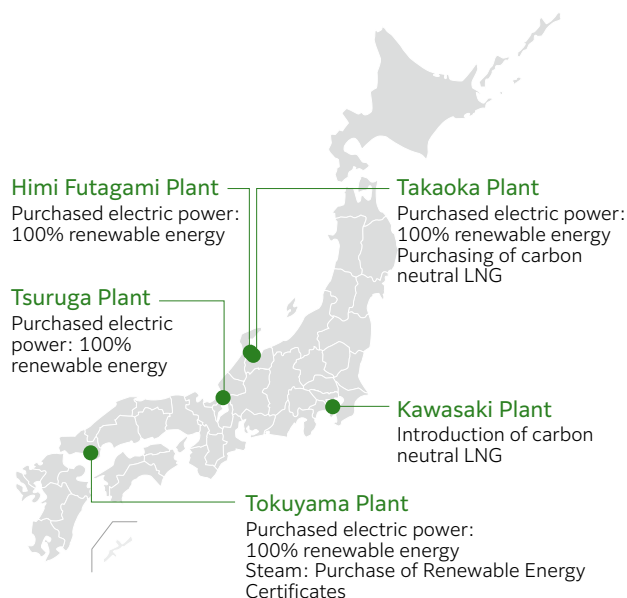


**Himi Futagami Plant**
Purchased electric power: 100% renewable energy

**Takaoka Plant**
Purchased electric power: 100% renewable energy
Purchasing of carbon neutral LNG

**Tsuruga Plant**
Purchased electric power: 100% renewable energy

**Kawasaki Plant**
Introduction of carbon neutral LNG

**Tokuyama Plant**
Purchased electric power: 100% renewable energy
Steam: Purchase of Renewable Energy Certificates

### (2) Adoption of internal carbon pricing (ICP) program

- Internal carbon price: 10,000 yen/t-$CO_2$
- Scope of application: Capital investment that will lead to an increase or decrease in $CO_2$ emissions
- Method of application: The increase or decrease in $CO_2$ emissions accompanying the capital investment project in question will be converted into a monetary amount using the internal carbon price, and this will be taken into account when making the decision as to whether or not to invest in the project.

### (3) Selected for NEDO* Green Innovation Fund Projects

- Development of manufacturing technology using carbon recycling for commodity chemicals used in synthetic rubber
  This demonstration project aims to establish two advanced technologies to produce butadiene and isoprene, which are key synthetic rubber chemicals, based on the recycling of carbon resources such as used tires and biomass at high yield rates, and to implement those technologies in society in the 2030s. (From a press release dated Feb. 21, 2022)
- Development of photonic chips for higher performance, energy-saving non-volatile memories
  Zeon Corporation will utilize its carbon nanotube (CNT) technologies to establish CNT-based non-volatile memory (NRAM) that can replace volatile memory (DRAM). The advantages are lower power consumption and lower cost with higher capacity. The goal is to commercialize NRAM in the 2030s. (From a press release dated Feb. 25, 2022)
- MATSURI Project
  The MATSURI Project is an initiative led by the Chitose Group, which specializes in the large-scale cultivation and commercialization of algae, that aims to build a new algae-based industry through partnerships with numerous companies. The project aims to facilitate zero carbon emissions by 2050, and Zeon is working as a participating company using microalgae as an energy source from sunlight and $CO_2$ as a direct raw material for chemical products such as bioplastics and functional materials, and for the commercial production of fuel, food, and feed. (From a press release dated Mar. 27, 2023)

*NEDO: New Energy and Industrial Technology Development Organization

### (4) Selected for the subsidy program for "measures to promote the introduction of non-fossil energy" by the Agency for Natural Resources and Energy, METI

The four companies of Idemitsu Kosan Co., Ltd., Tosoh Corporation, Tokuyama Corporation, and Zeon Corporation jointly proposed the "Basic Study on the Establishment of Ammonia Supply Center at the Shunan Industrial Complex" ("Project") in a subsidy program for "measures to promote the introduction of non-fossil energy," (Support Project for Establishment of Hydrogen and Fuel Ammonia Supply Center at Industrial Complex), for which the Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (METI) called for proposals, and has been adopted for the subsidy.

The Project aims to establish a carbon-free ammonia supply system in the Shunan Industrial Complex with an annual capacity of over 1 million tons by 2030. The companies will study the infrastructure improvement for ammonia supply to customers in the Shunan Industrial Complex, including the use of the storage facilities in the Tokuyama complex of Idemitsu Kosan as a common ammonia supply base. Based on the Project, the companies will promote the construction of Japan's first ammonia supply chain in the Shunan complex through various initiatives such as ammonia co-firing demonstration tests in actual equipment. (From a press release dated Aug. 30, 2022)

# Chemical Substances Management

## ▌ PRTR* Initiatives Chemical Substances

We are implementing group-wide initiatives to reduce release and transfer of substances subject to Japan's PRTR Act.

### Release and Transfer Volumes of Substances Subject to the PRTR Act (FY 2022)



- Release and transfer volumes total (438.8 tons)
  - Total release volume (18.5 tons)
    - Amount released into atmosphere: (18.5 tons)
    - Amount released into water: (0)
    - Amount released into soil: (0)
  - Total transfer volume (420.3 tons)
    - Transfer volume: (420.3 tons)
    - Amount to landfill: (0)
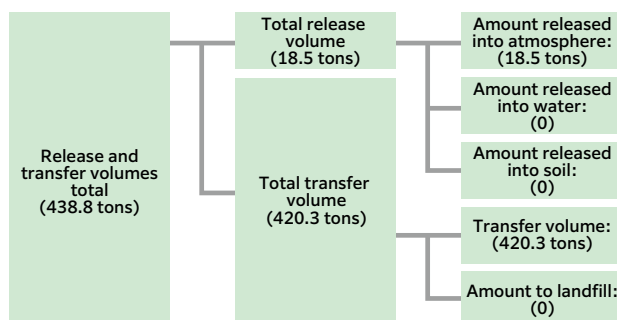
### Release of Substances Subject to the PRTR Act

Amount of release (tons)



| FY | 2018 | 2019 | 2020 | 2021 | 2022 |
|----|------|------|------|------|------|
| Amount of release (tons) | 23.7 | 23.3 | 23.4 | 23.4 | 18.5 |
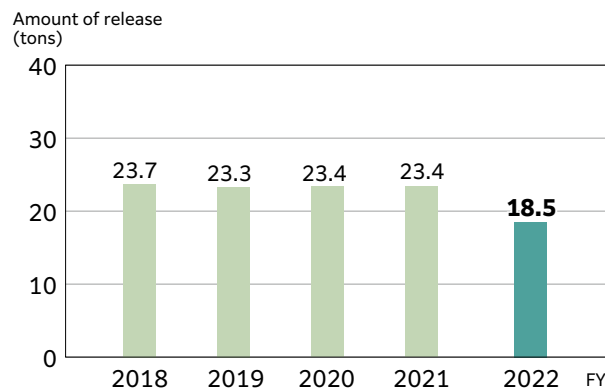
*PRTR: Pollutant Release and Transfer Register

### Detailed Release and Transfer Volumes of Substances Subject to the PRTR Act (FY 2022, 6 plants + R&D Center)

| Government designated no. | Substance | Handled amount (tons) | Released into atmosphere (tons) | Released into water (tons) | Total release volume (tons) | Transfer volume (tons) |
|---|---|---|---|---|---|---|
| 2 | Acrylamide | 26.4 | 0.0 | 0.0 | | 0.0 |
| 3 | Ethyl acrylate | 1,318.1 | 3.8 | 0.0 | 3.8 | 0.0 |
| 4 | Acrylic acid and its water-soluble salts | 25.1 | 0.0 | 0.0 | | 0.0 |
| 6 | 2-Hydroxyethyl acrylate | 13.9 | 0.0 | 0.0 | | 0.0 |
| 7 | n-Butyl acrylate | 2,740.9 | 1.5 | 0.0 | 1.5 | 18.2 |
| 8 | Methyl acrylate | 11.9 | 0.3 | 0.0 | 0.3 | 0.0 |
| 9 | Acrylonitrile | 21,171.9 | 2.9 | 0.0 | 2.9 | 0.0 |
| 13 | Acetonitrile | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 20 | 2-Aminoethanol (monoethanolamine) | 10.0 | 0.0 | 0.0 | | 0.0 |
| 28 | Allyl alcohol | 0.0 | 0.0 | 0.0 | | 0.0 |
| 29 | 1-Allyloxy-2,3-epoxypropane | 16.9 | 0.0 | 0.0 | | 0.0 |
| 30 | n-Alkylbenzenesulfonic acid and its salts (alkyl C=10-14) | 850.4 | 0.0 | 0.0 | | 0.0 |
| 36 | Isoprene | 160,238.3 | 1.9 | 0.0 | 1.9 | 0.0 |
| 53 | Ethylbenzene | 94.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 56 | Ethylene oxide | 900.0 | 0.0 | 0.0 | | 0.0 |
| 59 | Ethylenediamine | 0.0 | 0.0 | 0.0 | | 0.0 |
| 60 | Ethylenediamine tetraacetic acid | 13.0 | 0.0 | 0.0 | | 0.0 |
| 65 | Epichlorohydrin | 0.0 | 0.0 | 0.0 | | 0.0 |
| 68 | 1,2-Epoxypropane | 34.9 | 0.0 | 0.0 | | 0.0 |
| 80 | Xylene | 3,050.8 | 0.2 | 0.0 | 0.2 | 1.7 |
| 102 | 1-Chloro-2,4-dinitrobenzene | 0.0 | 0.0 | 0.0 | | 0.0 |
| 125 | Chloroform | 0.3 | 0.0 | 0.0 | 0.0 | 0.3 |
| 134 | Vinyl acetate | 160.1 | 0.1 | 0.0 | 0.1 | 0.0 |
| 151 | 1,3-Dioxolane | 1.1 | 0.0 | 0.0 | | 1.1 |
| 154 | Cyclohexylamine | 0.0 | 0.0 | 0.0 | | 0.0 |
| 190 | Dicyclopentadiene | 189,794.9 | 0.1 | 0.0 | 0.1 | 3.9 |
| 202 | Divinylbenzene | 5.1 | 0.0 | 0.0 | | 0.0 |
| 203 | Diphenylamine | 5.1 | 0.0 | 0.0 | | 0.0 |
| 207 | 2,6-Di-tert-butyl-4-cresol | 358.4 | 1.6 | 0.0 | 1.6 | 0.0 |
| 218 | Dimethylamine | 0.0 | 0.0 | 0.0 | | 0.0 |
| 220 | Water-soluble salts of dimethyldithiocarbamic acid | 10.7 | 0.0 | 0.0 | | 1.2 |
| 230 | N-(1,3-Dimethylbutyl)-N'-phenyl-p–phenylenediamine | 38.5 | 0.0 | 0.0 | | 0.0 |
| 232 | N,N-dimethylformamide | 234.9 | 0.0 | 0.0 | 0.0 | 1.2 |
| 240 | Styrene | 34,149.4 | 0.6 | 0.0 | 0.6 | 38.6 |
| 243 | Dioxins | 0.0 | 0.0 | 0.0 | | 0.0 |
| 259 | Tetraethylthiuram disulfide | 13.9 | 0.0 | 0.0 | | 0.0 |
| 274 | Tert-dodecanethiol | 658.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 277 | Triethylamine | 48.3 | 0.0 | 0.0 | | 0.0 |
| 296 | 1,2,4-Trimethylbenzene | 302.7 | 0.0 | 0.0 | | 0.0 |
| 297 | 1,3,5-Trimethylbenzene | 302.7 | 0.0 | 0.0 | | 0.0 |
| 300 | Toluene | 3,624.2 | 0.0 | 0.0 | 0.0 | 138.8 |
| 302 | Naphthalene | 380.6 | 0.0 | 0.0 | | 0.0 |
| 308 | Nickel | 92.9 | 0.1 | 0.0 | 0.1 | 82.3 |
| 309 | Nickel compounds | 129.9 | 0.0 | 0.0 | | 129.9 |
| 333 | Hydrazine | 0.5 | 0.0 | 0.0 | | 0.0 |
| 338 | 2-Vinylpyridine | 54.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 349 | Phenol | 81.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 351 | 1,3-Butadiene | 364,954.0 | 2.6 | 0.0 | 2.6 | 0.0 |
| 355 | Bis (2-ethylhexyl) phthalate | 0.0 | 0.0 | 0.0 | | 0.0 |
| 392 | n-Hexane | 589.1 | 2.1 | 0.0 | 2.1 | 2.1 |
| 395 | Water-soluble salts of peroxodisulfuric acid | 85.9 | 0.0 | 0.0 | | 0.2 |
| 400 | Benzene | 2,607.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 407 | Polyoxyethylene alkyl ether | 92.8 | 0.0 | 0.0 | | 0.0 |
| 408 | Polyoxyethylene octylphenyl ether | 2.5 | 0.0 | 0.0 | | 0.0 |
| 409 | Sodium polyoxyethylene dodecyl ether sulfonate | 0.0 | 0.0 | 0.0 | | 0.0 |
| 410 | Polyoxyethylene nonylphenyl ether | 0.0 | 0.0 | 0.0 | | 0.0 |
| 411 | Formaldehyde | 0.0 | 0.0 | 0.0 | | 0.0 |
| 414 | Maleic anhydride | 69.7 | 0.4 | 0.0 | 0.4 | 0.0 |
| 415 | Methacrylic acid | 1,196.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 417 | 2,3-Epoxypropyl methacrylate | 7.2 | 0.0 | 0.0 | | 0.0 |
| 420 | Methyl methacrylate | 144.2 | 0.0 | 0.0 | 0.0 | 0.8 |
| 436 | α-Methylstyrene | 263.8 | 0.0 | 0.0 | | 0.0 |
| 438 | Methylnaphthalene | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 |

The PRTR Act specifies amounts in kilograms to two significant figures; however, this report specifies amounts in tons.
0.0 indicates less than 0.005 tons.

# Air, Water, and Waste Materials

## Atmospheric Emission Reductions of Hazardous

We are installing collection facilities, implementing measures including improving facilities to prevent evaporation from openings in manufacturing facilities, and systematically reducing emissions of butadiene and acrylonitrile, which are among the substances requiring priority action under the Japan's Air Pollution Control Act.

**Butadiene Emissions**

Atmospheric emissions (tons)

| FY | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| | 3.4 | 3.0 | 2.7 | 2.8 | **2.6** |

**Acrylonitrile Emissions**

Atmospheric emissions (tons)

| FY | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| | 4.0 | 3.0 | 3.1 | 3.3 | **2.9** |

## Initiatives to Prevent Air and Water Pollution

We are working to reduce emissions of air pollutants through the adoption of heavy oil with low sulfur (S) content and conversion to liquid natural gas (LNG).
The quality of our plant wastewater complies with the standards of the Water Pollution Prevention Act and agreements with local authorities (voluntary management standards).

**SOx Emissions**
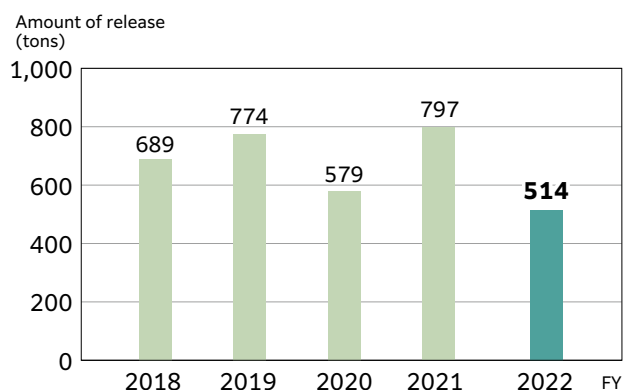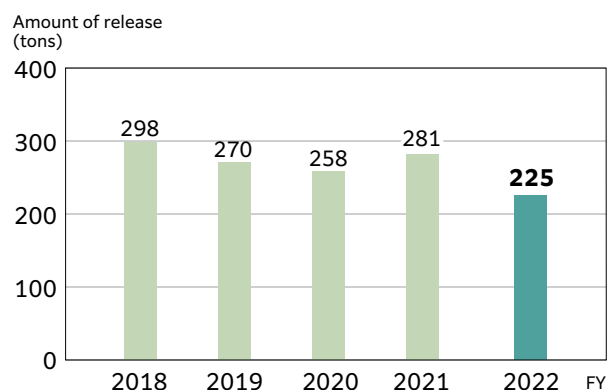
Amount of release (tons)

| FY | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| | 689 | 774 | 579 | 797 | **514** |

**NOx Emissions**

Amount of release (tons)

| FY | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| | 298 | 270 | 258 | 281 | **225** |

## Total Wastewater Discharge

Amount of release
（million m³）

| Year | Value |
|------|-------|
| 2018 | 15 |
| 2019 | 15 |
| 2020 | 15 |
| 2021 | 15 |
| 2022 | **16** |

FY

## COD Discharge

Amount of release
(tons)

| Year | Value |
|------|-------|
| 2018 | 124 |
| 2019 | 141 |
| 2020 | 121 |
| 2021 | 141 |
| 2022 | **110** |

FY

## Total Phosphorus Discharge

Amount of release
(tons)

| Year | Value |
|------|-------|
| 2018 | 1.8 |
| 2019 | 2.3 |
| 2020 | 2.5 |
| 2021 | 2.1 |
| 2022 | **2.0** |

FY
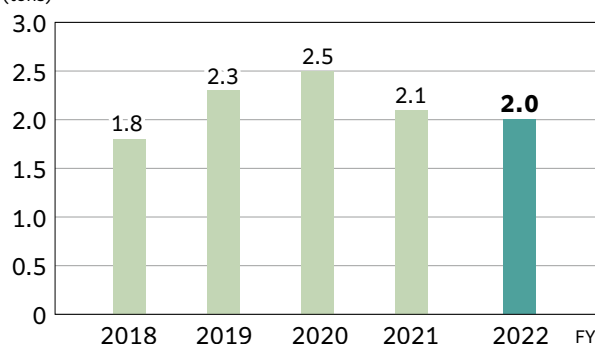
## Total Nitrogen Discharge

Amount of release
(tons)

| Year | Value |
|------|-------|
| 2018 | 160 |
| 2019 | 157 |
| 2020 | 133 |
| 2021 | 131 |
| 2022 | **120** |

FY
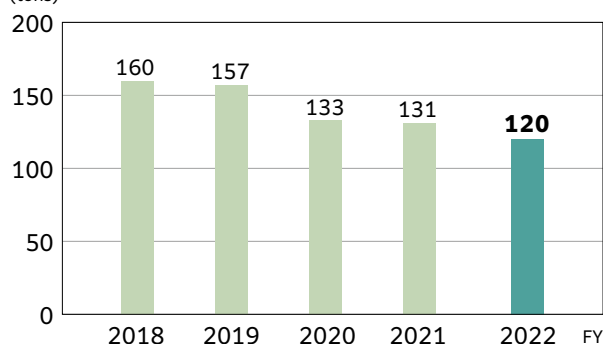
## Waste Reductions

In terms of reducing the amount of industrial waste destined for final landfill disposal, our worksites are maintaining a record of zero emissions (less than 0.1% of the industrial waste generated in FY 2007) since achieving this target in FY 2011.

Zeon Group companies had a final landfill volume of more than 600 tons in FY 2007, but since FY 2012 this has been reduced to around 10 tons, or roughly 0.4% of the industrial waste generated in FY 2007. This is considered zero emissions.

We aim to maintain a final landfill volume of 5 tons or less, the same as at our worksites.

### Final Industrial Waste Disposal at External Landfills

Landfill disposal volume
(tons)
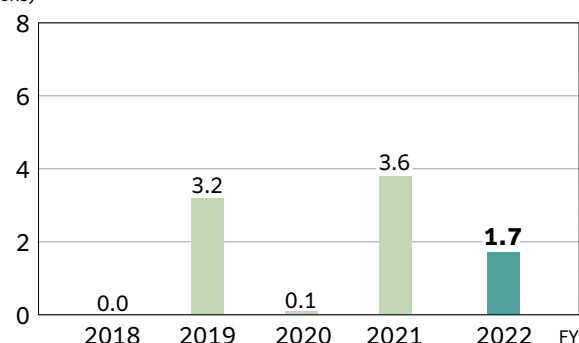
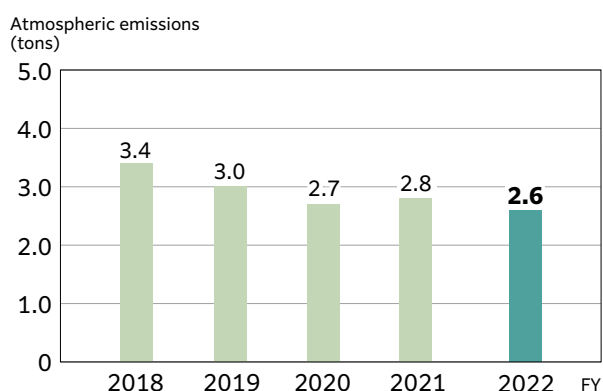| Year | Value |
|------|-------|
| 2018 | 0.0 |
| 2019 | 3.2 |
| 2020 | 0.1 |
| 2021 | 3.6 |
| 2022 | **1.7** |

FY

**ZEON  SUSTAINABILITY REPORT 2023**

↩ ◀ 24 ▶

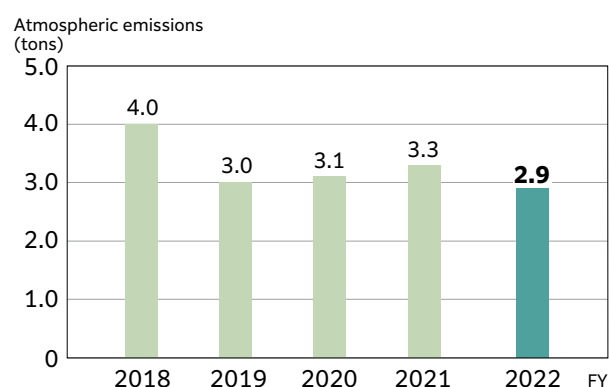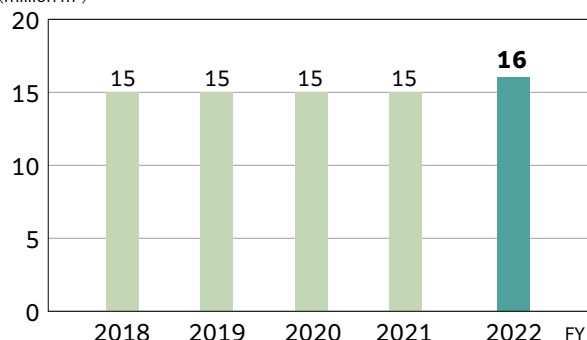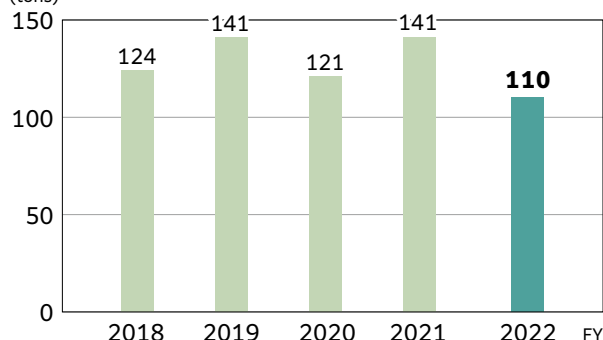| Contents | Zeon's Sustainability | Environment | Human Rights | Human Resources | GRI Content Index |
| Occupational Health and Safety | Quality Assurance | Community | Corporate Governance | ESG Data | United Nations Global Compact Index |

## Initiatives to Reduce Industrial Waste from Plastic Products

Article three in our Responsible Care Policy is "Minimize the discharge of toxic chemicals and waste." Under the Act on Promotion of Resource Circulation for Plastics, which came into force in April 2022, Zeon is classified as a business that generates a large amount of industrial waste from plastic products (250 tons or more). We are working to reduce the amount of waste we generate and set up medium- to long term targets and plans to manage waste.

**Amount of industrial waste from plastic products**



Targets and reduction plans are under review
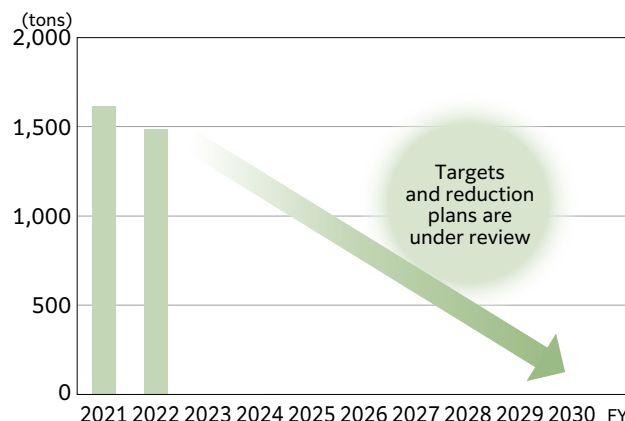
# Chemical Product Safety Information

We collect and provide safety information on our chemical products. We also conduct hazard assessments. For quality assurance, see Quality Assurance (→P. 51).

## Information for the Proper Handling of Chemical Products

We produce Safety Data Sheets (SDS) for all Zeon products. SDS provide information including GHS[1] classification results, product hazards, and cautions for handling, etc.

For some of our products, we disclose safety-related information in the form of safety abstracts, which are made available on the GPS/JIPS[2] platform.

*1 GHS
Globally Harmonized System of Classification and Labelling of Chemicals

*2 GPS/JIPS
Global Product Strategy / Japan Initiative of Product Stewardship. GPS is a new voluntary initiative related to the management of chemicals, promoted by the International Council of Chemical Associations (ICCA). In Japan, the Japan Chemical Industry Association (JCIA) promotes GPS under the JIPS and encourages member companies to participate.

## Participation in Voluntary Chemical Industry Initiatives

Zeon provides financial support for research activities by the LRI[3] involving chemical substance hazard reviews, safety evaluations, and environmental impact surveys. Zeon also participates in the Technology Subcommittee and the Environment Subcommittee of the Asia Pacific Section of the IISRP[4] (regular meetings four times a year, international meetings twice a year, 1 member on each subcommittee, total of 2 members). In international meetings, Zeon proactively participates in activities to improve the overall level of technology in the global rubber industry and to promote sustainability.

*3 LRI
Long-range Research Initiative: Activities to provide long-term support for research on the impact of chemical substances on health and the environment. A program under the auspices of the International Council of Chemical Associations (ICCA) that is carried out with funding from LRI member companies and in cooperation with the chemical industries of Japan, the United States and Europe (specifically, the Japan Chemical Industry Association, American Chemistry Council and European Chemical Industry Council).

*4 IISRP
International Institute of Synthetic Rubber Producers

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# Environment and Safety in Logistics

To more effectively use and recycle resources, we are promoting recovery and recycling of wood, resin, and metal pallets and containers used to transport various goods. We also use a large number of recycled resin transportation pallets.

Zeon has for some time now been working to promote the effective utilization of resources and implementing measures to reduce the environmental footprint of logistics operations, for example by reducing the weight of metal box pallets (by approximately 7%) and promoting the recovery of metal box pallets from overseas, as well as implementing flexible bag recovery and reuse.


Lightweight metal box pallet


Folded pallets after use

## Compliance with the Revised Energy Conservation Act and Efforts to Reduce $CO_2$ Emissions

As a specified consigner under the revised Energy Conservation Act, we are working to rationalize the use of energy together with partner companies involved in product and raw materials transportation. To date, we have studied and implemented improvements in loading efficiency, modal shift to rail and ship transportation, and truck and ship fuel efficiency.

The so-called "2024 problem" will also affect truck transportation, and we will shift from using domestic long-haul truck transportation to rail and coastal ship transportation, aiming to contain future transportation costs and reduce $CO_2$ emissions. An example of this is switching truck transportation to rail transportation while containing cost increases for a portion of raw materials transportation in Japan. At present, as a result of modal shift for half of the shipped volume, we have reduced $CO_2$ emissions by approximately 38%, according to Zeon estimates. We will continue to take steps to shift the total shipping volume.

**Annual $CO_2$ emissions from logistics after modal shift (Zeon estimate)**



Approx. 38% reduction in $CO_2$ emissions
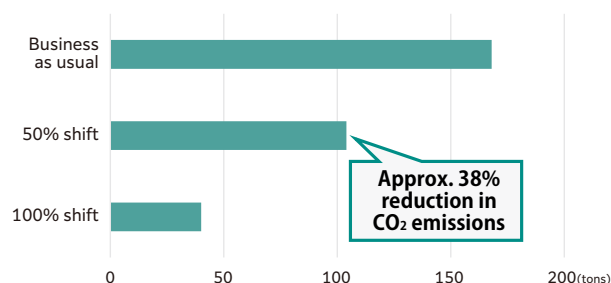
## Safety Initiatives in Logistics

At Zeon, we established Yellow Card* Management Rules for transporting hazardous products. These rules require drivers to carry a Yellow Card when transporting such products.

We also conduct reporting and communication training for drivers, and each plant offers training on product handling to prevent accidents in logistics.

*Yellow Card
Document describing what to do if an accident occurs during transportation, as established by the Logistics Safety Management Policy of the Japan Chemical Industry Association. The document is called a Yellow Card because it is printed on yellow paper.

# Human Rights

## Upholding Positive Working Environments by Protecting Human Rights and Prohibiting Discrimination

In August 2019, we established the Zeon Group Human Rights Policy, which sets forth respect for human rights and prohibits discrimination, and are striving to create a mutually accepting company that does not tolerate discrimination based on gender, age, nationality, or other attribute and understands diverse values.

### Zeon Group Human Rights Policy (Established in 2019, revised in 2023)

We, the Zeon Group, are committed to fulfilling our corporate social responsibilities in respect of human rights and contributing to realizing a sustainable society, based on international codes of conduct on human rights, such as the Universal Declaration of Human Rights, the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights in Labor, and the UN Global Compact.

**Respect for Human Rights**
We will not tolerate acts of discrimination or harassment based on age, gender, place of origin, ancestry, nationality, disability, religion, creed, marital status, employment status, union participation, political views and other differences. We also will not tolerate child labor, forced labor or/nor unjustly low wage labor.

**Collaboration with Stakeholders**
We will encourage our customers and business partners to support this policy with us to pursue business activities sharing respect for human rights.

**Prevention and Mitigation of Human Rights Violations**
We will strive to perceive, avoid and reduce any negative impact on human rights that might result from our business activities.

**Response to Human Rights Violations**
We will work on the relief through appropriate procedures when it is found that we have caused or furthered a negative impact on human rights.

**Efforts on Human Rights Issues**
We will provide appropriate education and training to our executives and employees, so that this policy is understood and implemented.

**Disclosure of Information**
We will publicly disclose information on our human rights initiatives under this policy through communication channels such as our website and integrated report.

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## Initiatives for FY 2022 and Beyond

Starting from FY 2022, we have begun to implement full-scale human rights due diligence initiatives. In implementing human rights due diligence, Zeon Corporation, group companies, and the supply chain have been carrying out relevant measures while receiving advice from external experts.

### Zeon Corporation

Zeon Corporation has added "human rights issues in advertising" to the 25 risk categories for human rights listed in "Company Obligations to Respond to Business and Human Rights" (published by the Ministry of Justice's Human Rights Bureau). This issue has become a problem downstream in the supply chain in recent years. We have designated a department to address this and other risks; it is now working to reduce human rights risks group-wide.

### Human Rights Issues We Focus On (Partial List) and Our Responses

| Risk categories | General risk description/examples | Status of our initiatives |
|---|---|---|
| Occupational health and safety | Workers' health is not protected | Continuation of regular health checkups and measures against infectious diseases such as COVID-19 |
| Excessive and unreasonable working hours | Long working hours due to labor shortages and incidents | Continuation of proper understanding of working hours, and making employees aware of working hour consultation services and maximum working hours |
| Harassment in different forms | Various acts of harassment such as power, sexual and care harassment, and pregnancy discrimination (maternity harassment) | Ongoing implementation of anti-harassment training |
| Rights of foreign workers | Discriminatory treatment on the basis of being a foreigner | Increased Japanese language learning support for and dialogue with foreign employees |
| Rights of local residents | Negative impact on local residents due to noise and waste in production activities | Confirmation of the status of initiatives at plants and production sites |
| Human rights issues in advertising | Advertisements produced promote discrimination | Attendance at human rights seminars for relevant personnel and confirmation with advertising agencies concerning human rights policies |
| Right to access remedies | Even if a consultation service exists, it is not made widely known | Revision and dissemination of employee concern system rules |

### Group Companies in Japan

For our group companies in Japan, we have provided education to the management and staff involved with human rights at each company regarding the background of our initiatives and the importance of efforts to promote respect for human rights.

Starting in FY 2023, we will begin full-fledged efforts to identify human rights risks at each group company and formulate and implement measures to reduce such risks.

### Supply Chain

**(1) Identification of risks at suppliers**

We surveyed a total of 262 of our suppliers by having our procurement departments identify those with operations that are likely to involve high risks for human rights, etc., in addition to those in the top 80% or higher by trading amount. We used Global Compact Network Japan's standard Self-Assessment Questionnaire (SAQ) to ascertain the status of initiatives being taken by suppliers and to identify risks.

**(2) Feedback**

We sent a feedback sheet to all suppliers who answered the standard SAQ survey, revealing their score in each category (human rights, labor, environment, etc.), along with the average score for all suppliers, their previous scores, and general comments, to encourage those suppliers to improve their CSR initiatives.

**(3) Supplier engagement**

From the suppliers to whom we sent the standard SAQ feedback sheet, we selected 16 for scores that were especially high or low or for their handling of high-risk materials in terms of CSR. We subsequently visited or interviewed those selected to explain the importance of CSR procurement and confirm the status of their initiatives.

As necessary, we ask them to make improvements or request other things through discussions as part of CSR risk reduction activities in the supply chain.

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**Supplier Engagement and Feedback**

| Item | Number of companies | Feedback interview content |
|---|---|---|
| Low-scoring companies | 5 | Explanations of CSR and sustainable procurement initiatives are provided, as well as a detailed review of low-scoring items to identify risks and encourage improvement actions |
| High-scoring companies | 3 | Interviews are conducted with high-scoring companies to learn from them and get examples of best practices to apply to sustainable procurement at our company and other suppliers |
| Companies handling high-risk raw materials | 8 | Companies that handle raw materials considered to be high-risk from a CSR perspective (such as conflict minerals, palm oil, and silicon) are asked to check their upstream approach and the management status of the target raw materials; and if inappropriate, encouraged to make improvements |

**(4) Establishing sustainable procurement guidelines**

We have conducted procurement activities compliant with our corporate social responsibility based on the Zeon CSR Procurement Guidelines. As an extension of those guidelines, we established the new Sustainable Procurement Policy in October 2023 as guidelines for promoting sustainable procurement activities together with our suppliers. We also established the Sustainable Procurement Guidelines, which include related Zeon policies built around the Sustainable Procurement Policy. Going forward, we will extend the Sustainable Procurement Guidelines to our suppliers, broadly establish understanding for our procurement approach, and promote sustainable procurement.

The Sustainable Procurement Policy and the Sustainable Procurement Guidelines are released on our website.

**(5) Establishing supply chain reporting hub**

To prevent incidents from occurring in our supply chain that infringe upon laws or regulations or violate corporate ethics, we will establish a supply chain reporting hub in the near future and publicly announce it on our website.

# Becoming a Signatory to the United Nations Global Compact and Participating in Subcommittee Activities

The Zeon Group endorses the UN Global Compact. We also participate actively in subcommittees of Global Compact Network Japan. We participate in workshops and working groups of the human-rights-related supply chain subcommittee and human rights due diligence subcommittee, and apply the information and knowledge gained through the Group's efforts to actions that ensure respect for human rights.


WE SUPPORT
UN GLOBAL COMPACT

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# Human Resources

# Overview of the Human Resources Strategy

## ▌ Work Together to Create "Stages" to Be Active On

Creating platforms for employee excellence together with employees is one of our Group-wide strategies. When all employees have a sense of freedom (having more choices in life) and achieve well-being (having a fulfilling life with both good mental and physical health), they will feel empowered to demonstrate their diverse talents at Zeon. We are taking a two-pronged approach to create these platforms: 1) deepening diversity, inclusion, and belonging (DI&B) and 2) increasing employee engagement.

In the first phase of our Medium-Term Business Plan (FY 2021–2022), we focused on developing favorable conditions and creating programs to offer employees a greater variety of options. Our actions included remodeling our head office, expanding remote work, and introducing a cafeteria plan.

### Phase 1 initiatives

| Phase 1 initiatives | Details |
|---|---|
| Implement employee engagement surveys | Visualize internal issues, set KPIs Expand survey scope to Group companies |
| Remodel Head Office | Create conditions that prompt employees to offer creative ideas |
| Increase remote work | Support work styles that work with various lifestyles Reduce commute times and support balancing employees' work and private life |
| Introduce cafeteria plan | Offer optional benefits for health, self-development, leisure, and more that fit employees' individual needs |
| Introduce and revise various programs | Senior employee personnel system, side-work program, expanded support for child and family caregiving, etc. |

### Group-wide strategy and targets for 2030
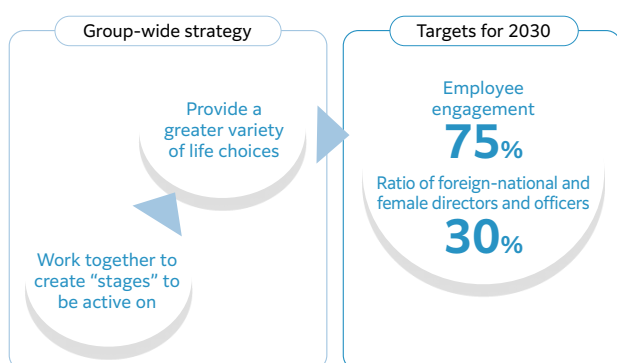


### Freedom and well-being
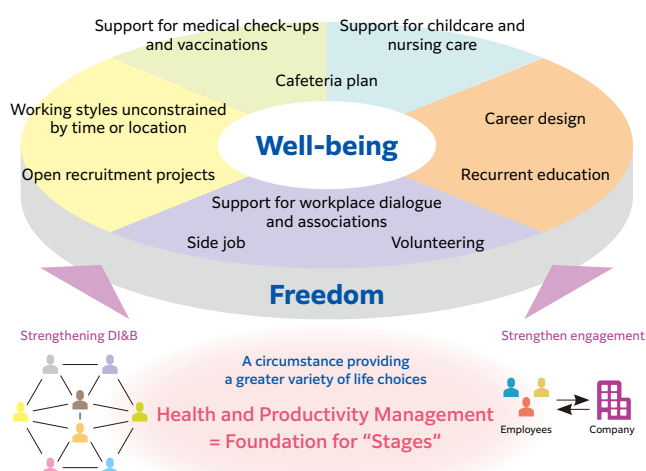
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## Key Theme for Phase 2: Transforming Human Resources Management to Mobilize Individuals' Strengths and Promote Growth

The second phase of our Medium-Term Business Plan (FY 2023–2026) focuses on enhancing corporate governance and developing conditions that promote employee health and motivation. Through this, we will realize our Group-wide strategies of co-creating platforms for employee excellence and enhancing our management foundation. Key areas in our HR strategy include Health and Productivity Management, operating a new personnel system with greater employee empowerment, establishing DI&B principles, and developing diverse human resources to lead business in the future. We will continue taking results-focused actions to achieve our FY 2026 targets for the related KPIs.

The new managerial personnel system that we launched in July 2023 began from a system that assigned grades based on roles. Strategy-based role design makes clear to employees what the HR requirements and necessary career background are, which supports their reskilling and career development. In terms of management and business strategy, the system provides visibility into where we have too many or too few of the needed resources. We can also gain a better understanding of the best people to achieve the Medium-Term Business Plan and tools to build an HR portfolio. This will enable us to implement HR management linked to management strategy that clearly defines what types of human resources we need to recruit, develop, and reassign. This, in turn, contributes to business management and achieving the goals of our Group-wide business strategy.

### Targets (KPI) for FY 2026 and Measures to Achieve Group-Wide Strategies

| Strategies | Targets for FY 2026 | | Measures |
|---|---|---|---|
| **3** **Work together to create "stages" to be active on** | • Engagement survey item Employee engagement | 56% | **Key policy** Create a healthy and motivating work environment |
| | • Engagement survey item Environment maximizing employee potential | 55% | • Advance health and productivity management initiatives |
| | • Zeon Healthy Behavior Indicator | 65% | • Operate a personnel system that allows employees to be themselves |
| | • Paid leave utilization rate | 70% | • Instill DI&B thinking |
| **4** **"Polish up" the management base** | • Ratio of foreign-national & female directors & officers | 25% | **Key policy** "Polish up" corporate governance |
| | • Ratio of female managers | 12% | • Training diverse human resources for future management positions |

### Vision for "Stages"
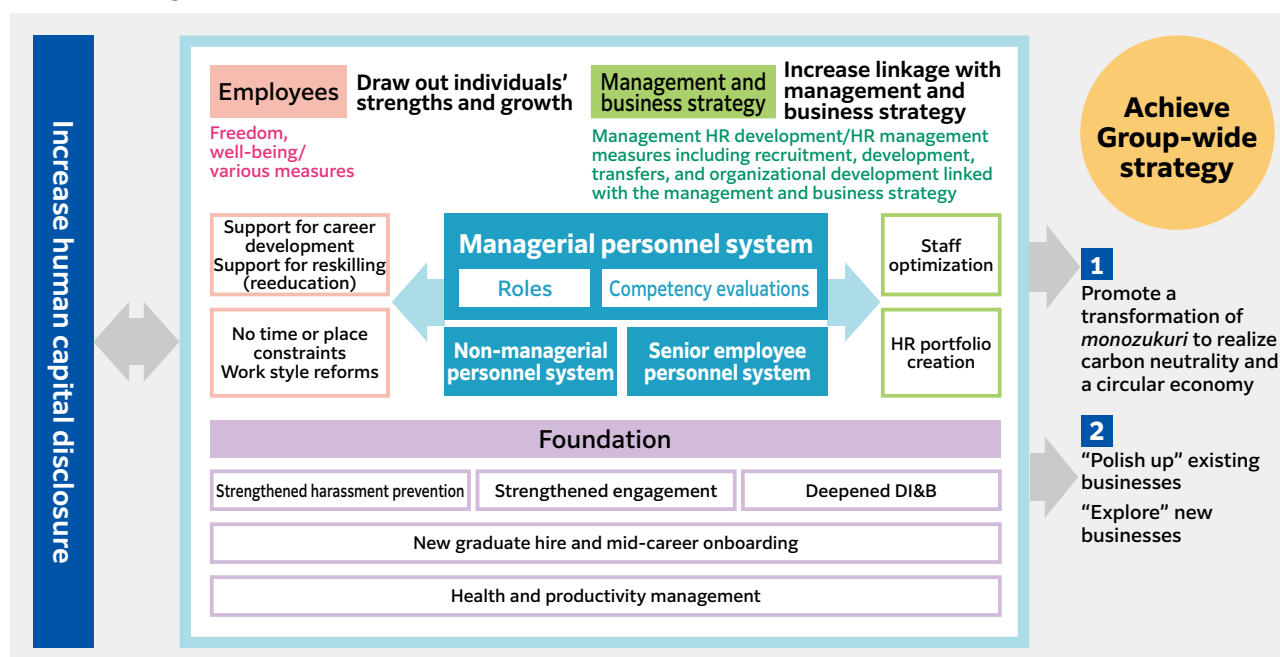
# Initiatives to Achieve Group-Wide Strategies

## Enhancing Engagement through Employee Engagement Surveys

At Zeon, we conduct employee engagement surveys as a means of gauging the results achieved for the "stages" and their current statuses. Employee engagement is an indicator of employees' motivation, meaning their commitment to the company and autonomous effort identified from the surveys that we give. Another indicator identified from the surveys is "environments that leverage employees," which expresses employee-friendly workplace environments that leverage employees' skills and talents.

We began giving the employee engagement survey in FY 2021. Employee engagement in FY 2022 received a score of 48%, while environments that leverage employees received a score of 46%. To support creating, implementing, and establishing improvement plans for organizational issues identified from the surveys, we implement improvements at workplaces through division-based workshops and are endeavoring to improve employee engagement through our human resource strategy.

We have set the 2026 targets of 56% for employee engagement and 55% for environments that leverage employees. Our employee engagement target for 2030 is set at 75%, the average value for global high-performing companies, and we will aim to create better "stages" to reach this target.

**Processes for the enhancement of employee engagement**
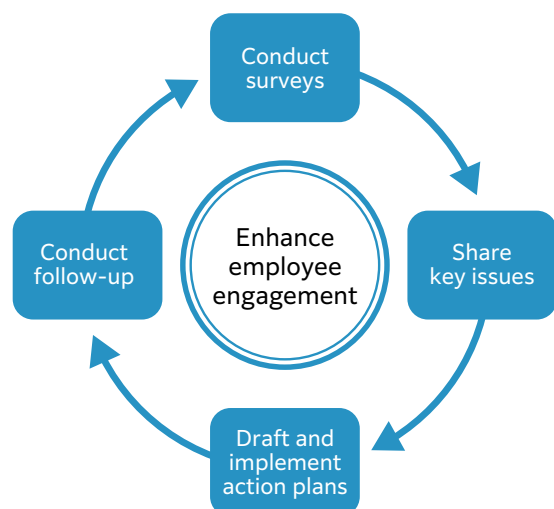


## Women's Participation and Advancement in the Workplace

In the context of an ongoing decline in the working population due to low birth rates and an aging population, the promotion of participation and advancement by women in the workplace is essential to Zeon's continued achievement of sustainable growth. There has been an increase in the number of female employees either holding or capable of holding the positions of department manager or section manager, and we are striving to expand the opportunities for female employees to be increasingly active in such roles. As of March 31, 2023, 13.4% of our company's employees, and 5.7% of managers, were female. We aim to increase the percentage of female managers to 12% by 2026.

When we assessed gender equality at Zeon using WEPs (seven international principles promoting women's economic empowerment) in March 2022, we found a need to offer greater support for women's career development due to a lack of women role models in management positions. We are therefore planning to establish a mentor program and a sponsor program in the near future to support women employees. We plan to build a framework from these programs for discussing HR requirements and enabling objective evaluations, as well as have this process repeated regularly, with the goal of creating successor development plans for diverse employees who will lead future management.

**Female manager ratio and number of female managers (non-consolidated)**
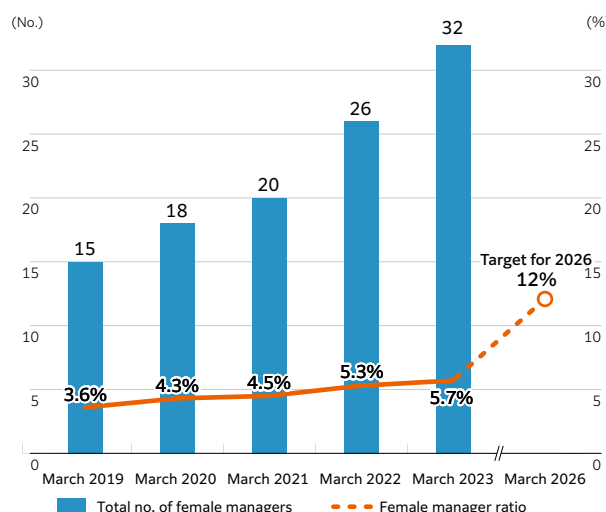
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**Zeon Corporation's General Employer Action Plan
(based on the Act on Promotion of Women's Participation and Advancement in the Workplace)**

We have established the following action plan to create employment conditions that allow women to continue working and be promoted to managerial positions.

1. Plan implementation period    April 1, 2021 to March 31, 2026

2. Zeon Corporation's issue    We want to increase the number of female employees.

3. Goals and initiatives, and implementation time-frame

Target 1:    **Increasing the percentage of new recruits (specifically, new employees who have just finished university or graduate school) who are women to at least 50% for administrative positions and at least 30% for technical positions**

Starting in FY 2021, we will be implementing manager cultivation training for employees who are candidates for management positions, and we will be expanding and continuing the support that we provide for self-development, including career development awareness raising.

Target 2:    **Raising the percentage of female managers to at least 6%**

Starting in FY 2021, we will be implementing manager cultivation training for employees who are candidates for management positions, and we will be expanding and continuing the support that we provide for self-development, including career development awareness raising.

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# Diverse Human Resources

## Instilling DI&B Thinking

We are promoting DI&B, with Belonging added to the principles of Diversity and Inclusion. We are conducting both top-down and bottom-up activities with the goal of mobilizing employees while respecting their diversity (D&I) and making everyone at Zeon have a sense of security and trust that they are accepted (Belonging).

Creating a culture of DI&B, where everyone is glad they work at Zeon and feels like they have a place to belong, is at its core the process of "creating 'stages' in which all employees can demonstrate their individual strengths" set forth in our Medium-Term Business Plan.

Zeon have established a dedicated department, the DI&B Promotion Office within the Human Resources Division, while also launching promotional projects with proposals solicited internally to help entrench DI&B in our organizational culture. Members of various ages, genders, and nationalities recruited by means of wide-ranging calls are distributed across various teams, where they are working to put into action "What we want to do to establish a culture of DI&B at Zeon."

### DI&B Initiatives

| Initiative | Details |
|---|---|
| DI&B-related education | Unconscious bias training, self-leadership training, etc. |
| DI&B promotion project (launched in Dec. 2020) | 36 employees Group-wide participated in the FY 2023 (6th) session, with various projects conducted |
| Utilizing senior employees | Lifetime career review training and external intern trial |
| Connection support/framework for employees to help each other | Career and organization consultation office, mentoring support connecting younger employees with more experienced employees |
| Support for employees with children | Posting stories on the internal company website about employees' experience taking parental leave, holding parent discussion sessions, and creating a community for employees with children |
| Support for mid-career hires | Holding networking events and activities to deepen company understanding, such as tours of business locations |
| DI&B Week | Holding a week-long campaign for all employees, jointly holding the campaign with local companies outside Japan |
| Dialogue sessions with management | Dialogue sessions between management and DI&B project members (total of 6 sessions held since FY 2021) |
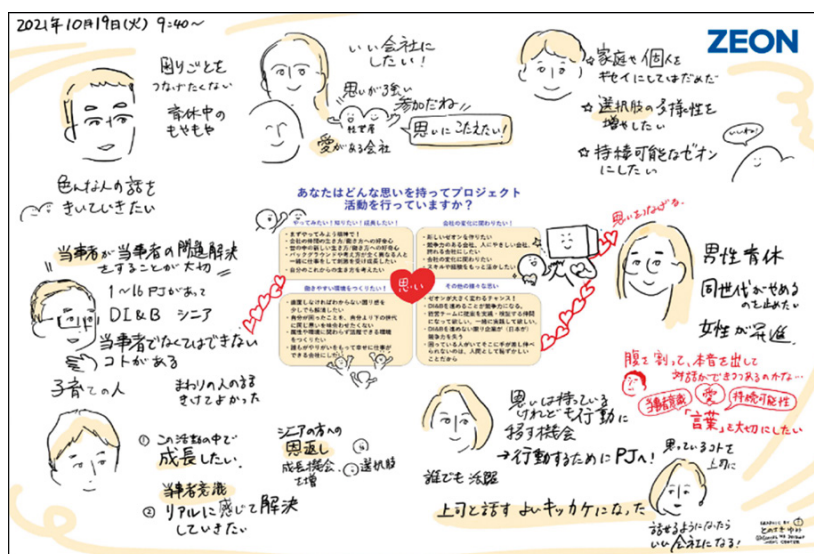


Records of dialogue sessions with management



Intranet webpage for DI&B Week

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## Hiring of Recent Graduates and Career/ Mid-career Candidates

In FY 2022, we hired 232 mid-career employees to work in many areas of Zeon, including Research & Development, Elastomers and Chemicals Business, Specialty Business, and Digital. In FY 2023, we hired 107 new graduates. As a means of advancing gender equality and steadily increasing the ratio of women employees that play a central role in future management decision-making, we aim to continue hiring women each year to fill at least 30% of the roles for new graduate hires at the Head Office.

Our workforce is growing from robust hiring levels over the last several years, and we are focusing on onboarding and creating frameworks to retain these new employees and have them demonstrate their individual skills. This includes providing support in their personal life, in-house self-study opportunities, and support for building interpersonal networks, based on two-way communication.

In FY 2023, we began an educational activity for newly hired mid-career hires to hold frank discussions with Human Resources soon after they start working at Zeon and gain understanding of Zeon's production activities, so that mid-career hires are able to perform their work with a high-level understanding of our Group.

### Number of new hires (non-consolidated)

(No.)

| (FY) | Recent graduates | Mid-career hires |
|---|---|---|
| 2019 | 41 | 27 |
| 2020 | 56 | 47 |
| 2021 | 67 | 95 |
| 2022 | 100 | 232 |
| 2023 | 107 | |

■ Recent graduates  ■ Mid-career hires

## Promoting Employment of People with Disabilities

We are promoting the employment of people with disabilities while exercising the utmost care regarding safety, at our laboratories and plants which handle hazardous materials and use rotating and other industrial equipment to manufacture chemicals.

We are also actively providing Decent Work (rewarding and humane work) opportunities, including the opening of three facilities, namely Zeon Farm, a facility for the employment of people with disabilities, in Kashiwa City, Chiba Prefecture in October 2020, Zeon Farm Tokuyama, in Shunan City, Yamaguchi Prefecture in September 2022, and a farm in Hirakata City, Osaka Prefecture.

Vegetables harvested from the farms are transported to the Head Office and plants or donated to "kodomo-shokudo" cafeterias for children, thus contributing to health and productivity management as well as community outreach activities. People with disabilities are at the center of cooperative activities to cultivate vegetables.


At Zeon Farm Tokuyama

### Percentage of Employees with Disabilities
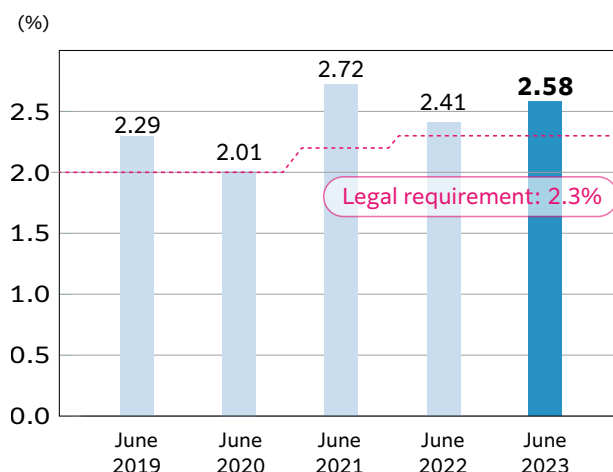
(%)

| | June 2019 | June 2020 | June 2021 | June 2022 | June 2023 |
|---|---|---|---|---|---|
| | 2.29 | 2.01 | 2.72 | 2.41 | 2.58 |

Legal requirement: 2.3%

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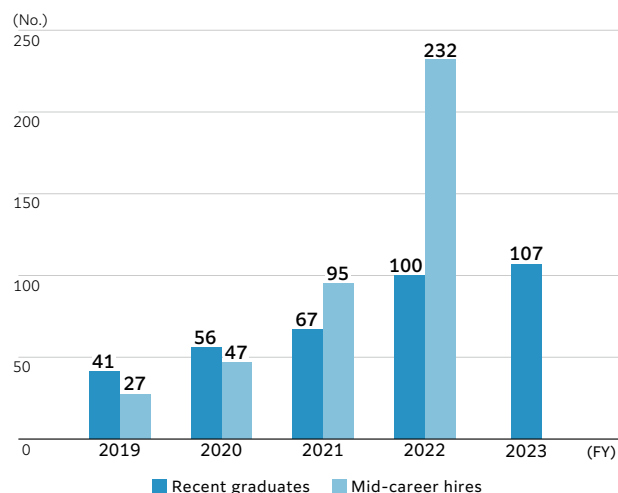| Contents | Zeon's Sustainability | Environment | Human Rights | Human Resources | GRI Content Index |
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## Participation and Advancement of Foreign-national Employees

As we expand our business globally, it is of the utmost importance that an active role is played not just by Japanese employees but also by employees of other nationalities.

Working in various departments serves to help not only non-Japanese employees but also the Japanese colleagues working alongside them to grow, while also promoting respect for diverse values and invigorating our organization as a whole.

Zeon has continuously pursued the recruitment of a multinational workforce, including hires from overseas, irrespective of nationality, for some time and, as of March 2023, has 32 foreign-national employees, an increase on past numbers. Of these 32 employees, six are active in managerial roles.

We will continue to pursue a policy of increasing the number of foreign-national employees capable of playing a central role in managerial decision-making into the future.

### Number of foreign-national employees (non-consolidated)

(No.)

| March 2019 | March 2020 | March 2021 | March 2022 | March 2023 |
|---|---|---|---|---|
| 19 | 24 | 23 | 28 | 32 |

## Globally Active Employees

At Zeon, employees stationed overseas are active in regions throughout the globe. As of March 2023, 52 employees were stationed outside Japan, and are promoting our overseas business, with an emphasis on those in Asian countries, but also in North America, Europe, and other regions.

In addition to offering our support to employees stationed outside Japan to ensure that they can live and work in safety, we aim to clar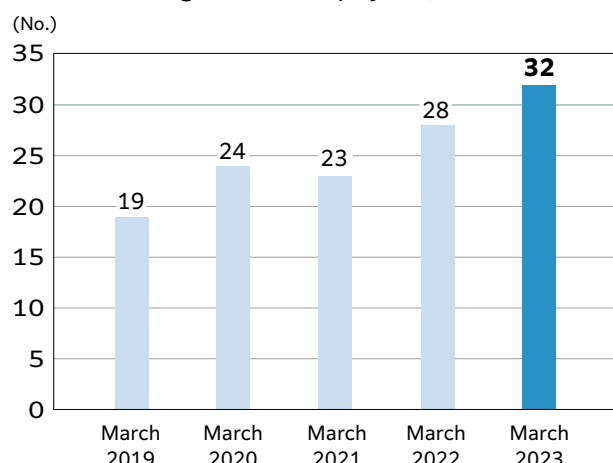ify the roles and duties required of each of these employees, as well as providing visions for their careers with an eye to their growth. We will also actively undertake the creation of environments which allow employees to rise to challenges with confidence. This will include canvassing and providing them with opportunities to volunteer their opinions and wishes.

## Contributions by Senior Employees

On April 1, 2022, we launched a personnel system for senior employees. As of April 1, 2023, 153 employees (including those on temporary assignments at Group companies) had been signed up to the personnel system for senior employees, and are currently active on several stages, including overseas assignments. The concept behind the revised system is to "create a stage (workplace) where employees who have entered or are about to enter their senior years can build their own stages to be active on for longer than had previously been possible, as we enter the era of lifespans of 100 years and over."

The adoption of this system will provide a framework for rehiring up to the age of 70, as well as increasing the variety of life options and providing environments in which employees can work in peace of mind. It will achieve this through the provision of attractive benefits and flexible workstyles, including part-time work and side work, as a response to the desire of seniors to remain active and take on challenges even after the mandatory retirement age.

### Overview of the personnel system for senior employees

| Rehire period | Extended to 70 years old |
|---|---|
| Course categories | Reorganized course categories to better reflect roles and demonstrated and refined abilities |
| Rewards and benefits | • Attractive rewards and benefits aligned to roles and abilities<br>• "Meister" title newly established |
| Workstyles/ health and welfare | • Possible to choose between full-time or part-time work<br>• Permission to work side jobs under certain conditions<br>• Adoption of support leave |

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# Promotion of Health and Productivity Management and Freedom/Well-Being

## Vision for Health and Productivity Management

In October 2021, Zeon enacted the Declaration for Health and Productivity Management and Code of Conduct for Well-Being. Based on our belief that "employees and their family members are our company's most indispensable asset," the ultimate goal of health and productivity management at Zeon is to create "stages" together with employees where they can demonstrate their individual strengths.

We will continue to promote health and productivity management initiatives with the aim of realizing freedom and well-being for all employees.

Freedom: Having more choices in life
Well-being: Having a fulfilling life with both good mental and physical health

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**Declaration for Health and Productivity Management (October 2021)**

Our corporate philosophy is "Contributing to the preservation of the Earth and the prosperity of the human race". This mission will be accomplished by each and every employee of Zeon Group fulfilling his or her potential and playing an active and vibrant role in the company and in the society.
In order for us to continue contributing to a "Sustainable Earth" and a "Safe and Comfortable Lives for People", we will create a work environment where employees can work cheerfully and vigorously and lead healthy lives, both physically and mentally, with their families and colleagues.

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**Code of Conduct for Well-Being: "What I need to do to be happy"**

- I will be conscious of and proactively work to ensure that I am healthy, happy and empowered in my work
- I will establish the status of my health by means of regular checkups and avail of appropriate feedback and guidance
- I will ask myself if I am sleeping and eating well and maintain awareness of my daily routines, noticing any changes in my condition as soon as possible, and engaging in self-care routines
- I will give due attention to the environment which surrounds me, and make daily improvements to make it safer and more comfortable
- I will understand the resources available around me that will support me in times of emergency

---

Health and productivity management targets and key issues/policies

| Company initiatives | Priority challenges | Goal |
| --- | --- | --- |
| Improve health literacy | Reduced risk of employees developing lifestyle diseases | **Each and every employee of Zeon Group fulfilling his or her potential and playing an active and vibrant role in the company and in the society** |
| Health events | Reduction in presenteeism* and absenteeism* | |
| Health monitoring and measurement, regular health checkups, etc. | Enhanced engagement metrics | |
| Improvements to working environments (workstyle reform) | Achievement of work-life balance | |
| Support for fulfilling work and lifestyles Operate systems/health and welfare | | |

*Presenteeism: Productivity lost due to employees coming to work despite being unwell
Absenteeism: Productivity lost due to employees being absent for reasons of illness

## Introducing Zeon Healthy Behavior Indicator

In Phase 2 of STAGE30, our Medium-Term Business Plan that we launched in FY 2023, we created the Zeon Healthy Behavior Indicator to set forth our goals for physical health. This original index consists of the three health indicators of a BMI within the standard range, engaging in routine exercise, and not smoking. Key points of this index were making the self-assessment easy to complete and including healthy activities that anyone can do. We have set the target of increasing the percentage of employees that satisfy two or three of the three health indicators from 60% (2022) to 65% or more (2026) and are taking steps to achieve this target.

Zeon Healthy Behavior Indicator



## Health and Productivity Management Promotion Framework

The President and CEO is positioned as the person in charge of health and productivity management.

The Health and Productivity Management Promotional Committee is chaired by the director in charge of human resources. The Committee both deliberates on measures and makes decisions on health and productivity management.

We established the Health and Productivity Management Conference as a subsidiary organization in FY 2023. It conducts activities to establish health and productivity management initiatives among employees, including sharing worksites' independent initiatives and building a cooperative structure between the Head Office and worksites.
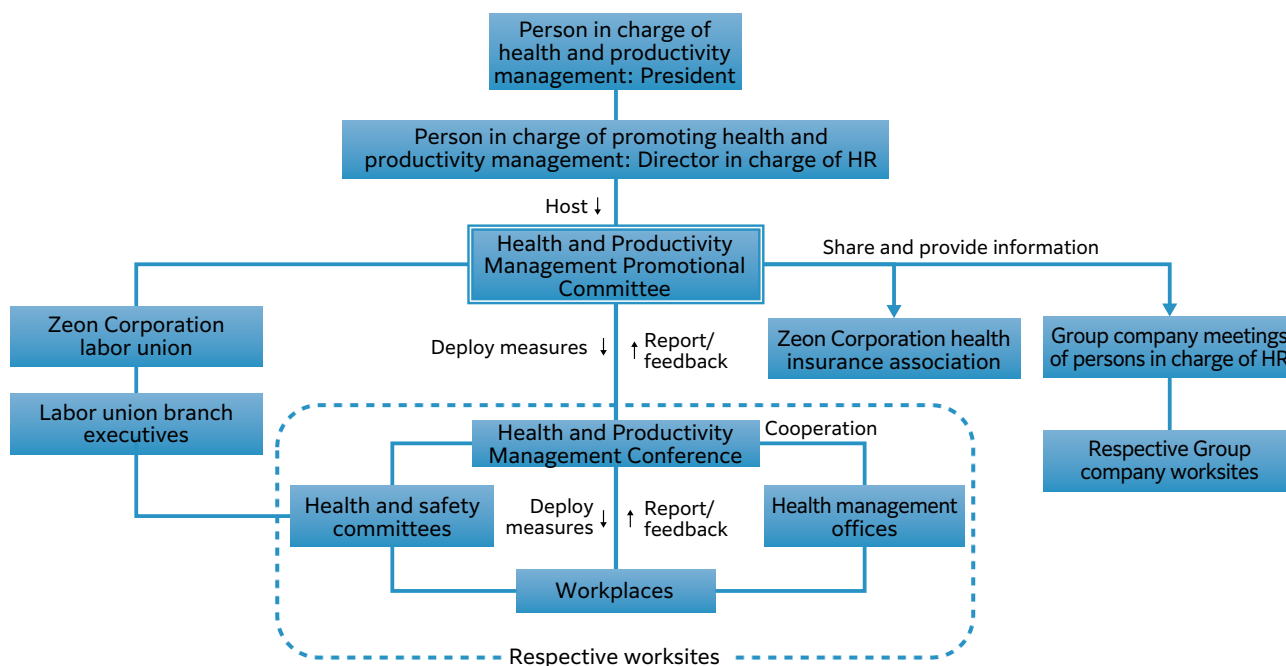
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## Specific Initiatives to Realize Freedom and Well-Being

### Physical and mental health initiatives

**●Mental health training**
We provide Self-Care Training for all employees and distribute video content, and afterward confirm participants' comprehension and satisfaction. The Line Care Training for existing posts and line positions has been modified to provide more practical exercises while promoting communication with instructors. We plan to have all employees in managerial positions complete the training during a three-year period.

**●Seminars on women's health issues**
Toward our goal of creating more inclusive and supportive workplaces for women and deepening understanding for women's health, we conduct seminars focused on women's health issues. With a practicing OB-GYN as the instructor, the seminars are a rare opportunity to get answers to questions that normally do not get asked.

**●Use of health support app**
We introduced a health support app, with a lineup of 16 menus for health support to aid employees in maintaining healthy routines. We held an event incorporating the app, which is helping employees to establish exercise routines.

**●Health checkups and follow-up care**
For regular health checkups, industrial physicians and nurses provide follow-up consultations and health guidance for persons who require guidance.
We have also launched a system that allows employees to view their health checkup results online 24 hours a day, with the intent to provide a state of health awareness whenever it is convenient. Awareness of health is the first step to creating good health. We will cultivate awareness for health through the launch of this system.

**●Stress checks**
We conduct annual stress checks every July. Feedback is provided to worksites and activities to improve workplace environments are conducted.

**●Launch of support for external counseling**
We have launched support for external counseling with the aim of promoting better mental health and well-being. Professional counselors provide support for resolving work-related problems, health worries, and other issues.

**●Independent worksite initiatives**
We implement measures to promote health tailored to the specific issues and needs of respective worksites, including walking events, physical fitness measurements, and the adoption of menus with healthy food options at cafeterias, as well as the holding of seminars to improve health literacy.

### Flexible workstyles initiatives

We are promoting the maintenance of "environments to facilitate flexible workstyles unconstrained by time and place," which includes the extension of teleworking and the introduction of a flex-time system, as well as by making it possible to take annual paid leave in hourly increments, as means to encourage the realization of well-being for each and every employee.

**●Office overhaul**
Prompted by the increased permeation of teleworking, we reviewed the role of the office, defining it as "a confluence point for communication to collaborate and co-create as well as for education." By employing a unilateral open-plan layout encompassing all organizational units and departments, as well as by introducing state-of-the-art ICT infrastructure to facilitate flexible workstyles, Head Office has transformed itself into a stage on which all employees can be active.

**●Deregulation of dress codes**
At Head Office, we have deregulated dress codes with the aim of creating a workplace environment where each and every employee can freely express their own ideas and conduct themselves with autonomy.


Office scene showing the office overhaul and deregulated dress codes

**●Eliminate postings of employees at locations remote from their families**
Head Office is working to eliminate postings of employees at locations remote from their families through the deployment of teleworking.

**●Launch of side work system**
A side work system was launched in April 2023. This system is being used to support employees to realize their career aspirations, by allowing them to build their careers by gaining skills and experience through side work and pursue self-realization by taking on challenges they seek out themselves.

**●Initiative to promote taking of annual paid leave**
As a measure to promote freedom and well-being, we are working to raise the rate of employees taking annual paid leave to 70% by FY 2026. As part of this, we are making it easier to take leave, such as by setting up days and periods of time where taking annual paid leave is encouraged and creating programs to enable taking leave in single-hour and half-day increments.

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● Initiative to expand application of the teleworking system
To realize work styles not tied to a particular place, we are conducting a trial expansion of the teleworking system at some worksites to allow employees to work at places apart from the standard telework locations (employees' homes and shared offices). While the majority of participants in the trial have given positive feedback, including the ability to have flexibility in how they work and more fulfillment in private life, employees providing nursing care support have also requested an increase in the maximum number of days they can use the program. In response to this feedback, in FY 2023 we increased the number of days the program can be used, from 20 work days to 40 work days. Aiming to create a teleworking system that supports employees in balancing their work and private life, we will continue to conduct measures while listening to employee feedback.

### Initiatives for comfortable and fulfilling lifestyles

● Adoption of a new health and welfare service: Zeon Cafeteria Plan
We have introduced the Zeon Cafeteria Plan, a system which allows employees to make their own choices from a menu of options to support the "peace of mind" and "career development," as well as options to help them "connect/co-create." It can be used for various purposes, including health promotion, encompassing comprehensive physical examinations and fitness clubs; support for childcare and nursing care, including babysitting and daycare services; self-development activities, for example correspondence courses and language study; and to avail of facilities for overnight stays.
We expanded the menu of options in FY 2023, adding travel expenses for employees on assignment without their family to return to their family home as well as travel expenses for those using nursing care to return to their family home to the expenses that are eligible for reimbursement.

● GLTD Program (Zeon Corporation Long-Term Rehabilitation Support Program)
We established this program with the aim of supporting creation of conditions that allow employees and their families to live with peace of mind. In the event of an illness or injury that prevents someone from working for a long period, this program compensates the employee at the company's expense for a portion of the employee's income for as long as up to their 65th birthday. Employees can also enroll in an optional plan for themselves that increases this compensation.

● Establishment of Childcare Leave Consultation Service
We have established the Childcare Leave Consultation Service as part of our efforts to improve understanding of the systems for childcare leave and to create an environment conducive to availing of this leave, while supporting the taking of childcare leave as well as offering support to those returning to work.

● Expansion of nursing care support
With the aim of helping employees to balance the obligations of their job and nursing care, we have established an external nursing care consultation service. Employees can consult nursing care specialists about issues or concerns they have by email or over the phone, with the service acting as a safety net for nursing care consultations. In addition, we are planning trainings and the publication of a nursing care support handbook to give employees basic information on nursing care.

● Expansion of support leave
Toward the consolidation of an environment in which they can work in peace of mind, we have made it possible for employees to avail of paid support leave in the event that they are unable to work due to personal injury or illness, or other unforeseen situations such as closure of schools of their children after they have taken all of their allocated annual paid leave for the year.

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## List of Freedom and Well-Being Initiatives and Systems

We are implementing ongoing initiatives to build more inclusive and supportive working environments. These include reducing overtime work and developing systems to support childbirth, childcare, and family care needs to offer more flexible workstyle options.

### List of Freedom and Well-Being initiatives and systems

| | |
|---|---|
| Workstyles unconstrained by time and place | ★Flex-time system, ★teleworking system, ★overhaul of Head Office, ★deregulation of Head Office dress code, encouraging the taking of special leave, half-day holidays, ★taking of annual paid leave in hourly increments (some worksites), instituted days with no overtime, ★elimination of postings of employees at locations remote from their families (some worksites), ★launch of side work system |
| Maternity/childcare support systems | Maternity leave before and after birth, ★childcare leave and childcare leave at birth (up to five days paid leave) system, ★childbirth leave for spouses (for male employees), leave to care for sick children, half-day leave, shortened working hours system, limits on overtime work, exemptions from late night work, child nursing time, childcare/caregiver leave financial support system, childbirth cash payments, dependents allowance, tuition allowance, ★support leave, flex-time system with no defined core times, ★cafeteria plan, drafting of guidelines for taking childcare leave |
| Nursing care support systems | Nursing care leave, caregiving leave system, consultation service for nursing care, ★cafeteria plan |
| Support for health improvement | Regular health checkups, ★launch of health checkup results viewing system, stress checks, ★employee engagement surveys, physical fitness measurements, mental health training, ★seminars on women's health issues, issuance of health news, ★use of health support app, ★holding of events to support health, ★cafeteria plan, ★COVID-19 (some worksites)/influenza workplace vaccination program |
| Asset accumulation | Employee savings scheme, employee stock ownership scheme (with financial incentives), defined-contribution (DC) corporate pensions, matching contributions system |
| Housing assistance | Housing assistance system (dormitory accommodation and company housing, rent subsidy system, home ownership allowance, home rental for transferred employees) |
| Systems for holidays and absences | Annual paid leave (up to 22 days granted/10 days granted on joining company), ★support leave system (up to 40 days granted/16 days granted on joining company), menstrual leave, childbirth leave, job transfer leave, relocation leave, public-service leave (for jury duty), disaster leave, quarantine and infectious disease leave, paid leave for family births, marriages or bereavement, ★childbirth leave for spouses, "My Life" leave (on reaching the age of 50), leave to care for sick children, nursing care leave, volunteering leave, leave for hospital visits by expectant mothers, "Refresh" leave (for senior employees) |
| Self-help | Disaster assistance, group medical insurance, compensation for absences from work (Zeon health insurance cooperative association), optional group insurance, group medical insurance, ★GLTD system |

★ : Initiatives expanded during the period of the Medium-Term Business Plan (FY 2021–FY 2023)

## Labor Agreements and Communication between Labor and Management

> **Joint Declaration by Labor and Management Aimed at the Growth of the Company**
> 1. We will make mutual understanding and trust the cornerstone of all management-labor relations
> 2. We will perform our respective roles to strengthen company infrastructure and build a company of which we can be proud
> 3. We will mutually strive to improve and promote our corporate culture as good partners

Zeon Corporation and its labor union have concluded a labor agreement for the purposes of maintaining peaceful relations between the two parties and cooperating for the healthy growth of the company and to maintain and improve working conditions for union members. This agreement stipulates rules for union activities, labor-management negotiations, and complaint processing, as well as working conditions such as wages and job hours.

We have also issued the Joint Declaration by Labor and Management Aimed at the Growth of the Company, based on the common understanding that both the company and the labor union must cooperate and actively strive to mobilize the abilities of everyone in Zeon Group to achieve initiatives for company growth.

Numerous opportunities for exchanging opinions have been set up, including consultations between labor and management, RC dialog, and joint labor-management patrols, as well as round-table meetings, which are now a permanent part of the labor-management dialog. Consultations between labor and management provide ample opportunity for forthright discussion. Both sides participate with a forward-looking attitude and a spirit of friendly rivalry based on mutual trust.

Going forward, we intend to actively provide opportunities for dialog with the labor union and to implement various policies to make Zeon a "company of which each of its employees can be proud" through a beneficial partnership between labor and management based on mutual respect for each other's positions.

# Reformation of the Personnel System

## Reformation of the Personnel System

We updated our personnel system in July 2023 to create a job-specific evaluation system for managerial staff. In the former system, grades and compensation were used as stepping stones to managerial roles, based on the person's ability to perform their duties. More recently, however, the roles (i.e., duties) employees are expected to perform have been diversifying.

To foster employees' motivation and create "stages" that allow employees to demonstrate their individual strengths, we decided that we needed to transition to a personnel system that draws out employees' diverse strengths and prompts their growth. This led to the revision of our managerial personnel system.

We revised the system with the following three objectives. The first is to reward employees according to the demands of the role they are expected to perform by creating a multitrack personnel system. In addition to the management roles created based on our existing roles, we introduced specialist roles with grades set by evaluating job performance on an individual basis. We also clearly defined the career paths and set compensation according to the demands of the role.

The second objective is to encourage growth after promotion to a managerial role. We introduced conduct (competency) evaluations that include specific items set for individual roles and are based on demonstrated conduct. This is designed to increase the transparency of performance evaluations, drive creation of results, and serve as a guide for long-term professional development.
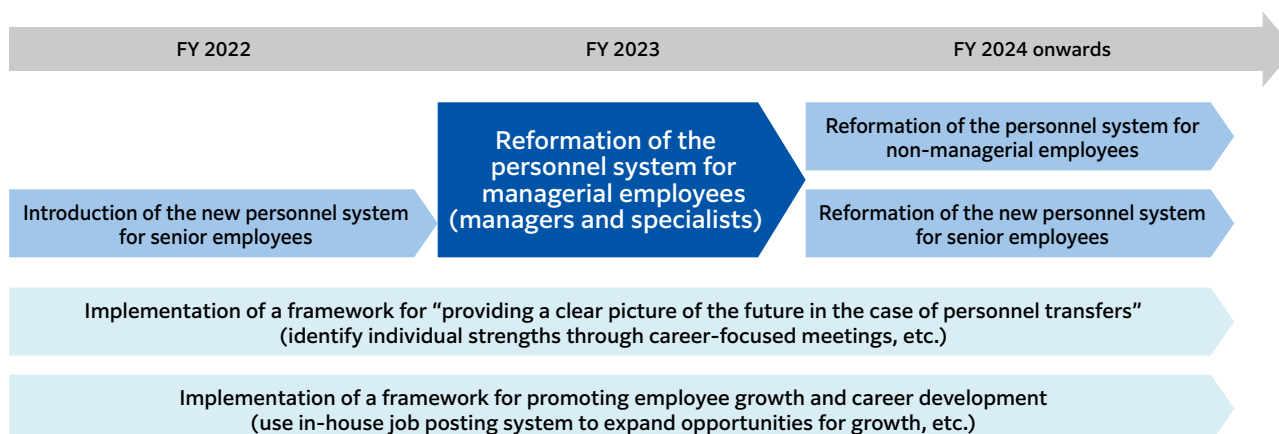
The third objective is to increase career track visibility for employees. By clarifying the requirements of each role, employees have a clearer picture of their career paths and the company can see where there are too many or too few of the resources needed to achieve the management strategy. This information will be used in personnel management to encourage employee growth and determine what types of resources are most need to be recruited, developed, and assigned to roles.

As part of implementing the new managerial personnel system, we will also build an HR portfolio to support getting the right people in the right positions to achieve our management and business strategy. Clarifying the HR requirements tied to each managerial role is designed to encourage the professional development of young and mid-level employees who want to advance to a managerial position as well as present a clearer picture of available career paths.

We are planning to revise the personnel system for non-executive employees in FY 2024 and beyond. In this revision, we will identify issues in work styles and career development through two-way dialogue and review how to support opportunities for young employees to independently develop their careers. We plan to revise the system in FY 2024 to reflect our approach to a job-based personnel system for senior employees, based on the new personnel system for managerial employees.

**Flow of reformation of the personnel system**

| FY 2022 | FY 2023 | FY 2024 onwards |
|---|---|---|
| | Reformation of the personnel system for managerial employees (managers and specialists) | Reformation of the personnel system for non-managerial employees |
| Introduction of the new personnel system for senior employees | | Reformation of the new personnel system for senior employees |

Implementation of a framework for "providing a clear picture of the future in the case of personnel transfers" (identify individual strengths through career-focused meetings, etc.)

Implementation of a framework for promoting employee growth and career development (use in-house job posting system to expand opportunities for growth, etc.)

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# Organizational and Human Resources Development

## Human Resources Development

### Basic Philosophy on Human Resources

Tap into, develop, and fully use the competencies of each employee.

Our concept of "being the worker I want to be" embodies "people who continually evolve by pursuing high goals based on independent thinking." Personnel are encouraged to set goals to become the worker they want to be, and we are modifying our education and training systems to allow them to bridge the gap between the current reality and their goals and facilitate goal-driven actions on a daily basis. By fairly evaluating what employees have accomplished and rewarding them accordingly, we aim for them to set even higher goals. With every personnel continuing to improve and demonstrating this in actions, we can create an even more capable workforce across Zeon.

### HR development at Zeon
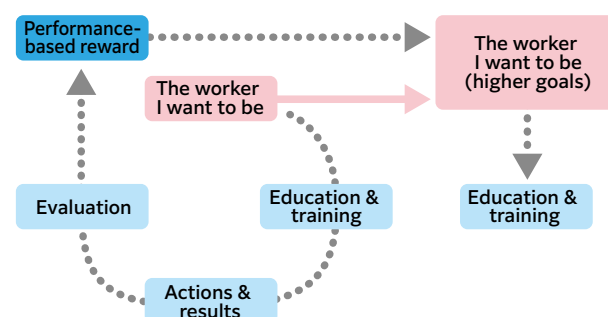


## Framework for Nurturing Human Resources

We implement basic education to nurture human resources at Zeon with a focus on building a cooperation-oriented attitude and acquiring standard knowledge. We also provide specialized rank-specific education including that intended to develop and improve the work competencies needed in specific occupations and evaluation training, and on-the-job training (OJT) conducted at worksites aimed at enhancing the skills of evaluators.

Educational grants for correspondence courses are offered as part of support for self-development. These grants cover 100% of tuition fees provided students satisfy the completion requirements for each subject.

### Education & Training System

## Award System (Zeon Challenge Award)

The Zeon Challenge Awards are presented annually to individuals or groups who have engaged with a challenge and produced results. The prizes given for the President's Award and other rewards are commensurate with the levels of these achievements. Alongside the Employee of the Month award, which is presented on a monthly basis to individual employees by division managers, the Zeon Challenge Award is intended to provide a stage to be active on, and caters to challenges undertaken at the initiative of employees themselves.

### Number of Annual Awards



(Awards)

| FY | President's | Outstanding | Special | Division | Total |
|---|---|---|---|---|---|
| 2018 | | 1 | | 9 | 11 |
| 2019 | 2 | 1 | | 12 | 15 |
| 2020 | 1 | 1 | 1 | 12 | 15 |
| 2021 | 1 | | 1 | 15 | 17 |
| 2022 | | 2 | 1 | 16 | 19 |

■ President's  ■ Outstanding  ■ Special  ■ Division

# Occupational Health and Safety

## Occupational Safety

### Initiatives to Prevent Occupational Accidents and Protect the Safety and Health of All Plant Workers

We emphasize communication between worksite managers and workers to enhance worksite capabilities while implementing measures to prevent infections with COVID-19, with the goal of creating safe, stable production systems. We focus on 5S safety inspections[1], hazard detection[2] activities, and identifying near-miss incidents[3], as well as hands-on safety training.

[1] 5S safety inspections
Inspections that evaluate operations where safety is an integral part of maintaining the 5Ss (Sort, Straighten, Scrub, Systematize, Sustain), and that are designed to enhance visualization of safety-related issues at worksites and address hazards.
[2] Hazard detection ("Kiken Yochi" [KY] activities)
Actions taken by workers to analyze and understand unsafe conditions with the aim of recognizing activities that would place them in danger.
[3] Near-miss incidents
Events or phenomena that have the potential to result in an accident.

### Record of Occupational Accidents

**Lost Work Time Accident Rate[1]** (Zeon Corporation)
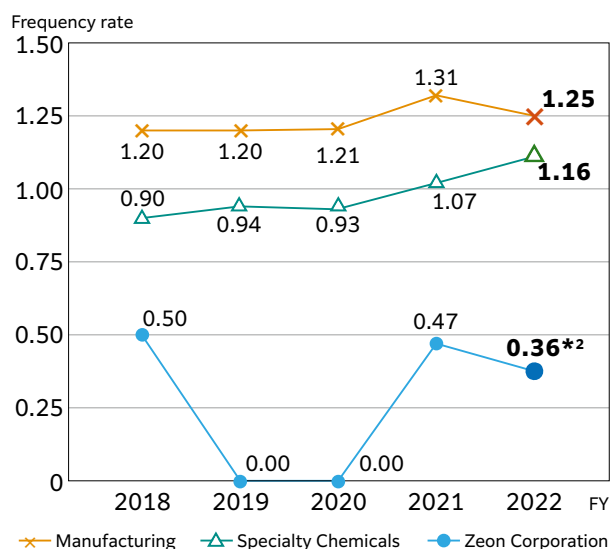


*1. Lost work time accident rate
    A safety indicator of the frequency of occupational accidents, calculated using the following formula.
    Frequency of lost work time accidents = Number of workers who experienced a lost work time accident / Total working hours × 1,000,000 hours
*2 From FY 2022, the total value for Zeon Corporation increased to 6 factories from 4 due to an absorption-type merger.

### Change in severity rate of lost worktime accidents* (Zeon Corporation, non-consolidated)
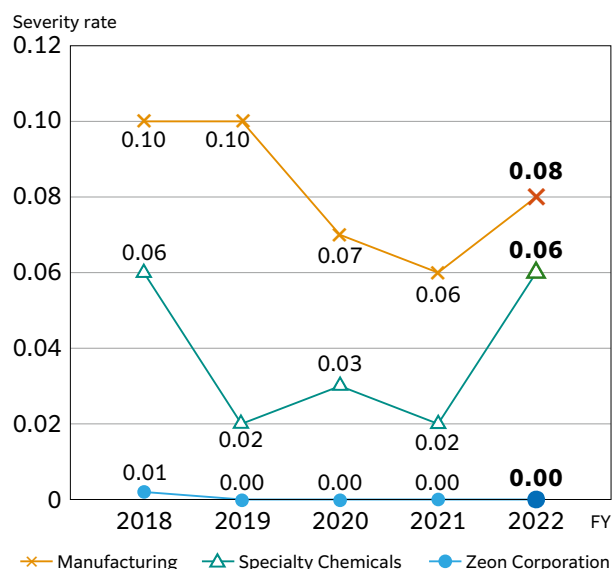


*Severity rate of lost worktime accidents = Total number of lost work days ÷ Total actual worked hours × 1,000 hours

### 5S Safety Inspections

5S safety inspections assess operations where safety is critical to maintaining the 5Ss (Sort, Straighten, Scrub, Systematize, Sustain).

The Environmental and Safety Affairs Department General Manager at the Head Office and Managers at Environmental and Safety Affairs Offices at each worksite conduct patrols of worksites where the Environmental and Safety Affairs Committee is held, to identify areas of excellence and areas where improvements are required (put on hold in FY 2022 due to the COVID-19 pandemic).

### Hazard Detection (Kiken Yochi) Activities

**4R-KY (four-round kiken yochi) activities**
4R-KY is a hazard detection method where employees analyze and understand their work tasks before starting them, to avoid placing themselves in danger. The process is carried out in four separate rounds.

KY trainers assigned to each workplace lead these activities.

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## Identifying Near-miss Incidents

Near-miss incidents are events that have the potential to result in a major accident, injury or loss. The concept of near-miss incidents comes from Heinrich's Law: In a workplace, for every accident that causes a major injury, there are 29 accidents that cause minor injuries and 300 accidents that cause no injuries (near misses). By collecting and sharing data on potentially serious near-miss incidents, we will strive to prevent the occurrence of major accidents.

# Safety and Accident Prevention

## Safety Management Efforts Led by Top Management

Each year, top management develops the Annual Safety Management Improvement Master Plan and leads initiatives to improve our Safety Management System based on the belief that ensuring safety is the highest priority.

Specifically, we are continuing to conduct priority measures to ensure safety, based on the following straightforward phrases.

1. Reliable operation of equipment and systems to prevent errors ("Never rely on 'maybe' or 'should'")
2. Plant degradation countermeasures and fail-safe measures* ("Good judgement saves money")
3. Review of past accidents and recurrence prevention ("Never rely on 'maybe' or 'should'")
4. Review of standards ("Always follow the rules. Change rules that cannot be followed.")

*Fail-safe measures
Modifications to equipment or processes and other measures to prevent accidents that would otherwise result from human error, such as mistakes made by new employees and others lacking in knowledge or experience, or careless mistakes made by experienced employees.

## Dialog between Management and Plants

To monitor progress on priority issues, senior managers at Zeon visit plants on a regular basis to conduct inspections, hold informational meetings with workers, and brief workers on annual policies. Visits are also made to plants on other occasions to communicate directly with plant workers, who are on the front-line of the company's operations. Along with these visits, we have concurrently held online meetings since FY 2020 to prevent the spread of COVID-19. In FY 2022, senior managers engaged with plant workers on 38 days, of which 35 days involved in-person visits, marking a resumption in holding proactive dialogue with worksites.

## Safety Inspector Certification at All Sites

**Certified Safety Inspector*[1]**
Obtained by Takaoka Plant, Kawasaki Plant, Tokuyama Plant, and Mizushima Plant

**Certified Completion and Process Safety Inspector*[2]**
Obtained by Kawasaki Plant, Mizushima Plant, and Tokuyama Plant

The certification renewal process includes reviews of safety inspection and completion inspection methods as well as inspection management, and verification that our Safety Management System meets the regulatory requirements defined in Japan's High Pressure Gas Safety Act and that these systems are operating properly.

To more reliably ensure safety at all plants, we employ our Safety Management System, identify the sources of hazards, and implement measures to mitigate risks at all of our plants. We are also formulating our vision for Smart Industrial Safety*[3] and promoting the realization of this vision.

*1 Certified Safety Inspector
Certification granted by Japan's Minister of Economy, Trade and Industry based on the High Pressure Gas Safety Act to allow qualified individuals to perform safety inspections to determine whether specified facilities comply with technical standards, either while the equipment is running or while it is stopped.

*2 Certified Completion and Process Safety Inspector
Certification granted by Japan's Minister of Economy, Trade and Industry based on the High Pressure Gas Safety Act to allow qualified individuals to perform completion inspections to determine whether manufacturing facilities or Class 1 storage facilities that have undergone specific modifications comply with technical standards.

*3 Smart Industrial Safety
Smart Industrial Safety is:
1. An autonomous and independent effort regarding industrial safety by the public and private sectors,
2. From the perspective of appropriate implementation of industrial safety regulations, promotion of industries, and strengthening of competitiveness,
3. In order to deal with economic and social structural changes, including rapid technological innovation, digitalization, low birthrate and aging population, and population decline,
4. Considering the safety of the citizenry and industry as a priority.

### Certification Status

| Plant | Obtained Certified Safety Inspector status | Obtained Certified Completion and Process Safety Inspector status |
| --- | --- | --- |
| Takaoka Plant | 2000 (renewed in 2020) | — |
| Kawasaki Plant | 1998 (renewed in 2022) | 2008 (renewed in 2022) |
| Tokuyama Plant | 2007 (renewed in 2021) | 2012 (renewed in 2021) |
| Mizushima Plant | 2006 (renewed in 2021) | 2006 (renewed in 2021) |

## Improving Plant Safety

We conduct Plant Safety Evaluations and Plant Safety Inspections to further raise the level of safety at plants and prevent serious accidents and injuries from occurring.

### Plant Safety Evaluations
We verify plant safety at the design stage when commissioning a new plant or upgrading an existing one.

### Plant Safety Inspections
For existing plants, while inspecting work areas, we ensure that all sources of danger have been identified and review past decisions regarding the need for safety measures.

## Occurrences of Accidents and Injuries

FY 2022: Safety incidents* 6
          (High-pressure gas leaks: 5 [including 4 fluorocarbon leaks]; Other: 1)

Although these incidents did not result in injury to humans or major impacts on the environment, we set up an accident investigation board for each incident. The boards have investigated the direct and indirect causes of the incidents, and are developing countermeasures to prevent recurrence.

*Safety incidents
Defined in company regulations as the occurrence of a fire, explosion, leak, damage, failure, runaway reaction, or similar event. Even if there has been no actual occurrence, the possibility of such an event if actions had been delayed and the observation of signs that could be deemed to indicate the potential for such an event are also defined as safety incidents.

## Disaster Preparedness Training

Worksites conduct disaster-response drills each year based on various hypothetical scenarios. The drills include reporting and contracting simulations, first-aid treatment, and rescue and firefighting activities. We conduct full-scale disaster-response drills jointly with local firefighting agencies when possible.

These drills allow us to verify that our standards are adequate, and to verify the operability of emergency equipment (e.g. fire trucks, fire hydrants, broadcasting equipment, etc.). When we encounter problems, we take steps to quickly resolve them, so as to maintain the highest level of disaster-response preparedness.

## Third-party Evaluations

Zeon Corporation has participated as a supporting company (full member) since the initial establishment of the Japan Safety Competency Center (a specified nonprofit corporation), and has made efforts to evaluate and improve its safety competency in terms of its safety foundation and safety culture. In third-party evaluations, the Japan Safety Competency Center evaluates Zeon's safety foundation. The Keio University format is also incorporated into the evaluation of the safety culture. The strengths and weaknesses of each worksite and department are objectively measured, and Zeon Corporation continues to conduct improvement activities aimed at improving its safety competency.

# Environmental and Safety Education

## ▌Systematic Safety Education

Environmental and safety education programs are implemented in accordance with the annual plan set by each worksite.

Group-wide environmental and safety education supervised by the Environmental and Safety Affairs Department is combined with worksite-specific environmental and safety education tailored to the specific needs of each individual worksite. Shared group-wide educational content includes content provided through e-learning as well as education on legal amendments of environmental and safety-related laws.

Through these educational activities, we strive to eliminate safety incidents and occupational accidents, minimize damage should an incident or accident occur, and maintain Zeon's status as an enterprise trusted by local communities.

### Manager and supervisor education
**Training for newly-appointed section managers**

This is implemented for newly-appointed manufacturing section managers, facilities management section managers, and environmental and safety section managers.

The content of the training includes safety activities based on Zeon's safety system, safety concerns and responsibilities that safety managers should be familiar with, environmental and safety related laws and environmental and safety related company regulations, and the Safety Management System, etc.

### Safety education provided by former plant managers
**Education using accident case studies**

Held since FY 2003, this education program aims to prevent the lessons of past accidents from fading from memory, to apply these lessons in work operations, to raise workers' awareness of safety, and to increase their sensitivity to potential risks.

Former plant managers give presentations to all plant employees. They cover specific examples of accidents at Zeon and other companies to communicate the grim consequences of such accidents, and provide instruction on how to analyze risk factors as well as countermeasures to prevent recurrences.


Education using accident case studies

### Environmental and safety education for new employees
**Newly-recruited employees at Zeon Head Office**

Presentation of case studies of occupational accidents that have occurred while newly-recruited employees were undertaking factory placements, emphasizing the importance of abiding strictly by the rules that have been established in each workplace.

**Newly-recruited employees at individual worksites**

Education in basic matters relating to environmental and safety issues.

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## Environmental and Safety Education and Training Activities Organized by Individual Worksites

### Safety and environmental legislation education

Each individual worksite implements environmental and safety education in accordance with the annual plan (Environmental and Safety Education and Training Plan).

### Training activities

Training is implemented in accordance with the annual plan. We strive to improve emergency response capabilities by identifying issues that arise following training implementation and using these to make systematic improvements.
- Comprehensive disaster response drills: These are held once or twice a year, and involve the implementation of disaster response training and evacuation training based on earthquake or tsunami scenarios
- Individual training: Trainings for the individual self-directed disaster response organization disaster response teams and reporting trainings are held

### Establishment of the "Safety Workshop"

A "Safety Workshop" has been established at the Mizushima Plant, at which employees can acquire practical experience in the various types of safety rules. Using the "Factory Safety Rules Understanding Verification Sheet" drawn up in accordance with the "Standards Governing Usage of the Mizushima Plant Safety Workshop," activities are conducted to check employees' level of understanding of safety rules; in addition, activities are held that make use of education based on the exhibits in the Safety Workshop to deepen understanding of factory rules among factory personnel (including the personnel of partner companies).


Display in the Safety Workshop showing how to use scaffolding

### Adoption of hands-on safety education

Safety sensory education is conducted at plants, research facilities, partner companies that perform work inside Zeon facilities on a long-term basis, and neighboring Zeon Group companies. Specifically, every year sensory education is provided on accidents in which employees are caught or trapped by machinery, electrostatic explosions and burns, shocks from residual pressure in couplers, accidents involving objects falling, and accidents involving cutting.

In the future, we will continue to implement this type of education systematically, including repeat education.


The hands-on safety education covering the dangers of getting caught in a roller

## Topics: Initiatives to Create "Smart Factories" to Simultaneously Improve Plant Efficiency and Realize Workstyle Reforms

At Zeon, we have been working to make our plants "smarter" since 2020. We have already carried out various activities to facilitate production innovation (visualization and utilization of intangible assets, including know-how and expertise of skilled and experienced workers) to date. The creation of smart factories will enable further production innovations and transformations in work tasks by increasing the range of things that can be accomplished by machines through the leveraging of digital technologies. For plants, this will have the effect of streamlining production and continually ensuring product quality. For employees, it will lead to the realization of comfortable and rewarding workplace environments.

As part of the "Smart Factory Realization Project" undertaken throughout the Zeon Group, we initially discussed the "Vision of an Ideal Plant" in six areas (work operations, safety, quality assurance, facilities, personnel, and logistics and warehousing), establishing the specifics of what we hoped to achieve via the creation of smart factories, as well as the steps needed to achieve this. Meanwhile, it is important to organize these various ideas and initiatives to facilitate optimization of the whole, rather than groupings of digitization initiatives partially optimized for individual fields.

Initiatives undertaken over a two-year period as part of this project involved pilot tests ranging from studies on ways to achieve the transition to smart factories to those on optimizing the whole, thereby identifying the topics to be addressed. We also worked out the organizational structures and a visualization of the digital human resources which would be required to achieve these goals. Since April 2022, initiatives to facilitate the creation of smart factories are being continued by the Production Innovation Center based on the Medium-Term Business Plan.

### What We Hope to Realize through Smart Factories

**Smart Factories**
(Streamlining and optimizing efficiency of production; what machines can do being done by machines)

- Optimal automated plant operations
- Elimination of shift work (workstyle reform)
- Guaranteeing production volumes without trials
- Vertical start-up without prototyping
- Detection and elimination of dangerous situations
- Automation of work tasks
- Elimination of sudden equipment failures/ optimization of repair costs
- Remote assistance

⬇ Surplus time  ⬆ Further improvements

**Nurturing high quality personnel**
(meeting the aspirations of employees)

- Enhancing capacities for autonomous improvements
- Enhancing logical thinking capacities through improvements
- Enhancing understanding of basic rules and principles
- Enhancing facility maintenance capacities
- Enhancing response capacities (safety) in the event of abnormalities
- Enhancing response capacities in the event of non-steady operations

### Example 1: Reduction of essential tasks through transition to the use of robotics

Activities for production innovation have to date reduced on-site troubleshooting operations by around 90%. We have now reached a juncture of considering whether to further reduce essential tasks (tasks required for production) to reduce workloads even more. In this context, we conducted deliberations on the potential of adopting digital technologies intended to reduce essential tasks.

If plant patrols can be replaced with cameras and robots, this would allow the time thus saved by increases in efficiency to be used for other improvement activities (workstyle reforms), while also improving operator safety. In addition, standardization of work tasks and the development of facilities for the transition to the use of robotics would further facilitate improvements in the basic infrastructure of plants.

By conducting reviews inside actual plants, we learned that commercially available functions would not meet our implementation needs and identified the technical issues that need to be resolved to have robots move around automatically. We are working quickly to resolve the issues by developing technology together with other companies as well as by utilizing opportunities to study the issues in industry-government-academia joint settings.


Actual plant inspection tour
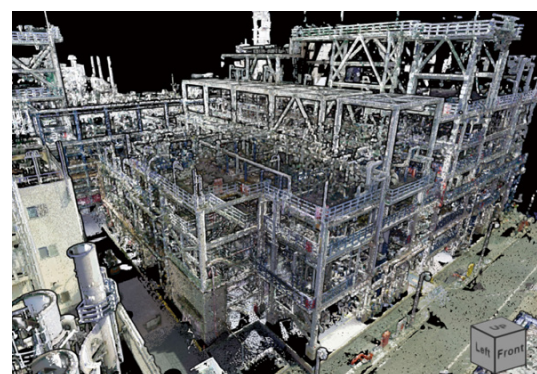

Plant point group data for robot control

## Example 2: Interactive training using VR technology

To operate a plant, it is important acquire the ability to respond in the event of abnormal conditions, in addition to having an understanding of basic rules and principles.

The introduction of VR technology during training drills is expected to facilitate improvements in the efficiency of both instructors and those under their instruction by allowing them to repeatedly be exposed to various situations and facilitate autonomous learning.

The use of 360-degree imaging and VR to enhance efficiency in the training of new employees has been pilot-tested and formally adopted at the Takaoka Plant, and we are currently preparing to expand this system to other plants. Training for more advanced troubleshooting drills, and launching new plants is under ongoing consideration as the burden involved in creating training materials is high.
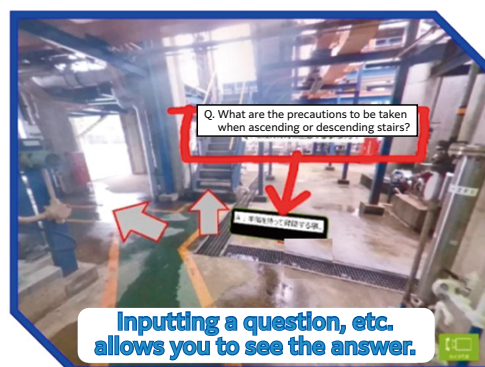
Image from a 360-degree camera

## Advanced drills on responding to problems and new plant launch drills

**New plant**
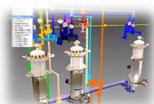
3D-CAD data conversion

**Existing plant**

Point group data filming, 3D modeling

[Field operator]
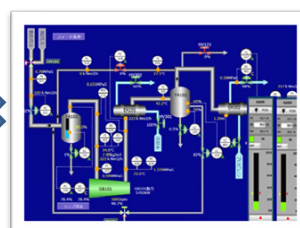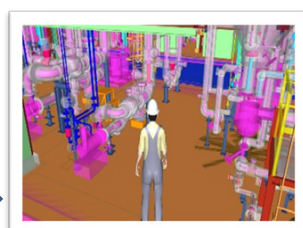
[Board operator]

Dynamic simulator

General OBS

# Quality Assurance

*For chemical product safety, see Environment (→P. 24)

## Basic Approach and System

### Quality Assurance Policies

In accordance with our basic philosophy and Sustainability Policy, we define our basic policy for quality assurance as follows.

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**Basic Policy for Quality Assurance**

1. We contribute to society by providing high-quality products, goods and services with excellent reliability and safety to the market.
2. We fully understand and predict user demands and provide products, goods and services that users can use with satisfaction.
3. In each quality assurance step, we establish an internal system that can assuredly evaluate high-quality products, goods and services with excellent reliability and safety.
4. We establish technologies that can produce products, goods and services with the target quality in terms of reliability and safety.

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### Quality Assurance System

To consistently manufacture products that reflect the needs and wants of customers and to ensure product quality, Zeon is advancing integrated quality assurance activities group-wide, across manufacturing, sales, and engineering functions, by strengthening cooperation between plants, departments and research units (R&D Center).

**Quality Assurance System**
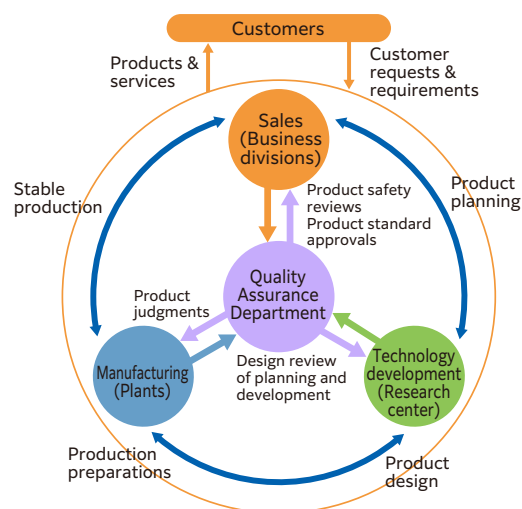


## Quality Assurance Initiatives

### Targets and Results of Major Quality Assurance Initiatives

| Initiative (topic) | Target | Results | Assessment |
|---|---|---|---|
| Timely responses to complaints, opinions from customers, etc. | Complete responses within a single year | While some cases temporarily exceeded a single year, no long-term delays occurred | Partially Achieved – Achieved |
| Enhance customer satisfaction | Analysis on customer satisfaction and initiatives for improvements | All business divisions conducted analyses on customer satisfaction through management reviews to determine and engage with topics that required a response | Achieved |

## Framework Supporting Quality Assurance

To ensure a consistent supply of high-quality products to our customers, we have put in place various quality assurance systems in accordance with internal regulations on quality assurance and conforming to the ISO 9001:2015 international standard for quality management systems. In 2010, we consolidated our ISO 9001 certification across the Group, and have maintained this since then. Zeon Group companies have also obtained global standard certifications related to quality.

In addition, to prevent quality issues from occurring, we offer commentaries on actual case studies for issues that could potentially arise as part of annual e-learning compliance checks to confirm levels of understanding for all employees. We are working to ensure that every employee performs their duties based on an accurate understanding of quality assurance.

### Status of Zeon Group Certifications for International Quality Standards

| Site | ISO 9001 :2015[1] | ISO 13485 :2016[2] | IATF 16949 :2016[3] | FSSC 22000 v5[4] |
|---|---|---|---|---|
| Japan | | | | |
| Zeon Corporation | O | | | O[6] |
| Zeon Kasei Co., Ltd. | O[5] | | | |
| Zeon Polymix Inc. | O | | | |
| Zeon Opto Bio Lab Co., Ltd. | O | O | | |
| Tokyo Zairyo Co., Ltd. | O | | | |
| Tohpe Corporation | O | | | |
| Zeon Medical Inc. | | O | | |
| Zeon North Co., Ltd. | O | | | |
| Zeon Chemicals Yonezawa Co., Ltd. | O | | | O |
| Outside Japan | | | | |
| Zeon Chemicals L.P. | O | | | |
| Zeon Chemicals (Thailand) Co., Ltd. | O | | | |
| Zeon Advanced Polymix Co., Ltd. | O | | | |
| Zeon Chemicals Singapore Pte. Ltd. | O | | | |
| Zeon Europe GmbH | O | | | |
| Zeon Chemicals Asia Co., Ltd. | O | | | |
| Zeon Kasei (Changshu) Co., Ltd. | | | O | |
| Zeon Kasei Mexico S.A. de C.V. | O | | | |

[1] ISO 9001 is the international standard for achieving ongoing improvements in enhancing customer satisfaction and quality management systems through product and services quality assurance.

[2] ISO 13485 is the global standard for quality management systems in the field of medical devices for the purpose of continued manufacture and provision of safe and useful medical devices. The standard has added requirements specific to medical devices while omitting some of the ISO 9001 requirements.

[3] IATF 16949 is a standard issued by the International Automotive Task Force (IATF) for the automobile industry sector, and which is intended as a supplement to the requirements of ISO 9001 for automobile manufacturers.

[4] FSSC 22000 (Food Safety System Certification 22000) is a standard developed by the Foundation of Food Safety Certification to certify management systems for the production of safe food.

[5] The logistical materials division has acquired certification limited to STEC®.

[6] Mizushima Plant acquired FSSC 22000 certification for the manufacture of food-grade synthetic aroma chemicals.

## Framework to Achieve Product Safety

### 1. Product safety reviews

We strive to ensure product safety in every possible aspect by conducting product safety reviews (PSRs) using our own checklists that consider product safety at every stage of the product lifecycle, from initial product development through planning, design, manufacturing, sales, use, and disposal.

### 2. Chemical substance regulatory compliance

The regulatory environment for chemical substances management is undergoing major change globally, with laws and regulations on chemical substances being enacted and amended not just in the United States and Europe but also in Japan and Southeast Asia. As seen with PFAS regulations, there are now more cases where trace impurities and molded products are also subject to regulations. As a result, the number of regulations to comply with is rising sharply. To comply with these regulations at Zeon, we are creating a database of the substances in our raw materials and products, even those present in minute quantities, and building a chemical substances management system capable of continuously tracking the most up-to-date regulatory information, safety information, and other relevant information.

## Audits

### PL Audits

PL audits are audits performed by an auditing team led by the director in charge of CSR and covering product liability (PL) and product safety. PL audits are conducted for product liability activities for products of Zeon business divisions spanning all stages of development, manufacture, use, final consumption, and disposal.

### Quality Audits

Quality audits are audits performed by an auditing team led by the head of the Quality Assurance Department that focus on checking the progress of implementing quality improvement activities. They are conducted at Zeon's business divisions, plants, laboratories, and affiliated companies.

### Internal Quality Audits

Internal quality audits are conducted for the purposes of evaluating whether Zeon's quality assurance management system is operating effectively and efficiently based on ISO 9001:2015 and promoting ongoing improvements. The audits are based on ISO 9001, and are structured so that the requirements of ISO 9001 are satisfied as long as Zeon's internal regulations are being complied with. The audits also focus on customer satisfaction and overall optimization. The audits are conducted for the whole of Zeon Group; as far as possible, audits are conducted by an auditing team comprised of auditors from other divisions. We identify issues through internal quality audits and connect these activities to improvements in our systems and processes.

## Quality Data Management

At Zeon, we define all customer comments or expressions of dissatisfaction with our products or services as "complaints," and utilize a complaint response system to report, review, approve, and manage delivery.

We have also implemented a standards management system configured to ensure that delivery standards, product standards, and product inspection standards remain consistent, and allow us to remain in compliance with the delivery specifications concluded with our customers. Inspection data is further checked against product inspection standards in the product testing system, with a decision of pass/fail assigned, and results automatically forwarded to the ERP system. Changes to or abnormalities in processes are also reliably managed through the deployment of a system that reports, reviews, and sends out effectiveness evaluations, emergency actions, and remedial measures, to facilitate implementation of assured change control and deviation management. We plan to construct an even more reliable and efficient system for quality assurance by means of linking these systems going forward.

## Risk Reduction for New Products

At Zeon, we conduct a comprehensive review (PSTR)[1] from quality assurance perspectives in addition to a design review (DR) when transitioning from the product design to the production preparations stages, as well as from the production preparations stage to actual production.

This review confirms items related to product quality to ensure that new products satisfy the quality requirements of our customers, and to allow us to fulfill supply obligations. Items subject to review include data on the chemical substances making up the product; 3D-QFD (quality function deployment), for data-based clarification of cause-and-effect relationships of information related to manufacturing; FMEA[2], which attempts to prevent potential post-production abnormalities; and testing methodologies and testing facilities to measure product standards and characteristics of critical processes.

*1 PSTR (Product Stage-gate Transfer Review)
*2 FMEA (Failure Mode and Effects Analysis)

## Communicating Safety Information

For more information about safety information for chemical products handled by Zeon, see Chemical Product Safety Information (→P. 24).

# Community

## Basic Approach

We believe that contributing to the development of local communities and building strong relationships of trust are crucial to conducting stable business activities and creating improved products and services.

### Zeon's Approach to Social Contributions

We believe that social contributions are essentially carried out through our core businesses. As a corporate citizen, however, the complex set of issues faced by society and company activities are not independent of one another. We are therefore undertaking social contribution activities outside of our core businesses to engage with society from a broader perspective.

In addition to planning activities related to supporting reconstruction from the Great East Japan Earthquake and common initiatives across Zeon plants and Group companies, CSR activities have consistently been undertaken independently by Zeon plants and Group companies, with all such activities developed with a focus on their synergistic benefits.

## Social Contribution Activities

### Great East Japan Earthquake Reconstruction Support

**Volunteering to support Great East Japan Earthquake reconstruction**

We invite employees to sign up for restoration volunteer tours open to the public and send employees on the tours on an ongoing basis. We cover the full cost of the tours to encourage employee participation (canceled in FY 2022 due to the COVID-19 pandemic).

**Zeon Charity Bazaar**

In the context of restrictions on movement and behavior associated with the COVID-19 pandemic, a bazaar was held in an online format at Zeon Group companies in Japan. At the bazaar, employees supplied items to be sold within the Group, with all the proceeds from the sale of these items, together with an additional donation from the company, presented to Japan Platform (specified non-profit corporation) in FY 2022.

**Eat and Root for Restoration**

We are supporting the recovery of industries by actively using food grown in disaster-affected areas (provision of menus featuring food from the Tohoku region at the employee cafeteria in the Takaoka Plant on the 11th of every month).

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## Common Group Initiatives

### Holding of Chemistry Experiment Classrooms

Based on the motto of "nurturing future Nobel Prize winners in chemistry," we hold chemistry classrooms in various areas to communicate the appeal of chemistry to children.

In FY 2022, in addition to continuing to hold chemistry classrooms at events such as the Youngsters' Science Festival in Yamagata, we also conducted lessons during school visits, which had been put on hold during the COVID-19 pandemic, to Sakaigawa Elementary School in Beppu City, Oita Prefecture.



At lessons given during school visits, after providing classroom instruction on energy harvesting and CNT, students engaged in hands-on learning, making water batteries and conducting experiments on electricity generation and communications during earthquakes.



Zeon Chemicals Yonezawa participated in the 2022 Youngsters' Science Festival in Yamagata. Together with children, employees added diluted aroma chemicals to alcohol-based sanitizer to make a hand spray.

### Green Purchasing of Office Supplies

As part of our green procurement initiatives, we are pursuing efforts for green purchasing of office supplies at Zeon Group companies in Japan. In FY 2022, green purchasing accounted for 33% of total purchases for all Group companies.

## Independent Projects

### Support for Education

Zeon's plants and Group companies offer assistance to educational institutions with internships for high school, technical college, and university students, by welcoming plant tours by school groups, and by sending special instructors to give lessons at schools. In FY 2022, internships and plant tours were gradually reinstated even in the midst of the COVID-19 pandemic, with 27 plant tours held, and 174 interns hosted by Group companies in Japan.



Internships at the Mizushima Plant



Internships (on-site training) at the Tsuruga Plant



Internships at the Kawasaki Plant (Facilities Tour)



Upon request from schools and the Japan Fire Engineering Qualification Center, Zeon Chemicals Yonezawa gives lectures to school instructors on company needs regarding the qualification exam for hazardous material engineers (advantages of acquiring the hazardous material engineer qualification while in school and how the qualification is useful in safety management at companies).

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## Dialog with Communities

Plants participate in community dialog as part of the Responsible Care Council activities and communicate information on environment-related improvements, safety, and disaster preparedness during plant tours for representatives of local government authorities and for community residents. In addition, since FY 2023 we have released videos on our website introducing each worksite to facilitate dialogue with communities.



Responsible Care community dialog at the Kawasaki Plant



Video introducing worksites (YouTube)



Zeon Advanced Polymix Co., Ltd. was recipient of the CSR-DIW 2023 Award, from the Department of Industrial Works (DIW) for the seventh consecutive year since 2017, in recognition of it being a company with outstanding CSR activities. (Photos: Trophy and award ceremony)

## Holding and Participating in Community Events

Zeon attaches great importance to our ties with local communities. Zeon's plants and Group companies hold various events, including summer festivals, and welcome opportunities to participate in community events.



Autumn festival at the Mizushima Plant

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## Community Cleanup Activities

With the goal of being useful to and benefitting local communities, Zeon's plants and Group companies conduct community cleanup campaigns around their sites and beyond. In FY 2022, there were a total of 1,209 participants in 45 cleanup campaigns held in Japan, despite restrictions associated with the COVID-19 pandemic.



Himi coastal cleanup event by the Himi Futagami Plant



Participation in community cleanup event by Zeon Polymix



Participation in winter group cleanup project in Shunan City by Tokuyama Plant and Zeon Yamaguchi

## Maintaining a Harmonious Relationship with the Local Community

We engage in collaborative activities with local communities in each region.



Zeon Advanced Polymix Co., Ltd. in Thailand has conducted volunteer cleanup and donation activities over the course of many years. (Photo: Repairing floor coating at a neighborhood school and donation of coating supplies)



Zeon Chemicals Thailand Co., Ltd. in Thailand has participated in volunteer activities to improve the community environment and donation drives for elementary schools for many years. (The photo shows its participation in a community tree-planting activity. Managing Director Horibata is in the center)



The Tokuyama Plant conducts activities to maintain forests with water sources, with participation from a wide range of partners including companies that use the water, in order to deepen understanding of forests' role in water source cultivation and global warming prevention as well as to promote independent activities to improve and appropriately manage forests.

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In recent years, blue carbon has attracted attention as a source of $CO_2$ absorption, and activities to conserve and restore blue carbon ecosystems are underway in various regions. The Oshima tidal flats in Shunan City is one such region. Here, an artificial tidal flat made using sediment generated in a dredging project at the Port of Tokuyama Kudamatsu has created a new habitat for eelgrass and Japanese eelgrass. The continuation of these conservation activities has led to the creation of a diverse ecosystem today. Zeon is participating in conservation activities at the Oshima tidal flats, and through the Japan Blue Economy Association, is purchasing and utilizing J Blue Credits® created in a Shunan City blue carbon project to connect the Oshima tidal flats to the Port of Tokuyama Kudamatsu. This not only helps offset the $CO_2$ emissions we produce, but also contributes to conserving the natural environment in the surrounding area, promoting marine industry, and promoting community vitalization.

# Information Disclosure

## Communications Approach and Framework

We conduct public relations activities to promote accurate understanding of our philosophies, approaches, and various undertakings by stakeholders and the public, and thereby increase recognition of Zeon and become more known and trusted in the world.

### Public Relations Committee

The Public Relations Committee discusses and sets policy related to internal and external information disclosure based on sustainability management.

## Information Disclosure

### Website
· Communicates information relating to the company, IR, products, and employment, etc.

## Advertising and PR

We conduct advertising and PR activities aimed at enhancing the Zeon brand.

### TV commercials
· Currently on air on terrestrial TV broadcasting (Regions: Kanto region and Yamagata, Toyama, Fukui, Okayama, Yamaguchi, and Kagawa Prefectures) and BS TV broadcasting (Regions: National)
· TV commercials for Asia are broadcast throughout Southeast Asia via satellite TV programs



Movie (available only online) connected to the new TV commercial released in October 2023

### Radio commercials
· Regions currently airing: Kanto area, Toyama Prefecture, Fukui Prefecture, Okayama Prefecture, and Yamaguchi Prefecture

### Newspaper ads

Newspaper ads were rolled out in conjunction with TV commercials.



## Internet Ads

To increase recognition and deepen understanding for Zeon, we are also placing online ads, primarily on YouTube. In FY 2023, we produced and released videos featuring employees who are continuing to take on challenges in new priority areas identified in our Medium-Term Business Plan.

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# Corporate Governance

## Corporate Governance

### Basic Policy on Corporate Governance

Zeon Corporation aims to increase profits and enhance corporate value on an ongoing basis while respecting and balancing the various interests of its shareholders and other diverse stakeholders. To this end, we are continuing efforts to establish a system that enables efficient and sound corporate management through corporate governance.

Putting in place a corporate governance system allows us to clarify the functions and roles of each organizational entity within the company and to carry out rapid decision-making and execution. We are also improving corporate transparency through appropriate monitoring and disclosure of business activities and their effects.

Basic Policy on Corporate Governance (Japanese version only)
**https://www.zeon.co.jp/csr/concept/pdf/200281514.pdf**
Corporate Governance Report (Japanese version only)
**https://www.zeon.co.jp/news/assets/pdf/230707.pdf**

The main components of our Corporate Governance System are summarized below.

### 1. Board of Directors

The Board of Directors meets, in principle, every month with Audit & Supervisory members in attendance to ensure compliance with applicable laws and the Articles of Incorporation in the execution of business. In addition to its statutory duties, the role of the Board of Directors is to make important decisions about basic management policy, strategy, and other aspects of business execution. As of July 2023, the Board of Directors consists of 11 directors, including 5 outside directors.

### 2. Executive Committee

The Executive Committee, in accordance with the Executive Committee Rules, comprises the President and executive officers ranked senior corporate officer and above, meets twice a month in principle to examine and make decisions on important business matters after due deliberation involving consultation with attending full-time Audit & Supervisory Board members. Important business matters stipulated in the Board of Director Rules are examined and decided by the Board of Directors.

### 3. Audit & Supervisory Board

The Audit & Supervisory Board comprises five members, including three external members. The Board reports, discusses, and adopts resolutions on important business matters. In accordance with the auditing guidelines established by the Audit & Supervisory Board, each member audits directors' execution of their duties through various means, such as attending Board of Directors meetings and monitoring business operations, including at subsidiaries' operations.

### 4. Director and Officer Nomination and Compensation Committee

The Director and Officer Nomination and Compensation Committee is positioned as an advisory organ to the Board of Directors for the purpose of strengthening the objectivity and transparency of the Board of Directors functions related to nominating directors and officers and deciding their compensation. The committee is composed of seven members, of which five are independent outside directors.

### 5. Corporate Value Creation Conference

The Corporate Value Creation Conference was established as an advisory body to the Board of Directors, to strengthen the decision-making and oversight functions of the Board with respect to the creation of the Zeon Group's corporate value, and activities aimed at reflecting that value in our market capitalization. The Conference has seven members, two of whom are independent outside directors, two of whom are independent outside auditors, and one of whom is an outside expert (a lawyer who is not an advisor to Zeon).

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## Corporate Governance System (As of September 2023)



General Meeting of Shareholders

Decisions/Supervision (appointments/dismissals)
(Appointments/dismissals)
(Appointments/dismissals)
Collaboration (assistance)

④ Director and Officer Nomination and Compensation Committee

Require advice
Suggestions

⑤ Corporate Value Creation Conference

Require advice

① Board of Directors

Auditing

③ Audit & Supervisory Board

(Dismissals)

Financial Auditors

Collaboration

Auditing Personnel

Financial Audits

Decisions/Supervision (selections/dismissals)

Auditing

Business Execution & Internal Controls System

Collaboration

Representative Director

② Executive Committee

Department of Internal Auditing

CSR Conference

Reporting

Risk Management Committee

Compliance Committee

Information Management Committee

Environmental and Safety Affairs Committee

Quality Assurance Committee

PL Committee

Public Relations Committee

Reporting (internal)

Sustainability Conference

Sustainability Committee

Cyber Security Committee

Health and Productivity Management Promotion Committee

Internal audits

Internal audits

Business divisions, indirect departments, laboratories, and plants

Control/monitoring

Subsidiaries and affiliates

External lawyers

Reporting (internal)

Reporting (external)

Reporting (internal)

Reporting (external)

**ZEON  SUSTAINABILITY REPORT 2023**                    ↩  ◀ 62 ▶

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# Risk Management

## Risk Management Framework

The Risk Management Committee leads Zeon's risk management. Activities to prevent law violations and to comply with laws and regulations are conducted under the Compliance Committee (For more information about the framework, see Compliance [→P.63]). The Information Management Committee implements appropriate management of information, from the time when information is obtained until the time when it is deleted.

**Risk Management and Compliance System**



**Risk Management Committee FY 2022 Results**
· Handle incidents as they occur and take steps to prevent their recurrence
· Enhance risk and crisis control measures
Example: Revising the content of Business Continuity Plans (BCPs) based around the scenario of a major earthquake

## BCP Formulation and implementation of Related Training

Recognizing the need on business continuity to mitigate the impact of damage from disasters such as earthquakes and severe storm and flood damage, we have formulated a Business Continuity Plan (BCP), and we implement training in order to enhance its effectiveness. During FY 2022, emergency drills conducted included one whole-company emergency headquarters drill, one whole-company emergency headquarters secretariat (CMT) drill, and two manufacturing plant drills.

In addition, individual business divisions and plants have drafted their own BCPs, conducting reviews (BCM) and implementing their own training on an ongoing basis, while putting in place systems to facilitate rapid responses in the event of emergencies.

## Internal Reporting System

We established its Internal Reporting System to quickly collect information on potential risks and facilitate their appropriate resolution. Per the rules on reporting risk-related information, reports can be made not only to one's supervisor or the Risk Management Committee directly, but also by calling the Compliance Hotline (❶ to ❸ below), which connects the caller to an external lawyer.

The Risk Management Committee conducts an investigation into the reported details and facilitates appropriate resolutions, including instructing internal organizations to institute measures based on the outcomes of their investigations.

Internal reports in FY 2022: 4

**Internal reporting flowchart**
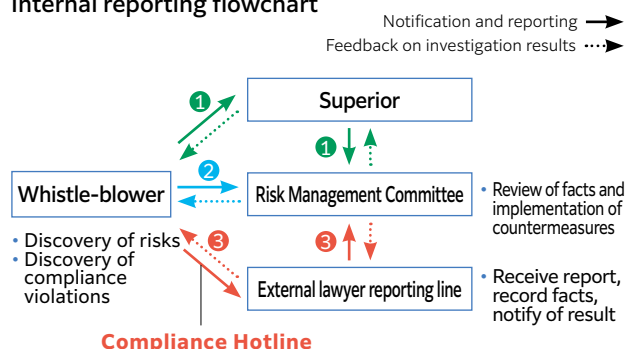


**Compliance Hotline**
Reporting contact: Hiroshi Yoshimura, lawyer
Office: Yoshimura Horitsu Jimusho, Iketani Bldg. 3F, 1-9-7 Iidabashi, Chiyoda-ku, Tokyo, 102-0072
Tel: +81-3-3264-1805
Fax: +81-3-3264-1806
Email: yosimura@tkh.att.ne.jp

## Structuring Our Cybersecurity System

The Cyber Security Committee reports directly to the President. The Committee oversees planned cybersecurity enhancements and provides prompt emergency response. It is also responsible for managing electronic information security (for structure diagram, see P. 61).

In addition, a Computer Security Incident Response Team (CSIRT) within the Committee ensures prompt response in the event of security incidents.

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# Compliance

## Compliance Initiatives

Based on the Sustainability Policy, Zeon Corporation strives to prevent corruption through implementation of the Sustainability and CSR Basic Policy as well as the CSR Code of Conduct, Policy on Prevention of Bribery, Guidelines for the Prevention of Bribery of Foreign Public Officials and Others, and the Anti-trust Law Compliance Guidelines among others. The various rules under the Sustainability and CSR Basic Policy are regularly revised every three years, based on group-wide rule management regulations.

The CSR Conference, whose chair is the Representative Director, is the highest decision-making body for CSR-related issues. At its meetings, held twice a year in principle, activities and measures overseen by seven standing committees established under the CSR Conference, including the Compliance Committee and the Risk Management Committee, are deliberated and decided. The CSR Conference receives progress reports from the committees and issues directives as necessary.

The CSR Code of Conduct applies to the entire Zeon Group both in Japan and globally and shares Zeon's compliance approach and initiatives.

To help ensure that compliance activities are conducted, the "Compliance Text Q&A" has been compiled and released on the intranet system. This information is organized and shared so that employees can confirm how to respond to specific incidents.

To increase compliance understanding and incorporation of this understanding into business processes, employees in senior management roles and above are requested to submit a CSR pledge every year.

Meanwhile, persons who engage in fraudulent acts are subject to discipline based on various Zeon rules including the Employment Rules.

## Compliance System

The Compliance Committee advances Zeon's compliance efforts. The Compliance Committee has three subcommittees, namely the Anti-trust Law Regulatory Subcommittee, the Export Security Control Subcommittee, and the Corporate Governance Subcommittee.

**Zeon's Compliance System**

```
┌─────────────────────────────────┐
│      Compliance Committee       │
└─────────────────────────────────┘
   Prevention of law violations Education
   and training in compliance with laws
      ┌──────────────────────────┐
      │     Anti-trust Law       │
      │ Regulatory Subcommittee  │
      └──────────────────────────┘
      Prevention of violations of
      the Anti-trust Law
      ┌──────────────────────────┐
      │     Export Security      │
      │  Control Subcommittee    │
      └──────────────────────────┘
      Proper security export control
      ┌──────────────────────────┐
      │  Corporate Governance    │
      │      Subcommittee        │
      └──────────────────────────┘
      Reliability in financial reporting
```

## Compliance Committee

### FY 2022 Results

- Continued activities to establish and instill compliance awareness
- Redeveloped the management system for legal risks for Zeon Group companies outside Japan

### Anti-trust Law Regulatory Subcommittee

- Conducted reviews prior to the revision of product prices in business divisions, carried out preliminary screenings when meeting with executives of competitors, and reviewed the status of participation in industry bodies

### Export Security Control Subcommittee

- Conducted seminars for ordinary employees and for department personnel in charge
- Implemented numerous final assessments of control list applicability and trade investigations

### Corporate Governance Subcommittee

- Established controls for identifying the risk of and preventing errors in consolidated financial statements. Evaluated whether the controls were functioning correctly
- Convened five times in FY 2022, and no ineffective controls were found

## Internal Reporting System

We established the Internal Reporting System to rapidly collect information on potential risks and facilitate their resolution. (For more information about the Internal Reporting System, see Risk Management.)

## Internal Audits

Internal audits are performed for the purpose of preventing improprieties and errors in business operations.

The Department of Internal Auditing inspects and assesses whether business operations in all departments are being carried out appropriately and effectively in accordance with laws and internal regulations, and orders improvements when there are incidents of violations or non-compliance. In addition, the Department of Internal Auditing carries out periodic follow-up audits on the progress of measures taken by departments.

FY 2022 results: 36 departments (16 departments at Zeon Corporation, 10 Zeon Group companies inside Japan, 10 Zeon Group companies outside Japan)

FY 2023 plan: 32 departments (15 departments at Zeon Corporation, 7 Zeon Group companies inside Japan, 10 Zeon Group companies outside Japan)

### Information Security Audits

Information security audits are internal audits on the handling of information assets. They are conducted for all divisions and departments at Zeon using a self-inspection format.

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# IR Communications

## ▌Communication with Shareholders

### Policies related to constructive dialogue with shareholders

Dialogue with shareholders is led by the department responsible for IR and SR, and overseen by the relevant director. The department responsible for IR and SR exchanges information with other relevant departments within the company as appropriate to provide accurate and unbiased information to shareholders.

We will continue to expand the avenues of dialogue apart from individual meetings. These include holding quarterly briefings for investors, making financial statements available on the Zeon Corporation website, and participating in company seminars for individual investors. The IR & SR office collects and analyzes feedback received in dialogue with shareholders and makes reports to the President as appropriate. Based on management regulations including those on insider trading and appropriate information disclosure, we strictly control unreleased important information while engaging in dialogue with shareholders to prevent information leaks.

### General Meeting of Shareholders

On June 29, 2022 (Wednesday), we held our 97th Annual General Meeting of Shareholders at an external conference room (Station Conference Tokyo). We also livestreamed the meeting for shareholders who were not able to come to the meeting in person. We mailed out notices approximately three weeks prior to the meeting to allow investors to exercise their voting rights by post or online based on a full review of the proposals. The week before mailing the notices, we publicly released its content on our website and the website of the Tokyo Stock Exchange.

We held the 98th General Meeting of Shareholders on June 29, 2023 (Thursday) at the same venue and continue to livestream it as well.

In addition, we release audio files of quarterly financial results briefings and videos of presentations by top management on the current status of management at Zeon.

For more information about the General Meeting of Shareholders, see
**https://www.zeon.co.jp/en/ir/stock/meeting/**
For more information about Medium-Term Business Plan presentation materials, see
**https://www.zeon.co.jp/en/ir/library/midtermplan/**

## Communicating Information to Shareholders

We periodically send a booklet to our shareholders featuring updated business information and recent topics of interest, etc.

The 98th Midyear Report, issued in December 2022, included a special feature on efforts to have all employees create "stages" where individual employees can demonstrate their strengths. The 98th Annual Report, issued in June 2023, features information on the positioning and aims of Phase 2 of STAGE30, our Medium-Term Business Plan, as well as specific related measures and target values.

We will continue to improve the Midyear Report to make it more accessible and better meet shareholders' needs.


98th Annual Report

For the Annual Report and other Midyear Reports, see
**https://www.zeon.co.jp/ir/library/businessreport/**
**(Japanese version only)**

### Distributions

While maintaining our basic policy of paying out steady dividends of excess earnings to shareholders, we also aim to maintain a dividend payout ratio of 30% or more and expand returns to shareholders.

In principle, Zeon Corporation distributes excess earnings twice annually, through interim and year-end dividends. The General Meeting of Shareholders decides the year-end dividend amount, and the Board of Directors decides the interim dividend amount. Retained earnings are leveraged for proactive capital investments, development of innovative technologies, and production innovations.

For more information about Zeon's share price and dividends, see
**https://www.zeon.co.jp/en/ir/stock/dividends/**

# ESG Data

# Environment

**Zeon Corporation only**                    *The Himi Futagami Plant and the Tsuruga Plant were added in FY 2021.

| | | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|---|---|---|---|---|---|---|
| Toxic substances | Butadiene consumption (tons) | 289,912 | 284,390 | 266,518 | 246,958 | 229,642 |
| | Butadiene emissions (tons) | 3.4 | 3.0 | 2.7 | 2.8 | 2.6 |
| | Acrylonitrile consumption (tons) | 29,205 | 28,775 | 24,319 | 27,629 | 21,219 |
| | Acrylonitrile emissions (tons) | 4.0 | 3.0 | 3.1 | 3.3 | 2.9 |
| Substances subject to the PRTR Act | Consumption (tons) | 878,072 | 827,134 | 817,455 | 782,415 | 790,981 |
| | Emissions (tons) | 23.7 | 23.3 | 23.4 | 23.4 | 18.5 |
| Industrial waste | Amount generated before compacting (tons) | 143,129 | 130,153 | 140,226 | 140,146 | 131,606 |
| | Amount generated after compacting (tons) | 15,932 | 15,115 | 16,362 | 18,849 | 16,515 |
| | Amount sent to landfills (tons) | 0.0 | 3.2 | 0.1 | 3.8 | 1.7 |
| | Industrial waste from plastic products (tons) | - | - | - | 1,614 | 1,488 |
| Atmospheric emissions | $CO_2$ emissions (tons) Standards on the promotion of energy-saving/global warming countermeasures | 545,024 | 499,222 | 453,980 | 526,727 | 462,156 |
| | $CO_2$ emissions (tons) Scope 1 | 724,122 | 682,175 | 715,338 | 690,544 | 701,923 |
| | $CO_2$ emissions (tons) Scope 2 | 50,954 | 95,366 | 98,871 | 88,448 | 32,791 |
| | $CO_2$ emissions (tons) Scope 1+2 | 775,076 | 777,540 | 814,209 | 778,992 | 734,714 |
| | SOx emissions (tons) | 689 | 774 | 579 | 797 | 514 |
| | NOx emissions (tons) | 298 | 270 | 258 | 281 | 225 |
| | Soot emissions (tons) | 4 | 7 | 4 | 7 | 4 |
| | Fluorocarbon leaks (tons-$CO_2$) | 73 | 107 | 304 | 446 | 311 |
| Water resources | Total water resource consumption (1,000 m³) | 18,098 | 17,741 | 17,905 | 17,811 | 17,961 |
| | Water used from water systems (1,000 m³) | 237 | 251 | 259 | 412 | 438 |
| | Groundwater used (1,000 m³) | 0 | 0 | 0 | 0 | 0 |
| | Industrial water used (1,000 m³) | 17,861 | 17,490 | 17,646 | 17,399 | 17,523 |
| Wastewater | Total wastewater discharge (1,000 m³) | 15,399 | 15,107 | 15,433 | 15,258 | 15,917 |
| | COD emissions (tons) | 124 | 141 | 121 | 141 | 110 |
| | Total phosphorus discharge (tons) | 2 | 2 | 2 | 2 | 2 |
| | Total nitrogen discharge (tons) | 160 | 157 | 133 | 131 | 120 |
| Energy | Total consumption (crude oil equivalent, kL) | 211,128 | 226,122 | 215,980 | 244,612 | 249,016 |
| | Per-unit energy consumption (kL/t-PDR) | 0.12 | 0.14 | 0.13 | 0.13 | 0.14 |
| Production equivalent | (tons) | 1,723,677 | 1,602,286 | 1,655,367 | 1,876,274 | 1,767,586 |

**Zeon Group companies in Japan**

("0" indicates less than 0.5, and "0.0" indicates less than 0.05)                    *Optes Inc. was merged into Zeon Corporation in FY 2021.

| | | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|---|---|---|---|---|---|---|
| Substances subject to the PRTR Act | No. of substances (total) | 3.5 | 3.6 | 4.2 | 2.2 | 2.8 |
| Industrial waste | Amount generated before compacting (tons) | 2,746 | 2,323 | 2,247 | 859 | 957 |
| | Amount sent to landfills (tons) | 1.3 | 2.8 | 14.3 | 7.6 | 2.1 |
| | Industrial waste from plastic products (tons) | - | - | - | 142 | 150 |
| Atmospheric emissions | $CO_2$ emissions (tons) Standards on the promotion of energy-saving/global warming countermeasures | 52,343 | 50,318 | 53,681 | 8,370 | 7,109 |
| | $CO_2$ emissions (tons) Scope 1 | - | - | 4,479 | 2,147 | 3,821 |
| | $CO_2$ emissions (tons) Scope 2 | - | - | 9,138 | 6,179 | 6,904 |
| | $CO_2$ emissions (tons) Scope 1+2 | - | - | 13,617 | 8,326 | 10,725 |
| Water resources | Total water resource consumption (1,000 m³) | 328 | 327 | 334 | 215 | 135 |
| Energy | Energy consumption (crude oil equivalent, kL) | 22,949 | 23,884 | 26,074 | 4,162 | 3,920 |
| | Electricity consumption (1,000 kWh) | 82,861 | 86,744 | 95,648 | 11,479 | 10,929 |

## Status of Certifications for International Environmental Standards

| Organization scope (manufacturing divisions, manufacturing companies) | ISO 14001 |
|---|---|
| Takaoka Plant | ○ |
| Kawasaki Plant | ○ |
| Tokuyama Plant | ○ |
| Mizushima Plant | ○ |
| Himi Futagami Plant | ○ |
| Tsuruga Plant | ○ |
| Zeon Kasei Co., Ltd. (Head Office divisions including research laboratories) | ○ |
| Zeon Polymix Inc. | ○ |
| RIMTEC Corporation | ○ |
| Zeon Opto Bio Lab Co., Ltd. | ○ |
| Tokyo Zairyo Co., Ltd. | ○ |
| Zeon Chemicals Yonezawa Co., Ltd. | ○ |
| Zeon North Co., Ltd. | ○ |
| Zeon Advanced Polymix Co., Ltd. | ○ |
| Zeon Chemicals (Thailand) Co., Ltd | ○ |
| Zeon Chemicals L.P. | ○ |
| Zeon Chemicals Singapore Pte. Ltd. | ○ |
| Zeon Polymix (Guangzhou) Co., Ltd. | ○ |
| Zeon Kasei (Changshu) Co., Ltd. | ○ |

# Social

## Status of Certifications for International Quality Standards

| Site | ISO 9001:2015[1] | ISO 13485:2016[2] | IATF 16949:2016[3] | FSSC 22000 v5[4] |
|---|---|---|---|---|
| Japan | | | | |
| Zeon Corporation | ○ | | | ○[6] |
| Zeon Kasei Co., Ltd. | ○[5] | | | |
| Zeon Polymix Inc. | ○ | | | |
| Zeon Opto Bio Lab Co., Ltd. | ○ | ○ | | |
| Tokyo Zairyo Co., Ltd. | ○ | | | |
| Tohpe Corporation | ○ | | | |
| Zeon Medical Inc. | | ○ | | |
| Zeon North Co., Ltd. | ○ | | | |
| Zeon Chemicals Yonezawa Co., Ltd. | ○ | | | ○ |
| Outside Japan | | | | |
| Zeon Chemicals L.P. | ○ | | | |
| Zeon Chemicals (Thailand) Co., Ltd. | ○ | | | |
| Zeon Advanced Polymix Co., Ltd. | ○ | | | |
| Zeon Chemicals Singapore Pte. Ltd. | ○ | | | |
| Zeon Europe GmbH | ○ | | | |
| Zeon Chemicals Asia Co., Ltd. | ○ | | | |
| Zeon Kasei (Changshu) Co., Ltd. | | | ○ | |
| Zeon Kasei Mexico S.A. de C.V. | ○ | | | |

*1 ISO 9001 is the international standard for achieving ongoing improvements in enhancing customer satisfaction and quality management systems through product and services quality assurance.
*2 ISO 13485 is the global standard for quality management systems in the field of medical devices for the purpose of continued manufacture and provision of safe and useful medical devices. The standard has added requirements specific to medical devices while omitting some of the ISO 9001 requirements.
*3 IATF 16949 is a standard issued by the International Automotive Task Force (IATF) for the automobile industry sector, and which is intended as a supplement to the requirements of ISO 9001 for automobile manufacturers.
*4 FSSC 22000 (Food Safety System Certification 22000) is a standard developed by the Foundation of Food Safety Certification to certify management systems for the production of safe food.
*5 The logistical materials division has acquired certification limited to STEC®.
*6 Mizushima Plant acquired FSSC 22000 certification for the manufacture of food-grade synthetic aroma chemicals.

## Safety

| | |
|---|---|
| Rate of conducting plant safety evaluations (%) | 100 |
| No. of RC audits conducted (times/year) | 1 |
| No. of safety incidents | 6 |
| No. of lost worktime accidents | 4 |
| No. of serious accidents without lost work time | 0 |
| Lost work time accident rate | 0.36 |
| Severity rate of lost worktime accidents | 0.00 |
| No. of accidents in logistics | 0 |

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## Basic Information on Zeon Corporation Employees (non-consolidated; does not include non-permanent employees)

| | | FY 2021 | | | FY 2022 | | | Notes (FY 2022) |
|---|---|---|---|---|---|---|---|---|
| | | Men | Women | Total | Men | Women | Total | |
| No. of employees | | 1,843 | 274 | 2,117 | 2,062 | 318 | 2,380 | |
| Ratio of female employees (%) | | | | 12.9 | | | 13.4 | |
| No. of new hires | New graduates | 78 | 20 | 98 | 86 | 21 | 107 | Employees that joined the company in April 2023 |
| | Mid-year | 79 | 16 | 95 | 195 | 37 | 232 | Employees that joined the company between April 2022 and March 2023 |
| Ratio of mid-career hires (%) | | | | 59.0 | | | 70.0 | |
| Average years of employment (yrs.) | | 16.2 | 13.1 | 15.8 | 13.6 | 9.5 | 13.1 | |
| No. of non-Japanese employees | | 13 | 15 | 28 | 16 | 16 | 32 | |
| Average age (years) | | 40.2 | 37.1 | 39.8 | 40.1 | 36.6 | 39.7 | |
| Number of employees leaving jobs | | 23 | 10 | 33 | 39 | 8 | 47 | Number of employees requesting voluntary retirement |

As of March 31, 2023 (excluding those who resigned as of the end of March)

## Results of Initiatives

| | FY 2021 | FY 2022 | Notes (FY 2022) |
|---|---|---|---|
| Female manager ratio (%) | 5.2 | 5.7 | |
| Paternity leave acquisition ratio (%) | 14 | 51 | April 2022 to March 2023 |
| Gender disparity in wages (all workers) (%) | — | 74.2 | |
|   For full-time regular workers (%) | — | 78.2 | |
|   For part-time and contract workers (%) | — | 64.6 | |
| Ratio of employees with disabilities (%)[1] (Legally required ratio of 2.3%) | 2.41 | 2.58 | As of June 2023 |
| Ratio of absences due to injury or illness (absenteeism) (%) | 0.56 | 0.70 | Ratio of total persons absent long term for more than 1 month and persons on leave in the total number of employees |
| Productivity loss ratio (presenteeism) (%) | 40.6 | 40.3 | Calculated the average loss ratio for all employees using the WHO-HPQ measure of absolute presenteeism |
| Ratio of those taking stress checks (%) | 96 | 93 | |
| Number of employees taking annual leave/acquisition ratio (%) | 54 | 61 | January 2022 to December 2022 (due to annual paid leave being granted as of January 1) |
| Ratio of employees undergoing routine medical checkups (%) | 100 | 100 | |
| Average designated overtime worked (hours) | 24.2 | 21.4 | April 2022 to March 2023 |
| Overtime exceeding statutory monthly amount of 45 hours (total number: persons) | 449 | 467 | April 2022 to March 2023 |
| Zeon Healthy Behavior Indicator (%) | — | 60 | Results of regular health checkups conducted between January and June 2022 |
|   ・Have a BMI within the standard range | — | 66 | Same as above |
|   ・Engage in routine exercise | — | 26 | Same as above |
|   ・Do not smoke | — | 76 | Same as above |
| Usage ratio for health support app (%) | 36 | 52 | |
| Participation ratio for practical health routines events (Challenge 60) (%) | 100 | 100 | |
| Rate of providing specified health guidance (%) | 44.3 | 23.4 | |
| Ratio of participation by eligible for mental health seminars (Line Care Training) (%) | 76 | 88 | |

As of March 31, 2023

## Basic Information on Zeon Group Employees

| | FY 2021 | FY 2022 | Notes (FY 2022) |
|---|---|---|---|
| No. of employees | 3,981 | 4,293 | |
| No. of new graduate hires | 120 | 124 | Employees that joined the company in April 2023 |

As of March 31, 2023 (excluding those who resigned as of the end of March), scope is applicable consolidated Group companies in Japan

# Governance

### Management Organization

| | |
|---|---|
| No. of members of the Board of Directors | 11 |
| Of which, are outside directors | 5 |
| Of which, are women directors | 3 |
| No. of members of the Audit & Supervisory Board | 5 |
| Of which, are outside auditors | 3 |

*As of July 2023

### Risk Management

| | |
|---|---|
| No. of reports received via the Internal Reporting System | 4 |

*FY 2022

### Internal Audits

| | |
|---|---|
| No. of departments/companies audited | 36 |

*Zeon Corporation: 16 departments, 10 Zeon Group companies inside Japan, 10 Zeon Group companies outside Japan

### Education

| | | FY 2021 | FY 2022 |
|---|---|---|---|
| E-learning | Rate of participation in information security education (%) | 92.3 | 96.4 |
| | Rate of participation in sustainability/CSR education (%) | 96.7 | 97.3 |
| | Rate of participation in checks of compliance comprehension (%) | 97.9 | 99.8 |
| Internal lectures | Lectures on laws and regulations* (number of sessions) | 27 | 34 |
| | Total number of participants (number) | More than 6,000 | 6,999 |

*Lectures on the Antimonopoly Act, trade secrets, personal information protection, contract precautions, and other legal and regulatory topics

For more detailed information, see the Corporate Governance Report

**Corporate Governance Report (Japanese version only)**

https://www.zeon.co.jp/news/assets/pdf/230707.pdf

# GRI Content Index

This report uses GRI Standards as reference.
The following reports also include disclosures.

● Integrated Report/IR Library
https://www.zeon.co.jp/en/ir/library/
● Corporate Governance Report (Japanese version only)
https://www.zeon.co.jp/news/assets/pdf/230707.pdf

| Statement of use | Zeon Corporation has reported the information cited in this GRI content index for the period [April 1, 2022–March 31, 2023] with reference to the GRI Standards. |
|---|---|
| GRI 1 used | GRI 1: Foundation 2021 |

| GRI Standard | Disclosure | Published format or item and page number (Integrated Report items are in blue, Sustainability Report items are in red) |
|---|---|---|
| General Disclosures | | |
| GRI 2: General Disclosures 2021 | | |
| 1. The organization and its reporting practices | | |
| 2-1 | Organizational details | Company Profile (15) |
| 2-2 | Entities included in the organization's sustainability reporting | Editorial Policy (3) |
| 2-3 | Reporting period, frequency and contact point | Editorial Policy (3) |
| 2-4 | Restatements of information | — |
| 2-5 | External assurance | — |
| 2. Activities and workers | | |
| 2-6 | Activities, value chain and other business relationships | — |
| 2-7 | Employees | ESG Data (67) |
| 2-8 | Workers who are not employees | — |
| 3. Governance | | |
| 2-9 | Governance structure and composition | Corporate Governance Report, Corporate Governance (60) |
| 2-10 | Nomination and selection of the highest governance body | Corporate Governance Report, Corporate Governance (71) |
| 2-11 | Chair of the highest governance body | Corporate Governance Report |
| 2-12 | Role of the highest governance body in overseeing the management of impacts | Sustainability Management (7), Risk Management (62) |
| 2-13 | Delegation of responsibility for managing impacts | Sustainability Management (7), Risk Management (62) |
| 2-14 | Role of the highest governance body in sustainability reporting | Sustainability Management (7) |
| 2-15 | Conflicts of interest | Corporate Governance Report |
| 2-16 | Communication of critical concerns | Corporate Governance Report |
| 2-17 | Collective knowledge of the highest governance body | Corporate Governance Report |
| 2-18 | Evaluation of the performance of the highest governance body | Corporate Governance Report |
| 2-19 | Remuneration policies | Corporate Governance Report, Corporate Governance (71) |
| 2-20 | Process to determine remuneration | Corporate Governance Report, Corporate Governance (71) |
| 2-21 | Annual total compensation ratio | Corporate Governance Report, Corporate Governance (71) |
| 4. Strategy, policies and practices | | |
| 2-22 | Statement on sustainable development strategy | Zeon's Sustainability (6) |
| 2-23 | Policy commitments | Zeon's Sustainability (6) |
| 2-24 | Embedding policy commitments | Zeon's Sustainability (6) |
| 2-25 | Processes to remediate negative impacts | — |
| 2-26 | Mechanisms for seeking advice and raising concerns | — |
| 2-27 | Compliance with laws and regulations | Compliance (63) |
| 2-28 | Membership associations | Becoming a Signatory to the United Nations Global Compact and Participating in Subcommittee Activities (28) |
| 5. Stakeholder engagement | | |
| 2-29 | Approach to stakeholder engagement | Stakeholder Engagement (61) |
| 2-30 | Collective bargaining agreements | Labor Agreements and Communication between Labor and Management (40) |

| GRI Standard | Disclosure | |
|---|---|---|
| Material Topics | | |
| GRI 3: Material Topics 2021 | | |
| 3-1 | Process to determine material topics | Activities to Define Materiality (58) |
| 3-2 | List of material topics | — |
| 3-3 | Management of material topics | — |

| GRI Standard | Disclosure | |
|---|---|---|
| **GRI 200 Economic Standard Series** | | |
| **Economic Performance** | | |
| **GRI 201: Economic Performance 2016** | | |
| 201-1 | Direct economic value generated and distributed | Financial and Non-financial Highlights (13), Data (77) |
| 201-2 | Financial implications and other risks and opportunities due to climate change | Risk and Opportunity (26), TCFD (66) |
| 201-3 | Defined benefit plan obligations and other retirement plans | — |
| 201-4 | Financial assistance received from government | — |
| **Market Presence** | | |
| **GRI 202: Market Presence 2016** | | |
| 202-1 | Ratios of standard entry level wage by gender compared to local minimum wage | — |
| 202-2 | Proportion of senior management hired from the local community | — |
| **Indirect Economic Impacts** | | |
| **GRI 203: Indirect Economic Impacts 2016** | | |
| 203-1 | Infrastructure investments and services supported | — |
| 203-2 | Significant indirect economic impacts | — |
| **Procurement Practices** | | |
| **GRI 204: Procurement Practices 2016** | | |
| 204-1 | Proportion of spending on local suppliers | — |
| **Anti-corruption** | | |
| **GRI 205: Anti-corruption 2016** | | |
| 205-1 | Operations assessed for risks related to corruption | — |
| 205-2 | Communication and training about anti-corruption policies and procedures | Compliance (63) |
| 205-3 | Confirmed incidents of corruption and actions taken | — |
| **Anti-competitive Behavior** | | |
| **GRI 206: Anti-competitive Behavior 2016** | | |
| 206-1 | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | Compliance (63) |
| **Tax** | | |
| **GRI 207: Tax 2019** | | |
| 207-1 | Approach to tax | — |
| 207-2 | Tax governance, control, and risk management | — |
| 207-3 | Stakeholder engagement and management of concerns | — |
| 207-4 | Country-by-country reporting | — |

| GRI Standard | Disclosure | |
|---|---|---|
| **GRI 300 Environmental Standards Series** | | |
| **Materials** | | |
| **GRI 301: Materials 2016** | | |
| 301-1 | Materials used by weight or volume | — |
| 301-2 | Recycled input materials used | — |
| 301-3 | Reclaimed products and their packaging materials | — |
| **Energy** | | |
| **GRI 302: Energy 2016** | | |
| 302-1 | Energy consumption within the organization | Overview of Environmental Impacts (15), ESG Data (65) |
| 302-2 | Energy consumption outside of the organization | — |
| 302-3 | Energy intensity | ESG Data (65) |
| 302-4 | Reduction of energy consumption | Climate Change (17) |
| 302-5 | Reductions in energy requirements of products and services | Climate Change (17) |
| **Water and Effluents** | | |
| **GRI 303: Water and Effluents 2018** | | |
| 303-1 | Interactions with water as a shared resource | Air, Water, and Waste Materials (22) |
| 303-2 | Management of water discharge-related impacts | Air, Water, and Waste Materials (22) |
| 303-3 | Water withdrawal | Overview of Environmental Impacts (15), ESG Data (65) |
| 303-4 | Water discharge | Overview of Environmental Impacts (15), Air, Water, and Waste Materials (22), ESG Data (65) |
| 303-5 | Water consumption | Overview of Environmental Impacts (15), ESG Data (65) |

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|---|---|---|---|
| **Biodiversity** | | | |
| **GRI 304: Biodiversity 2016** | | | |
| | 304-1 | Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | — |
| | 304-2 | Significant impacts of activities, products, and services on biodiversity | — |
| | 304-3 | Habitats protected or restored | Community (58) |
| | 304-4 | IUCN Red List species and national conservation list species with habitats in areas affected by operations | — |
| **Emissions** | | | |
| **GRI 305: Emissions 2016** | | | |
| | 305-1 | Direct  (Scope 1) GHG emissions | Overview of Environmental Impacts (15), Climate Change (17), ESG Data (65) |
| | 305-2 | Energy indirect  (Scope 2) GHG emissions | Overview of Environmental Impacts (15), Climate Change (17), ESG Data (65) |
| | 305-3 | Other indirect  (Scope 3) GHG emissions | — |
| | 305-4 | GHG emissions intensity | — |
| | 305-5 | Reduction of GHG emissions | Climate Change (17) |
| | 305-6 | Emissions of ozone-depleting substances  (ODS) | — |
| | 305-7 | Nitrogen oxides  (NOx), sulfur oxides  (SOx), and other significant air emissions | Air, Water, and Waste Materials (22) |
| **Waste** | | | |
| **GRI 306: Waste 2020** | | | |
| | 306-1 | Waste generation and significant waste-related impacts | Overview of Environmental Impacts (15), Air, Water, and Waste Materials (22), ESG Data (65) |
| | 306-2 | Management of significant waste-related impacts | Air, Water, and Waste Materials (22) |
| | 306-3 | Waste generated | Air, Water, and Waste Materials (22), ESG Data (65) |
| | 306-4 | Waste diverted from disposal | Air, Water, and Waste Materials (22), ESG Data (65) |
| | 306-5 | Waste directed to disposal | Air, Water, and Waste Materials (22), ESG Data (65) |
| **Supplier Environmental Assessment** | | | |
| **GRI 308: Supplier Environmental Assessment 2016** | | | |
| | 308-1 | New suppliers that were screened using environmental criteria | Supply Chain (27, 28) |
| | 308-2 | Negative environmental impacts in the supply chain and actions taken | Supply Chain (27, 28) |

| GRI Standard | Disclosure | |
|---|---|---|
| **GRI 400 Social Standards Series** | | |
| **Employment** | | |
| **GRI 401: Employment 2016** | | |
| | 401-1 | New employee hires and employee turnover | Diverse Human Resources (33), ESG Data (67) |
| | 401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees | — |
| | 401-3 | Parental leave | Specific Initiatives to Realize Freedom and Well-Being (39), ESG Data (67) |
| **Labor/Management Relations** | | |
| **GRI 402: Labor/Management Relations 2016** | | |
| | 402-1 | Minimum notice periods regarding operational changes | Labor Agreements and Communication between Labor and Management (40) |
| **Occupational Health and Safety** | | |
| **GRI 403: Occupational Health and Safety 2018** | | |
| | 403-1 | Occupational health and safety management system | Occupational Health and Safety (44) |
| | 403-2 | Hazard identification, risk assessment, and incident investigation | Occupational Health and Safety (44) |
| | 403-3 | Occupational health services | Health and Productivity Management Promotion (36) |
| | 403-4 | Worker participation, consultation, and communication on occupational health and safety | Health and Productivity Management Promotion (36) |
| | 403-5 | Worker training on occupational health and safety | Health and Productivity Management Promotion (38), Occupational Health and Safety (44) |
| | 403-6 | Promotion of worker health | Health and Productivity Management Promotion (38), Occupational Health and Safety (44) |
| | 403-7 | Prevention and mitigation of occupational health and safety impacts directly linked by business relationships | Occupational Health and Safety (44) |
| | 403-8 | Workers covered by an occupational health and safety management system | Occupational Health and Safety (44) |
| | 403-9 | Work-related injuries | Occupational Health and Safety (44), ESG Data (66, 67) |
| | 403-10 | Work-related ill health | Occupational Health and Safety (44), ESG Data (66, 67) |
| **Training and Education** | | |
| **GRI 404: Training and Education 2016** | | |
| | 404-1 | Average hours of training per year per employee | ESG Data (68) |
| | 404-2 | Programs for upgrading employee skills and transition assistance programs | Reformation of the Personnel System (41), Organizational and Human Resources Development (42) |
| | 404-3 | Percentage of employees receiving regular performance and career development reviews | — |

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|---|---|---|
| **Diversity and Equal Opportunity** | | |
| GRI 405: Diversity and Equal Opportunity 2016 | | |
| | 405-1 | Diversity of governance bodies and employees | Human Resources (29, 33), ESG Data (67, 68) |
| | 405-2 | Ratio of basic salary and remuneration of women to men | Financial and Non-financial Highlights (14) |
| **Non-discrimination** | | |
| GRI 406: Non-discrimination 2016 | | |
| | 406-1 | Incidents of discrimination and corrective actions taken | Upholding Positive Working Environments by Protecting Human Rights and Prohibiting Discrimination (26) |
| **Freedom of Association and Collective Bargaining** | | |
| GRI 407: Freedom of Association and Collective Bargaining 2016 | | |
| | 407-1 | Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk | Upholding Positive Working Environments by Protecting Human Rights and Prohibiting Discrimination (26), Labor Agreements and Communication between Labor and Management (40) |
| **Child Labor** | | |
| GRI 408: Child Labor 2016 | | |
| | 408-1 | Operations and suppliers at significant risk for incidents of child labor | Upholding Positive Working Environments by Protecting Human Rights and Prohibiting Discrimination (26) |
| **Forced or Compulsory Labor** | | |
| GRI 409: Forced or Compulsory Labor 2016 | | |
| | 409-1 | Operations and suppliers at significant risk for incidents of forced or compulsory labor | Upholding Positive Working Environments by Protecting Human Rights and Prohibiting Discrimination (26) |
| **Security Practices** | | |
| GRI 410: Security Practices 2016 | | |
| | 410-1 | Security personnel trained in human rights policies or procedures | — |
| **Rights of Indigenous Peoples** | | |
| GRI 411: Rights of Indigenous Peoples 2016 | | |
| | 411-1 | Incidents of violations involving rights of indigenous peoples | Upholding Positive Working Environments by Protecting Human Rights and Prohibiting Discrimination (26) |
| **Human Rights Assessment** | | |
| **Local Communities** | | |
| GRI 413: Local Communities 2016 | | |
| | 413-1 | Operations with local community engagement, impact assessments, and development programs | Community (54) |
| | 413-2 | Operations with significant actual and potential negative impacts on local communities | Community (54) |
| **Supplier Social Assessment** | | |
| GRI 414: Supplier Social Assessment 2016 | | |
| | 414-1 | New suppliers that were screened using social criteria | Supply Chain (27, 28) |
| | 414-2 | Negative social impacts in the supply chain and actions taken | Supply Chain (27, 28) |
| **Public Policy** | | |
| GRI 415: Public Policy 2016 | | |
| | 415-1 | Political contributions | — |
| **Customer Health and Safety** | | |
| GRI 416: Customer Health and Safety 2016 | | |
| | 416-1 | Assessment of the health and safety impacts of product and service categories | Chemical Product Safety Information (24) |
| | 416-2 | Incidents of non-compliance concerning the health and safety impacts of products and services | — |
| **Marketing and Labeling** | | |
| GRI 417: Marketing and Labeling 2016 | | |
| | 417-1 | Requirements for product and service information and labeling | Chemical Product Safety Information (24) |
| | 417-2 | Incidents of non-compliance concerning product and service information and labeling | — |
| | 417-3 | Incidents of non-compliance concerning marketing communications | — |
| **Customer Privacy** | | |
| GRI 418: Customer Privacy 2016 | | |
| | 418-1 | Substantiated complaints concerning breaches of customer privacy and losses of customer data | Compliance (63) |
| **Socioeconomic Compliance** | | |
| GRI 419: Socioeconomic Compliance 2016 | | |
| | 419-1 | Non-compliance with laws and regulations in the social and economic area | Compliance (63) |

# United Nations Global Compact Index

This table shows the measures taken by, and reporting made by, the Zeon Group in relation to the Ten Principles of the UN Global Compact  promoted by the United Nations.

| The UN Global Compact | Corresponding page |
|---|---|
| **Human Rights** | |
| Principle 1:<br>Businesses should support and respect the protection of internationally proclaimed human rights; and | Human Rights (26) |
| Principle 2:<br>make sure that they are not complicit in human rights abuses. | Human Rights (26) |
| **Labour** | |
| Principle 3:<br>Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; | Human Rights (26), Human Resources (40) |
| Principle 4:<br>the elimination of all forms of forced and compulsory labour; | Human Rights (26) |
| Principle 5:<br>the effective abolition of child labour; and | Human Rights (26) |
| Principle 6:<br>the elimination of discrimination in respect of employment and occupation. | Human Rights (26) |
| **Environment** | |
| Principle 7:<br>Businesses should support a precautionary approach to environmental challenges; | Environment (12, 13) |
| Principle 8:<br>undertake initiatives to promote greater environmental responsibility; and | Environment (12, 13) |
| Principle 9:<br>encourage the development and diffusion of environmentally friendly technologies. | Environment (12, 13) |
| **Anti-Corruption** | |
| Principle 10:<br>Businesses should work against corruption in all its forms, including extortion and bribery. | Human Rights (26), Compliance (63) |

**ZEON**