



TOSOH CORPORATION

TOSOH

TOSOH CSR Reporting

2024





Contents

Message from Management	1	Diversity and Inclusion	
CSR MANAGEMENT		Personnel System and Human Resource Cultivation	113
CSR Management	7	Work-Life Balance	121
Important CSR Issues	10	Diversity	136
Social Impact of Essential Products	14	Respect for Human Rights	139
Social Issues Solution	21	CSR Supply Chain Management	147
Responsible Care (RC) Activities	28	Communication with Stakeholders	151
ENVIRONMENT		Social Contribution Activities	156
Addressing Climate Change Issues		External Recognition	163
Addressing Climate Change Issues	39	GOVERNANCE	
Disclosing Information Based on TCFD Recommendations	41	Corporate Governance	167
GHG Emissions and Energy Use Results	59	Message from External Directors	203
Initiatives to Cut GHGs	67	Compliance	205
Strengthen Environmental Preservation Activities		Cybersecurity	214
Environmental Protection	78	DATA COLLECTION	
Biodiversity Preservation	87	ESG Data at a Glance	217
SOCIETY		GRI Table	243
Safe and Stable Operations		SASB Table	275
Safe and Stable Operations	90	About Our Reporting	280
Occupational Safety and Health	102		
Product Safety and Quality Management			
Quality Management	107		
Chemical Substance Management	110		

Message from Management



Management Policy

Reaffirming and putting into practice the commitments stated in our corporate philosophy

Our corporate philosophy, established in 1986, states: "We at Tosoh constantly strive to contribute to society through the chemistry of innovation." At the time, I was just another young employee in my third year with the company, and with my daily responsibilities I didn't have much time to reflect on the philosophy. Only since becoming Tosoh's president and representative director 36 years later, in 2022, have I found more opportunity to ponder these words. And over time, I've come to deeply appreciate their profundity.

Since our founding in 1935, we have developed a wide range of materials, products, technologies, services, and solutions as a chemical manufacturer that contribute to the advancement of industry and society. Observing the world today, it's clear that our materials and products are widely used in many industries, in countless aspects of people's daily lives, and throughout society. Most recently, for instance, we supported the medical field in the emergency situation of COVID-19's rapid spread by quickly developing testing equipment, antigen kits, and RNA detection reagents capable of measuring infectious diseases in a short period of time.

The demands and expectations of society with regard to chemistry have evolved over time, and the business environment enveloping our company has presented one new hurdle after another. To overcome these challenges and realize sustainable growth, we have undertaken a variety of innovative approaches, such as the promotion of a global strategy centered on Asia and structural reforms toward dual management that sees us balance our Commodities and Specialties businesses.

Today, we again face a hurdle—of unprecedented height: decarbonization. Mitigating greenhouse gas (GHG) emissions is a crucial issue that everyone on the planet must address. This includes all industrial sectors. But the issue is particularly challenging for the chemical industry. The chemical products so essential to society require for their manufacture a large volume of energy, such that chemical production processes emit a large volume of carbon dioxide (CO₂).

Tosoh's core social responsibilities—our mission—are to ensure a safe, stable supply of essential products while minimizing, or ideally eliminating, GHG emissions during production. Solving this contradictory problem will require all divisions and departments of the Tosoh Group to work together with the aim of achieving growth and decarbonization. My view is that this is what chemical innovation means today for Tosoh.

Progress of Medium-Term Business Plan

Improving the earning power of each business through continued investment in growth

In fiscal 2024, the second year of our fiscal 2023–2025 medium-term business plan, our consolidated net sales fell 5.5% year over year, to ¥1,005.6 billion. This was the result of weakening overseas product markets and declining demand, partly driven by China's economic slowdown. Improved trade conditions, however, resulted in operating income rising 7.0%, to ¥79.8 billion. And despite significant deterioration in the availability of products for semiconductors and electronic components because of inventory adjustments, net income attributable to the owners of the parent company increased 13.9%, to ¥57.3 billion. This increase owed itself to the addition of foreign exchange gains resulting from the depreciation of the yen.

For fiscal 2025, we forecast an increase in net sales of 8.4%, to ¥1,090.0 billion, as a recovery in the semiconductor market is expected to lead to volume growth. We also anticipate operating income increasing 25.2%, to ¥100 billion, although achieving the numerical targets of the medium-term business plan will be difficult.

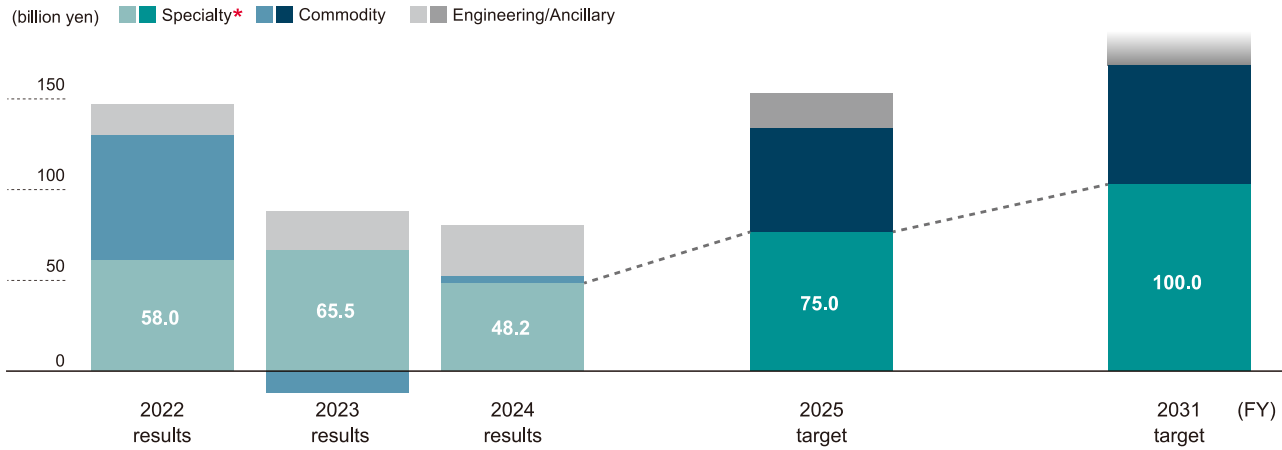
Our medium-term business plan faced several unexpected challenges following its launch after a record performance in fiscal 2022. These included the onset and prolongation of the Russia-Ukraine conflict, rising raw material and fuel prices, and a downturn in Commodity product markets on account of China's economic decline. I am convinced that our ability to turn a profit in an environment so severe that in the past we may likely have recorded a loss is proof that we have steadily bolstered our earning power.

We are also making continuous progress on strategies to achieve growth and decarbonization. We are investing for growth in plant and equipment, primarily in Specialty areas, such as sputtering targets, silica glass, and separation and purification media. And we are augmenting our Specialty supply capacity in preparation for the wave in demand that we see arriving soon. We are even investing in our Commodity business, with plans to establish a methylene diphenyl diisocyanate (MDI) manufacturing base in Vietnam and, as we did in the Chinese market, to construct a system of local production for local consumption in the Southeast Asian market. We forecast total capital investment for the three-year period of our medium-term business plan of ¥225 billion, about 10% more than originally planned.

Consolidated Results

	FY2023 results	FY2024 results	FY2025 targets	FY2025 forecast
Net sales	¥1,064.4 billion	¥1,005.6 billion	¥1,160.0 billion	¥1,090.0 billion
Operating income	¥74.6 billion	¥79.8 billion	¥150.0 billion	¥100.0 billion
Operating income ratio	7.0%	7.9%	10% or more	9.2%
ROE	7.0%	7.5%	10% or more	-

Profit Structure targets(Operating Income)



* Specialty: Specialty Group + Functional Polymers(Petrochemical Group) + Functional Urethanes(Chlor-alkali Group)

Progress in Decarbonization Investments

Advancing fuel conversion and CO₂ capture and reuse technologies

In addition to investing in the growth of our business, we continue our focus on decarbonization initiatives. The most important issue is to reduce our CO₂ emissions in our Commodity business, where energy consumption and emissions are high, while keeping costs down.

We have set an interim target of reducing our GHG emissions 30% from fiscal 2019 levels by fiscal 2031 in pursuit of achieving carbon neutrality by fiscal 2050. To meet this target, we plan to invest ¥120 billion in decarbonization efforts by fiscal 2031.

The largest of our decarbonization investments is in fuel conversion at our in-house coal-fired power generation facility at the Nanyo Complex. The facility has one of Japan's largest outputs (900 MW) for a single company and single site. In fiscal 2024, we initiated a plan to replace one of the six boilers at the facility with a biomass-dedicated boiler. Construction is underway, with the goal of initiating the operation of the new boiler in April 2026. We are also considering raising the biomass co-firing rate of the facility's five other boilers.

We have, meanwhile, also begun establishing a supply chain for black pellets—carbonized wood pellets—to stably procure biomass power generation fuel, which is expected to be in short supply. We are, in fact, thinking of building a black pellet production facility at our Nanyo Complex in the interest of partial self-sufficiency in this crucial fuel. In addition, we are considering adding a gas turbine power generation facility at the Yokkaichi Complex that will generate electricity from oil coke gas by-products. We intend to announce the specifics in our next medium-term business plan.

Mitigating CO₂ emissions through fuel conversion is one approach being taken at Tosoh. We are also moving aggressively to capture our CO₂ emissions and repurpose them as raw material for our products. A plant for this purpose is scheduled for full-scale operations at our Nanyo Complex in fall 2024. This plant will recover and convert CO₂ from combustion exhaust gas into raw material for isocyanate products. The plant was completed in only about two years from construction of a pilot plant through data collection and evaluation and demonstration testing to commercial operation.

The amine used for CO₂ recovery at this plant is a newly developed, proprietary Tosoh product. It resists high temperatures and acidic gases with high nitrogen dioxide (NO_x) content, such as thermal power plant exhaust gas, and remains stable for longer than conventional products, which helps to lower operating costs.

Initially, we will utilize this amine for the recovery and conversion of CO₂ emissions into raw materials only at our plants. We look forward, however, to eventually selling our proprietary amine as a Specialty product and to proposing other of our technologies, including equipment, that we establish as system-wide solutions for CO₂ emissions reduction to an array of companies in and beyond our industry.

Safety Initiatives

Ensuring that safety takes precedence throughout the Tosoh Group

For today's corporate management, nonfinancial capital initiatives in the way of environmental, social, and governance (ESG) undertakings have become increasingly important for raising corporate value.

Regarding the environment, as I previously mentioned, we are strengthening company-wide activities aimed at achieving decarbonization. However, as a company operating large-scale chemical plants, another priority I place great importance on is occupational safety and health at the worksite. My background in manufacturing has enabled me to develop various activities at Tosoh that encourage and, indeed, enforce safety in everything that we do.

In recent years, we have promoted the application of digital technology in safety measures. Examples include establishing a monitoring system that, through a distributed control system (DCS), provides a bird's-eye view of key safety-related data on a large screen; introducing an abnormality prediction detection system using machine learning; and adopting communication tablets at manufacturing and facility management sites. Our promotion of digital transformation (DX) enhances our level of safety.

On November 2, 2023, however, an explosion occurred at group company Tosoh SGM Corporation's Shin-Nanyo Factory within our Nanyo Complex, resulting in an employee's death. We pray for the soul of the deceased and extend our condolences to the bereaved family.

The small test plant where the accident occurred did not handle hazardous materials as defined by the Fire Service Act, but due to several overlapping conditions, an explosion occurred. Since the explosion at our Nanyo Complex in 2011, we have continued to invest in maintenance projects to support preventive safety at our major plants and have implemented various safety measures to prevent major accidents. Although process-related incidents have steadily decreased in recent years, we deeply reflect on the fact that risk assessments across the group still have room for improvement.

In April 2024, we submitted our final report on that accident to the authorities. Our report investigated its cause and offered measures to prevent a recurrence. Our headquarters team in charge of environment and safety takes the lead in these respects, rigorously reviewing the safety management system and facility and operational safety throughout the Tosoh Group and enforcing the basic premise that safety takes precedence over everything else.

Research and Development

“Seeding” aggressively and accelerating research and development

Research and development (R&D) is another aspect of nonfinancial capital that I emphasize. Generating technologies and products of value is a prerequisite for sustainable growth in any industry. But R&D requires more time in the chemical industry than in other industries. Functional products that support our growth as a highly profitable business—zirconia, separation and purification media, silica glass, and high-silica zeolite—are all products that we researched as part of our business diversification strategy from the mid-1980s into the 1990s. And all were successfully commercialized over the next several decades.

Sluggish business performance, however, saw Tosoh reduce its investment in R&D in the 2000s. But since around 2010, management has been steering the company back toward strengthened R&D. We are looking 20 to 30 years ahead and are again focusing on seeding for growth—strategically planting the initial ideas, innovations, and investments that will foster future expansion—including investing in human resources. While we fine-tune the details in line with our market environment and progress in R&D, our R&D bases are constantly at work on about 30 themes a year, of which, 10 themes are in the commercialization phase. Highly profitable products are emerging, such as gallium nitride target materials and more that we expect to become pillars of our corporate value.

We are attempting to improve the R&D environment at our sites throughout Japan. In April 2023, we established the MI Center, which consolidates our materials informatics (MI) technology within our Tokyo Research Center, our advanced technology research facility. The MI Center's objective is to shorten development times from the previous 20 to 30 years by leveraging the power of artificial intelligence (AI), machine learning, and computational science simulations. In some fields, the center has already dramatically accelerated, by 10 to even 20 times, the speed of experiments and evaluations. And the results are becoming evident in such as AI-based proposals for compounds from new perspectives.

Cultivation of Human Resources

Inheriting and expanding a corporate culture that encourages the taking on of challenges

As a manager, I'm naturally aware of the importance of human capital. It is self-evident that people are the most important management resource supporting a company's foundation and roots.

We at Tosoh have defined the type of personnel we seek as self-reliant individuals who can perform tasks and accept roles in any environment and who can work with others to achieve the best results. And we are working to cultivate them. We do not believe that such personnel can be developed solely through classroom lectures and educational training. Gaining a broad spectrum of work experiences is essential to each employee's growth and development.

My experience as the leader of a plant construction project at the Nanyo Complex some 20 years ago made a strong impression on me. I made a mistake that delayed construction for over a year. I managed to get through this painful situation with the help of subordinates and superiors alike. Looking back, I recognize this experience as significant for my personal and professional growth.

It would, of course, had been better, for me and the company, to have avoided so difficult a situation. It is nevertheless true that human resources develop in part through failure, albeit preferably of a small scale. A corporate culture that encourages employees to challenge the unknown is vitally important. Failure is nothing more than a potential outcome of taking on a challenge. Our corporate culture has long encouraged employees, even young employees, to tackle challenges. If they fail, they are supported by the people around them.

To pass on this free and vigorous corporate culture, we urge employees to work on-site as much as possible. This may go against trends, but I believe that there are many things that can only be learned through a presence at the company and in direct, face-to-face communication with superiors, subordinates, and people from outside the company.

One of the key reasons for relocating our headquarters to Tokyo Midtown Yaesu's Yaesu Central Tower, near Tokyo Station, in March 2024, was to create a highly accessible workplace that attracts talent and fosters a desirable environment where people want to work. To that end, we've established refreshment areas and numerous meeting spaces. Our hope is that this environment promotes interactions that transcend departmental boundaries and fosters the development of self-reliant, challenge-accepting human resources.

Dialogue with Stakeholders

Connecting with stakeholders to enhance corporate value

Another important management mission is to deepen communication and mutual understanding with our stakeholders. This includes customers, employees, shareholders, investors, business partners, and local communities.

For more than 10 years before I became Tosoh's president, I visited the company's manufacturing sites throughout Japan annually to communicate with frontline staff. The presidency has granted me opportunities to communicate directly with an even broader range of stakeholders. I enjoy dinner meetings and discussions not only with people in our production departments but also with sales staff, female career-track employees, and many others in the full range of occupations and positions at Tosoh. It has afforded me the chance to hear the voices of the people at each of our workplaces.

And yet I wish to elevate our dissemination of information to our stakeholders to a whole new level. I want to heighten their understanding of our approach to improving our corporate value, of our strategy for medium- to long-term growth, and of our progress on specific initiatives.

In January 2024, Tosoh released its first brand movie as a television commercial. Its content conveys the utility of Tosoh's technologies and products in all of the important scenes and stages in the life of a single woman.

The movie's principal aim is to enhance our corporate image among job-hunting students and others. But it is in fact also a message to Tosoh Group employees and other stakeholders. The movie appears in advertisements on media such as YouTube. We hope that everyone will view it and that it will reaffirm that Tosoh is indeed a company that produces value for people's lives in myriad ways.

Tosoh will continue to contribute to people's lives through the chemistry of innovation while tackling the challenge of balancing growth and decarbonization. We seek as such to be a company indispensable to society.

The Tosoh Group humbly asks all of its stakeholders for their continued understanding and support.



Representative Director
and President



CSR Management

We are advancing our business activities with the understanding that the Tosoh Group's corporate social responsibility (CSR) lies in realizing our corporate philosophy: "We at Tosoh constantly strive to contribute to society through the chemistry of innovation."

Message from the Head of Corporate Social Responsibility

Address CSR issues and Contribute to the Realization of a Sustainable Society

CSR as a Core Management Pursuit

Tosoh positions CSR at the core of its management and focuses on activities related to the environment, society, and governance with the objective of realizing a sustainable society. These activities are closely linked to our business strategy and, as such, are also critical to our efforts to achieve sustainable corporate growth. The Tosoh Group considers it vital, as a chemical manufacturer, to contribute to society through safe, stable production, steady supply, an emphasis on compliance, and sustainable product development. These are important CSR issues in themselves, and I recognize that consistently addressing each of them is my mission.



Toru Doi

Director,
Executive Vice President

CSR Activity Reviews

— Important CSR Issues

We review our principal CSR issues throughout the period of our medium-term business plans. Fiscal 2024 was the penultimate year of our fiscal 2023–25 plan, and it saw us continue to promote the activities defined in the plan. Effective July 2024, in fact, we have linked executive compensation to the degree key performance indicators (KPI) on these activities were attained in the preceding fiscal year. We have done so with the objective of employing compensation incentives to enhance corporate value and thereby profit sharing with shareholders and to further our contributions to establishing a sustainable society. In fiscal year 2024, we did not achieve some of the targets related to the nine CSR issues declared important in the plan. Most significantly, a Tosoh Group company in Japan suffered a serious occupational accident. This is disappointing, given our efforts on safety since the 2011 explosion and fire at one of our domestic VCM plants. To make matters worse, we also experienced various safety incidents and quality issues deemed serious by Tosoh standards. We therefore dedicate ourselves to work ever harder to raise the profiles and effectiveness of the safety assessment and quality management systems at our Nanyo and Yokkaichi Complexes and at our domestic companies.

Our focus on environmental issues, meanwhile, saw us make further investment decisions on greenhouse gas (GHG) emission reduction themes. The Tosoh Group's goal is to have reduced its GHG emissions 30% in fiscal 2031 compared with fiscal 2019. And we are pursuing that target.

Improved corporate governance is likewise a critical CSR issue within our medium-term business plan. In fiscal 2024, we thus undertook to revitalize domestic and overseas group company compliance activities.

We also further addressed respect for human rights. This saw us revise our code of conduct and our CSR procurement guidelines in accordance with the Tosoh Group Human Rights Policy. We are performing due diligence on human rights in our operations and began in fiscal 2024 to identify potential risks to those rights in each of our business activities.

— Social Contributions through Business

In fiscal 2023, we launched a Social Issues Solution certification system, under which we certified seven products and technologies in fiscal 2024. We continue as such to strive to contribute to society through our business activities. Such of Tosoh's products as caustic soda, PVC resin, and isocyanate (urethane) are indispensable to industry functions and people's lives. Given the importance of these and other of our products, we systematically detailed each product's social and environmental impacts and benefits in fiscal 2024.

Future Initiatives

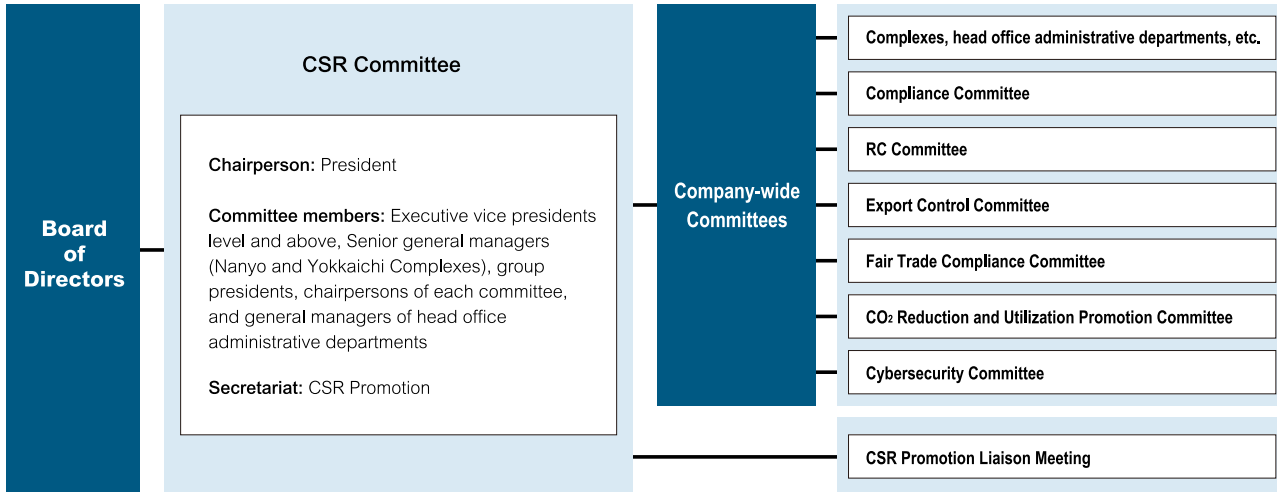
Fiscal 2025 is a crucial year to review what CSR issues will be important in our next medium-term business plan. Our CSR Promotion Liaison Meeting is the forum for groupwide discussions to define those issues and related KPIs and targets. Its participants include employees from our headquarters, business divisions, and complexes.

We are committed to the sustainable growth of society and the Tosoh Group. To that end, we are aware of how essential it is to earn our stakeholders' trust.

Basic concept of CSR management

Global concern over social issues, such as climate change and human rights, is growing. Also growing is the expectation for corporations to address these issues. The Tosoh Group understands that business activities to resolve these issues are essential for its sustainability and society's. It is for this reason that CSR activities are central to our operations. Our CSR Basic Policy identifies material issues and addresses the SDGs and other challenges. Tosoh's CSR initiatives are led by its CSR Committee, chaired by the company president. The CSR Committee is responsible for revising our CSR Basic Policy and for discussing, recommending, and approving CSR targets and KPIs. It also coordinates interdepartmental efforts to promote CSR activities, deliberates on significant reporting items, and formulates policies for information disclosure, which it submits to the Board of Directors for approval.

Promotional Structure



CSR basic policy

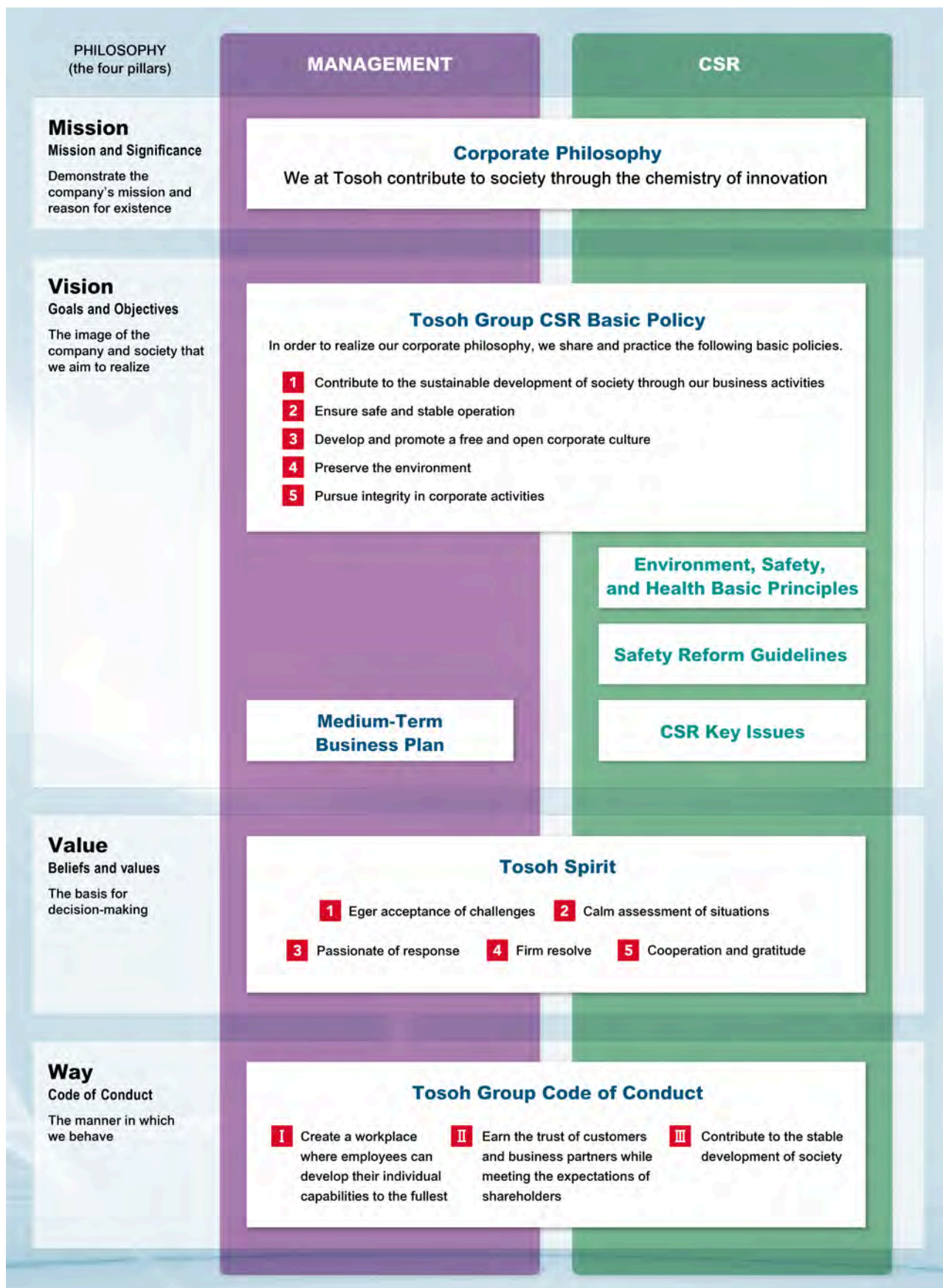
The Tosoh Group positions CSR activities at the core of its management and aims to realize its corporate philosophy by sharing and implementing the CSR Basic Policy throughout the Group.

Tosoh Group CSR Basic Policy

We share and practice the following basic policies to realize our corporate philosophy.

- 1 Contribute to the sustainable development of society through our business activities**
 Through the deepening of our unique chemistry-based technologies and collaborative activities with our business partners around the world, we provide innovative and reliable products and services that help solve social issues and contribute to people's well-being.
- 2 Ensure safe and stable operation**
 We recognize that ensuring the safety and well-being of people involved in our business activities and stable operations are the most important management issues, hence we work assiduously to foster a culture that strengthens and secures our safety infrastructure.
- 3 Develop and promote a free and open corporate culture**
 By nurturing an open and people-friendly work environment that provides job satisfaction and respects human rights and diversity, we will realize a corporate culture that is full of vitality and in which employees and their families can take pride.
- 4 Preserve the environment**
 In addition to thorough management of chemical substances, we make continuous efforts throughout the value chain to minimize the impact of our worldwide business operations on the environment.
- 5 Pursue integrity in corporate activities**
 We work to maintain a global corporate group that is trusted by stakeholders through sincere and highly transparent corporate activities based on dialogue and collaboration.

Corporate philosophy system





Important CSR Issues

The Tosoh Group has established specific KPIs and targets for key CSR issues. We continuously strive to achieve these goals. Recognizing that these efforts contribute to both society’s sustainable development and the Tosoh Group’s long-term growth, we have positioned CSR activities at the core of our management structure and are making a groupwide effort.

Steps in Identifying Important CSR Issues and KPIs* for fiscal years 2023–2025

* Key Performance Indicator

<p>Step 1 Selection of Key Issue Candidates</p>	<p>Considering international guidelines ISO 26000*¹ and GRI Standards*², as well as the demands of society toward contributing to a sustainable society as well as the Tosoh Group’s sustainable growth plan, we identified several candidates as important issues that could be considered both risks and opportunities.</p> <p>*¹ International Standard for Organizational Social Responsibility by the International Organization for Standardization *² Framework for sustainability reporting by the Global Reporting Initiative, an international nongovernmental organization</p>
<p>Step 2 Assessing the Importance of Key Issue Candidates</p>	<p>We conducted a quantitative materiality assessment of potential critical internal and external*³ issues, while considering their impact on society’s sustainable development, as well as Tosoh Group’s sustainable growth plan.</p> <p>*³ External evaluation: External directors, four investment institutions, CSR consultants, non-profit corporations, and others</p>
<p>Step 3 Identification of Key Issues</p>	<p>In addition to the importance assessment, we have also identified nine important issues based on the ideas in 1 to 3 below in consideration of the results of CSR activities through FY2022 and society’s expectations of the Tosoh Group.</p> <ul style="list-style-type: none"> ❶ Issues of high importance for both the impact on society’s sustainable development and the Tosoh Group’s sustainable growth plan ❷ Issues of high importance in terms of impact on society’s sustainable development ❸ Issues in which the Tosoh Group has been actively involved <p>Important CSR Issues (FY2023–2025)</p> <ul style="list-style-type: none"> ● Creation and offering of products and technologies that solve societal issues ● Addressing climate change issue ● Strengthening environmental preservation activities ● Achieving safe, stable operations ● Product safety and quality management ● Diversity and inclusion ● Reinforcing CSR supply chain management ● Strengthening compliance ● Respect for human rights
<p>Step 4 Identifying KPIs</p>	<p>To resolve the nine issues identified, we have established 24 KPIs that will lead to earning and maintaining stakeholder trust and achieving the sustainable growth of the Tosoh Group.</p>
<p>Approval</p>	<p>Deliberation by the CSR Committee and Board of Directors</p>

Important CSR Issues (FY2023–2025)

Assessment: Achieved ☉, In progress ○, Not achieved △

Important CSR Issues	Target	KPI	Fiscal year 2024 results of initiatives	Assessment	
Create and provide products and technologies to resolve social issues	<ul style="list-style-type: none"> Number of projects commercialized 	<ul style="list-style-type: none"> Complete at least 110% when compared to the previous Medium-Term Business Plan by the end of fiscal 2025 	<ul style="list-style-type: none"> Formulate a plan for commercialization, conduct periodic progress checks, and implement countermeasures 	In progress	○
	<ul style="list-style-type: none"> Number of submissions 	<ul style="list-style-type: none"> 30 or more/year 	<ul style="list-style-type: none"> Encourage proactive contribution to Tosoh's research and technical reports, as well as recommendations for external presentations 	51	☉
	<ul style="list-style-type: none"> Number of news releases 	<ul style="list-style-type: none"> Two or more/year 	<ul style="list-style-type: none"> Published in the American Journal of Chemistry (research results of environmentally friendly zirconia powder) Adopted as a NEDO-commissioned project (R&D related to water electrolysis) Etc. 	4	☉
	<ul style="list-style-type: none"> Number of patent applications 	<ul style="list-style-type: none"> 105% or more of the previous year's level 	<ul style="list-style-type: none"> Expanding the range of topics for which strategic applications are filed 	117%	☉
	<ul style="list-style-type: none"> Utilization Level of Materials Informatics (MI) 	<ul style="list-style-type: none"> 3 or higher (5-point scale) 	<ul style="list-style-type: none"> Promote utilization at MI Center (established in April 2023) and laboratories 	3.0	☉
Climate change response	<ul style="list-style-type: none"> Tosoh Group GHG emissions 	<ul style="list-style-type: none"> Reduce by 30% in FY2031 compared to FY2019 	<ul style="list-style-type: none"> Make decisions regarding investments in major GHG emission reduction themes Install solar power generation equipment (domestic group companies) 	In progress	○
Strengthening of environmental preservation activities	<ul style="list-style-type: none"> Major environmental accidents 	<ul style="list-style-type: none"> Zero 	<ul style="list-style-type: none"> Ensure compliance with voluntary control values Promote environmental education Cooperate with group companies 	Zero	☉
Safe and stable operation	<ul style="list-style-type: none"> Major security accidents 	<ul style="list-style-type: none"> Zero 	<ul style="list-style-type: none"> Ship (empty vessel) stranding accident: Introduce unmanned condition warning system on ship's bridge Accident involving combustible gas leakage and explosion: Review group companies' process safety assessment system 	2 (domestic group companies)	△
	<ul style="list-style-type: none"> Major industrial accidents 	<ul style="list-style-type: none"> Zero 	<ul style="list-style-type: none"> (Accident involving combustible gas leakage and explosion: See above) 	1 (domestic group companies)	△

Important CSR Issues

Assessment: Achieved ◎, In progress ○, Not achieved △

Important CSR Issues	Target	KPI	Fiscal year 2024 results of initiatives	Assessment	
Product safety and quality management	<ul style="list-style-type: none"> Major quality issues 	<ul style="list-style-type: none"> Zero 	<ul style="list-style-type: none"> Cooperate in a cross-departmental manner to reduce product complaints Strengthen supply chain management: Outsource production, audit raw material suppliers, etc. Conduct quality control survey of Tosoh and its group companies (ongoing) 	1	△
	<ul style="list-style-type: none"> Occurrence of serious nonconformities (chemicals) 	<ul style="list-style-type: none"> Zero 	<ul style="list-style-type: none"> Ensure implementation of risk assessment related to chemical substances Comply with the revised Industrial Safety and Health Act Publicize newly designated substances: Systematize poisonous and deleterious substance ledgers for products sold 	Zero	◎
Diversity and inclusion	<ul style="list-style-type: none"> Proportion of male employees taking childcare leave 	<ul style="list-style-type: none"> FY2023: 50% or more FY2024-: 90% or more 	<ul style="list-style-type: none"> Send letters of encouragement to eligible persons Publish testimonials from those who have taken leave in the company newsletter Explain childcare leave system and purpose to newly appointed executives 	70.4%	△
	<ul style="list-style-type: none"> Proportion of taking annual paid leave (all employees) 	<ul style="list-style-type: none"> FY2024: 80% or more 	<ul style="list-style-type: none"> Promote use of leave through mid-year feedback on status of use 	89.5%	◎
	<ul style="list-style-type: none"> Proportion of women hired for career-track positions 	<ul style="list-style-type: none"> In fiscal 2025: 20% or more 	<ul style="list-style-type: none"> Participate in seminars oriented toward female job seekers to promote Tosoh Increase the number of female recruiters 	24.2%	◎
	<ul style="list-style-type: none"> Proportion of women in executive positions 	<ul style="list-style-type: none"> In fiscal 2025: 2.6% or more 	<ul style="list-style-type: none"> Expand career-track job opportunities for female employees: Assign to manufacturing, facility management, and sales departments Provide continuous support through a career counseling system 	In progress	○
	<ul style="list-style-type: none"> Proportion of employees using career counseling 	<ul style="list-style-type: none"> In fiscal 2025: 70% or more 	<ul style="list-style-type: none"> Provide opportunities for participants in tier-based training to attend counseling 	In progress	○
Strengthening of CSR supply chain management	<ul style="list-style-type: none"> Results of 1st CSR Survey 	<ul style="list-style-type: none"> Follow up 	—	Completed	◎
	<ul style="list-style-type: none"> 2nd CSR Survey 	<ul style="list-style-type: none"> Review content 	<ul style="list-style-type: none"> Completed preparation of new CSR survey form; began requesting responses from target suppliers 	In progress	○
	<ul style="list-style-type: none"> Review new suppliers 	<ul style="list-style-type: none"> Implement review 	<ul style="list-style-type: none"> Distributed CSR survey sheets to new suppliers 	In progress	○

Important CSR Issues

Assessment: Achieved ☉, In progress ○, Not achieved △

Important CSR Issues	Target	KPI	Fiscal year 2024 results of initiatives	Assessment	
Strengthening of compliance	<ul style="list-style-type: none"> ● Number of serious legal violations 	<ul style="list-style-type: none"> ● Zero 	<ul style="list-style-type: none"> ● Raise compliance awareness and foster understanding to preclude violations ● Utilize questionnaires and operate a consultation service to prevent compliance violations and ensure early correction ● Activate compliance activities at domestic group companies ● Export control: Establish new department head, provide education to Tosoh and domestic group companies ● Comply with Antimonopoly Act: Investigate implementation status at group companies and comply with the Subcontract Act 	Zero	☉
	<ul style="list-style-type: none"> ● Ensure compliance with laws and regulations and ensure that corporate ethics education activities are spread throughout the entire Group 	—			
Respect for human rights	<ul style="list-style-type: none"> ● Human rights policy 	<ul style="list-style-type: none"> ● Develop a human rights policy 	<ul style="list-style-type: none"> ● Action taken following formulation of human rights policy: Completed revision of action and procurement guidelines 	(formulated)	☉
	<ul style="list-style-type: none"> ● Human rights education 	<ul style="list-style-type: none"> ● Implement human rights education 	<ul style="list-style-type: none"> ● Human rights education in tier-based training programs, publication of relevant articles in company newsletter ● Conducted internal questionnaire to inform employees of human rights policy 	Implemented	☉
	<ul style="list-style-type: none"> ● Human rights due diligence (DD) 	<ul style="list-style-type: none"> ● Prepare human rights due diligence response 	<ul style="list-style-type: none"> ● Determined priority targets for fact-finding surveys among potential human rights risks ● Conducted human rights seminar for Tosoh's officers and presidents of domestic group companies 	In progress	○



Social Impact of Essential Products

We contribute to society’s sustainable development by providing chemical products in alignment with our corporate philosophy: “We at Tosoh constantly strive to contribute to society through the chemistry of innovation.” To further our contribution, we have organized our essential products by social impact. This aids us in identifying and implementing initiatives to increase the value we deliver to society.

Essential products

Essential products are indispensable to industry and everyday life and difficult to substitute because of their unique properties. Examples include caustic soda; vinyl chloride monomer (VCM), a precursor to PVC resin; and isocyanate, a raw material for polyurethane.

Caustic soda



Application:

Caustic soda is used in myriad fields, including chemical fiber, paper and pulp, and aluminum manufacturing.

Vinyl chloride monomer (VCM)



Application:

VCM is the raw material for PVC resin, which is processed into pipes, film, sheets, and more.

Isocyanate



Application:

Isocyanate is a polyurethane material used in synthetic fibers, heat insulators, paints, adhesives, and more.

Background of social impact assessment

Essential products are critical for society’s sustainable development. As basic chemicals used upstream in the supply chain, however, their direct value is not immediately visible. A full understanding of the value they provide requires an assessment of their place in the downstream supply chain. Tosoh has undertaken just such an assessment to define and enhance the value of its essential products for society.

Method of assessing social impact



We evaluated the social impact through the creation of a logic model. As the framework for the logic model, we organized downstream applications (materials and products manufactured using Tosoh products) as outputs and identified the outcomes of those applications and their impact on society. Furthermore, we began quantifying the outcomes and impacts for some key applications.

Definition of terms

Output: Applications downstream for products and services provided through business activities

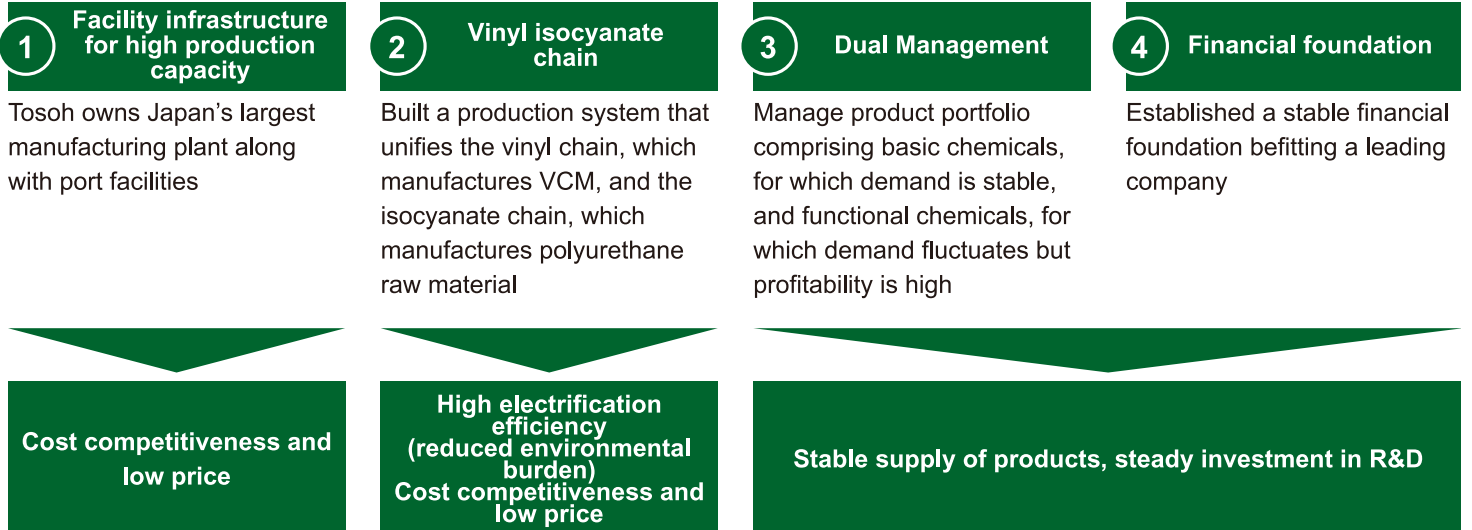
Outcome: Stakeholder benefits and effects resulting from the downstream use of products and services

Impact: Value provided to the economy, to society, and to the environment because of continuous outcomes

Tosoh's management resources and strengths support the supply of essential products

Tosoh's strengths lie in its ability to manufacture at low cost and with minimal environmental impact, to deliver a stable supply of products, and to sustainably develop products. These strengths owe themselves to the company's establishment of a vinyl isocyanate chain and dual management structure.

Four management resources support the supply of essential products and are the source of Tosoh's strength

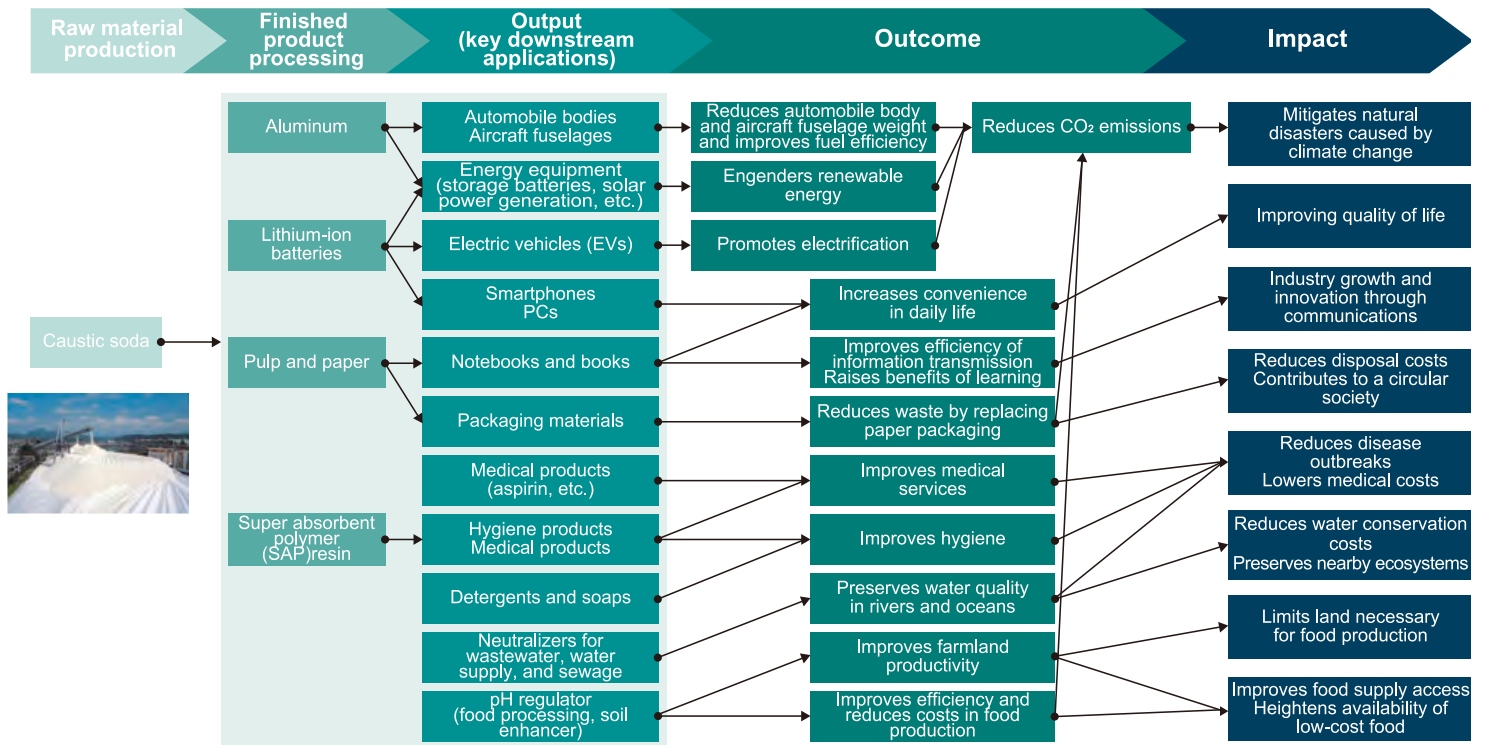


Logic model

Essential products are used upstream in the manufacturing of materials and products and have a broad range of downstream applications. Our first step in visualizing their social impact is to identify their outputs. We then determine their corresponding results and impacts and organize them within the logic model as illustrated in the accompanying figure. Given the extensive variety of applications for our products and materials, we are here highlighting only those of our materials and products with the most significant uses and social impacts.

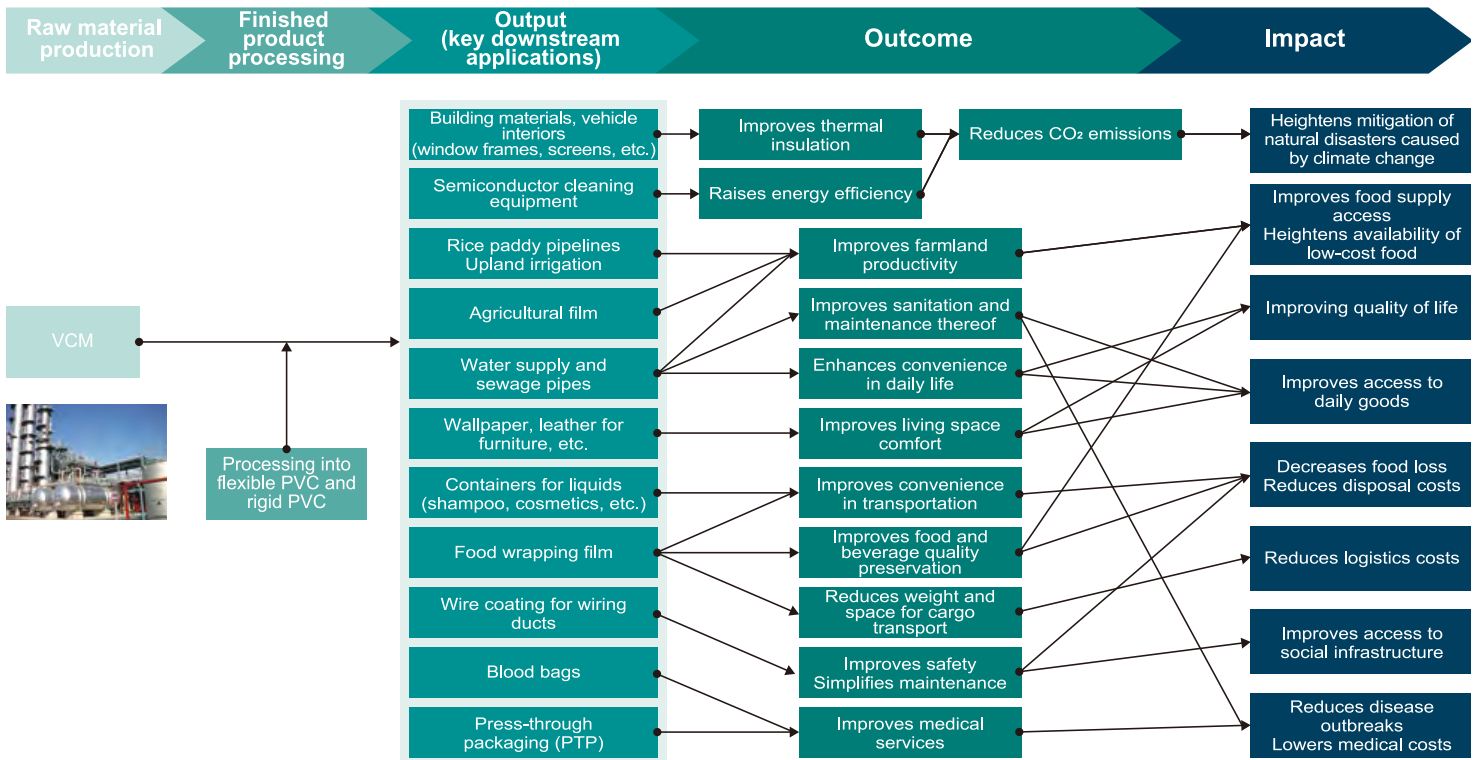
Caustic soda

The output, products or applications that are derived from caustic soda, spans a wide range of fields, including mobility, energy, healthcare, and daily goods. While its production process requires a large amount of energy, we also contribute to reducing CO2 emissions through results such as vehicle weight reduction, the promotion of electrification, and the widespread use of renewable energy.



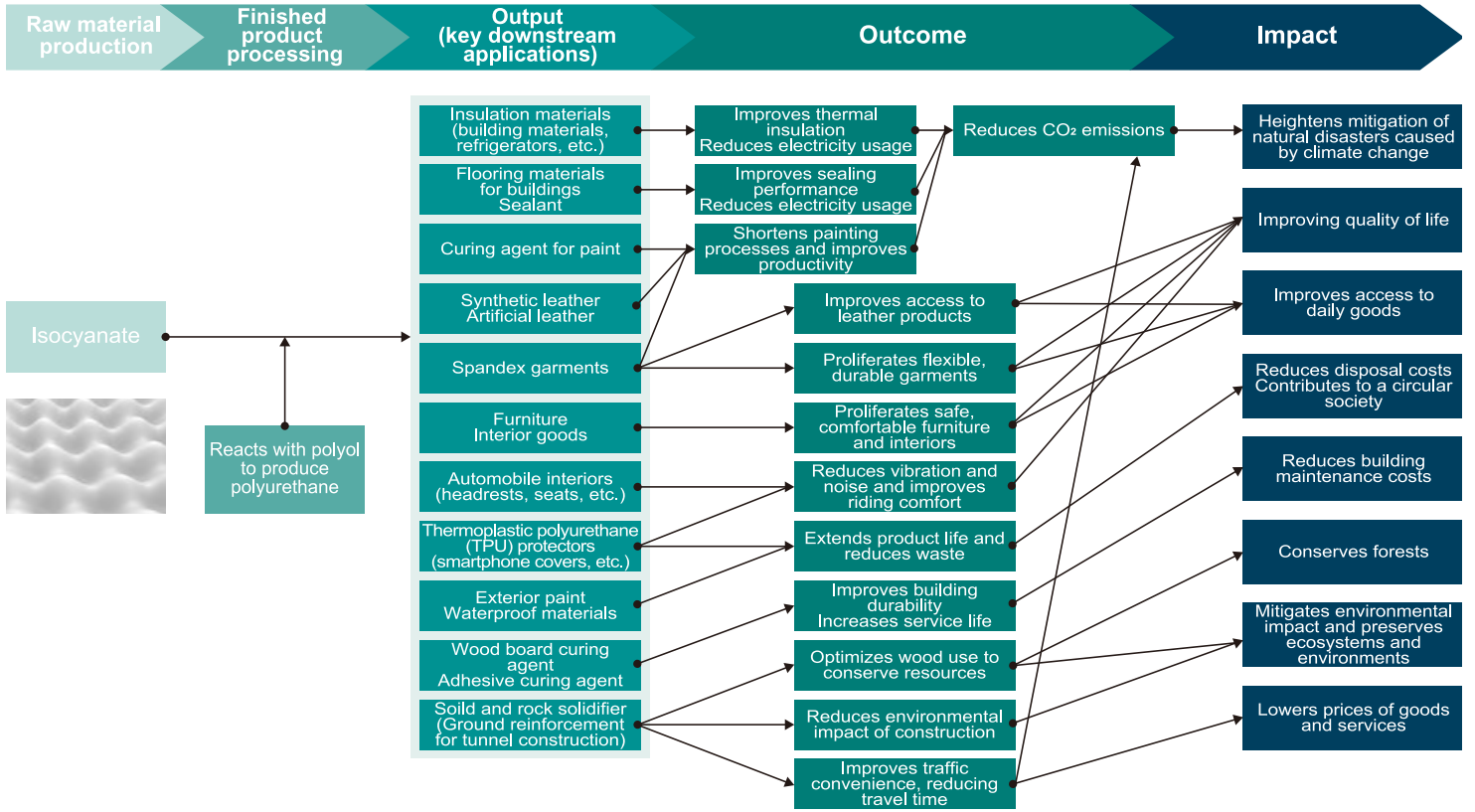
Vinyl chloride monomer(VCM)

Vinyl chloride monomer (VCM) is a major raw material for polyvinyl chloride (PVC) resin, a thermoplastic that can be heated and molded into various shapes. PVC's versatility facilitates its widespread use in everyday goods, including medical products and building materials. PVC is crucial to ensuring access to safe food, particularly through its use in agricultural films, water pipelines, and food packaging.



Isocyanate

Isocyanates are principal raw materials for polyurethane, which is widely used in everyday consumer products as a thermal insulator, including in building materials, refrigerators, synthetic leather, and such elastic fibers as spandex. Isocyanates are also essential in industrial applications. They are used as curing agents in the production of wood boards and a soil and rock stabilizer in tunnel construction.

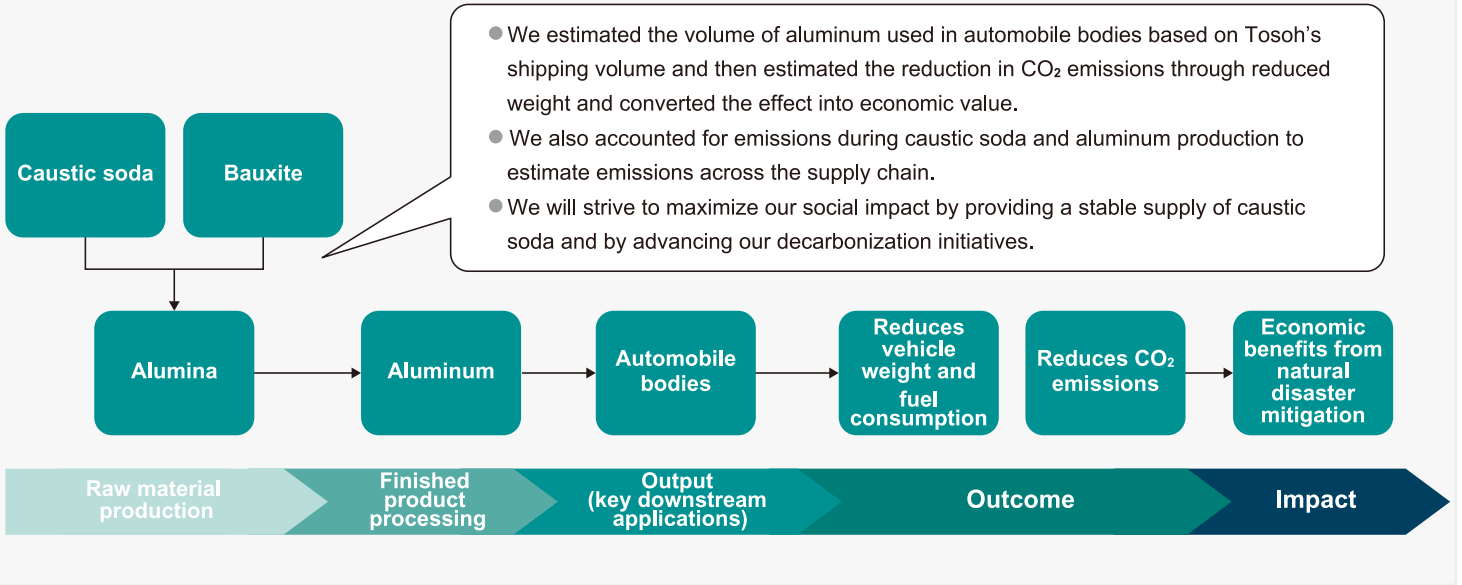


Estimating social impact

We have begun quantifying the outcomes as well as the impacts associated with the outputs derived from caustic soda, VCM, and isocyanate. These estimates will enable us to measure the societal impact of our products more accurately. Moving forward, we will use these insights to explore initiatives that can further expand our positive impact on society.

Product	Output	Outcome	Impact	Items for estimation and analysis
Caustic soda	Lithium-ion batteries (car batteries for EVs)	<ul style="list-style-type: none"> • Electrification to reduce CO₂ emissions 	<ul style="list-style-type: none"> • Economic benefits from natural disaster mitigation 	<ul style="list-style-type: none"> • Reduces CO₂ emissions • Economic benefits from natural disaster mitigation
	Aluminum (Automobile bodies)	<ul style="list-style-type: none"> • Reduction of transport equipment weight to improve fuel efficiency and lower CO₂ emissions 	<ul style="list-style-type: none"> • Economic benefits from natural disaster mitigation 	<ul style="list-style-type: none"> • Reduces CO₂ emissions • Economic benefits from natural disaster mitigation
VCM • PVC	Agricultural film (flexible PVC)	<ul style="list-style-type: none"> • Improves farmland productivity 	<ul style="list-style-type: none"> • Heightens availability of low-cost food • Improves food supply access 	<ul style="list-style-type: none"> • Total floor area of vinyl greenhouses that can be produced
	PTP (drug packaging sheets)	<ul style="list-style-type: none"> • Improvement in quality of health and medical services 	<ul style="list-style-type: none"> • Extension of healthy life expectancy 	<ul style="list-style-type: none"> • Proportion of Tosoh drug packaging sheets relative to distribution volume
Isocyanate • Urethane	Wooden boards (adhesive curing agent)	<ul style="list-style-type: none"> • Reduction of hazardous substance emissions (formaldehyde) • Improved use of wood to conserve resources 	<ul style="list-style-type: none"> • Optimal use of wood fragments to conserve forests • Economic benefits from reduced air pollution 	<ul style="list-style-type: none"> • Wooden board production volume (also estimated by forest area) • Carbon sequestration and economic benefits for reduced CO₂ emissions
	Soil stabilizers	<ul style="list-style-type: none"> • Reduction of impact on soil, groundwater, and other elements of surrounding environment • Improvement in transportation access with tunnel 	<ul style="list-style-type: none"> • Preservation of neighboring environment and ecosystems • Lowers prices of goods and services • Generation of local employment 	<ul style="list-style-type: none"> • Tunnel length enhanced through construction application • Effects of improved transportation accessibility

Case | Example of Concrete Logic Model (Automobile Body Parts)





Social Issues Solution

As stated in its corporate philosophy, "We at Tosoh constantly strive to contribute to society through the chemistry of innovation." To follow this philosophy, the Tosoh Group focuses on achieving sustainable growth by developing businesses that contribute to resolving social issues, while continuing to be a company that is trusted by all stakeholders and valued in society. We consider the Sustainable Development Goals, or SDGs, adopted by the United Nations as fundamental guiding principles and believe that our mission is to manufacture products beneficial to society, thereby contributing to achieving a sustainable society. Based on this belief, the Tosoh Group has certified its products, technologies, and services that all contribute to solving social issues, such as reducing environmental impact and improving quality of life, as Social Issues Solution and the Group are promoting the development and diffusion of these solutions.

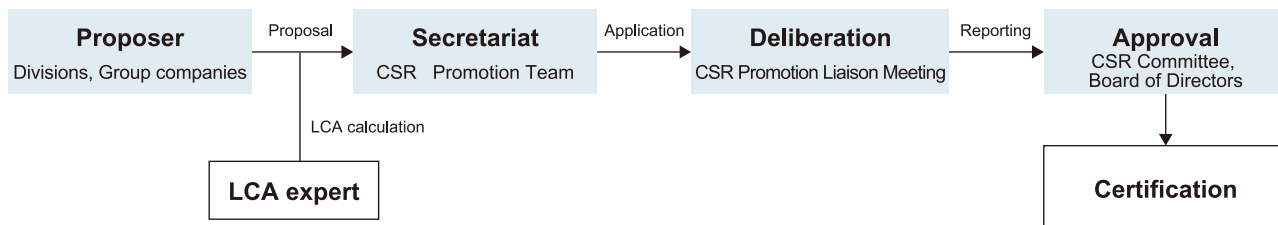
Certification requirements

The requirements for certification as Social Issues Solution are "contribution to solving social issues" and "contribution to enhancement of corporate value and sustainable growth." For the former, Tosoh uses 169 targets, which are the specific goals aligned with the company's 17 SDGs, as certification requirements. These targets serve as essential guiding principles for the company's contribution to resolving social issues. In the case of the latter, Tosoh regards Social Issues Solution as not only about solving social issues, but also about contributing to enhancing corporate value and sustainable growth. The certification requires that the company continue its efforts to achieve SDGs.

Certification Requirements	
I. Contribution to solving social issues	<ul style="list-style-type: none"> Contribution to achieving 169 SDGs targets
II. Contribution to enhancement of corporate value and sustainable growth	<ul style="list-style-type: none"> Provision to society (marketed products) Business continuity

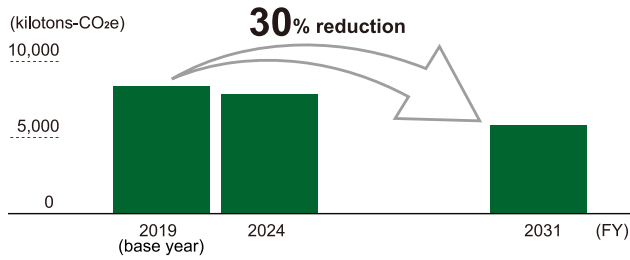
Certification procedure

The CSR Promotion Liaison Meeting discusses products proposed by business units, complexes and operating companies and subsequently submits its successful proposals to the CSR Committee and the Board of Directors for approval.

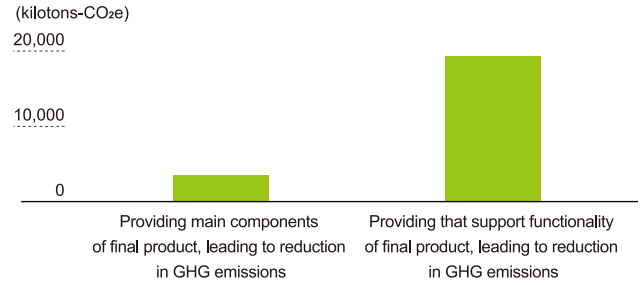


Tosoh Group contribution to reducing GHG emissions

Tosoh Group GHG emission reduction and targets



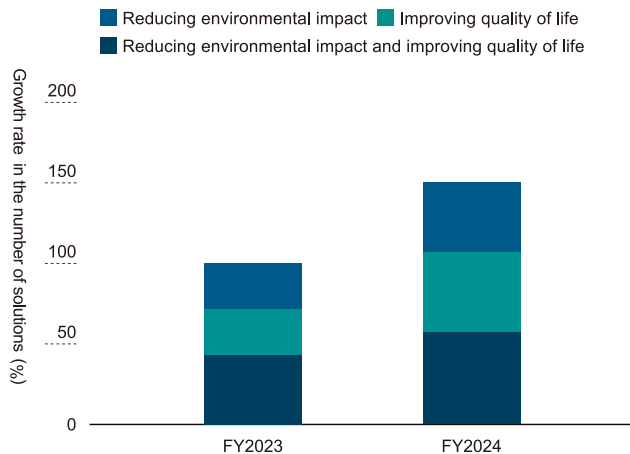
Reduction in GHG emissions across the product lifecycle by providing society with Tosoh Group products and technologies*



* Life Cycle Assessment (LCA) calculation

Introduction of certified products

Tosoh's Social Issues Solution products and technologies encompass those that reduce environmental impact and enhance quality of life. In the second round of certification, 7 additional products were recognized, bringing the total to 21, from the 14 certified in the first round. This time certified products include those that contribute to energy generation, energy storage, and disaster preparedness. The certification criteria for contributions have also been expanded.

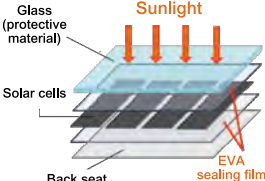

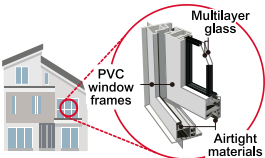



Social issues targeted by certified products




item	Targeted social issues
Reducing environmental impact	<ul style="list-style-type: none"> Energy conservation Renewable energy Creation energy Energy storage Reduction of GHG emissions Reduction of hazardous substances and VOCs Reduction of waste Preservation of ecosystem Conservation of water Recycling
Improving quality of life	<ul style="list-style-type: none"> Infrastructure Food Health and medical care Disaster preparedness

Solutions certified (excerpts)





Contribute to reducing environmental impact

Certified products name Group company name	Reason for certification	Targeted social issues	SDGs target
<p>MDI for heat insulators in building material applications</p> 	<ul style="list-style-type: none"> MDI is used as insulation in applications such as residential walls. It boasts insulation properties superior to those of other foamed plastic insulation materials and therefore contributes to saving energy. LCA*1 calculations make possible GHG emissions reductions using only a small amount of polyurethane foam, aiding in the response to climate change. 	Energy conservation Reduction of GHG emissions	7.3 13.2  
<p>EVA (ethylene-vinyl acetate) copolymer for encapsulation of solar cells</p> 	<ul style="list-style-type: none"> EVA copolymer used for solar cell encapsulation Promotes use of renewable energy, contributes to GHG emission reduction (LCA calculation) 	Energy conservation Reduction of GHG emissions	7.3 13.2  
<p>PVC resin for plastic sashes</p> <ul style="list-style-type: none"> Taiyo Vinyl Corporation Plas-Tech Inc. 	<ul style="list-style-type: none"> Used in the production of resin sash and aluminum-resin composite sash window frames Offers superior thermal insulation and airtightness, improving heating and cooling efficiency and contributing to GHG emission reduction (LCA calculation) 	Energy conservation Reduction of GHG emissions	9.4 13.2  
<p>Licensing of technology for energy-saving seawater electrolyzer</p> 	<ul style="list-style-type: none"> Technology license for ion exchange membrane (IM) seawater electrolyzer for energy conservation Technology license for IM seawater electrolyzer to achieve a reduction in GHG emissions 	Energy conservation Reduction of GHG emissions Reduction of hazardous substances and VOCs	7.3 13.2  
<p>Caustic soda for use in manufacturing positive electrode material for lithium-ion batteries</p>	<ul style="list-style-type: none"> Caustic soda is an essential raw material in the production of lithium-ion battery cathode precursor materials. Lithium-ion batteries are used in electric vehicles (EVs), smartphones, computers, and energy equipment, contributing significantly to electrification, which, in turn, contributes to CO2 emissions reduction. 	Energy storage Renewable energy Reduction of GHG emissions	7.1 7.2 





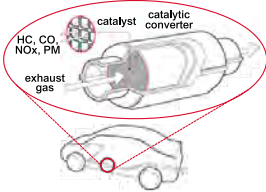

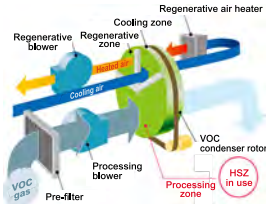

Contribute to improving quality of life

Certified products name Group company name	Reason for certification	Targeted social issues	SDGs target
<p>AIA®-CL series fully automated chemiluminescent enzyme immunoassay analyzers</p> <p>AIA® series automated enzyme immunoassay analyzers for health and medicine</p> <ul style="list-style-type: none"> ● Tosoh Hi-Tec, Inc. ● Tosoh AIA, Inc. 	<ul style="list-style-type: none"> ● These analyzers are used for identifying tumor markers, for immunological testing for diseases such as thyroid and cardiac diseases, and for testing for COVID-19 and other infectious diseases. ● These analyzers are used to maintain health and mitigate disease risk for people around the world. They enable early diagnosis and treatment through rapid result reporting, high sensitivity and accuracy, and ease of operability. 	Health and medical care	3.3 / 3.4 / 3.7 / 3.D 
<p>HLC-723® Series Automatic Glycohemoglobin Analyzers</p> <ul style="list-style-type: none"> ● Tosoh Hi-Tec, Inc. 	<ul style="list-style-type: none"> ● Used to measure HbA1c-a clinical laboratory test for diabetes- for diabetes diagnosis, treatment, and health checkups ● Rapid, high-precision measurement capability contributes to improved patient services and team-based diabetes care 	Health and medical care	3.4 / 3.d 
<p>TRCReady®-80 Series Automated Nucleic Acid Testing System</p> <ul style="list-style-type: none"> ● Tosoh Hi-Tec, Inc. 	<ul style="list-style-type: none"> ● Used to test for mycobacterium tuberculosis, norovirus, COVID-19, and other infectious diseases ● Rapid reporting of results supports early diagnosis and treatment, automated testing contributes to a reduction of laboratory personnel. Individually packed reagents improve efficiency, and prevent contamination 	Health and medical care	3.3 
<p>TOYOPEARL® Series Separation and Purification Media</p> 	<ul style="list-style-type: none"> ● Used in purifying antibody drugs, vaccines, and other biopharmaceuticals ● Higher performance, stable production improving pharmaceutical quality, helping to ensure a steady supply 	Health and medical care	3.3 / 3.4 





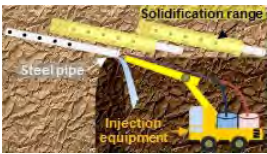



Social Issues Solution

Certified products name Group company name	Reason for certification	Targeted social issues	SDGs target
<p>FLAMECUT® 120G for brominated flame retardants</p> 	<ul style="list-style-type: none"> ● Frame Cut 120G serves as a flame retardant in the laminates used in printed circuit boards for electrical products and devices, either alone or in reaction with other materials. ● Frame Cut 120G, moreover, saves lives from fires caused by the ignition of electrical products and equipment and prevents economic losses from fires. It also contributes to the optimal use of sustainable resources on the strength of the proprietary technology behind its manufacture, which facilitates the production of bromine from seawater. 	<p>Infrastructure Disaster preparedness</p>	<p>11.b</p> 
<p>Chloroprene rubber (CR) for use in medical gloves</p> 	<ul style="list-style-type: none"> ● CR is used in latex gloves. ● Synthetic rubber latex gloves help prevent allergic reactions triggered by proteins present in natural rubber latex gloves. This innovation contributes significantly to protecting the health of medical professionals and patients with latex allergies. 	<p>Health and medical care</p>	<p>3.d</p> 

Contribute to reducing environmental impact and improving quality of life

Certified products name Group company name	Reason for certification	Targeted social issues	SDGs target
<p>PVC resin for pipes and fittings</p> <ul style="list-style-type: none"> ● Taiyo Vinyl Corporation ● Plas-Tech Inc. 	<ul style="list-style-type: none"> ● PVC resin is the primary raw material used in pipes and fittings for water supply, sewage, agricultural water, and facilities. ● Salt constitutes 60% of the raw materials used in our PVC resin production process and significantly reduces our reliance on petroleum resources compared with the manufacture of conventional plastic. This innovation conserves fossil fuel resources and contributes to substantially reducing GHG emissions during production. PVC pipes and fittings are lightweight, durable, and can reduce GHG emissions, making them useful in response to climate change (LCA calculation) . 	<p>Infrastructure Conservation of water Reduction of GHG emissions Recycling Food</p>	<p>2.4 6.1 / 6.2 9.1 11.1 13.2 15.3</p> 
<p>MDI Woodcure® series for particle board adhesives used in building materials and furniture</p> 	<ul style="list-style-type: none"> ● The hardener (MDI) added to adhesive is used for bonding small pieces of wood and other materials together to create particle board. ● The addition of MDI contributes to the production of F☆☆☆☆ (F Four-star plywood) that complies with the revised Building Standards Act for Sick House Syndrome prevention. These boards exhibit excellent formaldehyde diffusion ratings and have no restrictions on usage area. *2 	<p>Reduction of hazardous substances and VOCs Health and medical care</p>	<p>11.1</p> 
<p>HSZ® Series High-silica zeolite catalyst for automotive exhaust gas purification</p> <ul style="list-style-type: none"> ● Tosoh Advanced Materials Sdn. Bhd. 	<ul style="list-style-type: none"> ● HSZ Series High-silica zeolite catalyst contributes to the removal and purification of harmful substances from automobile exhaust gases. ● Tosoh uses the LIME method to evaluate its contribution to mitigating environmental impact. *3 	<p>Reduction of hazardous substances and VOCs Health and medical care</p>	<p>3.9 11.6</p> 
<p>Adsorber High Silica Zeolite HSZ® in Volatile Organic Compound (VOC) Removal Systems</p> 	<ul style="list-style-type: none"> ● Adsorber for VOC recovery systems in semiconductor manufacturing processes and printing and paint factories ● Subsequent incineration energy is reduced through efficient VOC adsorption, and concentration 	<p>Reduction of hazardous substances and VOCs Health and medical care Energy conservation</p>	<p>3.9 7.3 11.6</p> 

Social Issues Solution

Certified products name Group company name	Reason for certification	Targeted social issues	SDGs target
<p>TS Series Fly Ash/Heavy Metal Treatment Agent</p> 	<ul style="list-style-type: none"> Used to treat heavy metals fly ash from waste incinerators Prevents the leaching of heavy metals into the environment, contributing to the elimination of heavy metal poisoning, and reduce pollution-related diseases in society Reduces carbon disulfide gas emissions, helping to provide a safe and healthy working space Reduces the amount of treated ash, thereby contributing to the reduction of waste 	<p>Reduction of hazardous substances and VOCs Reduction of waste Preservation of ecosystem Conservation of water Health and medical care</p>	<p>3.9 6.6</p> 
<p>IC-8100® Series High-Speed Ion Chromatography System ● Tosoh Hi-Tec, Inc.</p> 	<ul style="list-style-type: none"> Separates quantified substances such as inorganic ions contained in target samples; used in water quality testing, quality control, and environmental monitoring Used for high-speed, high-precision analysis of bromic acid and cyanide in water and compliant with sewerage authorities regulations Used to test the water quality of factory discharge, contributing to environmental conservation 	<p>Preservation of ecosystem Conservation of water Health and medical care</p>	<p>3.9 6.3 / 6.b</p> 
<p>Polymeric MDI and polyol systems for rock hardening agents</p> 	<ul style="list-style-type: none"> Tunneling through mountains entails the risks of ground deformation and collapse because of soft ground occasioned by groundwater (spring water) and other factors. This polyurethane product solidifies unstable ground for safe construction work. It reduces the contamination of the surrounding environment, including land and groundwater, and minimizes the risk of ground collapse during excavation due to rock and soil instability. This, in turn, increases labor efficiency by shortening construction periods. 	<p>Preservation of ecosystem Infrastructure Disaster preparedness</p>	<p>9.1 / 9.4</p> 
<p>Zgaia® Series Zirconia Powder ● Tosoh Ceramics Co., Ltd.</p> 	<ul style="list-style-type: none"> The Zgaia series zirconia powder grants products that it is used in the properties of high bending strength and hardness and ionic conductivity. It is used for watch bezels and other decorative applications and for medical applications, such as implants. The fracture toughness of this product series is more than twice that of our earlier zirconia powder. The use of this product in implants and related applications contributes to the health of people who suffer from metal allergies or live in countries that restrict the use of metals. The Zgaia series also reduces electricity consumption because it requires a 200°C lower sintering temperature than other products. 	<p>Energy conservation Reduction of GHG emissions</p>	<p>3.9 7.3 13.2</p> 

*1 Life Cycle Assessment (LCA is a quantitative evaluation of environmental impact).

*2 Four-star plywood is wood of the highest formaldehyde emission grade that can be used without limitation.

*3 LIME (Life Cycle Impact Assessment Method) is the Japanese version of a method for comprehensively assessing multiple environmental impacts. It calculates the damage to human health and biodiversity by production and other activities.

Responsible Care (RC) Activities

The Tosoh Group's Basic Philosophy on the Environment, Safety, and Health and its corresponding action guidelines are aligned with the Basic Policy on the Environment, Health, and Safety of the Japan Chemical Industry Association (JCIA). We recognize that conserving the environment, safety, and health are fundamental to our business operations. So we've developed a Responsible Care (RC) promotion system to advance our various initiatives in that regard.

Environment, safety, and health basic principles

Environment, safety, and health basic principles

Based on the recognition of the prime importance of environmental protection and the assurance of safety and health, the Tosoh Group is engaged in continuous RC activities throughout a product's life cycle, from R&D, manufacture, use or consumption, through recycling or disposal. We will contribute to the sustainable development of society through continuous voluntary RC activities and constant innovation in chemistry.

Action guidelines

Action guidelines

Employees and officers of the Tosoh Group have established the following action guidelines to serve as the basis for putting into practice the company's environment, safety, and health principles.

1. Environmental Protection

- Aim to maximize the effective use of resources through energy conservation, resource conservation, and the 3Rs—reduce, reuse, and recycle—and to minimize the environmental impact of our business activities and help create a recycling-oriented society.
- Promote community-based environmental protection activities on the recognition that the conservation of biodiversity leads to the sustainable development of society.

2. Ensuring Safety

- Always recognize that safety takes precedence over everything else.
- Strive to comprehensively and quantitatively identify and reduce risks in order to eliminate accidents and disasters and ensure stable operations.
- Strengthen the emergency response system, including for natural disasters.

3. Chemical Product Safety

- Strive to obtain accurate information on all chemical substances handled in research, development, and production, including new products, and ensure appropriate management.
- Place the highest priority on environmental protection and ensuring safety and health in the provision of products and services.
- Strive to heighten customer satisfaction through quality control and safety in logistics.

4. Promoting Communication

- Proactively promote communication with stakeholders through information sharing and dialogue.

What is Responsible Care?

Responsible Care is a voluntary initiative undertaken to ensure the environment, safety, and health of companies that handle chemical substances in all processes from development, manufacturing, distribution, use, final consumption and recycling to disposal, as well as to publicize the results and engage in social dialogue. The driving force behind Tosoh's RC initiative is the Responsible Care (RC) Committee of the Japan Chemical Industry Association (JCIA).

The Tosoh Group's RC activities go beyond compliance with laws and regulations. They encompass environmental protection, disaster prevention and safety, occupational health and safety, chemical and product safety, quality assurance, logistics security, and voluntary engagement to build society's trust.

The International Council of Chemical Associations launched the Responsible Care Global Charter in 2006, which it revised in 2014. Tosoh signed the original charter in February 2006 and its revision in September 2014.



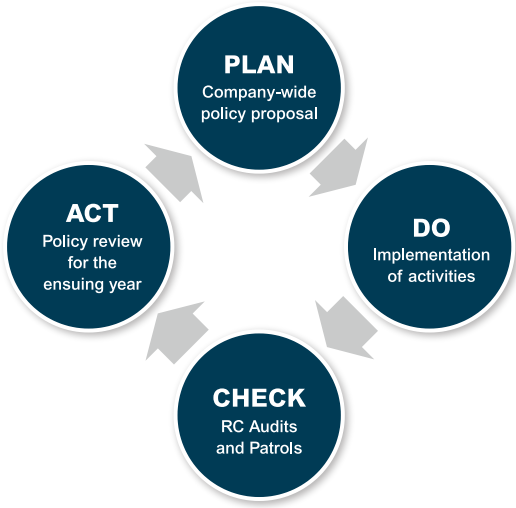
RC promotional structure

We are working on the following system to promote RC activities.

Promotional Structure



RC activity cycle



	Tosoh	Tosoh Group
P	Establish company-wide policies	Establish policies for each company
D	Promote activities in line with policies	
C	Conduct an audit of activities (RC audit)	Confirm activities through environmental and safety patrols
A	Review company-wide policies based on audit results and the activities of each group company	Review each company's policies based on the status of its activities

List of activity targets and achievements

RC activity targets and achievements ★★★ Achieved ★★ In progress ★ Not achieved

Fiscal 2024: Tosoh Group RC activities:

Technology and activities for the next generation, achieved through the enthusiasm of each and every one of us.

Fiscal 2025: Tosoh Group RC activities:

Quickly adapt in times of change and overcome challenges with cutting-edge technology

Safety and disaster prevention/Occupational safety and health

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
1) Policy: Zero Accidents and Injuries Resulting in Lost Time	Not achieved: Four accidents and eight injuries resulting in lost time (one employee and seven subcontractors)	★★	Policy: Zero Accidents and Injuries Resulting in Lost Time
(1) Ensure basic safety behavior <ul style="list-style-type: none"> Establish practice-based hazard prediction training Continue 5S activities 	(1) Continue 5S and KY as part of daily operations		(1) Ensure basic safety behavior <ul style="list-style-type: none"> Continue practical hazard prediction, promotion of safety awareness education Continue 5S activities
(2) Improve comprehensiveness of risk assessment <ul style="list-style-type: none"> Priority: Continue re-verification of multiple layers of protection Priority: Training for process safety engineers (PSEs) 	(2) Conducting risk assessment based on multiple layers of defense and using fault tree analysis (FTA) <ul style="list-style-type: none"> Launch training safety technology curriculum for PSE education Company-wide deployment of abnormal reaction information system 		(2) Advance risk assessment <ul style="list-style-type: none"> Priority: Continue to re-verify multiple layers of protection Priority: Inspect equipment for machine safety Train Process Safety Engineers (PSEs)
(3) Undertake efforts to eliminate similar accidents and occupational injuries <ul style="list-style-type: none"> Priority: Reinforce safety management for outsourced operations Laterally deploy accident and occupational injury case studies, consider reflecting in standards 	(3) Undertaking improvement activities based on lessons learned from accidents and industrial accidents <ul style="list-style-type: none"> Working to improve issues identified in outsourced operation system Tosoh Logistics begins attending Japan Industrial Safety & Health Association safety guidance sessions. Investigation conducted on the status of protective equipment usage and areas with risk of entrapment or being caught in machinery. 		(3) Undertake efforts to eliminate similar accidents and occupational injuries <ul style="list-style-type: none"> Priority: Reinforce safety management for outsourced operations Strengthen safety guidance for Tosoh Logistics contractors Laterally deploy accident and occupational injury case studies, consider reflecting in standards
(4) Maintain and improve construction system <ul style="list-style-type: none"> Organize and improve issues related to risk assessment system operation Consider initiatives for skill improvement, including learning methods to instruct workers to pay attention to unsafe behavior on-site 	(4) Verification meetings held biannually to exchange information <ul style="list-style-type: none"> Ongoing operation of spiral-up framework to improve system 		(4) Maintain, improve construction system <ul style="list-style-type: none"> Organize and improve issues related to risk assessment system operation Consider skill improvement initiatives, including learning methods to instruct workers to pay attention to unsafe behavior on-site
2) Policy: Promotion of Earthquake and Tsunami Countermeasures	—	★★★	Policy: Promotion of Earthquake and Tsunami Countermeasures
Ensure earthquake resistance of important buildings and promote tsunami countermeasures	Conducting seismic reinforcement and flood control work as planned		Ensure earthquake resistance of important buildings and promote tsunami countermeasures

Responsible Care (RC) Activities

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
3) Policy: Maintenance and Improvement of Independent Safety Measures	—	★★★	Policy: Maintenance and Improvement of Independent Safety Measures
(1) Actions to be taken under new certification system <ul style="list-style-type: none"> Proactively consider introducing smart security technology Strengthening cyber security system (2) Assessment of security capabilities <ul style="list-style-type: none"> Survey by Yokkaichi Complex of safety management status 	(1) Utilize smart security <ul style="list-style-type: none"> Establishment of working group comprising various departments to introduce DX (2) Developing cyber security system <ul style="list-style-type: none"> Network equipment inventory and assessment Cybersecurity policy formulation Education to heighten awareness of need for security 		(1) Actions to be taken under new certification system <ul style="list-style-type: none"> Proactively consider introduction of smart security technology Fortify cyber security countermeasures Respond to new requirements, including confirmation of legal compliance (2) Assess security <ul style="list-style-type: none"> Conduct security management status survey at Nanyo Receive safety assessment in Yokkaichi City from Japan Industrial Safety Competency Center (JSCC)
4) Policy: Zero Accidents and Injuries Resulting in Lost Time at Group Companies	Three accidents and 22 injuries resulting in lost time (15 employees and seven subcontractors)	★	Policy: Zero Accidents and Injuries Resulting in Lost Time at Group Companies
(1) Provide guidance to group companies <ul style="list-style-type: none"> Priority: Continue environment and safety exchange meetings Priority: Promote utilization of Ankan-Net(Safe Environment Network) meetings 	(1) Provided guidance to group companies <ul style="list-style-type: none"> Environment and safety exchange meetings: Seven Safety guidance by outside safety experts: 35 times at 10 companies Ankan-Net meetings: Two Education by outside instructors: Four times for safety, twice for environment 		(1) Provide guidance to group companies <ul style="list-style-type: none"> Priority: Implement reliable process safety assessments Priority: Augment use of Ankan-Net exchange meetings Priority: Promote utilization of Ankan-Net meetings (two) Education sessions (four safety, two environmental)
(2) Continue promotion of earthquake and tsunami countermeasures at Group companies	(2) Conducting survey of each company's response status regarding important buildings		(2) Promote earthquake and tsunami countermeasures at Group companies <ul style="list-style-type: none"> Promote earthquake resistance of important buildings
(3) Cooperate in business auditing for overseas Group companies (manufacturing companies)	(3) Attending web business audits (four cases) (Philippine Resins Industries, Inc., Tosoh Polyvin Corporation, Tosoh Quartz, Inc., Tosoh (Shanghai) Polyurethane Co., Ltd.)		(3) Cooperate in business auditing for overseas group companies (manufacturing companies)

Environmental protection

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
<p>1) Policy: Compliance with Laws and Regulations (zero deviations from regulatory or agreed values)</p>	<p>No instances where regulatory limits were exceeded but one instance where agreed-upon values were exceeded</p>	<p>★★★</p>	<p>Policy: Compliance with Laws and Regulations (zero deviations from regulatory or agreed values)</p>
<p>(1) Ensure compliance with agreed values</p> <ul style="list-style-type: none"> Strengthen monitoring of facilities specified by laws and regulations; promote preventive measures related to deviations Review standards during nonroutine operations where control values may be exceeded Conduct re-education of cases of deviation from agreed values (including dissemination of information, etc.) 	<p>(1) Three cases of deviation from agreed values</p> <ul style="list-style-type: none"> Enhanced facility monitoring, conducting of meetings to report issues 		<p>(1) Ensure compliance with agreed values</p> <ul style="list-style-type: none"> Strengthen monitoring of facilities specified by laws and regulations; promote preventive measures related to deviations Review of non-routine work standards that may cause deviations Conduct re-education of cases of deviation from agreed values (including dissemination of information, etc.)
<p>(2) Ensure compliance with laws and regulations</p> <ul style="list-style-type: none"> Ensure compliance with laws and regulations other than measurement items Promote environmental education; improve employee competence and awareness 	<p>(2) Promote environmental education and environmental awareness</p> <ul style="list-style-type: none"> Conducted environmental education, explanation of legal revisions, education for pollution prevention managers, etc. 		<p>(2) Ensure compliance with laws and regulations</p> <ul style="list-style-type: none"> Ensure compliance with laws and regulations other than measurement items Promote environmental education; improve employee competence and awareness.
<p>2) Policy: Compliance with Laws and Regulations at Group Companies</p>	<p>—</p>		<p>Policy: Compliance with Laws and Regulations at Group Companies</p>
<ul style="list-style-type: none"> Priority: Improve legal compliance management level Reinforce guidance through use of environmental consultants Conduct periodic checks, guidance on compliance with environmental laws and regulations 	<ul style="list-style-type: none"> Provided guidance in three instances on waste management operations, interpretation of laws Regular distribution and dissemination of information on revisions to environmental laws and regulations 		<ul style="list-style-type: none"> Priority: Improve legal compliance management level Reinforce guidance through use of environmental consultants Conduct periodic checks, guidance on compliance with environmental laws and regulations
<p>3) Policy: Reduce PRTR Emissions by 30% Compared with FY2016 (424 metric tons)</p>	<p>PRTR emissions: 5,175 metric tons (357 metric tons/year of target substances)</p>	<p>★★</p>	<p>Policy: No Worsening of PRTR Emissions Year on Year</p>
<ul style="list-style-type: none"> Implement n-hexane reduction plan Manage emissions in accordance with revisions to regulations Continue to study monochlorobenzene (MCB) emission control (wastewater) 	<ul style="list-style-type: none"> n-hexane reduction measures progressing as planned Continuing to study MCB emission control 		<ul style="list-style-type: none"> Implement n-hexane reduction plan Manage new target substance emissions Promote high-risk substance reduction plans

Responsible Care (RC) Activities

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
<p>4) Policy: Effective Use of Industrial Waste</p> <ul style="list-style-type: none"> Undertake measures to reduce emissions 75% in fiscal 2026 compared with fiscal 2001 levels Reduce total industrial waste discharge, external disposal Maintain recycling rate of 90% or better 	<p>Landfill industrial waste volume: 507 metric tons</p> <ul style="list-style-type: none"> Continue considering final landfill volume reduction initiatives Promote total emission reduction, external disposal Continue promotion of recycling 	★★★	<p>Policy: Effective Use of Industrial Waste</p> <ul style="list-style-type: none"> Continue toward 75% reduction in FY2026 compared with FY2001 results Reduce total industrial waste discharge, external disposal Maintain recycling rate of 90% or more
<p>5) Policy: Promotion of Planned Disposal of Polychlorinated Biphenyl (PCB) - Containing Equipment</p> <ul style="list-style-type: none"> Implement planned disposal of equipment containing low PCB concentrations in coating 	<p>—</p> <ul style="list-style-type: none"> Promote disposal based on plan Low-concentration PCB coatings (remediation work completed on one tank at the Nanyo Complex and planned for two tanks at Tosoh Group companies) Conducted survey on disposal status 	★★★	<p>Policy: Promotion of Planned Disposal of Polychlorinated Biphenyl (PCB) -Containing Equipment</p> <ul style="list-style-type: none"> Implement planned disposal of target equipment containing low PCB concentrations

Quality management

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
<p>1) Policy: Reduce Serious Product Complaints to Zero</p> <p>(1) Reduce product complaints through strengthening of cooperation among quality assurance, manufacturing, and business divisions</p> <ul style="list-style-type: none"> Prevent recurrence of complaints with same cause Review of measures to prevent endogenous foreign matter Confirm status of complaint prevention efforts, maintenance of prevention measures through on-site inspection, risk assessment, etc. Confirm details of delivery specifications 	<p>Number of serious product complaints: One</p> <ul style="list-style-type: none"> Confirm status of corrective action taken in response to complaints Confirm risk of contamination by foreign matter Bolster initial response system in event of problem Confirm sufficiency of measures taken in response to errors in shipments and confirm maintenance/management status Review of measures to prevent endogenous foreign matter Confirm details of delivery specifications Reviewing contents of delivery specifications in Tosoh's format Maintain in-house delivery specifications Provide education on regulatory status of specifications and legal notices 	★	<p>Policy: Reduce Serious Product Complaints to Zero</p> <p>(1) Priority: Reduce product complaints by strengthening cooperation between quality assurance, manufacturing, and business divisions</p> <ul style="list-style-type: none"> Prevent recurrence of similar complaints Review of measures to prevent endogenous foreign matter Promote complaint prevention efforts and confirm status of prevention measure maintenance Confirm contents of delivery specifications Review of delivery specifications in Tosoh's format Develop and operate in-house a delivery specification database Provide education on specification legal status

Responsible Care (RC) Activities

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
2) Policy: Strengthening Supply Chain Management	—	★★★	Policy: Strengthening Supply Chain Management
(1) Strengthen quality control system of outsourced manufacturing sites <ul style="list-style-type: none"> Conduct quality audits at outsourced production locations and tank bases Consider measures to be taken regarding resale and swap items 	(1) Strengthened quality control system of outsourced manufacturing sites <ul style="list-style-type: none"> Conducted quality audits of 33 contract manufacturing companies and of seven tank base companies 	★★★	(1) Strengthen quality control system of outsourced manufacturing sites <ul style="list-style-type: none"> Conduct quality audits at outsourced production sites and tank bases Establish quality assurance system for resale and swap items purchased
(2) Strengthen management of raw material (including packaging materials) suppliers <ul style="list-style-type: none"> Priority: Systematically implement raw material supplier audits 	(2) Strengthened management of raw material (including packaging materials) suppliers <ul style="list-style-type: none"> Performed quality audits at 54 companies 		(2) Strengthen management of raw material (including packaging materials) suppliers <ul style="list-style-type: none"> Priority: Systematic implementation of raw material supplier audits
3) Policy: Confirmation of Quality Control System	—	★★★	Policy: Confirmation of Quality Control System
(1) Continue internal, Group company quality control surveys <ul style="list-style-type: none"> Conduct survey on inspection systems and inspection data traceability Conduct survey of Group company quality control systems 	(1) Conducted internal, 25 Group company quality control surveys <ul style="list-style-type: none"> Detected no instances where risk of serious impact on environment or safety existed Held group quality system survey (23 companies) Found no instances of impropriety 	★★★	(1) Continue internal, Group company quality control surveys <ul style="list-style-type: none"> Survey fiscal 2024 inspection data Strengthen quality control systems
(2) Conduct quality control survey follow-up for Group companies <ul style="list-style-type: none"> Provide education on quality compliance 	(2) Conducted quality control survey follow-up for Group companies <ul style="list-style-type: none"> Laterally deployed other companies' quality control case studies 		(2) Conduct quality control survey follow-up for group companies <ul style="list-style-type: none"> Continue quality compliance education

Pharmaceutical Affairs Act

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
1) Policy: Reinforcement of Quality Assurance System for Bioscience Division Products	—	★★★	Policy: Reinforcement of Quality Assurance System for Bioscience Division Products
(1) Establish legal compliance system in response to revised Pharmaceutical Affairs Agency Law	(1) Ensured traceability of in vitro diagnostic pharmaceutical and medical device packaging with mandatory barcode labeling	★★★	(1) Establish legal compliance system in response to revised Pharmaceutical Affairs Agency Law
(2) Monitor quality assurance system of BS product manufacturing facilities	(2) Confirmed quality assurance system for diagnostic products <ul style="list-style-type: none"> Conducted regulatory audit of five BS manufacturing sites 		(2) Monitor quality assurance system of BS product

Chemical and product safety

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
<p>1) Policy: Zero Occurrence of Major Nonconformities in Compliance with Domestic and International Chemical Substance Laws and Regulations</p>	<p>Zero occurrence of major nonconformities</p>	<p>★★★</p>	<p>Policy: Zero Occurrence of Major Nonconformities in Compliance with Domestic and International Chemical Substance Laws and Regulations</p>
<p>(1) Comply with legal obligations</p> <ul style="list-style-type: none"> • Ensure risk assessment of chemical substances • Maintenance and management of SDS/labeling • Respond to, manage sales of substances newly designated under Poisonous and Deleterious Substances Control Law <p>(2) Respond to notifications, applications</p> <ul style="list-style-type: none"> • Ensure implementation of notification, application under Law Concerning the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Industrial Safety and Health Law • Respond appropriately to overseas laws and regulations 	<p>(1) Complied with legal obligations</p> <ul style="list-style-type: none"> • Adopted CREATE-SIMPLE (Chemical Risk Easy Assessment Tool Edited for Service Industry and Multiple workplaces) and implemented risk assessment • Maintained and managed SDS/labels • Handled newly added substances under Poisonous and Deleterious Substances Control Act and managed sales <p>(2) Responded to notifications, applications</p> <ul style="list-style-type: none"> • Requested applications via Hot-Net and shared performance data via Box • Increased efficiency through systemization of quantity notification data creation under Chemical Substances Control Law • TBA supported EU authorities' investigation on recycling products containing brominated substances through the International Bromine Council (BSEF) • Collaborated with departments to respond to the EU public consultation on per- and polyfluoroalkyl substances (PFAS) . 	<p>★★★</p>	<p>(1) Proper chemical substance management</p> <ul style="list-style-type: none"> • Implement comprehensive risk assessments in accordance with revised Industrial Health and Safety Act • Prepare and maintain SDS/labels • Disseminate information concerning newly added substances under Poisonous and Deleterious Substance Control Act and ensure response <p>(2) Respond to notifications, applications</p> <ul style="list-style-type: none"> • Ensure compliance with chemical substance application system and quantity notification system • Conduct regulatory education • Comply appropriately with overseas laws and regulations • Continue responding to public comments concerning PFAS/US PFAS regulations

Logistics safety

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
<p>1) Policy: Reduce Logistics Complaint and Problem Incidence Rate to 70 Parts Per Million (ppm) or Fewer</p>	<p>Logistics complaints and problems: 95 ppm</p>	<p>★★</p>	<p>Policy : Reduce Logistics Complaint and Problem Incidence Rate to 70 Parts Per Million (ppm) or Fewer</p>
<p>(1) Comprehensive implementation of the following four items to achieve policy:</p> <ul style="list-style-type: none"> i) Ensure company is contacted promptly in the event of issues ii) Ensure once-daily cargo movement confirmation against inventory iii) Augment vehicle equipment inspections iv) Perform comprehensive safety check when moving within customer premises <ul style="list-style-type: none"> • Consider construction of model workplace (Yamaguchi Koun Corporation) • Continue follow-ups and validation • Continue issue prevention activities and confirmation of effectiveness through use of issue reporting system 	<p>(1) Priority: Thoroughly implement four items</p> <ul style="list-style-type: none"> • Check driving recorders, conduct surprise patrols at gasoline stations, and conduct external safety education for model workplaces • Reconfirm periodically that countermeasures in response to past issues are ongoing • Investigate lateral spread of past accidents and risk of occurrence at other workplaces 		<p>(1) Comprehensive implementation of the following two items to achieve policy:</p> <ul style="list-style-type: none"> i) Perform comprehensive safety check when moving within customer premises ii) Reinforce and ensure procedural education for truck drivers on delivery <ul style="list-style-type: none"> • Consider constructing model workplace • Continue follow-up, effectiveness checks • Continue issue prevention activities using issue reporting system
<p>2) Policy: Zero Serious Incidents</p>	<p>Serious incidents: One</p>	<p>★</p>	<p>Policy: Zero Serious Incidents</p>
<ul style="list-style-type: none"> • Raise safety awareness through BRM training for time chartered vessels and ongoing voyage and operation diagnoses • Provide ongoing support for Tosoh Logistics Corporation's efforts to rebuild culture of safety 	<ul style="list-style-type: none"> • Schedule 11 vessels for bridge resource management (BRM) training • Conducted voyage, transportation diagnostics for 8 vessels • Change patrol frequency based on workplace level and implement KY (hazard prediction) training • Utilize Japan Industrial Safety and Health Association safety support program and implement with assistance from external instructors 		<ul style="list-style-type: none"> • Raise safety awareness through BRM training for time chartered vessels and ongoing voyage and operation diagnoses • Provide ongoing support for Tosoh Logistics Corporation's efforts to rebuild culture of safety • Continue to utilize Japan Industrial Safety and Health Association's safety support program

Responsible Care (RC) Activities

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
3) Policy: Ensure Preventive Logistics Safety	—	★★	Policy: Ensure Preventive Logistics Safety
<ul style="list-style-type: none"> • Priority: Implement measures to improve high-risk customer cargo handling • Priority: Implement safety measures for bromine ISO tank container transport • Priority: Conduct risk assessment of on-site operations, consider measures to reduce risk • Ensure safety of outsourced work • Conduct risk assessment of logistics processes 	<ul style="list-style-type: none"> • Remedy sources of danger at truck and other vessel suppliers • Determine why Logistics Division is unable to achieve local visits to new customers in China • Reinforce subcontracting partnerships and promote 40 workplaces as planned • Introduce risk assessment of chemical substances 		<ul style="list-style-type: none"> • Secure safety of cargo handling operations at customer sites (address labor shortage) • Improve business practices to mitigate risk • Implement safety measures for bromine ISO tank container transport • Implement risk assessments for on-site work, apply risk mitigation measures, and develop activities to bolster cooperation with contractors • Establish risk assessments of chemical substances

Social dialogue

FY 2024			FY 2025 Goals
Policy and plan	Results	Appraisal	
1) Policy: Promotion of Risk Communication	—	★★★	Policy: Promotion of Risk Communication
<ul style="list-style-type: none"> • Continue to conduct media training 	<ul style="list-style-type: none"> • Conducted media training at Yokkaichi Complex 		<ul style="list-style-type: none"> • Continue to conduct media training
2) Policy: Promotion of Cooperation with Local Communities	—	★★★	Policy: Promotion of Cooperation with Local Communities
<ul style="list-style-type: none"> • Conduct community dialogues, factory tours, neighborhood association social gatherings • Promote interaction with local schools, cooperation with government • Promote biodiversity preservation activities 	<ul style="list-style-type: none"> • Implemented as planned 		<ul style="list-style-type: none"> • Conduct community dialogues, factory tours, neighborhood association social gatherings • Promote interaction with local schools, cooperation with government • Promote biodiversity preservation activities



Addressing Climate Change Issues

Climate change is one of the world's most pressing societal issues. Accordingly, the Tosoh Group recognizes that contributing to the reduction of greenhouse gas (GHG) emissions through its business activities is a key focus for the company's medium- to long-term growth, and is promoting the reduction of CO₂ emissions through energy conservation and fuel conversion, as well as the study of technologies for the effective utilization of CO₂.

Basic concept

In October 2020, the Japanese government declared its intent to achieve a decarbonized society by 2050. In response, Tosoh in 2022 established a new GHG emissions reduction policy for the entire group.

New Policies

- Cutting GHG emissions (Scope 1+2) by 30% compared with fiscal 2019, by fiscal 2031
- Working toward becoming carbon neutral by 2050

CO₂ discharged by energy sources accounts for the majority of Tosoh's GHG emissions. Tosoh has been actively investing in energy conservation ahead of schedule while working aggressively to mitigate these emissions. The company will promptly implement various measures toward a decarbonized society, taking into account trends in Japan's energy policy; the policies of industry associations; technological innovations; and the distribution of CO₂-free fuels.

Tosoh also endorsed the Task Force on Climate-related Financial Disclosures Task Force (TCFD^{*1}) recommendations in November 2019. In line with these recommendations, the group will continue to disclose information on its initiatives. Moreover, in response to growing societal demand Tosoh will work to improve the accuracy of its carbon footprint of products (CFP^{*2}) calculations. This includes initiatives to help our customers reduce the CFP of their products as well as ours.

^{*1} Task Force on Climate-related Financial Disclosures: The Financial Stability Board established this organization to formulate a disclosure framework that aids in understanding climate-related risks and opportunities for companies. In June 2017, Tosoh published recommendations related to items of information disclosure.

^{*2} Carbon Footprint of Products: A framework for communicating through easy-to-understand CO₂ measurements the GHG emissions generated by products and services throughout their entire life cycle, from raw material procurement to disposal and recycling.

> Related pages : [Disclosing Information Based on TCFD Recommendations](#)

Measures to Cut GHG Emissions

1. Promoting energy conservation

We convert changes in GHG emissions from new investments to expenses using an internal carbon price as a basis for investment decisions. We will raise this internal unit price to 6,000 yen/ton-CO₂ to accelerate energy conservation efforts as never before.

2. Decarbonizing the energy we use

Our biggest target for reducing GHG emissions is through cutting CO₂ discharged by in-house thermal power generation facilities. We will promote a gradual transition from coal and other fossil fuels with high GHG emissions, to biomass, ammonia, hydrogen, and other clean energy sources, while simultaneously bolstering our efforts to introduce renewable energy sources, such as solar power, to eliminate carbon from the energy we use.

3. Recovering and effectively utilizing CO₂

With support from external research institutions and the government, we promote the development of technologies to separate and recover CO₂ emitted by power generation facilities and manufacturing processes then effectively use it as a raw material for polyurethane and other products.

4. Investing in measures to cut GHG emissions

In addition to ongoing capital investments, we plan to spend approximately ¥120 billion in cutting GHG emissions by fiscal 2031 to support measures 1–3 above. This spending includes a plan to invest approximately ¥60 billion over three years starting in fiscal 2023, the most recent fiscal year.

> Related pages: Initiatives to Cut GHGs

ENVIRONMENT

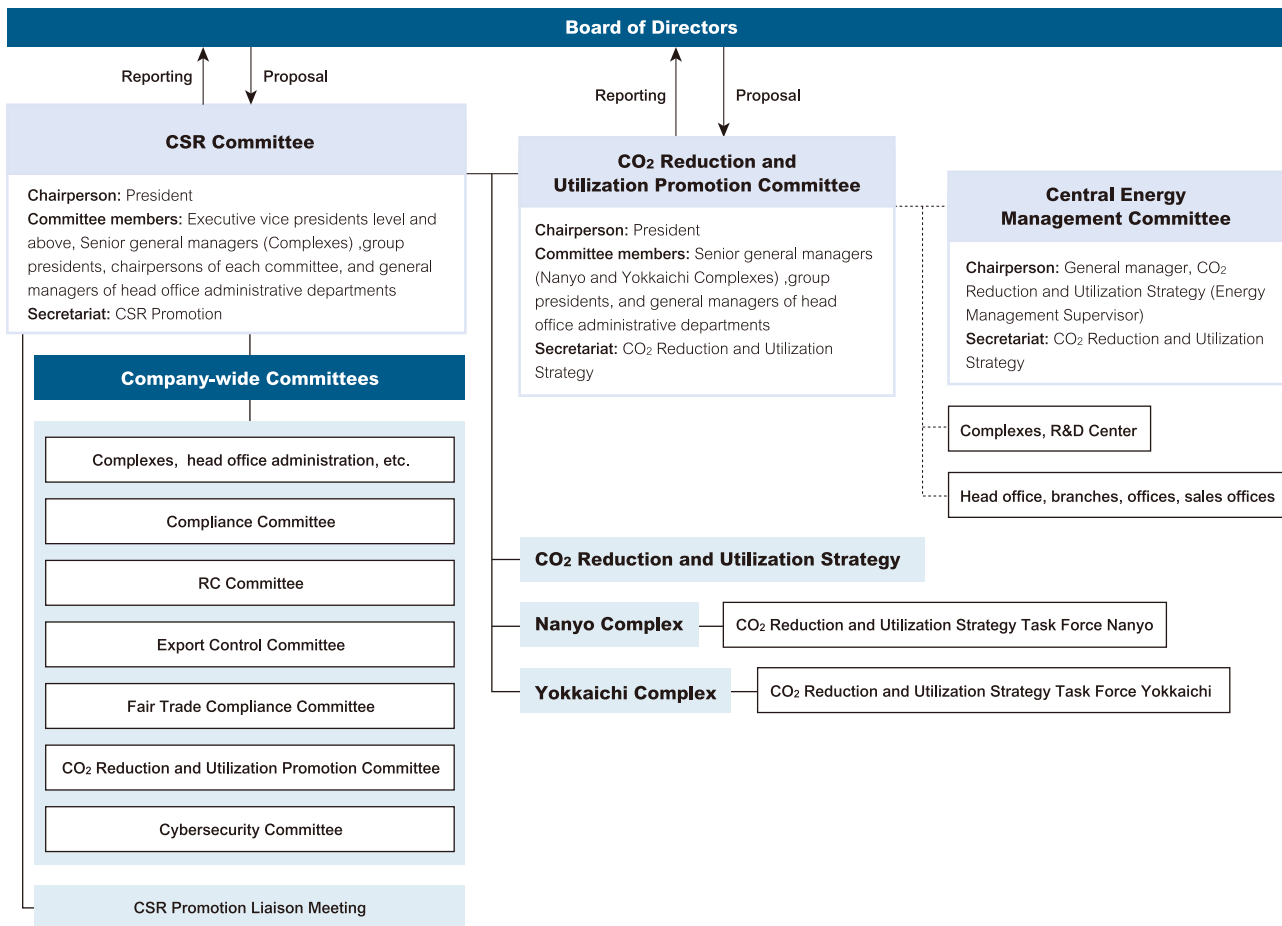


Disclosing Information Based on TCFD Recommendations

Governance

Tosoh's response to climate change issues is promoted mainly by the CO₂ Reduction and Utilization Promotion Committee and the Central Energy Management Committee. We are also gathering information on social trends, regulatory requirements, and climate change-related risk management and sharing this information with companies across the Tosoh Group. Matters relating to these activities are reported to the respective Board of Directors for approval as appropriate, with necessary instruction then received.

Promotional Structure



CSR Committee

Corporate Social Responsibility (CSR) has gained prominence in recent years. The Tosoh Group recognizes that helping address various social issues—including climate change—through its business activities is vital for sustainable growth. Thus, we promote our business with CSR at the heart of management.

Chaired by the representative director and president, our CSR Committee deliberates on key matters relating to the Tosoh Group's CSR activities. The committee reports its resolutions to the Board of Directors for approval and instruction as necessary. Moreover, we have established organizations to promote specific responses to climate change issues under the CSR Committee: the CO₂ Reduction and Utilization Promotion Committee, the Responsible Care (RC) Committee, and the Central Energy Management Committee.

We have identified climate change as an essential CSR issue the Tosoh Group should address. The representative director and president, who chairs the CSR Committee, is responsible for climate change-related policy. Our new president took office in March 2022, taking over the above-mentioned responsibilities while retaining his prior role as chair of the CO₂ Reduction and Utilization Promotion Committee, thus broadening his climate change-related responsibilities.

In fiscal 2024, we assessed our progress in fiscal 2023 regarding the energy-related CO₂ emission reduction target newly established as a key performance indicator (KPI) for addressing climate change. We also reviewed our GHG emissions reduction policy to align with our goal of carbon neutrality by 2050.

Activities and discussions (reports) for fiscal 2024

- Approval of Solutions for Social Issues (21 cases) (submitted to the Board of Directors)
- KPI progress assessment for fiscal 2023 and fiscal 2024 action plan proposal

> Related pages: Important CSR Issues

CO₂ Reduction and Utilization Promotion Committee

The committee is chaired by the director in charge (president and representative director after March 2022), and promotes identifying issues, formulating policies, conducting research and analysis, and advancing emission reduction management. This includes transitioning to alternative fuels and effectively using CO₂ through its recovery and conversion into raw materials. These efforts actively promote reducing and effectively utilizing energy-derived CO₂ emitted from in-house thermal power plants.

In June 2021, the CO₂ Reduction and Utilization Strategy team and the CO₂ Reduction and Utilization Task Forces at the Nanyo and Yokkaichi complexes were established to strengthen the system for promoting CO₂ reduction and effective use. Furthermore, in June 2024 the company restructured its CO₂ Reduction and Utilization Strategy Team, transitioning it from a committee under the CO₂ Reduction and Utilization Promotion Committee to an independent entity at headquarters. This reorganization will strengthen our efforts to address climate change issues and advance related initiatives.

- CO₂ Reduction and Utilization Strategy team: Newly established under the CO₂ Reduction and Utilization Promotion Committee to formulate company-wide strategies, collect information on government trends, and coordinate with the task forces at the Nanyo and Yokkaichi complexes.
- CO₂ Reduction and Utilization, Nanyo and Yokkaichi Task Forces: These task forces have been newly established at the Nanyo and Yokkaichi complexes to implement specific measures at each site.

Activities and discussions (reports) for fiscal 2024

- Activity report for fiscal 2024 Power Plant: Continued investigations into increasing the volume of woody biomass co-firing, introducing fuel ammonia, and participating in the GI Fund project, among other initiatives
- Deliberation on a carbon footprint (CFP) disclosure policy in line with customer requests
- Deliberation on GX League emissions trading target and content for the GX Dashboard
- Deliberation on a policy for obtaining International Sustainability and Carbon Certification (ISCC) PLUS certification at the Nanyo and Yokkaichi Complexes

Central Energy Management Committee

The committee, chaired by the head of the CO₂ Reduction and Utilization Strategy team, is working to achieve comprehensive energy savings. This includes improving energy consumption in production and transportation, and promoting alternative energy sources. Specifically, the committee discusses and determines policies for energy management, medium-term and annual plans, compliance status and evaluation methods, and energy management-related matters.

Activities and discussions (reports) for fiscal 2024

- Review of the previous fiscal year's energy use results and initiatives and policies for fiscal 2024
- Examine the Revised Act on the Rational Use of Energy regarding targets for the conversion to nonfossil energy and regarding the voluntary disclosure system

CSR Advancement Liaison Meeting

The Tosoh CSR Advancement team serves as the secretariat, sharing information on climate-related social trends and exchanging opinions with the aforementioned committees on compiling group-wide GHG emissions data. The team is working with high-emission Tosoh Group companies to monitor and support their progress toward their reduction targets and plans.

Strategy

Scenario analysis

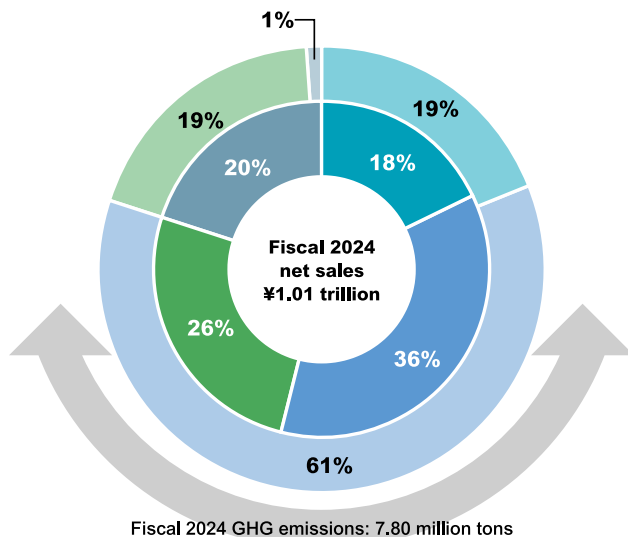
Scenario analysis predicts how business conditions will change due to both climate change and the long-term trends in government policy addressing the issue. It also examines how such changes will impact our corporate business strategies. Through scenario analysis, the Tosoh Group discovers the likely impact of risks and opportunities relating to climate change issues. It incorporates these lessons into its medium- and long-term management plans, formulating strategies to further promote our products, technologies, and services that contribute to addressing the issues that must be tackled in order to realize a sustainable society.

The diagram below details the Tosoh Group's net sales and GHG emissions by sector for fiscal 2024.

A key issue for the entire Tosoh Group is reducing GHG emissions, thus our analysis focuses on energy-intensive products and technologies. In fiscal 2024, we conducted a company-wide scenario analysis and a scenario analysis focused on our Chlor-alkali Group. Despite being only one of four groups—Petrochemicals, Chlor-alkali, Specialty, and Engineering/Ancillary—the Chlor-alkali Group accounts for fully 62% of the Tosoh Group's GHG emissions (Scopes 1 and 2). To date in fiscal 2025, we have expanded the scenario analysis to include the Petrochemicals and Specialty Groups.

Net Sales and GHG Emissions by Group in Fiscal 2024

Net sales: Petrochemical Group, Chlor-alkali Group, Specialty Group, Engineering Group/Ancillary
 GHG Emissions: Petrochemical Group, Chlor-alkali Group, Specialty Group, Engineering Group/Ancillary



Assessment of Tosoh Group overall

The Tosoh Group's GHG emissions are currently among the highest in the chemical industry, and reducing these emissions is considered essential. We have already launched specific measures related to fuel conversion at our in-house thermal power generation facilities—which account for about 80% of Tosoh's GHG emissions—and renewable energy procurement, which are vital initiatives. Potential business opportunities have appeared across various sectors in both the Commodity and Specialty businesses. Approaching the climate change issue as a good opportunity, we will focus our attention on developing technologies and products for the future from a broader perspective.

Assessments of the Chlor-alkali, Petrochemical, and Specialty Groups

The Chlor-alkali Group comprises the chemicals business (including caustic soda, VCM, PVC, and chlorine derivatives), the urethane business (including MDIs and functional urethane), and the cement business. The business utilizes caustic soda and chlorine produced through saltwater electrolysis. It consumes significant energy from our in-house thermal power plants that use fossil fuels (including coal and petroleum coke), making it a sector with substantial GHG emissions. Thus, the critical issue for this group—which is also the one most affected by rising energy costs—is the transition to new fuels for our thermal power plants. This is a concern which overlaps across the Tosoh Group. We must reduce our CO₂ emissions from product manufacturing while keeping energy cost increases in check; simultaneously creating a mechanism to pass the value of low-carbon and decarbonized materials through to product prices.

Furthermore, since most of the products in this sector are basic raw materials, they find use in diverse applications – and the impact of climate change poses risks for some applications, and opportunities for others. At this stage, our analysis findings are not biased toward either risk or opportunity. The demand for these products is robust over the long term, and they are poised to be one of the critical pillars of the Tosoh Group's foundation.

The Petrochemical Group comprises two main businesses: the olefin business, which produces ethylene, propylene, and other petrochemical feedstocks, and the polymer business, which manufactures polyethylene, resin products, functional polymers, and more. At the heart of Tosoh's operations and these businesses is the naphtha cracker at the Yokkaichi Complex.

That naphtha cracker, however, emits significant CO₂ from its use as a fuel of a petroleum-based by-product hydrocarbon gas generated throughout the company's business activities. Tosoh is therefore exploring alternatives, including converting the cracker to hydrogen or ammonia fuel use and improving the cracker's use of the current by-product gas. In addition, Tosoh is preparing to meet growing demand for products made from bio-naphtha and other bio-based raw materials.

The Petrochemical Group's products are, like those of the Chlor-alkali Group, mostly fundamental with wide-ranging applications. There are concerns about declining sales of parts for gasoline-powered vehicles as the electric vehicle (EV) market expands. But the latter also raises expectations for increased sales of EV components. The impact of climate change on the Petrochemical Group thus poses risks and opportunities that our scenario analysis at this stage suggests are balanced.

Our Specialty Group spans three main businesses: bioscience, which focuses on separation and diagnostic products; organic chemicals, which specializes in inorganic and organic fine chemicals; and advanced materials, which involves electronic and functional materials. Although the Specialty Group has low GHG emissions relative to our other groups, it too faces risks from climate change, such as rising energy costs.

The Specialty Group, however, does have the potential for significant growth opportunities, in EVs, digital markets, and products related to CO₂ capture. Our scenario analysis, in fact, suggests that the Specialty Group has greater potential than other of our groups.

Our approach to scenario analysis

We follow a process for making progress in our scenario analyses. Based on the two scenarios presented in "Assumptions for Scenario Analysis," we developed a list of possible transition and physical risks on the 2030 to 2050 timeline, together with business opportunities related to climate change. We narrowed this list down through qualitative analysis and identified items for quantitative analysis.

Moreover, we analyzed the impact on the Tosoh Group, considering not only Tosoh and its group companies independently but also the entire supply chain (in terms of raw materials procurement, processing and production, logistics, sales, consumption, and disposal and recycling).

Progress in scenario analysis

	Summary of each step	Specific analytical conditions and implementations
<p>Step 1 Assess the significance of climate-related risks</p>	<p>Determine climate change-related risks and opportunities for our business (qualitative analysis)</p>	<ul style="list-style-type: none"> ● Key issues related to climate change <ul style="list-style-type: none"> • Market and technological transformation • Corporate reputation • Government policy and legislation • Physical risks
<p>Step 2 Identify and define scenarios</p>	<p>Investigate the impact of climate change-related phenomena on our business (scenario analysis)</p>	<ul style="list-style-type: none"> ● Target businesses: Chlor-Alkali Group + Petrochemical Group + Specialty Group ● Target periods: -2030, -2050 ● Scenarios: 1.5 °C, 4 °C
<p>Step 3 Assess the impact on our business</p>	<p>Create business forecasts and financial impact estimates for each defined scenario (quantitative analysis)</p>	<ul style="list-style-type: none"> ● Identify the impact on our business ● Formulate strategies reflecting risks and opportunities
<p>Step 4 Identify potential responses</p>	<p>Establish measures to address identified risks and opportunities, and indicators to manage these</p>	<ul style="list-style-type: none"> ● Implement responses <ul style="list-style-type: none"> • Cut GHG emissions primarily by converting fuels for in-house thermal power generation facilities • Develop environmentally friendly products and pass costs on through pricing as appropriate ● Track management indicators <ul style="list-style-type: none"> • Targets for reduction by 2030 and carbon neutrality by 2050 • Increase sales of environmentally friendly products
<p>Step 5 Disclose activities (internally and externally)</p>	<p>Foster understanding among relevant parties and disclose activities to stakeholders</p>	<ul style="list-style-type: none"> ● Approve and disseminate disclosure materials through governance reporting and proposals ● Disclose activities via website and annual report

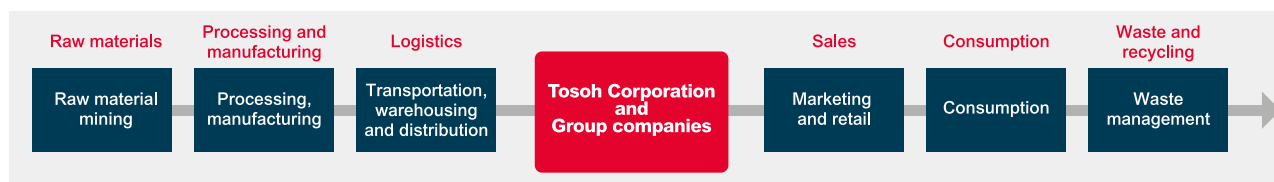
Premise of scenario analysis

	Details for each scenario
+1.5 °C Scenario	<ul style="list-style-type: none"> ● Scenario with significant CO₂ emission control to limit temperature rise to +1.5 °C (WEO: Net Zero Emissions by 2050 Scenario [NZE]^{*1}) ⇒ Treating increased legislation and significant behavioral changes in society and markets as transition risks
+4 °C Scenario	<ul style="list-style-type: none"> ● Scenario in which global warming countermeasures make insufficient progress, and the temperature rises to an estimated 4 °C above pre-industrial levels by 2100 (IPCC SSP5-8.5^{*2}) ⇒ Treating extreme weather events and changes in society and ecosystems as physical risks

^{*1} This scenario is put forward in the World Energy Outlook (WEO) 2023, prepared by the International Energy Agency (IEA). It requires achieving global net zero by 2050, in order to limit the temperature increase to +1.5 C by 2100.

^{*2} This scenario was presented in the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Based on the framework of Shared Socioeconomic Pathways (SSP), this scenario assumes the competitive regional development of SSP5-8.5, with governmental climate policies eschewed as temperatures rise by 4.4 C (with a likely range of 3.3–5.7 C) by 2100.

Analysis Throughout the Supply Chain



Identifying risks and opportunities



Scenario analysis overview

Transition/physical risk

Risk factors	Financial impact factors	Qualitative evaluation *Red frame: Items that significantly affect Tosoh's business operations	Groups with high relevance			Response required (◆: in progress)
			Chlor-alkali	Petrochemical	Specialty	
1.5°C (2050 carbon neutral (CN))scenario						
Strengthening of GHG emission regulations	Increased fossil fuel-derived costs due to higher carbon pricing and other factors	<ul style="list-style-type: none"> Increased operating costs commensurate with the carbon tax due to delayed decarbonization efforts on the part of the company [Quantitative Assessment 1] 	○	○	○	<ul style="list-style-type: none"> ◆ Apply internal carbon pricing in investment decisions (promote investment in CO₂ reduction, assess business feasibility when considering the increase in CO₂ emissions which are driven by capacity expansion) ◆ Investigate new technologies for the conversion from fossil fuels of in-house thermal power generation facilities, which account for about 80% of the company's total GHG emissions <ul style="list-style-type: none"> ⇒ Diversify decarbonized fuels ⇒ Consider future fuel mixes, the impact on operating costs, application of subsidies, when making investment decisions ⇒ Determine whether to invest in biomass power generation facilities (-500,000 t-CO₂) ◆ Efficiently execute the fuel conversion of private thermal power generation facilities, implement carbon-neutral technology through coordination between complexes ◆ Investigation into the creation of a mechanism to appropriately pass CO₂ reduction measure costs in collaboration with the rule formation working group of the Ministry of Economy, Trade and Industry's (METI) GX League
	Increased energy costs due to increased renewable energy source utilization ratio	<ul style="list-style-type: none"> Increased operating costs owing to expansion of renewable energy ratio in accordance with customer and government requirements 	○		○	
Transition to decarbonization technologies	Increased capital investment and fuel expenses increased due to the fuel conversion of in-house thermal power generation facilities	<ul style="list-style-type: none"> Increased capital investment costs were incurred at the decarbonizing power generation facilities [Quantitative Assessment 2] Increased fuel costs were incurred owing to decarbonization of power generation facilities 	○	○	○	

Disclosing Information Based on TCFD Recommendations

Risk factors	Financial impact factors	Qualitative evaluation *Red frame: Items that significantly affect Tosoh's business operations	Groups with high relevance			Response required (◆: in progress)
			Chlor-alkali	Petrochemical	Specialty	
Changes in raw material costs	Increased raw material costs in line with heightened demand for bio-based raw materials	<ul style="list-style-type: none"> Increased procurement costs owing to an insufficient supply capacity of environmentally friendly bio feedstock such as naphtha and benzene 	○	○	○	<ul style="list-style-type: none"> Ascertain demand for bio-based raw material products, diversify sources of raw material procurement ◆ Investigate carbon footprint of products (CFP) and related reduction plan
	Increased primary fuel costs due to factors such as higher carbon pricing	<ul style="list-style-type: none"> Passing on cost increases related to primary fuel suppliers' efforts toward decarbonization 	○	○	○	
Changes in Consumer behavior	Decrease in sales of GHG-intensive products due to increased recognition of low-carbon alternatives and transition to a circular economy	<ul style="list-style-type: none"> Decrease in sales of energy-intensive products and those products in high demand given the transition to a circular economy 	○	○	○	<ul style="list-style-type: none"> ◆ Calculate and disclose CFP by product in response to requests from customers ◆ Establish and acquire certification for a carbon-free product supply system ◆ Develop circular economy-compatible materials, recycling systems
	Decrease in sales of gasoline vehicle-related products due to the growing EV market	<ul style="list-style-type: none"> Decrease in sales of gasoline internal combustion engine-related materials 		○		
	Decrease in sales of diesel vehicle-related products due to the growing EV market	<ul style="list-style-type: none"> Maintain sales of diesel internal combustion engine-related materials (raw materials for exhaust gas purification catalysts, etc.) until around 2035 			○	

Disclosing Information Based on TCFD Recommendations

Risk factors	Financial impact factors	Qualitative evaluation *Red frame: Items that significantly affect Tosoh's business operations	Groups with high relevance			Response required (◆: in progress)
			Chlor-alkali	Petrochemical	Specialty	
4°C (status quo) scenario						
Intensification of abnormal weather	Increased losses caused by flooding, and supply chain disruptions resulting from unexpectedly severe wind and flood damage	<ul style="list-style-type: none"> Severe damage at domestic plants caused by flooding, and storm surges [Quantitative Assessment 3] 	○	○	○	<ul style="list-style-type: none"> ◆ Implement business continuity (BCP) measures in response to changes in the environment <ul style="list-style-type: none"> ⇒ Tosoh has implemented damage control measures primarily for major electrical equipment, to prevent or mitigate damage resulting from severe weather conditions, such as tsunami and storm surges ⇒ Implementing measures for safe shutdown and early restoration based on the assumption of severe flooding up to a depth of 1.25m in Yokkaichi, where earthquake and tsunami risk are high Review raw material and product inventory capacity, and Establish product bases ◆ Reinforce BCP response across the breadth of the supply chain
		<ul style="list-style-type: none"> Damage at a Japanese production site caused by strong winds [Quantitative Assessment 3] 	○	○	○	
		<ul style="list-style-type: none"> Reduction in operations at downstream plants in the supply chain (chlor-alkali plants abroad) due to closure of domestic plants 	○			
		<ul style="list-style-type: none"> Reduced plant operations due to shutdowns at the manufacturing facilities of overseas sites, customers, and raw material suppliers [Quantitative Assessment 4] 		○		
		<ul style="list-style-type: none"> Reduction in plant operations and hikes in logistics costs due to factors such as restrictions on vessel movements, such as arrivals and route detours 	○	○	○	
Increase in average temperature	Increase in various operating costs due to rising temperatures	<ul style="list-style-type: none"> Reduced work efficiency and prolonged downtime due to heightened risk of heat stroke during routine plant repair work Reduction in production capacity due to insufficient cooling capacity equipment at plants 	○	○	○	<ul style="list-style-type: none"> Strengthening of the health management system relevant to actual work scenarios Review of plant design standards

Examples of calculating the financial impact of risk factors

[Quantitative assessment 1: Rising carbon pricing] (items to be updated in fiscal 2025)

Financial impact factors

The Tosoh Group's actual GHG emissions (Scope 1 & 2) in fiscal 2024 were 7.80 million tons. We anticipate increasing operating costs commensurate with the carbon tax to be a risk, due to delays in our decarbonization efforts.

Calculation parameters

- We calculated fiscal 2024 GHG emissions by summing the GHG emissions of each Tosoh Group company by manufacturing site location, and multiplying these sums by the carbon prices given below.
- For these we used the NZE Scenario carbon price (¥145 to the US dollar) from the World Energy Outlook 2022.

[US dollar/ton-CO₂]

	2030	2050	Relevant locations
Advanced economies	140	250	Japan and the US
Emerging market	90	200	China, Indonesia, and Greece
Other	25	180	Philippines and Malaysia

Assessment Results

We recalculated our capital investment and fuel costs, taking into account the impact of exchange rates and the updated base year. There were no significant changes compared with the fiscal year 2023 calculations.

Our premise regarding the carbon tax burden remains that there has been no change in GHG emissions since fiscal 2024.

[Fiscal 2031: approx. ¥160 billion; fiscal 2051: approx. ¥280 billion]

Required actions

- The Tosoh Group aims to cut its overall GHG emissions by 30% compared to fiscal 2019 by 2031, further reducing their impact by achieving carbon neutrality (CN) by 2050.
- We use our internal carbon price (¥6,000/ton-CO₂) to evaluate the profitability of capital investments. Tosoh promotes investment to reduce CO₂ emissions and assess the business feasibility of investments that increase CO₂ emissions due to factors such as capacity expansion, taking into account the increased cost of such investments.

[Quantitative assessment 2: Shifting to new fuels for our in-house thermal power plants] (items to be updated in fiscal 2025)

Financial impact factors

Since GHG emissions from in-house thermal power plants at our Nanyo and Yokkaichi complexes account for approximately 80% of the Tosoh Group's emissions, shifting to CO₂-free fuels is imperative. Thus, we anticipate risks from significant increases in capital investment and fuel costs.

Calculation parameters

- We estimate the required capital investment and fuel cost increases based on a fuel composition modeled on reducing GHG emissions by 30% compared to fiscal 2019 by 2031, and achieving CN by 2050.
 - For 2031, reducing GHGs through biomass fuel cofiring and effectively using naphtha cracker byproduct gas.
 - For 2050, we assume power generation based solely on CO₂-free fuels such as biomass, ammonia, and hydrogen. However, estimating the capital investment and fuel costs is challenging at this stage.
- We use the average fuel cost from fiscal 2020–2024 as the basis for comparison (=1).
- We estimate all fuel costs based on in-house purchase prices, data from the government and related organizations, and other available metrics.

Assessment Results

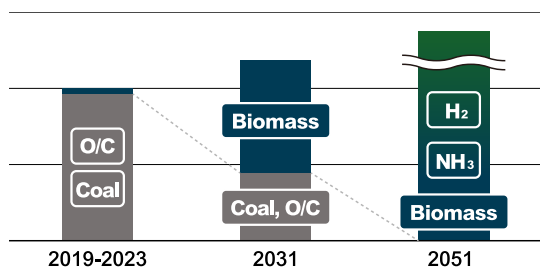
The cumulative capital investments for shifting to fuels that reduce GHG emissions by 30% by fiscal 2031

[Through fiscal 2031: approx. ¥90–120 billion]

The fuel cost increase rate for shifting to fuels that reduce GHG emissions by 30% by fiscal 2031

[Fiscal 2031: +20% compared to present]

Fuel Cost Calculations



Required actions

- We are considering diversifying the fuels for our in-house thermal power generation (various biomass fuels, ammonia, and hydrogen) and purchasing renewable energy to become carbon neutral.
 - > Related pages: Initiatives to Cut GHGs
- We are looking into approaches for transitioning to fuels that minimize the impact on operating costs while effectively using government subsidies, including subsidies for capital investment and price differential compensation for fuels.
- We promote the efficient decarbonization of our power plants by partnering with companies on fuel procurement, and in other areas, at the Shunan and Yokkaichi industrial complexes. We are discussing with the GX League—an industry-academia-government forum established with the aim of meeting GHG emissions reduction targets—and other groups the creation of a mechanism to pass on the added value of green products manufactured with reduced GHG emissions through our client pricing.

Topics

In July 2022, we decided to invest in a new biomass power plant, including replacing the aging coal-fired pulverized coal boiler in Nanyo with a circulating fluidized bed boiler capable of firing biomass fuels alone.

(Capital investment: approx. ¥40 billion; planned GHG reduction: approx. 500,000 tons; variable cost increase due to this plan: none)

【Quantitative assessment 3: Flooding and storm surge damage at production sites】

1) Flooding caused by heavy rain and storm surges (assessment item for fiscal 2024)

Financial impact factors

In the 4 C scenario (SSP5-8.5), extreme weather events are expected to intensify. Both the Nanyo and Yokkaichi complexes will see flooding from storm surges and other factors, resulting in damage to assets and a risk of lost sales opportunities due to suspended operations.

Calculation parameters

- A private meteorological company calculated the flood depths from storm surges and other sources for 2030 and 2050 at the Nanyo Complex (Shunan City, Yamaguchi Prefecture) and the Yokkaichi Complex (Yokkaichi City, Mie Prefecture), Tosoh's primary production sites, using Aqeduct* simulations.
 - The flood depth calculations assumed a once-a-century probability (meaning a 1% probability of occurrence per year). Quoted figures are the maximums from five simulation models.
 - The planned scale (countermeasure targets) of disaster prevention plans for rivers and other bodies of water in large cities is at a probability of once in 100–200 years.
- The estimated financial impact of the flood depths calculated in the above simulations used the following data in the Reference Indicator Tool for the Impact of Natural Disasters on Business (Flood Damage) created by the Disaster Management Consortium of the Cabinet Office.
 - (1) Business type (= manufacturing), (2) Personnel count (= business size), (3) Topography (= plains)

* A water risk atlas provided by the World Resources Institute

Assessment Results

The maximum amount of one-time property damage due to flooding from storm surges and other sources with a once-a-century probability of occurring as of 2030 and 2050.

[Fiscal 2031: approx. ¥5 billion/maximum damage incident; fiscal 2051: approx. ¥9 billion/maximum damage incident]

Required actions

- In our tsunami and storm surge flooding policy, we have implemented damage control measures primarily for critical electrical equipment.
- At the Yokkaichi Complex, which is subject to high earthquake and tsunami risk, we are implementing safe shutdown and quick recovery measures assuming flooding up to 1.25m from a predicted tsunami from the anticipated Nankai Trough Earthquake.
- We periodically conduct flooding and storm surge simulations based on projections of future temperature increases, and consider the measures required for stable operations according to the simulation results.

2) Damage caused by strong winds (assessment item for fiscal 2025)

Financial impact factors

The 4 C scenario (SSP5-8.5) indicates a risk of damage to assets. Extreme weather events are expected to intensify, and the Nanyo and Yokkaichi Complexes could suffer from typhoons and other weather events.

Calculation parameters

- A private meteorological company conducted simulations for Tosoh Corporation's manufacturing sites at the Nanyo Complex (Shunan City, Yamaguchi Prefecture) and the Yokkaichi Complex (Yokkaichi City, Mie Prefecture). The simulations calculated the frequency of wind speeds exceeding the historical averages (standard value) of typhoons and the rates of increase or decrease in average wind speed.
- The simulations estimated the financial impact of wind damage by applying projected changes in the frequency and average wind speed for 2030 and 2050 to the monetary value of past asset damage.
 - Nanyo reference values: average wind speed of 25 m/s (Typhoon Hagibis (No. 19) in 1991, property damage of ¥300 million)
 - Yokkaichi reference values: average wind speed of 24.1 m/s (Typhoon Ampil (No. 7) in 1998, property damage of ¥100 million)

Assessment Results

The maximum amount of property damage resulting from high winds under various global warming conditions in 2030 and 2050 is estimated as follows:

[approximately ¥300 million in 2030 and approximately ¥300 million in 2050] *

* The simulations indicated that the frequency of typhoons exceeding the standard value is expected to decrease slightly in 2030 and 2050 but that their average wind speed will increase slightly. As a result, the financial impact from estimated damage remains minimal.

Required actions

- To mitigate damage from high winds, we are maintaining and upgrading aging facilities. We have also already implemented damage control measures focused on critical power supply infrastructure.

【Quantitative assessment 4: Flooding of Tosoh Group company, customer, and raw material supplier production bases because of the intensification of extreme weather events】 (assessment item for fiscal 2025)

Flooding caused by heavy rain and storm surges

Financial impact factors

The 4 C scenario (SSP5-8.5) points to a heightened risk of asset damage amid the expected intensification of extreme weather events. The production sites of Tosoh Group companies and of customers and raw material suppliers could be affected by flooding from high tides and more. This could lead to operational shutdowns, disruptions in the value chain, and lost sales.

Calculation parameters

- A primary water risk assessment was conducted using Aqueduct.* It covered the domestic and overseas production bases of 19 Tosoh Group companies and five customers and raw material suppliers.
- Of the Tosoh Group companies and customers and raw material suppliers evaluated, the assessment found at high risk the overseas production bases of two Tosoh Group companies and one customer. Overseas production at Tosoh Guangzhou Chemical Industries, Inc. (main products: PVC resin), and Tosoh Vietnam Polyurethane Co., Ltd. (main products: diphenylmethane diisocyanate, or MDI), and at a customer were found in a second Aqueduct assessment and a simulation by a private meteorological company at risk of water damage from flooding by high tides in 2030 and 2050.
 - The depth of flooding that occurs once every 100 years (i.e., 1% chance of occurring in a single year) was calculated. The value quoted was the maximum value from among five simulation models.
 - Disaster prevention planning (countermeasure targets) for rivers in large cities is planned on a 100- to 200-year probability scale.
- The data can be entered into the Reference Index Tool for the Impact of Natural Disasters on Business (Flood Damage Edition) formulated by the Japanese government's Cabinet Office's Disaster Risk Management Economic Consortium. Then, the number of production stoppage days due to the depth of flooding calculated in the aforementioned simulation can be calculated.

(1) Business type (= manufacturing)

* Aqueduct is a water risk assessment tool from the World Resources Institute.

Assessment Results

The estimated maximum decrease in sales per occurrence of production stoppage is based on flooding and storm surges expected to occur once every 100 years. These estimates are calculated under various global warming scenarios projected for 2030 and 2050.

- Tosoh Guangzhou Chemical Industries and Tosoh Vietnam Polyurethane: no significant sales impact
- Customers' overseas production bases: **[billions of yen each in 2030 and 2050]**

Required actions

- Tosoh Guangzhou Chemical Industries manufactures PVC resin using as a raw material VCM produced by Tosoh Corporation. Should it or other Tosoh Group overseas production site suffer damage from flooding or storm surges, the parent company will work to maintain sales by adjusting the balance of production and sales at the affected entity accordingly.
- Tosoh Vietnam Polyurethane plans to operate a crude MDI splitter in 2026 to produce monomeric and polymeric MDI. Should flooding or storm surge damage impede production, the parent company will maintain stable sales by compensating with production at other Tosoh Group manufacturing sites.
- Customers' overseas production sites will undergo simulations of flooding and storm surges based on projected temperature increases. The simulations will reveal what measures to enact to ensure stable operations, from diversifying sales destinations to mitigating potential disruptions.

Business Opportunities Related to Climate Change

Opportunity factors	Financial impact factors	Qualitative assessment ※Red frame: Items that significantly affect Tosoh's business operations	Groups with high relevance			Response required (◆: in progress)
			Chlor-alkali	Petrochemical	Specialty	
1.5°C (2050 carbon neutral (CN)) scenario						
Increase in demand for contributing products and technologies	Growth in business opportunities for recycling-related technologies, given the transition to a circular economy	<ul style="list-style-type: none"> Environmental contribution through the establishment of composite plastic material and chemical recycling technology 		○		<ul style="list-style-type: none"> ◆ Bolster development of functional products suitable for recycling • Establish a recycling chain in cooperation with venous industries
	Growth in business opportunities for CO ₂ recovery and effective utilization of technology in line with an increased demand for carbon capture, utilization, and storage (CCUS)	<ul style="list-style-type: none"> Respond to CCUS demands through the establishment of CO₂ separation and recovery technology using proprietary amine absorbers and separation membranes Boost sales of CO₂ separation materials such as amine absorbers and zeolite 			○	<ul style="list-style-type: none"> ◆ Promote CCUS-related R&D ◆ Strengthen product lineup of CO₂ recovery technologies, including hardware ◆ Accumulate CO₂ separation and recovery know-how through demonstrations of CO₂ feedstock conversion at the Nanyo carbon monoxide plant (investment decision)
	Increased demand for products derived from CO ₂ which is in line with growth in CCUS demand	<ul style="list-style-type: none"> Increase in sales of CO₂-derived urethane products Increase in sales of microalgae-derived urethane products 	○			<ul style="list-style-type: none"> • Establish a stable supply system to satisfy any demand requirements • Heighten market recognition of CO₂-derived chemicals, and create a mechanism as a green commodity for appropriate price pass-on
	Increase sales of products related to EVs and semiconductors in line with market expansion	<ul style="list-style-type: none"> Increase sales of basic chemicals required for manufacturing EV-related components because of heightened demand for storage batteries and other products 	○	○		<ul style="list-style-type: none"> • Accelerate research and development of EV-related products • Ensure supply structure to satisfy demand
		<ul style="list-style-type: none"> Increase sales of basic chemicals that contribute to lower automobile fuel consumption 		○		
<ul style="list-style-type: none"> Increase sales of ceramic raw materials required for manufacturing components for fuel cell vehicles 				○		
<ul style="list-style-type: none"> Increase sales of semiconductor-related products 	○	○	○			

Disclosing Information Based on TCFD Recommendations

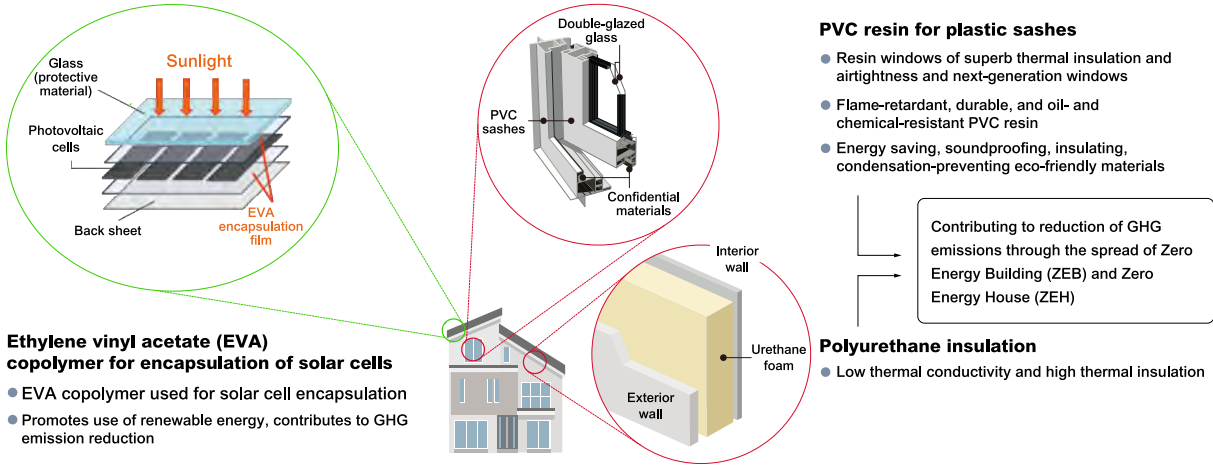
Opportunity factors	Financial impact factors	Qualitative assessment ※Red frame: Items that significantly affect Tosoh's business operations	Groups with high relevance			Response required (◆: in progress)
			Chlor-alkali	Petrochemical	Specialty	
Increase in demand for contributing products and technologies	Increased sales of electrolytic technology-based products due to growing demand for the technology	<ul style="list-style-type: none"> Contribute to CO₂ emission reduction through joint development of energy-saving electrolyzers Increase in sales through the application of energy-saving electrode technology to water electrolysis 	○			<ul style="list-style-type: none"> ◆ Further develop and disseminate energy-saving electrolyzers ◆ Accelerate the development of electrolyzer peripheral technologies • Development of hydrogen derivatives, formulation of business models
		<ul style="list-style-type: none"> Increased sales due to high value-added byproduct hydrogen ◆ Increase sales of water electrolysis component raw materials 		○	○	
	Growing demand for building materials related to energy efficiency in line with the increased prevalence of energy-efficient buildings (ZEB, ZEH)	<ul style="list-style-type: none"> Increase sales of building materials with superior thermal insulation performance and of solar cell materials [Reference: Contribution of Tosoh products to the environment] 	○	○		◆ Stable supply of building materials that contribute to carbon neutrality
4°C (status quo) scenario						
Intensification of abnormal weather	Heightened demand for infrastructure-related products in line with the intensification of abnormal weather events	<ul style="list-style-type: none"> Increase sales of building materials for infrastructure facility reinforcement in the interest of disaster prevention 	○			<ul style="list-style-type: none"> • Investigate needs domestically and abroad, and ensure stable product supply
	Growing demand for products related to infectious diseases in line with proliferation	<ul style="list-style-type: none"> Increase in sales of diagnostic equipment and reagents for infectious diseases Increase in sales of chlorine disinfectants 			○	<ul style="list-style-type: none"> ◆ Continue R&D and ensure a stable supply structure and BCP measures are in place

[Reference] Contribution of Tosoh products to the environment

Achieving our 2050 carbon neutrality target relies on our reduction of our GHG emissions through long-term measures, such as enhancing residential building insulation. The global transition to renewable energy, moreover, is accelerating the adoption of photovoltaic cells.

Tosoh efforts in both regards involve supplying materials that mitigate GHG emissions. They include PVC, polyurethane, and ethylene vinyl acetate (EVA) resins.

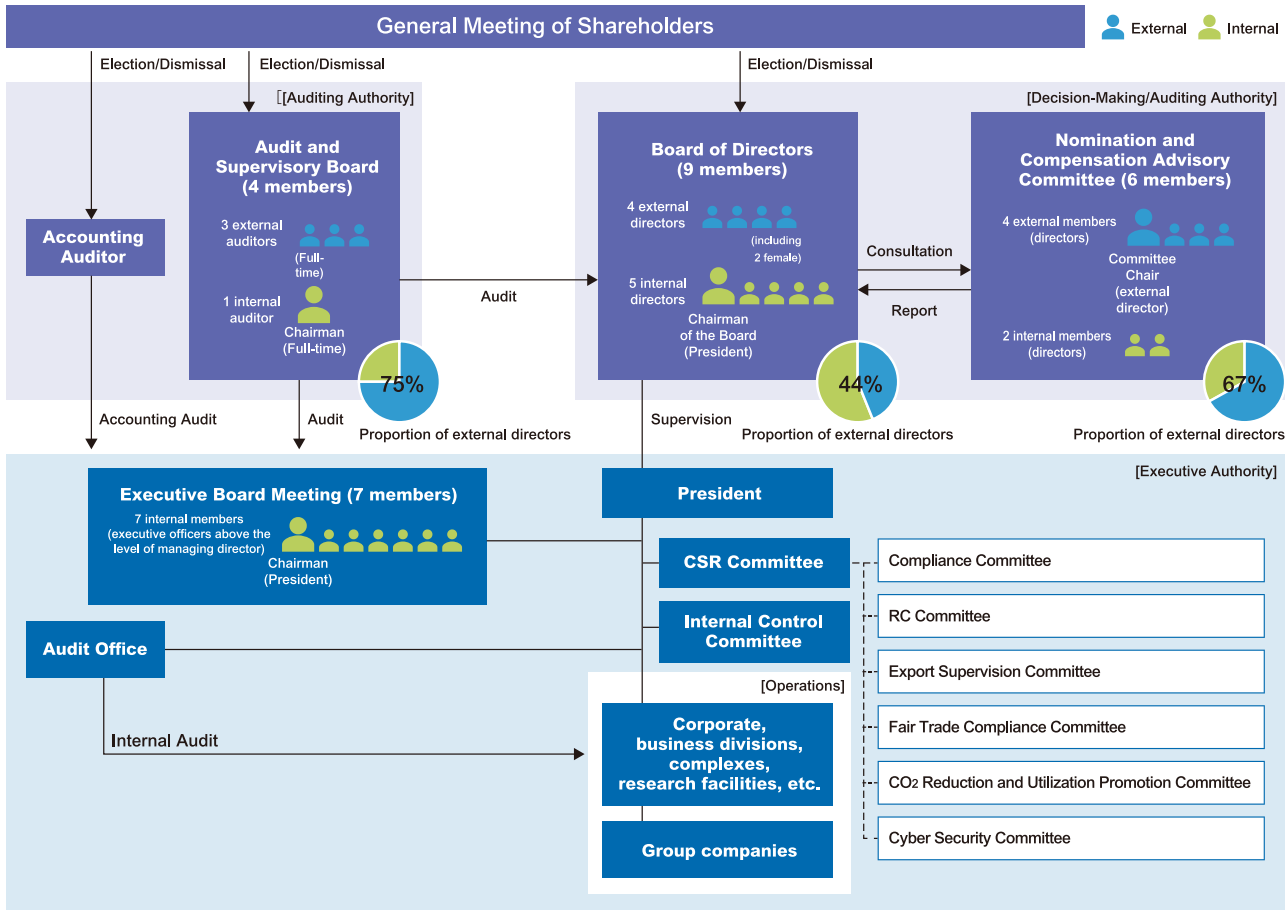
> Related pages: Social Issues Solution



Risk management

Tosoh's company-wide governance structure is shown below.

Please refer to "[Corporate Governance](#)" for an overview of company-wide committees.



Disclosing Information Based on TCFD Recommendations

Utilizing information on societal trends, and the status of consultations and discussions with the Japanese government, any potential risks posed by climate change issues are assessed through the CSR Committee by each division under its jurisdiction. The CO₂ Reduction and Utilization Promotion Committee handles comprehensive risk management related to GHG emissions reduction and effective use. Each division responsible for managing risks associated with business operations identifies the relevant risks, assesses their potential financial impact, and reports to the president. The divisions autonomously handle risk management in each day-to-day business activity under the authority of the director in charge and consult with the Board of Directors as necessary for approval and instruction. Moreover, they use our internal carbon price to formulate capital investment plans, including profitability and environmental impact. We have also adopted climate-related risk as a key CSR issue, and the CSR Committee reports progress to the Board of Directors for PDCA management.

The CO₂ Reduction and Utilization Promotion Committee promotes strategy planning, issue organization, policy formulation, research and analysis, and progress management related to CO₂ emission reduction and effective use of CO₂ as a raw chemical. The committee has also formulated a roadmap for the challenge of becoming carbon neutral by 2050, by assessing both risks and opportunities.

As a risk, Tosoh has high-efficiency cogeneration* in-house thermal power plants to secure the inexpensive and stable power needed for chemical production. If a carbon tax or emissions trading system is introduced in the future, we will incur new costs. The strategy quantitatively evaluates the impact of a company-wide carbon tax (see Strategy) and assesses how this risk affects the competitiveness of each of our products. We calculate the GHG emission intensity (carbon footprint, or CFP) of every product and the GHG emissions of the factories that produce them. This includes evaluating the potential impact on product profitability and identifying countermeasures.

If, for example, a product generates an ordinary profit of ¥10 million per kiloton of CO₂ emissions, and a carbon price of \$100 per ton-CO₂ (at an exchange rate of ¥145/\$1) is applied—whether due to a carbon tax or to user requests for emission reductions—the estimated cost burden would be ¥15 million. This would eliminate profit.

As a means of capturing opportunities, we have begun assessing the environmental contributions of existing products, and we plan to increase sales through the growing market for products and services that mitigate environmental impact. The Tosoh Group has certified its products, technologies, and services as Social Issues Solutions aimed at limiting environmental impact and improving quality of life (QOL) and more. The company develops and disseminates its solutions to contribute to establishing a sustainable society.

> Related pages: Social Issues Solution

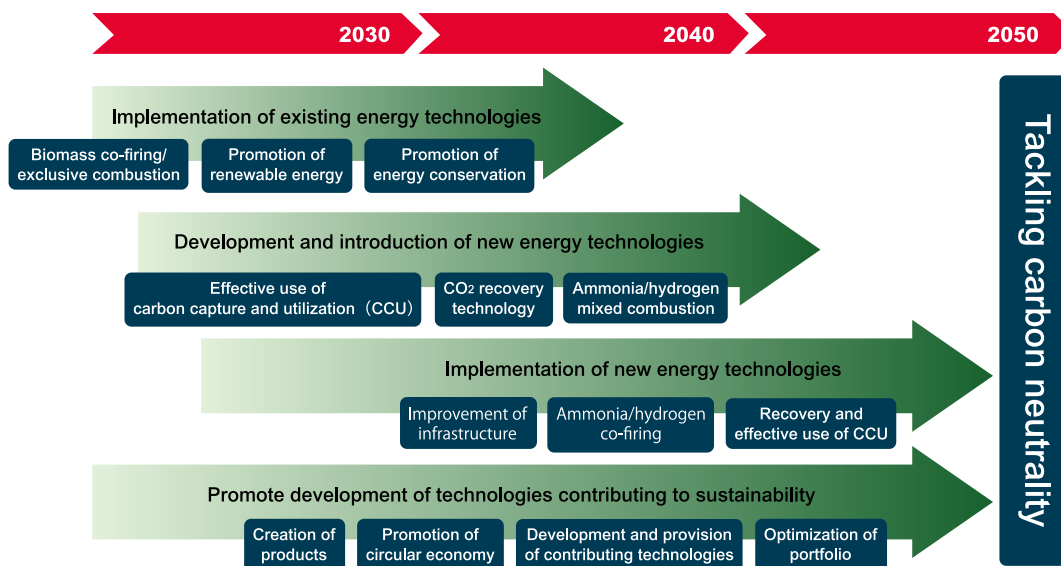
In R&D, we have designated life science, electronic materials, and environment/energy as priority fields as we work to create products and services that respond to market needs and social issues related to climate change.

* Cogeneration: A system that recovers and uses the heat produced during power generation

Assumed climate-related risks and opportunities

	Risks		Opportunities	
	Medium-term (through 2030)	Long-term (through 2050)	Medium-term (through 2030)	Long-term (through 2050)
Government policy, laws, and regulations	Increased costs from carbon prices (carbon taxes and carbon trading)		<ul style="list-style-type: none"> ● Innovation for a low-carbon/decarbonized society <ul style="list-style-type: none"> • Environmentally friendly products and services (marketing environmentally friendly products) • Offices using clean energy • Technologies for CO₂ separation, recovery, and recycling ● Making infrastructure resilient <ul style="list-style-type: none"> • Building urban infrastructure (building materials) • Building IT networks (IT materials) • Supporting comfortable lives (improving QOL) • Building business infrastructure (safe & stable supply chains) 	
Technology	Introducing cofiring technologies (hydrogen, ammonia, biomass, and waste plastic)	Introducing renewable energy		
Markets and reputation	Raw materials & energy (supply and pricing) Consumer preferences & stakeholders			
Weather	Extreme weather (wind damage, heavy rains, drought)	Persistent damage (rising temperatures and sea levels)		

Roadmap for 2050



Indicators and targets

GHG emission targets

Climate change is becoming a social issue of great interest worldwide. The need to raise GHG emission reduction targets is at the heart of this issue. In response to the Japanese government's October 2020 declaration of carbon neutrality by 2050 and reestablishment of GHG emission reduction targets for fiscal 2031, Tosoh reviewed its previous target for fiscal 2026 (non-consolidated BAU* emissions against the fiscal 2014 baseline) and formulated a new GHG emission reduction policy for the entire Tosoh Group in January 2022.

GHG emissions reduction policy

- Cutting GHG Emissions (Scope 1+2) by 30% compared to fiscal 2019 by fiscal 2031
- Tackling becoming carbon neutral by 2050

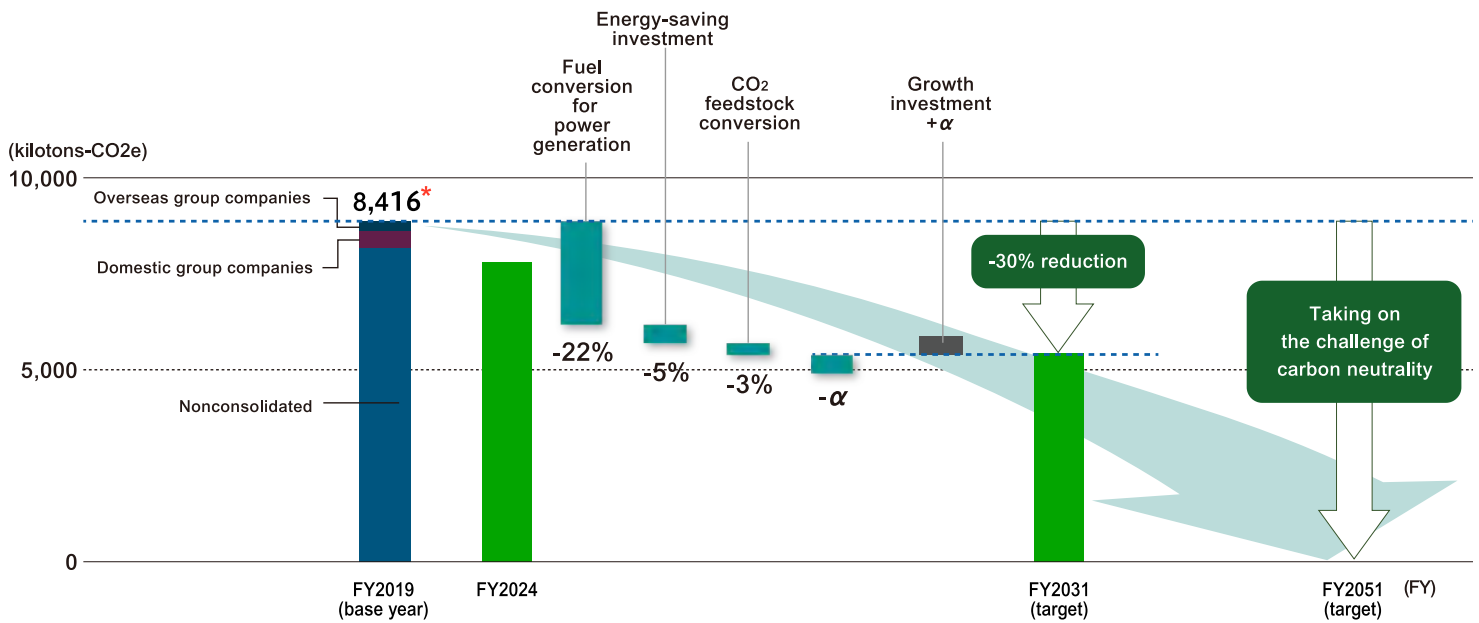
In March 2023, the Japan Chemical Industry Association (JCIA), of which Tosoh is a member, set the following target for fiscal 2031 to achieve carbon neutrality by 2050:

- 32% reduction (compared to fiscal 2014) by fiscal 2031

Tosoh's new target aligns with the JCIA's latest target. As a member company, we will also help achieve industry targets.

* Business As Usual (BAU) emissions = production volume x CO₂ intensity in the reference year

Tosoh Group GHG Emissions Reduction Plan



* Review due to revisions to the Act on the Rational Use of Energy and to the Act on Promotion of Global Warming Countermeasures

Climate-related indicator categories

1. GHG emission (result)	GHG emission in fiscal 2024: Refer to “GHG Emissions and Energy Use Results”
2. Transition risks	Government policies and regulations concerning carbon pricing and other issues, progress in introducing renewable energy (shifting to new fuels) and other technological innovations, and markets and reputation related to consumer preferences
3. Physical risks	Operational shutdowns or logistics delays (in purchasing and shipping) due to extreme weather (including flooding or storm surges)
4. Opportunities from climate change	Building business infrastructure to stably supply environmentally friendly products and services, or urban infrastructure-related products and materials
5. Capital allocation	Plans to invest ¥120 billion in climate change-related investments by fiscal 2031 and ¥60 billion by fiscal 2027 (based on final investment decisions)
6. Internal carbon price	Tosoh applies an internal carbon price system (¥6,000/t-CO ₂) to promote capital investment that helps cut GHG emissions.
7. Compensation	Refer to “Corporate Governance”



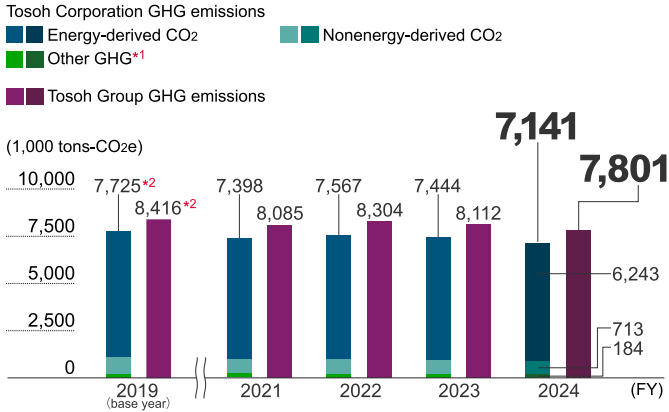
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GHG Emissions and Energy Use Results

GHG emissions (Tosoh Group)

The Tosoh Group's GHG emissions (Scope 1+2) in fiscal 2024 totaled 7.801 million tons CO₂e, a decrease of 311,000 tons CO₂e from fiscal 2023.

The decrease results from reduction measures and market conditions. We are actively promoting capital investment for fuel and energy conservation in order to achieve our target of reducing energy-derived CO₂ emissions, which constitute the majority of our emissions.



All GHG emissions are calculated using our Calculation, Reporting, and Publication Systems for Greenhouse Gas Emissions.

We have these calculations to include the manufacturing and logistics sites of 53 domestic and overseas group companies, using formulas for adjusted greenhouse gas emissions.

*1 "Other GHG" represents the total emissions for N₂O, CH₄, SF₆, and HFC.

*2 Review due to revisions to the Act on the Rational Use of Energy and to the Act on Promotion of Global Warming Countermeasures

Scope-specific GHG emissions (Tosoh Group)

To understand the greenhouse gas (GHG) emissions across the entire supply chain of the Tosoh Group, emissions are calculated by scope.

(1,000 tons-CO₂e)

	Fiscal 2019 (base year)	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024
Scope 1*1	7,881*2	7,588	7,787	7,645	7,333
Scope 2*1	535	496	518	467	468
Scope 1+2	8,416*2	8,085	8,304	8,112	7,801

*1 We have these calculations to include the manufacturing and logistics sites of 53 domestic and overseas group companies, using formulas for adjusted greenhouse gas emissions. Additionally, greenhouse gas emissions derived from waste fuel are not included here but are listed separately.

*2 Review due to revisions to the Act on the Rational Use of Energy and to the Act on Promotion of Global Warming Countermeasures.

Calculated values for Scope 3 emissions

(1,000 tons-CO_{2e})

	Category	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024
1	1 Purchased products and services	2,787	2,623	2,940	2,657	2,716
2	2 Capital goods	193	139	125	155	110
3	3 Fuels and energy-related activities not included in Scope 1 + 2	1,306	1,287	1,359	1,066	1,012
4	4 Transportation/delivery (upstream)	522	423	446	421	411
5	5 Waste from business	17	16	19	17	17
6	6 Business travel	16	2	3	10	18
7	7 Employee commuting	11	12	14	14	11
8	8 Leased assets (upstream)	–	–	–	–	–
9	9 Transportation/delivery (downstream)	–	–	–	–	–
10	10 Sold product processing	–	–	–	–	–
11	11 Sold product use	148	156	150	73	119
12	12 Sold product waste	2,066	1,938	1,984	1,477	1,419
13	13 Leased assets (downstream)	–	–	–	–	–
14	14 Franchises	–	–	–	–	–
15	15 Investments	–	–	–	–	–
	Total	7,066	6,596	7,039	5,891	5,834

Scope 1: Direct emissions from fuel combustion and plant operation by Tosoh.

Scope 2: Indirect emissions from electricity and heat supplied by other companies.

Scope 3: Other indirect emissions (emissions from mining and transportation of raw fuel; transportation, use, and disposal of products; and employee commuting and business travel).

For calculation method and emission coefficient, please refer to the [Tosoh Group calculations of greenhouse gas emissions and emission coefficient source database](#).

Use of waste as energy

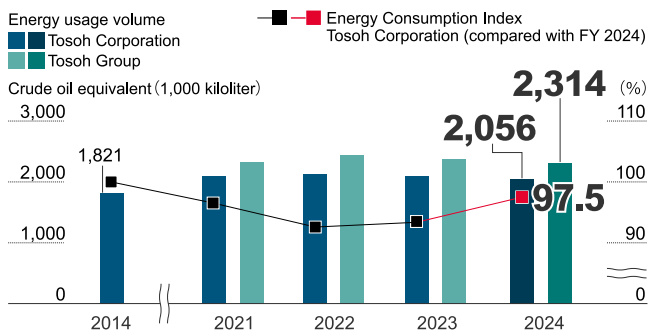
Tosoh is promoting the use of energy from both internally and externally generated waste. We are striving to reduce consumption of fossil fuels by effectively utilizing waste oil, waste liquids, general waste plastics, and industrial waste generated through processes such as fuel manufacture. The standard used to collect activity data and calculate emissions is the Act on Promotion of the Measures to Cope with Global Warming (Japan, revised 2005). Moreover, the emission coefficient is calculated using an adjusted coefficient that takes into account the use of electricity from renewable sources. The adjusted GHG emissions calculation does not include emissions from waste used as energy.

(1,000 tons-CO₂e)

	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024
Waste fuel-derived GHG emissions	49	50	55	41	48

Energy consumption index of energy used (Tosoh Group)

Tosoh's energy intensity index for fiscal 2024 was 97.5% compared with fiscal 2014. Energy efficiency fell by 4.1 percentage points compared with fiscal 2023, due to lower energy efficiency stemming from decreased production volume and other factors.



Energy consumption (in 1,000 kiloliters of crude oil equivalent) was until year-end fiscal 2023 calculated by adding the energy consumed from biomass to the figures derived under the Act on the Rational Use of Energy. Starting in fiscal 2024, the calculations are based on the Act on Rationalization of Energy Use and the Shift to Nonfossil Energy. The energy consumption index compared with fiscal 2014 is calculated using the methodology outlined in the Act on the Rational Use of Energy. When calculating energy consumption specifically for Tosoh Corporation, we deduct the energy sold to other firms.

Logistics-related CO₂ emissions and basic energy unit

In fiscal 2024, Tosoh's CO₂ emissions from logistics increased 0.36% compared with fiscal 2023. The logistics energy intensity was 19.2, an improvement of 6.8% over fiscal 2023.*1 The improvement in the basic unit was due to an increase in the vessel ton-kilometer ratio and a decrease in the truck ton-kilometer ratio.

To reduce CO₂ emissions, we are continuously promoting energy efficiency through a modal shift in transport that sees us promoting marine and rail transport and improving transportation fuel efficiency. In March 2022, the caustic soda carrier Toyo Maru received the highest rating for domestic vessels under the Ministry of Land, Infrastructure, Transport and Tourism's energy conservation rating system.

Hull improvements (hardware)

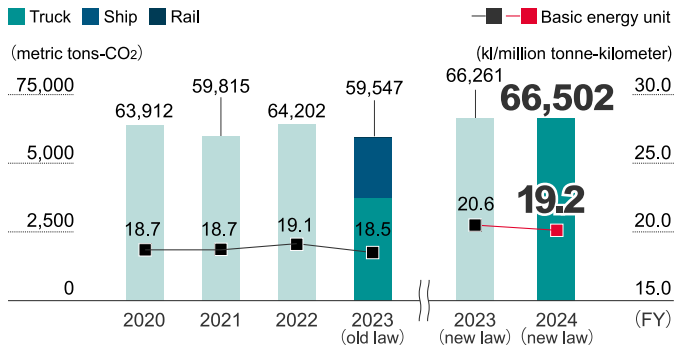
- Reduced viscous drag
- Suppressed wave-making drag
- Improved propeller efficiency

Operational support and cooperation (software)

- Operational data management
- Reduced energy loss from slow steaming
- Demonstration project for improving domestic vessel operational efficiency*2

*1 Logistics energy intensity = crude oil equivalent consumption (ko) / transported ton-kilometer (million tons-kilometer)

*2 We assess the effect of energy-saving operations by monitoring vessel data before and after sailing, using forecasting information provided by tablet devices equipped with ocean tide and current forecasts.



Tosoh Group Greenhouse Gas emissions calculation method

【Scope of aggregation】

Tosoh: Nanyo Complex, Yokkaichi Complex, Tokyo Research Center, head office & branch offices

Domestic group companies (34): Hokuetsu Kasei Co., Ltd., Rensol Co., Ltd., Toyo Polymer Co., Ltd., Sankyo Chemical Industry, Inc., Ace Pack Co., Ltd., Tohoku Tosoh Chemical Co., Ltd., Minamikyushu Chemical Industry Co., Ltd., Taiyo Vinyl Corporation*1, Plas-Tech Corporation, Taihei Chemicals, Ltd., Asia Industry Co., Ltd., Nippon Miractran Co., Ltd., Tosoh Finechem Corporation, Tosoh Hi-Tec, Inc., Tosoh AIA, Inc., Tosoh Hyuga Corporation, Tosoh Ceramics Co., Ltd., Tosoh Zeolum, Inc., Tosoh Silica Corporation, Tosoh Speciality Materials Corporation, Tosoh Quartz Corporation, Tosoh SGM Corporation, Rin Kagaku Kogyo Co., Ltd., Organo Corporation, Organo Food Tech Co., Ltd., Tosoh Logistics Corporation*2, Koun Industry Co., Ltd.*2, Keiyo Koun Corporation*2, Koun Marine Co., Ltd.*2, Yokkaichi Koun Corporation*2, Kansai Kaiun Co., Ltd.*2, Yamaguchi Koun Corporation*2, Toho Unyu Co., Ltd.*2, Hyuga Unyu Co., Ltd.*2

Overseas Group companies (19): Tosoh (Guangzhou) Chemical Industries, Inc., Philippine Resins Industries, Inc., Tosoh Polyvin Corporation, Mabuhay Vinyl Corporation, P.T. Standard Toyo Polymer, Tosoh (Ruian) Polyurethane Co., Ltd., Tosoh (Shanghai) Polyurethane Co., Ltd., Tosoh Bioscience LLC, Tosoh SMD, Inc., Tosoh SMD Korea, Ltd., Tosoh SMD Shanghai Co., Ltd., Tosoh Quartz, Inc., Tosoh Quartz Co., Ltd., Tosoh Quartz Korea Co., Ltd., Tosoh Namhae Silica Corporation, Tosoh Advanced Materials Sdn. Bhd., Tosoh Hellas Single Member A.I.C., Tosoh Logistics Warehouse Co., Ltd., *2 Oriental Marine Corporation*2, *3

*1 Yokkaichi Plant data is included within that of the Yokkaichi Complex.

*2 Logistics Group companies

*3 Included in Tosoh Logistics Corporation

【Target of calculation】

The calculation includes manufacturing and logistics bases of domestic and overseas group companies, and excludes offices located independently.

【Calculation method】

In the calculation of GHG emissions from fiscal 2022 onward, in addition to the above expansion of the scope of aggregation and handling of calculation targets, the calculation method is based on adjusted GHG emissions. Therefore, the emission factors for electricity are based on adjusted emission factors and do not include waste fuel-derived GHGs, which are listed separately.

Category	Definitions & calculation formulas
Energy consumption	Calculations include Tosoh Corporation, Japanese group companies, and overseas group companies. Energy consumption is based on the Act on Rationalization of Energy Use and the Shift to Nonfossil Energy. It involves multiplying the amount of each fuel used and the amount of power and steam purchased from outside the group (all physical data) for the relevant year by the calorific value of each fuel unit specified by the Energy Conservation Act and the conversion coefficient (1 gigajoule = 0.0258 kL of crude oil equivalent). The amount of biofuel-derived energy consumed was calculated by multiplying the volumes of biofuels used in a fiscal year (obtained from logistics data) by the calorific value of each fuel unit. The calorific value of biofuels for wood was determined according to the Act on Promotion of Global Warming Countermeasures and was obtained individually for other fuels used.
CO ₂ emissions from energy sources	The scope of aggregation encompasses Tosoh Corporation as well as domestic and overseas group companies. Based on the Act on Promotion of Global Warming Countermeasures, the total was the sum of the calculated values using the equations below: <ul style="list-style-type: none"> ● Volume of each fuel used in the relevant fiscal year (physical data) X the unit calorific value of each fuel X the emission factor of each fuel ● Volume of electricity purchased externally X emission factor for electricity ● Amount of steam purchased externally X steam emission factor The unit calorific value and emission factor specific to each fuel are based on the calculation, reporting, and publication system of the Anti-Global Warming Act. In Japan, the emission factor for electricity uses the values for each electricity provider and plan for the relevant fiscal year. Emission factors for electricity overseas are the fiscal 2022 values for each country listed in the 2023 edition of Emissions Factors published by the International Energy Agency (IEA). Emission factors for steam overseas is the value from Source 1.
CO ₂ greenhouse gas emissions from non-energy sources and non-CO ₂ greenhouse gas emissions	Calculations include Tosoh Corporation, Japanese group companies, and overseas group companies. Calculation formulas, calorific values, emission coefficients, and global warming potential are based on the calculation, reporting, and publication systems prescribed in the Anti-Global Warming Act.

GHG Emissions and Energy Use Results

Category	Definitions & calculation formulas
<p>Calculated using [From activities] x [Emission coefficient] based on the following approach:</p>	
<p>【Category 1】 Purchased products and services</p>	<p>Calculations include Tosoh Corporation, Japanese group companies (excluding Organo Corp.), and overseas group companies. (1) Companies in the above calculations except the Tosoh Logistics Group companies [From activities] The amount of primary raw materials procured by each group company from outside the group (total shown in the Input/Output column of the Tosoh Report; physical data) [Emission coefficient] Uses values from (Source 1) (2) Tosoh Logistics Group companies [From activities] Repair and maintenance costs [Emission coefficient] Uses values from (Source 2)</p>
<p>【Category 2】 Capital goods</p>	<p>Calculations include Tosoh Corporation and all 93 domestic and overseas Tosoh Group companies. [From activities] The asset value of buildings and structures, machinery and equipment, vessels, vehicles, tools, furniture, fixtures, and land purchased or acquired during the given fiscal year (monetary data) [Emission coefficient] Uses values from (Source 2)</p>
<p>【Category 3】 Fuels and energy-related activities not included in Scope 1+2</p>	<p>Calculations include Tosoh Corporation, Japanese group companies, and overseas group companies. [From activities] Fuel used by type for Tosoh Corporation and group companies, power and steam purchased from outside the group (all physical data) [Emission coefficient] Uses (Source 1) for fuels and (Source 2) for the emission coefficient of purchased power and when purchasing steam fuels</p>
<p>Scope 3 Greenhouse gas emissions</p>	<p>The scope of aggregation encompasses Tosoh Corporation, Japanese group companies (excluding Organo Corporation and logistics group companies), and overseas group companies (excluding logistics group companies). (1) Transportation of raw materials [Activity level] Volumes (physical data) of major raw materials used by Tosoh Corporation and Group companies (total volumes are shown in the Input/Output section on the website (Environmental Protection)), and transportation distances from the suppliers of each raw material to Tosoh Corporation and Group companies. <ul style="list-style-type: none"> ● Assumed standard transportation distances for domestic procurement: 500 km for land, and 1,000 km for marine ● For international marine transportation, values from Citation 1 are used for transportation distances [Emission factors] Uses values from (Source 1)</p>
	<p>(2) Product delivery ① Domestic transportation <ul style="list-style-type: none"> ● Tosoh Corporation: Reported values under the Act on the Rational Use of Energy and the Known Shipper/Regulated Agent system ● Group companies [Activity level] Product shipment volume (quantity data) and transportation distance for each Group company. Assumes uniform standard transportation distances of 500 km for land and 1,000 km for marine. [Emission factors] Uses values from (Source 1) ② International Transportation Activity level: Product shipment volume (physical data) and transportation distance for Tosoh Corporation and Group companies. Transportation distances are based on the values in Source 1. [Emission factors] Uses values from (Source 1)</p>

GHG Emissions and Energy Use Results

Category		Definitions & calculation formulas
Scope 3 Greenhouse gas emissions	<p>[Category 5] Waste from business</p>	<p>Calculations include Tosoh Corporation and Japanese group companies. [From activities] The amount of industrial waste generated by Tosoh Corporation and Japanese group companies and incinerated, landfilled, or recycled outside the group (physical data) [Emission coefficient] Uses values from (Source 2)</p>
	<p>[Category 6] Business trips</p>	<p>Calculations include Tosoh Corporation, and all 93 domestic and overseas Tosoh Group companies. [From activities] Tosoh Corporation's business trip expenses for the given fiscal year (categorized as domestic travel expenses [rail], Japanese taxi fares, and international travel expenses [international flights]) (financial data) Group companies use representative values calculated based on the personnel count ratio to Tosoh Corporation [Emission coefficient] Uses values from (Source 2)</p>
	<p>[Category 7] Employee commuting</p>	<p>Calculations include Tosoh Corporation, and all 93 domestic and overseas Tosoh Group companies. [From activities] Tosoh Corporation's commuting expenses for the given fiscal year (categorized as commuter pass expenses [rail] and gasoline expenses [personal vehicles]) (financial data) Group companies use representative values calculated based on the personnel count ratio to Tosoh Corporation [Emission coefficient] Uses values from (Source 2) for rail and from (Source 1) for personal vehicles</p>
	<p>[Category 8] Leased assets (upstream)</p>	<p>The assets in question are trivial and therefore excluded from calculations as their associated emissions impact is negligible.</p>
	<p>[Category 9] Transportation/delivery (downstream)</p>	<p>Emissions from product transportation are calculated in Category 4. Downstream emissions other than those generated during product transportation are excluded from the calculation because it is difficult to reasonably calculate emissions from diverse, complex transportation and delivery modes.</p>
	<p>[Category 10] Sold product processing</p>	<p>The Tosoh Group's products are mainly materials and components that require various forms of processing before being utilized by end users. Therefore, reasonably estimating the type or scale of processing methods is challenging. As a result, we excluded these metrics from the calculations based on the WBCSD's Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain.</p>
	<p>[Category 11] Sold product use</p>	<p>Calculations include Tosoh Corporation. Assumes that butane fractions and other products are used as fuel [From activities] Sales volume of recovered residual oil and other products (physical data) [Emission coefficient] The value set in the Anti-Global Warming Act</p>

GHG Emissions and Energy Use Results

Category		Definitions & calculation formulas
Scope 3 Greenhouse gas emissions	[Category 12] Sold product waste	<p>Calculations include Tosoh Corporation, Japanese group companies (excluding Organo Corp. and Tosoh Logistics Group companies), and overseas group companies (excluding Tosoh Logistics Group companies).</p> <p>Assumes that all products produced by the group in the given fiscal year became waste, based on the estimated form of the final products in which the products of Tosoh Corporation and its group companies are used as raw materials.</p> <p>Based on the WBCSD's Guidance on Accounting and Reporting of Corporate GHG Emissions in the Chemical Sector Value Chain, we basically used the default coefficients of 80% landfill and 20% incineration, of which cinders, waste acids, waste alkalis, scrap metal, glass ceramic waste, mineral dust, debris, soot, and dust were landfilled 100%.</p> <p>[From activities]</p> <p>Production volume (excluding anything consumed within the group; physical data)</p> <p>[Emission coefficient]</p> <p>Disposal methods (including landfill and incineration): Uses values from (Source 1)</p> <p>Waste transportation: Uses values from (Source 2)</p>
	[Category 13] Leased assets (downstream)	The assets in question are trivial and therefore excluded from calculations as their associated emissions impact is negligible.
	[Category 14] Franchises	No emissions since the group conducts no franchising.
	[Category 15] Investments	Tosoh Corporation's holdings in all non-group companies are intended to help develop and maintain business relationships. They are limited to important clients and suppliers. The product of Tosoh Corporation's holdings multiplied by the GHG emissions of each company is small and therefore excluded from the calculation, as the impact on the Tosoh Group is negligible.

Emission coefficient source databases

Source 1	<p>The IDEA LCI database (from the National Institute of Advanced Industrial Science and Technology [AIST] and the Sustainable Management Promotion Organization [SuMPO])</p> <p>Ver. 2.2 up to and including fiscal 2019, ver 2.3 for fiscal 2020–2022, ver 3.3 for fiscal 2023 and ver 3.4 for fiscal 2024</p>
Source 2	<p>Emission Unit Value Database for Accounting of Greenhouse Gas Emissions by Organizations Throughout the Supply Chain (from the Ministry of the Environment and the Ministry of Economy, Trade and Industry)</p> <p>Ver. 2.6 up to and including fiscal 2019, ver 3.0 for fiscal 2020, ver 3.1 for fiscal 2021, ver 3.2 for fiscal 2022, ver 3.3 for fiscal 2023, and ver 3.4 for fiscal 2024</p>



ENVIRONMENT

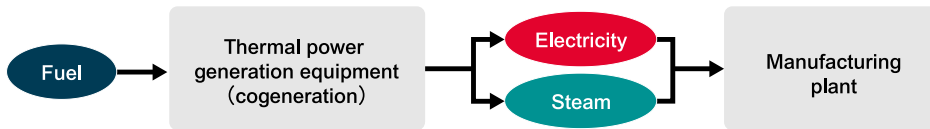
Initiatives to Cut GHGs

Tosoh implemented many initiatives in fiscal 2023, including reducing and contributing to GHG emissions and making effective use of CO₂. We will also introduce our partnerships with the local industrial complex and participation in contribution activities.

Shifting to new fuels for our in-house thermal power plants at the Nanyo Complex

Manufacturing chemicals requires energy and significant volumes of steam. Tosoh effectively uses the steam generated by its thermal power plants. Despite being subcritical boilers, the steam output and overall efficiency of these plants are higher than those of ultra-supercritical steam generators. * Thus, Tosoh's cogeneration in-house thermal power plants ensure effective energy utilization and stable plant operations. We are also investigating ways to reduce emissions further, including increasing the ratio of biomass fuels and waste plastics in the cofiring process.

* Power generation efficiency: Subcritical: 38% or less, supercritical: 38%–40%, and ultra-supercritical: 41%–43%. Steam turbine power generation has higher efficiency due to the increased temperatures and pressure from steam.



Building a new biomass power plant

Tosoh decided to build a new power plant that uses primarily biomass fuel at its Nanyo Complex in Shunan, Yamaguchi.

The existing thermal power plant at our Nanyo Complex uses mainly coal, however the new plant will use waste fuels such as construction waste and RPF* alongside wood-based fuels. While effectively using a variety of waste materials as fuel, it will also reduce greenhouse gas emissions. In the future we aim to burn biomass exclusively, thereby reducing CO₂ emissions by approximately 500,000 tons annually.

* An abbreviation for refuse-derived paper and plastic-densified fuel, a solid fuel made from waste paper and plastic.



Biomass power plant fuels

Actively using biomass fuels in production

We are working to reduce energy-derived CO₂ emissions by using biomass fuel as a substitute for coal in our in-house thermal power plants at the Nanyo Complex. In fiscal 2024, we used approximately 28,000 tons of biomass fuel, cutting about 33,000 tons*¹ of CO₂ emissions. In January 2021, Tosoh signed an agreement with Izumi Sangyo Co., Ltd. and Yamaguchi Prefecture's Shunan City, for the use of wood pruned from trees at public facilities in Shunan City as fuel for private thermal power plants at the Nanyo Complex. At the Shunan Biomass Center, Izumi Sangyo produces woody biomass fuel chips from trees pruned at public facilities in Shunan City. Tosoh cofires these chips with coal at our in-house thermal power plants, thereby reducing greenhouse gas (GHG) emissions.

We also utilize biomass fuel at some of our overseas group companies, resulting in a reduction of approximately 31,000 tons*² of CO₂ emissions in fiscal 2024.

*¹ Calculated using the calorific values of wood and fuel coal and the emission coefficient of fuel coal as stipulated in the Act on Promotion of Global Warming Countermeasures (the "Anti-Global Warming Act").

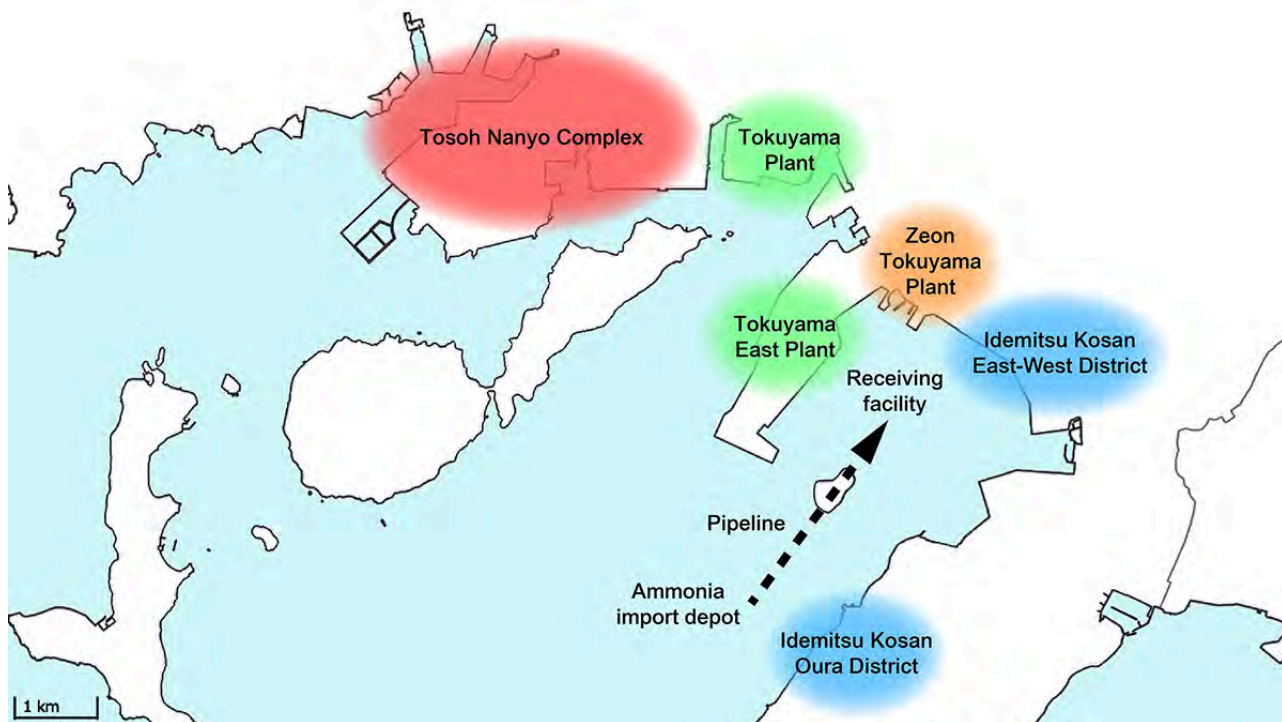
*² Calculated using the calorific values of wood and crude oil and the emission coefficient for fuel coal as stipulated in the Anti-Global Warming Act.

Project for fundamental research toward building an ammonia supply center at the Shunan Industrial Complex

Tosoh, along with three other companies from the Shunan Industrial Complex, was chosen by the Ministry of Economy, Trade and Industry and the Agency for Natural Resources and Energy to receive subsidies to promote non-fossil fuel-based energy as part of the Support Project for Establishment of Hydrogen and Fuel Ammonia Supply Center at Industrial Complex.

The project aims to establish a carbon-free ammonia supply system with an annual capacity of over one million tons by 2030, and includes an ammonia-firing proof-of-concept trial in an operational facility.

In partnership with Shunan City and the Society of Chemical Engineers, Japan (SCEJ), we aim to achieve a carbon-neutral industrial complex by 2050.



Ammonia fuel supply and demand

Separating, recovering, and effectively utilizing CO₂

CO₂ recovery amine

As the trend toward decarbonization gains momentum, demand for CO₂ capture systems is seen increasing. Among these, chemical absorption systems in particular are suitable for recovering CO₂ from fossil fuel boiler exhaust gases, but there is the issue of their durability against NO_x in combustion exhaust gases.

Tosoh has developed a high-performance CO₂ recovery amine with superior NO_x tolerance that can be used to recover CO₂ from combustion exhaust gases when fossil fuels are employed. The company's CO₂ recovery amine is forecast to be applied to a vast range of combustion exhaust gases and its high NO_x resistance and its excellent energy-saving performance should make possible stable use over the long term.

Furthermore, for practical use, Tosoh introduced a CO₂ recovery demonstration test facility at the Nanyo Complex in 2022, and is working toward optimization, including the system itself.



CO₂ Recovery PoC Trial Facility

As a first step in the practical application of this technology, we decided to install a CO₂ recovery and raw material conversion facility at the Nanyo Complex. The plan is to recover carbon dioxide (CO₂) from facilities that produce naphtha-derived carbon monoxide (CO) and use this CO₂ as a raw material for isocyanate products, one of our flagship products.* Operations are scheduled to start around autumn 2024.

The new facility will recover approximately 40,000 tons of CO₂ per year from firing emissions and effectively use it as a raw material for CO production. The switch from naphtha to CO₂ will lower the carbon content of our isocyanate products.

We will eventually achieve both CO₂ reductions and effective CO₂ utilization through commercial-scale facilities operations, while further improving performance and promoting external sales of CO₂-capture amine-based solutions.

We will continue working toward a carbon-neutral society by embracing innovation, while leveraging our technological expertise and the experience we have amassed over the years.

* Polyurethane made from MDI and other materials



Isocyanate raw material production facility (CO plant)

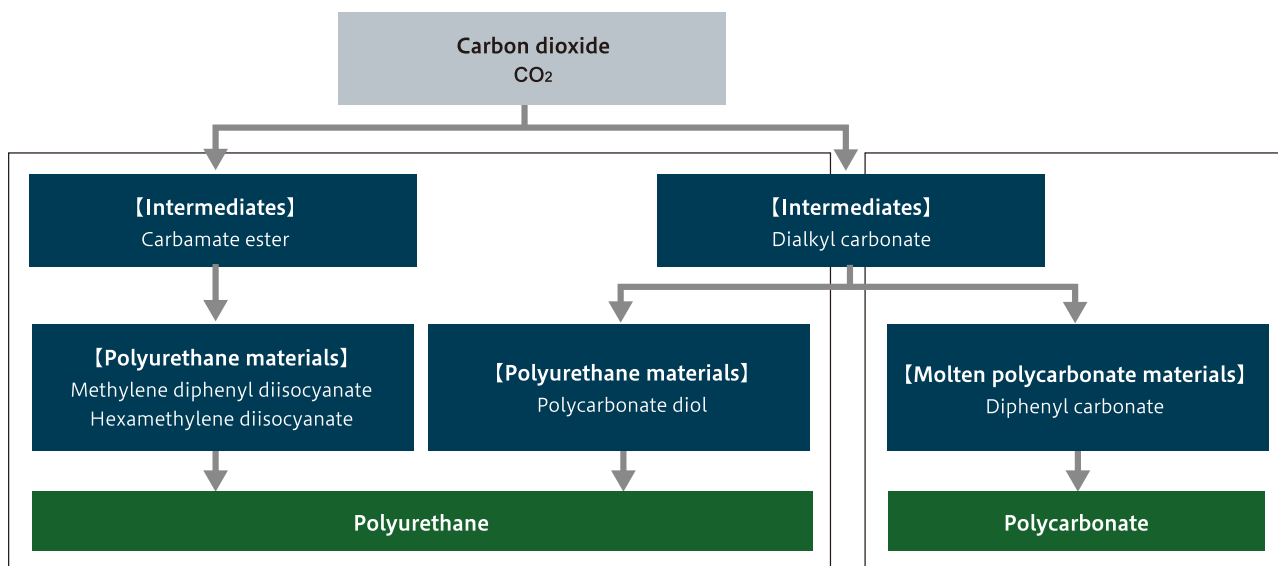
Producing functional chemicals made from CO₂

Tosoh took the lead in a joint research partnership with other companies, universities, and national laboratories. The New Energy and Industrial Technology Development Organization (NEDO) selected this collaboration for the Green Innovation Fund Project.

With a focus on developing manufacturing technology for functional plastic materials using CO₂ as raw material, the project aims both to reduce CO₂ emissions in the manufacturing process of polycarbonate and polyurethane by 2030, and to realize a technology that can use CO₂ as a raw material. The ultimate goal is to improve plastic functionality and achieve production costs equivalent to existing products through a pilot trial.

We believe that our efforts to reduce GHG emissions will lead to medium- and long-term business growth. We will work toward realizing a sustainable society by developing technologies for effectively using CO₂.

Business Vision



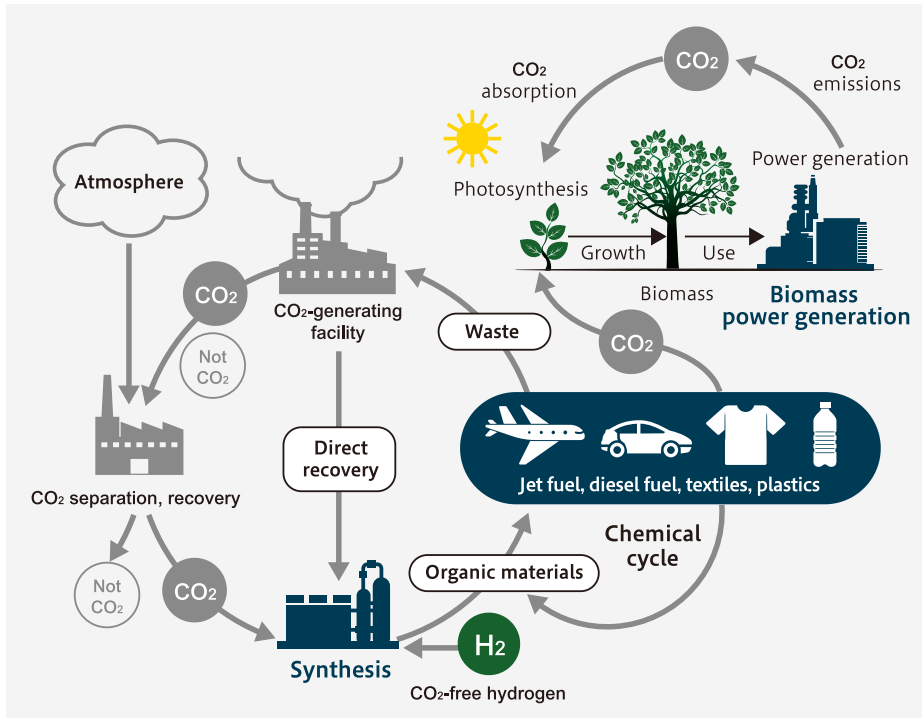
Resource recycling (carbon recycling)

Addressing climate change requires accelerating the transition to a circular economy, and boldly promoting a sustainable and resilient society while transitioning to a decarbonized economy.

In the drive to become carbon neutral by 2050, CO₂ separation, recovery, and effective use (including using it as a raw material for chemicals) and material resource recycling (including recycling plastic materials and chemicals) promise to be critical technologies in cutting GHG emissions and becoming carbon negative.

In addition to the chemical absorption provided by CO₂ capture amines, Tosoh is working to develop an efficient CO₂ separation and recovery process using CO₂ filtration membranes. We also promote technologies to effectively use carbon, including direct CO₂ recovery from combustion exhaust gas, as we develop carbon recycling technologies.

Moreover, we are actively developing process technologies for plastic resource recycling through joint research with national research institutes and fellow companies, helping realize a circular economy.



Introducing renewable energy

Tosoh Corporation, together with our domestic and overseas group companies, actively promotes the introduction of renewable energy sources, including solar power generation; hydroelectric power generation; and custom power contracts.

Overview of Tosoh Hi-Tec's solar power generation system

Tosoh Group company Tosoh Hi-Tec, Inc., has installed a solar power generation system. That system became operational on January 29, 2024.

The system was installed on the roof of the company's Fukugawa plant. It has a maximum output of 750 kW dedicated to in-house use. The plant is projected to consume approximately 840 MWh annually. That is about 30% of the total electricity required by the Fukugawa district, where the Fukugawa plant and the TRC plant are located, and equivalent to the electricity consumed by around 230 typical, four-person households with an average consumption of 10 kWh a day.

Tosoh Hi-Tec's solar system is expected to reduce CO₂ emissions some 438 metric tons a year. The company's adoption of solar power expands Tosoh's use of renewable energy and furthers our efforts to mitigate climate change and to develop a sustainable society.



Solar power system

Using hydroelectric power at MVC

Tosoh Group's Mabuhay Vinyl Corporation (MVC; located in Makati, Philippines) decided to increase the production capacity of its electrolysis facility and that of chlorine derivatives hydrochloric acid and liquid chlorine. As part of this plan, the company will reduce its carbon dioxide emissions by cutting steam and power consumption and further improving its energy use efficiency (i.e., increasing the use of renewable energy) before the planned capacity increase.

Demand for caustic soda is growing in many industries in the Philippines, particularly from the food sector where it is used for cleaning. This demand promises steady growth into the future. Chlorine demand is also growing, for disinfecting the water and sewage systems which are focal points of the country's developing infrastructure; and for use as bleaching agents. Against this backdrop, MVC will increase the production capacity of its electrolysis facilities and establish a stable supply chain to meet the country's growing demand for caustic soda and chlorine derivatives. However, electrolysis facilities are energy-intensive, which raises concerns about increased GHG emissions. MVC strives to reduce GHG emissions by using renewable energy from hydroelectric power plants, which make use of the area's abundant water resources.

The Tosoh Group will keep working to bolster earnings and reduce GHG emissions by leveraging the robust and expanding demand in the Asian region.

Capital investment in energy conservation

One of the basic policies of our new medium-term management plan is to make a group-wide effort to reduce and effectively utilize CO₂ emissions, since Tosoh sees energy conservation as a social responsibility that requires ongoing investment.

- Upgrading caustic soda electrolysis to save energy (Nanyo and Yokkaichi complexes)
- Installing advanced control systems for ethylene plants (Yokkaichi Complex)
- Installing gas turbines and improving efficiency in naphtha cracking furnaces (Yokkaichi Complex)
- Installing state-of-the-art turbines and rotors in in-house thermal power plants (Nanyo Complex)
- Installing optimized load balancing systems in power plants (Nanyo Complex)
- Making ongoing capital investment to increase the ratio of biomass fuel cofiring (Nanyo Complex)

We will keep accelerating our reduction of energy-derived CO₂ emissions by promoting energy conservation through equipment upgrades at our energy-intensive plants.



Gas turbine

Effectively using cement plant waste

The Tosoh Nanyo Complex's cement plant effectively utilizes both internal and external waste to produce cement and thermal energy. We accept and process approximately 19,000 tons of plastic waste, automobile shredder residues (ASR), and shredder residues (SR) of scrap home appliances as fuel for thermal energy, reducing the CO₂ generated from fossil fuels by approximately 48,000 tons (for fiscal 2024).



Cement plant

Helping reduce CO₂ by licensing energy-saving technologies

Caustic soda electrolysis

Caustic soda is produced by electrolyzing raw materials using ion-exchange membranes (IM).

As Japan's largest producer using IM-based sodium chloride electrolysis, Tosoh jointly developed an energy-saving electrolyzer in 1995. We have been continually improving this technology ever since, and license it to companies in Japan and abroad thus helping them conserve energy.

Licensees span enterprises in Japan and 35 other countries, for caustic soda production of approximately 21 million tons with reduced CO₂ emissions. In fiscal 2024, CO₂ reductions facilitated by these licenses (solely from caustic soda production transitioned from mercury and diaphragm-based processes) rose to an estimated 580,000 tons (for caustic soda production of approximately 2 million tons).*

* Estimated based on the energy saved from shifting from the mercury and diaphragm processes to Tosoh's IM-based sodium chloride electrolysis technology for the expected production of licensees. The CO₂ emission coefficients for power by country are those in the 2023 edition of the IEA CO₂ Emissions Factors.



New caustic soda electrolyzer

VCM heat recovery device

Vinyl chloride monomer (VCM), a raw material for PVC resin, is produced through the thermal decomposition of ethylene dichloride. The decomposition furnaces that perform this process generate substantial amounts of heat. Tosoh recovers this heat and reuses it to heat the furnaces, reducing the total amount of fuel required. We have also licensed this technology to companies in three other countries, achieving a CO₂ reduction of approximately 36,000 tons.*

* Estimated from the energy recovered before and after installing this technology in the licensee production facilities.

Pursuing energy conservation in logistics

Tosoh leverages its logistics subsidiary, Tosoh Logistics Corporation, to better address logistics challenges. These include tackling climate change with renewable energy solutions and improved operational efficiency.

Introduction of solar power generation equipment at integrated logistics center

Tosoh transports most of its products from its main manufacturing facility, the Nanyo Complex. To enhance logistics, Tosoh Logistics opened Rinkai Logistics Center Building A adjacent to the Nanyo Complex in 2020. More recently, Tosoh Logistics installed solar panels on the center's roof as part of Tosoh's commitment to carbon neutrality. The electricity is used in-house and accounts for nearly 10% of the center's annual energy consumption. The use of renewable energy also reduces by 220 metric tons the center's yearly CO₂ emissions.



Integrated Rinkai Logistics Center Building A

Completion of the ethylene carrier *Kayou*

The construction of Tosoh's ethylene carrier *Kayou* was completed in August 2023. Tosoh uses this vessel to transport ethylene produced at the Yokkaichi Complex to the Nanyo Complex, where it is processed into key products. These include vinyl chloride monomer (VCM), which is critical to the company's value chain.

The *Kayou* is Tosoh's second ethylene carrier, following the renewal of the *Shoyo* in 2020. It is one of the few ships in Japan specialized to transport ethylene gas in liquid form, which must be cooled to as low as -103 C.

The *Kayou*, moreover, has been equipped for safe and stable transport to appease growing concerns about climate change-related physical risks. The ship features live cameras to ensure the safety of ship and crew and thereby improve onboard living conditions. It also has energy-saving onboard and navigational LED lighting. In addition, the *Kayou* boasts greater cargo capacity than other vessels of the same purpose. It is therefore more transport efficient and environmentally friendly.



Ethylene carrier *Kayou*

Considering joint logistics initiatives

In June 2023, Tosoh, Mitsubishi Chemical Group, Mitsui Chemicals, and Toray led the establishment of the Chemical Working Group, part of METI and MLIT's Realization of the Physical Internet conference^{*1}. Forty-four companies and one university have joined the group. It will work toward creating a framework for sustainable logistics that balances productivity and safety with reduced CO₂ emissions, through measures that include reforming commercial practices in logistics; standardization; and formulating, informing stakeholders of, and implementing action plans related to DX promotion.

The logistics industry in Japan continues to face pressure from factors including a labor shortage and aging drivers and seafarers, while demand for logistics—especially for small-lot cargo—is on the rise. In addition to the “2024 problem”^{*2} in logistics, a future lack of logistics transportation and storage capacity has become one of the chemical industry's most pressing issues. Moreover, chemical logistics involves a wide range of transportation methods and conditions due to the cargo's unique properties, as well as packaging, weight, and other characteristics. This creates challenges in implementing effective measures on a per-company basis, and so we helped establish the working group to promote industry-wide initiatives.

Japan's government estimates that, without intervention, Japan could see a 34% shortfall in trucking capacity to meet logistics demand by 2031. Addressing this issue calls for a focus on reducing the time spent waiting for and handling cargo. That, in turn, requires a digital infrastructure to raise operational efficiency for cargo owners and transport companies.

The government announced a voluntary action plan in December 2023 to encourage collaboration among shippers and logistics companies to that end. The plan highlights 13 actions that shippers must implement in accordance with government guidelines. A joint logistics pilot program is scheduled to begin in the Kanto and Tokai regions in September 2024.

Tosoh, meanwhile, is integrating its initiatives with those of Tosoh Logistics. We aim to reduce our logistics-related GHG emissions for the sustainability of logistics operations and of the broader Japanese chemical industry.

^{*1} Established in October 2021 by the Ministry of Economy, Trade and Industry (METI) and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), it aims to develop a roadmap for realizing a Physical Internet in Japan. The “Physical Internet” concept applies the idea of Internet communication—in which a chunk of data is defined as a packet and is exchanged efficiently—to the physical world of logistics.

^{*2} Refers to various issues faced by the logistics industry, including a labor shortage due to a clause in the Work Style Reform Act on maximum overtime for professional drivers that will take effect in April 2024.

Contributing to CO₂ absorption

Reforestation in the Joint Demonstration Project for Woody Biomass Production in Shunan City

On September 1, 2022, Yamaguchi Prefecture's Shunan City, Tosoh, and three other companies agreed to conduct a joint reforestation demonstration as part of the Joint Demonstration Project for Woody Biomass Production. Based on this agreement, the parties planted fast-growing trees in Mukaidake, in Shunan City's Heta District.

The project aims to promote using forestry resources and the local production and consumption of woody biomass to create a sustainable forestry management model, through reforestation using fast-growing trees. It arose from the Partnership Agreement on Woody Biomass Usage and Forestry Improvement, signed on December 15, 2021, initiated by the Shunan City Wood Biomass Use Promotion Council, which was formed in January of that year.

The five parties will continue to promote efforts to produce woody biomass using municipal forests.



Tree-planting ceremony

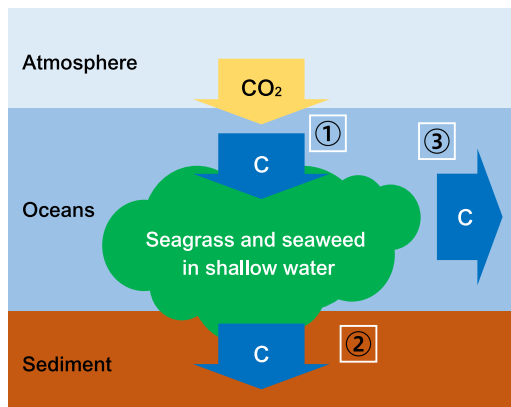
Joining the Blue Carbon promotion project

To encourage conservation of the Oshima tidal flat which is under its jurisdiction, Shunan City has begun to utilize blue carbon* as an initiative to decarbonize the area, thus reducing a cause of global warming in CO₂.

Blue carbon refers to the carbon absorbed by seagrass and other marine organisms. Seagrass can absorb significant amounts of CO₂, taking CO₂ from the atmosphere that dissolves into the ocean. The more seagrass there is, the more substantial amounts of CO₂ it can absorb.

The Oshima tidal flat absorbed 29.3 tons of CO₂ throughout fiscal 2024. Tosoh supports this project by purchasing and utilizing the recently created J Blue Credits from fiscal 2022.

* In October 2009, the United Nations Environment Programme (UNEP) named the carbon captured in marine ecosystems "blue carbon" in its report.



Isolation and storage mechanisms in blue carbon ecosystems

- ① Atmospheric CO₂ is taken up by blue carbon ecosystems in shallow water areas through photosynthesis, isolation, and storing CO₂ as organic matter.
- ② As the organisms in these ecosystems die and accumulate on the seafloor, they continue to be buried in lower sediment layers, with the carbon accumulating as blue carbon.
- ③ With kelp, wakame seaweed, and other forms of macroalgae that grow on reefs, currents wash the leafy parts out to the open ocean, transporting them to further depths. There they remain decomposing in the mesopelagic zone over many years, as the carbon is sequestered and stored as blue carbon.

Source: Created by Tosoh using Blue Carbon data provided by Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Joining the GX League*

In fiscal 2023, Tosoh endorsed the GX League concept put forward by METI. In fiscal 2024, we announced that we would join the GX League, formally becoming a member in May 2023. The GX League generates output for society in three domains: dialogue on the form of a future society, establishment of market rules, and voluntary emissions trading. Through these efforts, we will proactively participate in developing rules to realize carbon neutrality while bolstering and maintaining the Japanese chemical industry's competitiveness.



* An industry-government-academia framework formed by METI to tackle quickly transitioning to a carbon-neutral society, from the perspective of creating a virtuous cycle between the economy and the environment to achieve carbon neutrality by 2050.



Environmental Protection

Basic concept

Through its commercial activities, the Tosoh Group contributes to the development of a sustainable society in which environment, economy, and society are harmoniously integrated. Furthermore, the group strives to achieve a “recycling economy” including via the effective use of resources.

We also aim to minimize environmental impact, through appropriate management of key control items such as air and water emissions, and of waste generated by our activities.

> Related page: List of Responsible Care (RC) Activity Targets and Achievements “Environmental Protection”

Input/Output (Tosoh Group)

The Tosoh Group mitigates the environmental impact of its business activities throughout the lifecycle of its products. In addition, we make effective use of the input of limited resources—“inputs” such as fuels, raw materials, and water resources—to manufacture products, and endeavor to minimize waste “outputs” and the extent of the company’s environmental impact on air and water.

Tosoh and Japan-based group companies

INPUT

FUEL INPUT (kiloliters)		RAW MATERIAL INPUT		WATER INPUT ^{*1}	
Tosoh	2.06 million kiloliters	Tosoh	5.36 million metric tons	Tosoh	1.40 billion metric tons
Group Companies (Japan)	160,000 kiloliters	Group Companies (Japan)	350,000 metric tons	Group Companies (Japan)	10.74 million metric tons

OUTPUT

PRODUCTS	
Tosoh	4.56 million metric tons ^{*2}
Group Companies (Japan)	370,000 metric tons

ATMOSPHERIC EMISSIONS

	Greenhouse gas emissions					Sox	NOx	Dust	PRTR-designated substances
	Total	CO ₂ (based on fuel consumption)	CO ₂ (based on nonenergy-derived consumption)	Other greenhouse gases ^{*3}	CO ₂ ^{*4} (based on waste disposal fuels)				
Tosoh	7.14 million metric tons	6.24 million metric tons	710,000 metric tons	180,000 metric tons	50,000 metric tons	306 metric tons	7,842 metric tons	150 metric tons	494 metric tons
Group Companies (Japan)	430,000 metric tons	420,000 metric tons	-	10,000 metric tons	-	369 metric tons	105 metric tons	16 metric tons	273 metric tons

WATER EMISSIONS

	Water effluent	COD (Chemical oxygen demand)	Phosphorus	Nitrogen	PRTR-designated substances
Tosoh	1.21 billion metric tons	902 metric tons	375 metric tons	27 metric tons	4,681 metric tons
Group Companies (Japan)	9.96 metric tons	60 metric tons	22 metric tons	1 metric tons	4 metric tons

LAND EMISSIONS


	Landfill waste	PRTR-designated substances
Tosoh	507 metric tons	0 metric tons
Group Companies (Japan)	42,259 metric tons	0 metric tons

*1 Totals include industrial water, seawater, groundwater, and tap water

*2 Internal consumption is not included

*3 Totals include N₂O, CH₄, SF₆, and HFC

*4 CO₂ (from the use of waste materials as fuel) is not included in the total GHG emissions

For information on the scope of the data, please refer to the [boundary list](#) .

Overseas group companies

INPUT

FUEL INPUT (kiloliters)	RAW MATERIAL INPUT	WATER INPUT (Industrial-usewater)
100,000 kiloliters	550,000 metric tons	14.54 million metric tons

OUTPUT

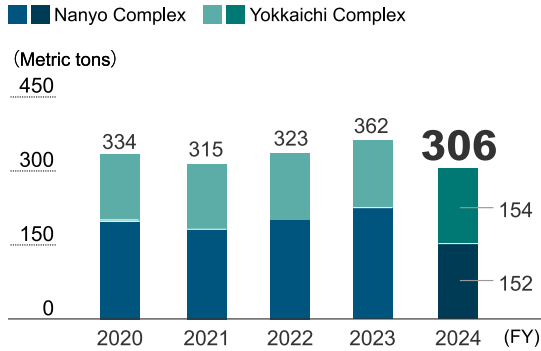
PRODUCTS		ATMOSPHERIC EMISSIONS	
	690,000 metric tons	CO ₂ (based on fuel consumption) 230,000 metric tons	Other greenhouse gases 1,000 metric tons

For information on the scope of the data, please refer to the [boundary list](#) .

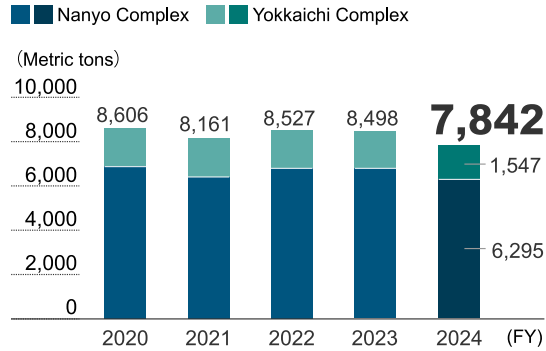
Atmospheric preservation

Tosoh and its group companies in Japan monitor the concentrations and amounts of sulfur oxides (SOx), nitrogen oxides (NOx), soot, dust, and other air pollutants emitted by each individual facility. We implement voluntary control values stricter than those set by Japan's Air Pollution Control Act, and those agreed upon with local governments. At certain factories, SOx in exhaust gas is discharged into the atmosphere after being collected through desulfurization, in order to help preserve the air environment. A similar process is applied to NOx, via catalytic adsorption, and to dust through electrostatic precipitation. In fiscal 2024, there were no instances exceeding regulatory or agreed-upon limits.

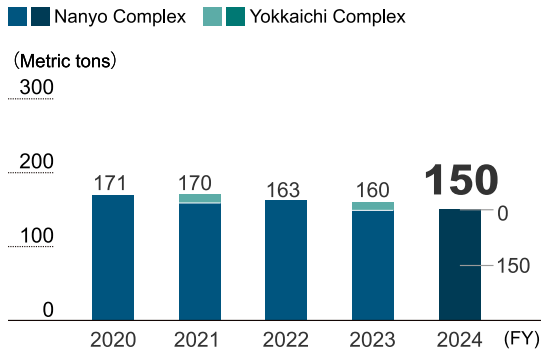
Sox Emission Volume



NOx Emission Volume



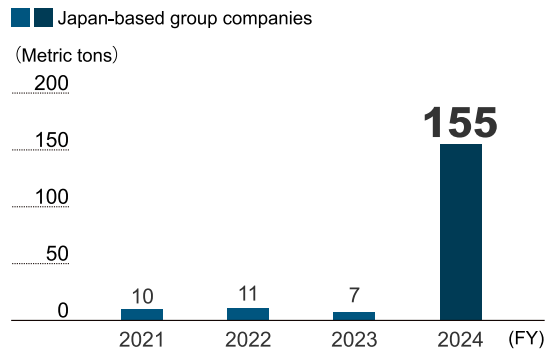
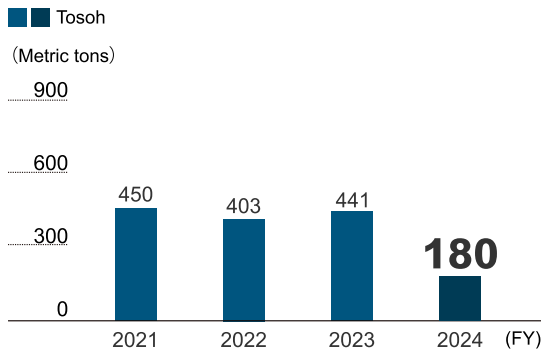
Dust Emission Volume



Calculation Method: Calculated based on the analysis values (concentration, gas emissions) for each designated facility as stipulated by law for specified period.

Volatile Organic Compounds (VOCs)

Tosoh's VOC emissions amounted to 180 tons in fiscal 2024. The total for domestic group companies, meanwhile, was 155 tons.



Specified Chlorofluorocarbons (CFCs)

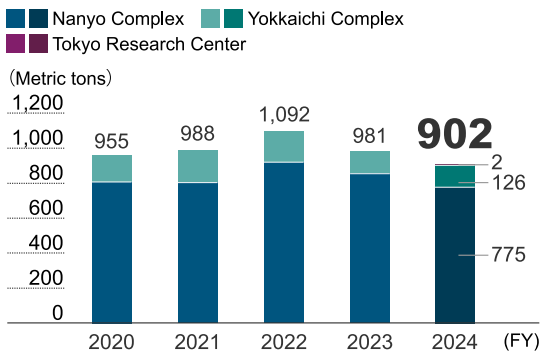
Tosoh is taking action on equipment that uses specified chlorofluorocarbons (CFCs and HCFCs) as refrigerants, based on environmental laws and regulations (including the Act on the Protection of the Ozone Layer through the Control of Specified Substances and the Act on Rational Use and Proper Management of Fluorocarbons) as well as administrative guidelines and industry trends.

Moreover, in accordance with the Act Concerning the Discharge and Control of Fluorocarbons, we report as required the volume of calculated leaks of CFC substitutes to the government, and establish management targets to minimize leaks and promptly implement repair measures through early leak detection.

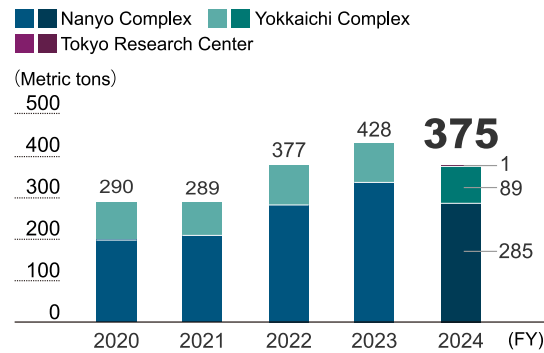
Water preservation

Tosoh and its Japan-based group companies remove pollutants from wastewater at dedicated treatment facilities; recover active ingredients from wastewater; and monitor emissions of COD, nitrogen, phosphorus, and other substances by setting voluntary control values that are stricter than those stipulated by the Water Pollution Control Law and agreements with local governments. In fiscal 2024, there was one instance where agreed-upon limits were exceeded; however, no penalties or administrative guidance were issued.

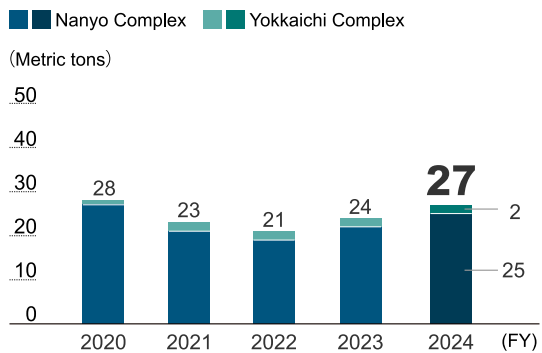
COD Emission Volume



Nitrogen Emission Volume



Phosphorus Emission Volume



Water resource utilization

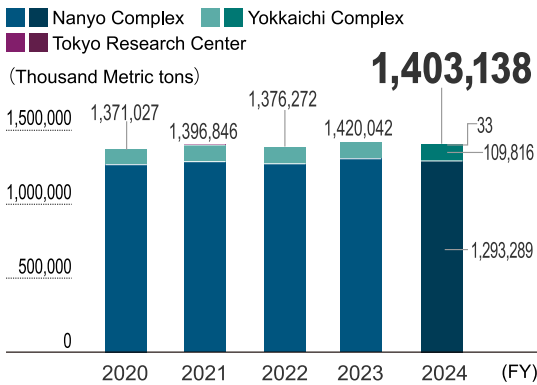
Tosoh and its domestic group companies produce a wide variety of chemical products, with water heavily utilized in their manufacture. This includes processes such as heating, cooling, dissolving, and washing, as well as chemical detoxification and drainage.

Water is thus an essential resource for the Tosoh Group. Each group company strives to make effective use of water intake—such as by circulating cooling water systems, and employing higher performance heat exchangers—and to maintain and improve wastewater quality with the goal of sustainable utilization of water resources in the vicinity of its business sites.

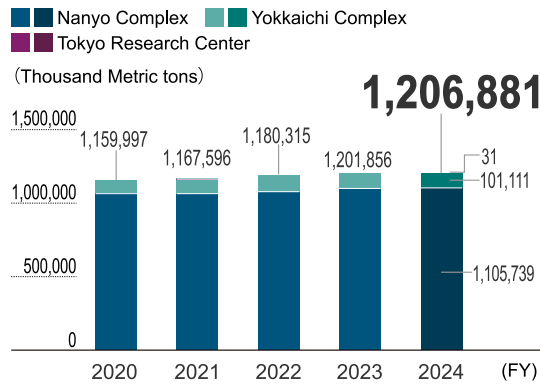
Through our CSR procurement guidelines, we also require that our suppliers pursue effective wastewater management and efficient utilization of water.

The Tosoh Group conducts water risk assessments for each of its manufacturing sites in Japan and overseas, and results confirm a relatively low risk level at each location.

Water Input Volume



Effluent Volume



Industrial waste

Tosoh and its group companies within Japan are actively promoting the 4Rs—Reduce, Reuse, Recycle, and Renew—in support of the transition to a circular economy.

In accordance with Phase 5 of the Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society, Tosoh has targeted recycling at least 90% of its industrial waste. We greatly exceeded that aim in fiscal 2024, with a result of 96%. We also target reducing our final disposal volume about 75% compared with the fiscal 2001 level. Our final disposal volume in fiscal 2024 was 507 metric tons, achieving our target of 1,261 metric tons or less. The bulk of the coal ash and other industrial waste generated at our business sites is recycled as raw materials for use at cement plants. We also promote "local production for local consumption" recycling of plastic waste collected from municipalities, and actively accept external plastic waste for effective use as raw fuel for cement. This contributes to reducing the burden on the surrounding community.

Tosoh Group companies, aware of their responsibilities as generators of waste, also conscientiously manage and dispose of waste prior to it being delivered to a disposal company.

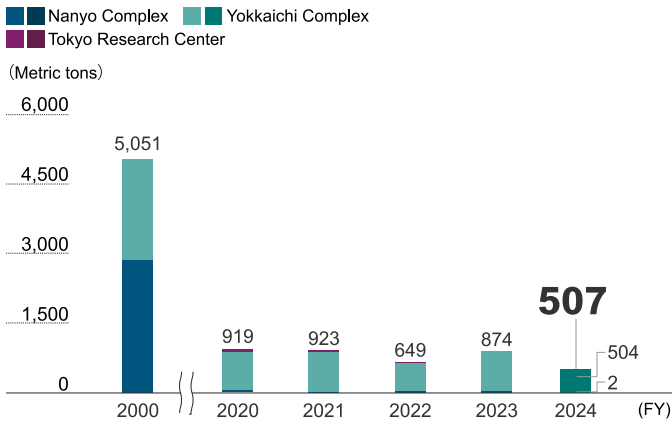
The 417,752 metric tons of industrial waste that we generated included 91,859 metric tons of specially controlled industrial waste (1,353 metric tons of specified hazardous industrial waste and 90,506 metric tons of other waste). * The figures represent the total for Nanyo Complex, Yokkaichi Complex, Tokyo Research Center, and Headquarters.

The final disposal amount for the fiscal year 2024 accounted for 0.1% of the industrial waste generation.

Date Collection Method : Aggregated from the stated in manifest.

* Specified Hazardous Industrial Waste : Waste including PCBs, waste mercury, waste asbestos, hazardous metals (cadmium, lead, chromium), arsenic, dioxins, and waste oil.

Final Landfill Disposal Volume



Status of disposal of equipment containing PCBs

Tosoh and its group companies in Japan are promoting the appropriate disposal of equipment containing polychlorinated biphenyls (PCBs) in accordance with Japan's PCB Special Measures Law. We are pursuing the elimination of equipment containing PCBs, with disposal of that containing high concentrations of PCBs such as transformers and capacitors as well as lighting ballasts, now complete. Approximately 80% of all equipment containing low-concentration PCBs was scheduled to be disposed of by fiscal 2024, with the remainder to be systematically disposed of by fiscal 2027.

Emission reduction measures for substances in the PRTR^{*1}

Tosoh and its domestic group companies have set voluntary emission reduction targets for substances subject to Japan's Pollutant Release and Transfer Register (PRTR) system based on the Act on Confirmation of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register).

Substances newly added beginning in fiscal 2024 significantly increased Tosoh's emissions, to 5,175 metric tons.^{*2} The company remains steadfast in reducing emissions and will assess the impact of these additional substances and how to lower emissions of them.

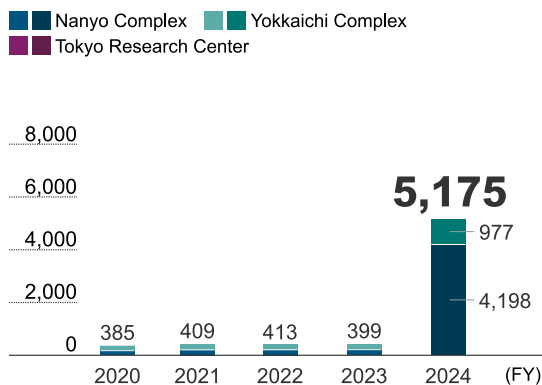
Furthermore, the emissions related to the substances subject to regulation before the legal amendment amount to metric 357 tons, achieving the voluntary target (below 424 metric tons: a reduction of over 30% compared to fiscal year 2016).

Emissions from Tosoh's domestic group companies in fiscal 2024, meanwhile, totaled 277 metric tons, an increase of 208 metric tons from fiscal 2023. This surge was primarily due to an increase in the number of domestic group companies that we've included in our reporting.

^{*1} Pollutant Release and Transfer Register

^{*2} Enforcement of Japanese revised Chemical Substances Control Law came into effect on April 1, 2023. It increased the number of Class I Designated Chemical Substances from 462 to 515.

Total Emissions of PRTR-Applicable Substances



Calculation method : Based on the calculation method of the Law concerning Pollutant Release and Transfer Register for each target substance.

Emissions and transfers of PRTR substances in fiscal 2024

(Metric tons, dioxins only: mg-TEQ)

Substance	Atmospheric emission volume	Water effluent volume	Land emission volume	Landfill disposal volume	Emission volume within complexes	Amount transferred to sewage systems	Amount transferred out of complexes
Chlorobenzene	34.0	1.6	0.0	0.0	35.6	0.0	79.0
Chloroethylene (vinyl chloride)	41.6	2.1	0.0	0.0	43.7	0.0	0.0
Chloroform	4.6	12.6	0.0	0.0	17.2	0.0	0.1
1,2-Dichloroethane	28.0	1.4	0.0	0.0	29.4	0.0	54.1
Ethylenediamine	4.1	8.2	0.0	0.0	12.3	0.0	0.1
Vinyl acetate	9.6	3.8	0.0	0.0	13.4	0.0	0.4
1,1,2-Trichloroethane	24.0	0.9	0.0	0.0	24.9	0.0	50.5
N-hexane	120.0	0.0	0.0	0.0	120.0	0.0	3.9
Other	231.9	4,638.7	0.0	0.0	4,870.6	0.0	1,544.4
Dioxins (mg-TEQ)	16.6	9.5	0.0	0.0	26.1	0.0	26.5

Environmental accounting

Tosoh has introduced environmental accounting to quantitatively assess our investments into—and the costs and effectiveness of—environmental protection initiatives.

Environmental investments totaled ¥2.3 billion, primarily into equipment relating to energy conservation and fuel reduction measures.

Environmental expenses decreased approximately ¥1.2 billion from fiscal 2023, to ¥20.6 billion.

Economic benefits totaled ¥6.6 billion, including proceeds from the sale of valuable resources and cost savings achieved through energy conservation efforts.

【Scope of aggregation】

Nanyo Complex, Yokkaichi Complex, Tokyo Research Center

Environmental Protection cost

(Billions of yen)

Category	Description of key initiatives	Investments				Costs	
		FY 2021	FY 2022	FY 2023	FY 2024	FY 2023	FY 2024
Costs within complexes		7.33	2.33	4.60	2.04	17.33	16.08
Pollution prevention costs	Exhaust gas and wastewater treatment measures	4.89	0.98	3.31	0.39	10.88	9.93
Global environmental protection costs	Electricity and fuel reduction measures	1.12	1.22	1.01	1.37	2.72	2.51
Resource recycling costs	Raw material and waste recovery measures	1.32	0.13	0.27	0.27	3.73	3.64
Management activity costs	Environmental management, environmental impact assessment, environmental reporting, and environmental impact monitoring	0.03	0.08	0.01	0.04	1.47	0.91
R&D costs	Development of technologies to reduce environmental impact and development of environment-related products	0.24	0.17	0.23	0.24	2.93	3.48
Social activity costs	Association dues, tree planting, and community coexistence	0	0	0	0	0.03	0.02
Other		0	0	0.01	0	0.07	0.11
Total		7.60	2.58	4.84	2.31	21.83	20.6

Economic impact

(Billions of yen)

Details		FY 2021	FY 2022	FY 2023	FY 2024
Earnings	Amount of contracted reuse treatment of external industrial waste, and sale of substandard products	1.53	1.27	1.16	1.03
Cost reduction	Energy conservation	1.56	0.70	1.78	0.95
	Resource conservation	2.93	4.16	5.38	4.63
Total		6.02	6.13	8.31	6.61

We adhere to the 'Environmental Accounting Guidelines 2005 Edition' established by the Ministry of the Environment, but areas not explicitly specified in the guidelines are calculated based on assumptions set by our company.

Environmental protection initiatives

Improving education

Tosoh regularly holds lectures by invited experts and local government figures. The departments in charge of environmental management at our complexes, meanwhile, provide on-site education and liaison opportunities for manufacturing departments, enabling them to report case studies and disseminate regulations.

For group companies, Tosoh holds briefings on trends in the strengthening of environmental laws and regulations, and through the Tosoh Group Safe Work Environment Network we provide examples of environmental violations to be avoided. We also promote compliance with laws and regulations through legal checklists and other means.

Educational achievement items	Venue	Details	Number of total participants
Lectures by outside speakers	Headquarters	Environmental law revision trends	80 (Including group companies)
	Yokkaichi Complex	Current status of microplastic pollution in Ise bay	47
Training	Nanyo Complex	On-site environmental education and liaison meetings with manufacturing sites	1,714
		EMS internal auditor training	42
		Environmental management education	161
	Yokkaichi Complex	On-site environmental education	52
		Pollution prevention manager refresher training	5
		EMS internal auditor training	1
In-house briefings	Yokkaichi Complex	Regular environmental liaison meeting	121



Biodiversity Preservation

Basic concept

If not properly managed during production, the Tosoh Group's chemical products have the potential to significantly affect the natural environment, including ecosystems. The entire supply chain may also have an ecological impact, due to manufacturing processes that utilize resources such as energy, mined natural resources, and water resources. The Tosoh Group is committed to both the preservation of biodiversity through its business activities, and contributions to local communities in the aim of realizing a sustainable society.

Furthermore, in the interest of further educating our employees, since fiscal 2021 we have included initiatives for biodiversity preservation activities in the action guidelines of our Basic Principles Regarding the Environment, Safety, and Health, and are working to heighten awareness of nurturing biodiversity through in-house education and other means.

Biodiversity preservation initiatives

Endorsement of and participation in councils and other organizations

The Tosoh Group promotes community-based environmental protection initiatives that nurture biodiversity under the Action Guidelines of the Basic Principles Regarding the Environment, Safety, and Health, with each region conducting its own voluntary activities. As part of our efforts to address the issue of marine plastic pollution, we have signed the Declaration for Solving the Plastic Marine Litter Problem issued by the Japan Plastics Industry Federation. These activities seek to promote voluntary efforts addressing the marine plastic problem and to convey to wider society the gravity of the situation.

In 2024, we also joined the Keidanren Initiative for Biodiversity Conservation. We have supported the Keidanren Declaration on Biodiversity and its revised guidelines since December 2023. Through it and the Keidanren Initiative for Biodiversity Conservation and Japan's National Biodiversity Strategy, we work to build a society with a sustainable economy in harmony with nature. Additional global objectives that we seek include the GBF,^{*1} the SDGs, and 30by30.^{*2}

^{*1} In December 2022, new targets were set for the GBF at the 15th Conference of the Parties (COP15) to the Convention on Biological Diversity.

^{*2} The objective of 30by30 is to halt and reverse biodiversity losses and conserve 30% of land and sea as healthy ecosystems by 2030. In 2023, a portion of the Nanyo Complex was designated a 30by30 protected land area. Tosoh is advancing its biodiversity conservation efforts there and elsewhere.

Addressing the plastic problem

Tosoh prioritizes material and chemical recycling in its bid to reduce plastic waste. Our collaboration with universities and national research institutes is leading to the development of advanced recycling technologies aligned with progress toward a circular economy. An example is our participation in the development of liquid-phase hybrid recycling technology for multilayer plastic films, which has been recognized as a leading research project by Japan's New Energy and Industrial Technology Development Organization (NEDO). Tosoh also seeks to produce recyclable plastics amid initiatives to minimize its environmental impact.

Coordination with business activities

The Nanyo Complex has concluded an agreement with Shunan City, Yamaguchi Prefecture for the effective use as woody biomass fuel of branches pruned from roadside trees and other materials generated around the city. This initiative will contribute to the effective use of limited resources and prevention of global warming. Tosoh additionally composts pruned branches, fallen leaves, and other materials generated on the Nanyo premises, and utilizes the composted matter for tree growth and green space management. Furthermore, in December 2021, Shunan City and a local enterprise signed a joint agreement to collaborate on woody biomass material utilization and forest maintenance.

Contribution to local communities

The Tosoh Group promotes community-based environmental protection activities to realize a society in harmony with nature.

Satoyama preservation activities

Tosoh's Nanyo and Yokkaichi Complexes are actively involved in local satoyama ("undeveloped local woodland") preservation activities. Each year, the Nanyo Complex participates in the Forestation for Water Conservation Promotion Project hosted by Yamaguchi Prefecture, while the Yokkaichi Complex participates in satoyama preservation activities hosted by the Yokkaichi Nature Conservation Promotion Committee. We will continue to promote satoyama preservation activities that maintain the ecosystem.



Satoyama preservation activities (Nanyo area)



Satoyama preservation activities (Yokkaichi area)

Community volunteer cleanups

Tosoh conducts urban cleanups in the neighborhoods around its business sites, as well as at nearby beaches and rivers. The Nanyo Complex strives to beautify the surrounding area through community volunteer activities such as Clean Up My Nanyo, as well as other cleanup projects at sites including Nagata Beach. The Yokkaichi Complex participates in the Kasumigaura Regional Environmental Promotion Association (KIEPS), which consists of 31 companies and organizations, and continues to conduct environmental volunteer activities. An example is KIEPS' support for the Mie Prefecture-sponsored Ise Bay Forest, River, and Sea Cleanup Campaign to clean up nearby coastlines and clean-ups encompassing both industrial complexes and piers.

The Tokyo Research Center also participates in the Association for Clean Rivers, and conducts river patrols.



Nagata Coastal Cleanup (Nanyo area)



Takamatsu Coastal Cleanup (Yokkaichi area)



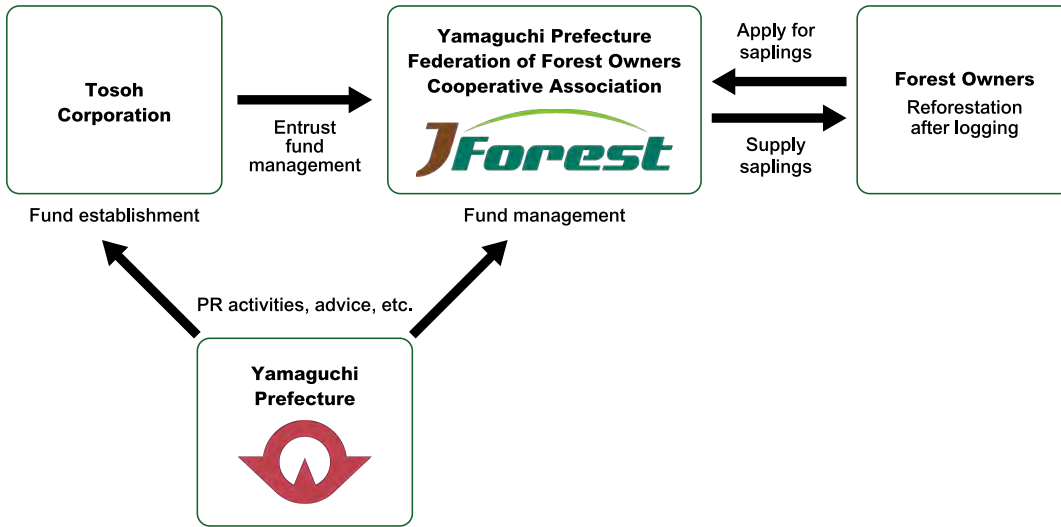
River patrol (Tokyo Research Center)

Establishment of the Tosoh Sapling Fund

On April 10, 2024, Tosoh Corporation, Yamaguchi Prefecture, and the Yamaguchi Prefecture Federation of Forest Owners Cooperative Association agreed to establish the Tosoh Sapling Fund. Their agreement promotes the efficient use of residual materials harvested from forests in Yamaguchi Prefecture and supports the reforestation of logged areas.

Tosoh will accept and use fuel chips derived from forest residual materials as fuel for in-house power generation at the Nanyo Complex. In return, the company will contribute funds proportional to the volume of fuel chips received. The Yamaguchi Prefecture Federation of Forest Owners Cooperative Association will use these funds to provide saplings to forest owners for reforestation after logging. The agreement thereby supports the multifunctionality of forests and advances forestry through the recycling of forest resources.

Fund organization



Agreement signing ceremony



Safe and Stable Operations

Basic concept

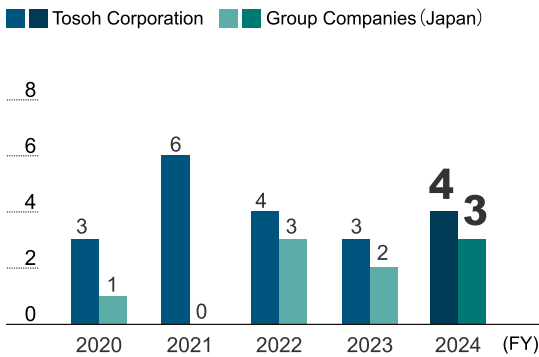
The Tosoh Group is promoting activities pertinent to safe and stable operations, through its RC promotion system based on the Action Plan for Industrial Safety, a set of guidelines established by the Japan Petrochemical Industry Association in July 2013. We recognize that ensuring stable operations and employees' health and safety are management issues of the highest importance. Underpinned by our basic philosophy of environment, health, and safety, and our action guidelines stating that "safety takes precedence over everything else," we will continue to develop a range of measures for strengthening our safety infrastructure, while fostering a safety-first culture in the aim of zero accidents and zero lost work time through injury. Moreover, we will promote initiatives for business continuity plans (BCP) in preparation for natural disasters and other business risks.

> Related pages: List of RC Activity Targets and Achievements "Safety and disaster prevention/Occupational safety and health"

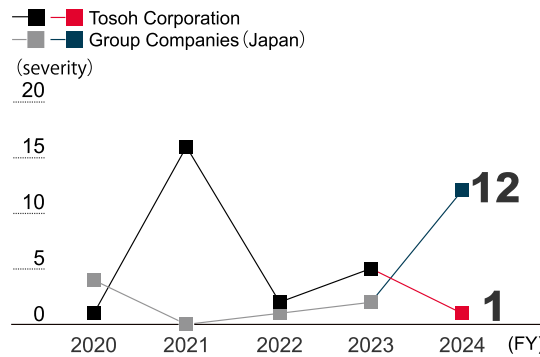
Fiscal 2024 results

Four accidents occurred at Tosoh facilities in fiscal 2024. In the event of an accident, the Accident Countermeasures Committee investigates the cause and determines countermeasures, and holds a briefing session for the company and group companies to horizontally disseminate information on the incident, with the aim of preventing recurrence.

Number of Accidents



Accident Severity*



* We quantitatively assessed the severity of each accident using the evaluation criteria of the Japan Petrochemical Industry Association (JPCA) in accordance with the evaluation method of the US-headquartered Center for Chemical Process Safety (CCPS).

Fostering a culture of safety

President’s control room visits

Every year since fiscal 2013, Tosoh’s president has visited manufacturing facilities at the Nanyo and Yokkaichi Complexes to hold direct dialogues with staff. This is an opportunity to share management ideas on safety and other on-site issues, which serves to enhance employee motivation. The president visited a total of 281 control rooms and offices over the 11-year period from 2012–2023, interacting with over 6,600 employees. Tosoh will continue its efforts to promote a culture of safety.



Visit to Nanyo Complex



Visit to Yokkaichi Complex

Accident remembrance

As a valuable reminder of the November 2011 explosion and fire at our No. 2 Vinyl Chloride Monomer Plant at the Nanyo Complex, we have erected the safety pledge monument there and also exhibit documents relating to the incident. In addition, we have designated each November 13 as Safety Day. On that day, we host safety-focused meetings and activities at each complex and research facility, and invite relevant experts to address employees. Through these activities, we hope to instill in all our staff the determination to promote and ensure company safety.

Safety Day Activities (Fiscal Year 2024)

Location	Activities	
Nanyo Complex	Safety activity presentation	Presentation on safety initiatives (November 11) Three departments at the Nanyo Complex, and three collaborating companies of the Tosoh Group
Yokkaichi Complex	Lecture on safety	“Preventing Serious Accidents: Learning from Case Studies,” Yoichi Saeki, Lecturer, Okayama Industrial Safety Academy (November 13)
Headquarters		
Tokyo Research Center		“Revitalizing the Workplace and Eliminating Human Error: Safety Starts with Communication,” Rie Kawachi, Approach Co., Ltd. (November 13)

Safe and Stable Operations



Safety Day: Safety activity presentation (Nanyo Complex)



Safety Day: Safety lecture (Yokkaichi Complex)



Safety Day: Safety lecture (Tokyo Research Center)



Safety monument: "Pledge of Safety" (Nanyo Complex)



Preservation and exhibition of accident-related documents (Nanyo Complex)

Initiatives to ensure safety

Enhancing risk assessment

With the aim of making risk assessment more comprehensive, we are reevaluating our security equipment from the standpoint of the multiple layers of protection proposed by Professor Emeritus Kimihide Matsuyama of Kyushu University.^{*1} In addition, the Abnormal Reaction Information System (ARIS) is now in operation.^{*2}

At the Nanyo Complex, we verified the integrity of the third and final layer of protection (security, detoxification, and emergency shutdown equipment), and analyzed major events occurring in the security equipment by using fault tree analysis (FTA), taking into account multiple factors in the base layer and the first and second layers.^{*3}

Verification work on the functional integrity of security equipment has been completed in the production departments, with countermeasures being implemented for equipment deemed to be high risk. Moreover, events determined to have a high impact factor—as in the risk of explosions, fires, and leaks—are reevaluated by adding multiple event analyses and quantification of risk assessment indicators. Additionally, the process of entering data into ARIS for all plants has been completed. The results of the evaluation of reaction hazards are utilized in setting the key events of the FTA.

The Yokkaichi Complex is currently conducting a safety and disaster prevention risk assessment that incorporates perspectives on safety engineering and includes the verification of security equipment. The Yokkaichi Complex has also deployed and begun inputting plant data into ARIS.

^{*1} A system that consists of multiple tiers of plant accident prevention measures.

^{*2} Abnormal Reaction Information System

^{*3} Fault tree analysis (FTA) is a method for analyzing the causes of product failures and resulting accidents.

Improved education

To achieve safe, stable, and efficient plant operation, we conduct a host of training programs in cooperation with related departments — these reflect the experiences and opinions of on-site employees. Technical education includes hazard experience training,^{*1} and we also operate simulators and hands-on learning devices.^{*2} In fiscal year 2024, we initiated education using the pointing and calling method introduced in the previous year, equipment that allows participants to experience the dangers of oxygen deficiency. Additionally, we introduced hands-on equipment that simulates climbing a rope ladder and being suspended in liquid.

We are committed to enhancing education and training programs to equip our employees with the knowledge and skills necessary for safe and stable operations to strengthen on-site capabilities. Training on protective equipment, for example, includes the proper use of items such as the safety glasses, protective gloves, and helmets provided to individuals.

^{*1} Practical training that allows participants to experience firsthand workplace hazards such as being caught or entangled in equipment, falling or being exposed to hazardous substances and static electricity.

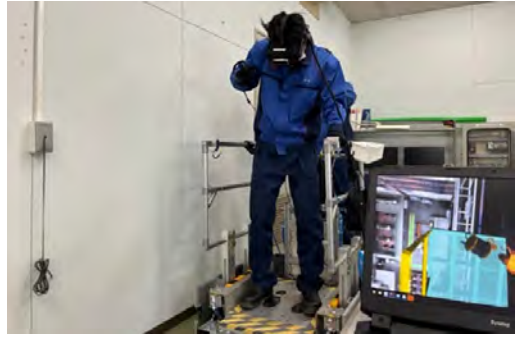
^{*2} Introduced in fiscal 2018, the facility allows visitors to experience the principles and characteristics of a distillation column—a fundamental operation of a chemical plant—how to start up and shut down a distillation column; and how to respond to abnormalities and other events.



Equipment for experiencing hazardous substance exposure and safety equipment operation



Protective equipment training



Virtual reality hazard simulation education



Equipment for experiencing oxygen deficiency



Equipment for experiencing oxygen deficiency

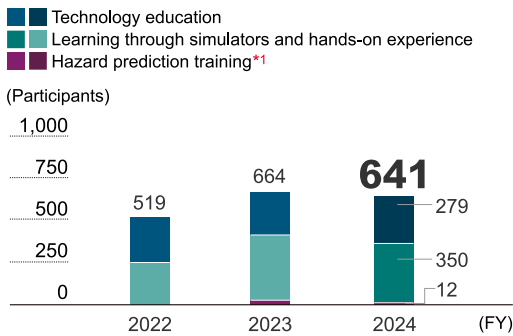


Equipment for experiencing suspension in liquid



Equipment for experiencing climbing a rope ladder

Number of Participants in Major Safety Training Programs



*1 Hazard prediction training includes follow-up training by an external instructor.

Accident case study research

To prevent the recurrence of accidents—and the issues that led to them—it is important to investigate their causes based on underlying principles, and then formulate and implement permanent countermeasures. To uncover the root cause of a given problem, Tosoh looks into why it occurred, and conducts detailed examinations and analyses of accident cases. In addition, we operate an accident and disaster information database to centrally manage such incidents. This facilitates our sharing of information and utilization of case studies for educational and training purposes.

Enhanced safety

Activation of digital transformation

We have been actively promoting the introduction of digital transformation (DX) to ensure plant safety and stable operations, and in June 2023 we established the Cyber Security DX Group as part of the IT Management Department to further promote DX. In addition, we are establishing a structured training program that will quickly develop human resources skilled in digital technology, such as the data scientists essential for driving DX. The program will incorporate digital technology education to this end.

- Implementation of common monitoring system for complexes

We are sequentially introducing a common monitoring system for our production departments, that utilizes big data accumulated in the distributed control system (DCS). Abnormalities can be quickly detected on the monitoring screen, and operational guidance is displayed on a large monitor located in the control room, enabling rapid and unified decision making.

- Introduction of operational support system

The company has introduced an operational support system to visualize operational techniques and know-how in a flowchart format. In the form of a handbook, it is used for passing on operational techniques, education, and procedures. Furthermore, by automating operations through theory and principle—ones that were previously driven by empirical knowledge—safe, stable, and correct operations can be ensured.

- Introduction of abnormality prediction and detection system

Tosoh has implemented a machine learning-based system for early detection of operational abnormalities. By machine-learning the correlations across plant data under normal conditions, rapid detection of abnormalities can be made based on the discrepancy between actual conditions and the obtained normal model. Machine learning is used not only for abnormality prediction and detection, but also for quality prediction and productivity enhancement. The Yokkaichi Complex has introduced diagnostics to predict and detect abnormalities in rotating equipment. Wireless vibration temperature sensors have been installed in key rotating equipment, while AI (enabling abnormality prediction and detection) and alarm reporting functions have been newly added to enhance condition monitoring functionality. (Test operation ongoing from April 2023).

- Electronic logbook for operational handover

Conventional handwritten operation handover logbooks have been digitized to provide electronic data on work history, operation information, and knowledge. This allows all parties involved to share information when retrieving past operational data, or for handover in a three-shift system, thereby improving efficiency. Moreover, facility management is optimized through the use of maintenance information links and mobile functions.

- Introduction of mobile terminals

Tosoh is introducing mobile terminals at the manufacturing sites of the Nanyo and Yokkaichi Complexes to facilitate data entry into shift-handover electronic logbooks. These terminals also support young employees by enabling real-time information exchange between worksite and control room through video and voice communication. We have provided tablets to all facility management team members at both complexes. The tablets reduce travel time during repairs, allow timely information sharing, and enhance work efficiency and quality.

- Introduction of pocket cameras

In the Facility Management department, numerous wireless mobile cameras are deployed during periodic repair operations with the aim of reducing waiting time for construction personnel and to monitor work. In the production departments, the cameras are used to relay safety instructions from control rooms to operators and to confirm work status, contributing to safe, stable operation.

Safe and Stable Operations

● Introduction of wireless gas detectors

Tosoh has installed wireless gas detectors at the boundaries of its complexes, and toxic gas concentrations are monitored in real time via an internal network system. Employing wireless gas detectors with built-in batteries—that can detect gas leaks even during power outages caused by earthquakes—has enabled Tosoh to quickly and reliably assess the impact of gas leaks outside of its complexes, and to respond swiftly.

● Introduction of wireless vibration and temperature sensors

We have installed wireless vibration and temperature sensors in the steam traps throughout our manufacturing facilities. We are striving for early abnormality detection and to reduce patrol staff workload by using our in-house network to monitor vibration and temperature in real time.

● Introduction of soft sensors

Variables within processes such as component concentrations, that are difficult to gauge with ordinary measuring devices, are automatically estimated in real time using machine learning. This makes possible continuous monitoring of such variables, facilitating early detection of process fluctuations and proactive operational responses.

● Introduction of drones

We are using aerial and underwater drones as alternatives to in-person inspections because they provide visibility equal to a person's and offer advantages in safety, time, and cost. Drones are especially useful for inspections at high altitude or in confined spaces, such as of chimneys at power generation facilities; for inspections internally of large tanks and such; and for inspections where there is little to no oxygen, such as of buried seawater pipes. We are also moving to employ drones to rapidly assess disaster sites.

Tosoh cooperates fully with government agencies regarding drone use. The company also trains its drone operators.

● Installation of gas turbine energy management system

In conjunction with the construction of the gas turbine power plant, the company installed a system to collectively monitor the entire plant's power and fuel balance, and calculate the optimal amount of gas turbine power generation. Adjusting operation based on the results of these calculations leads to higher efficiency, which in turn leads to energy savings.

● Strengthened response to cyberattacks

In the interest of preventing security incidents and maintaining stable operation, it is essential to strengthen security measures against cyberattacks. Therefore, in addition to information systems, a firewall has also been installed on the control system network to which the DCS and other systems are connected, improving the ability to prevent both IT and OT (operational technology) computer virus infiltration.

Moreover, we have established a company-wide Cyber Security Committee to confirm facility soundness, formulate countermeasures, construct systems and PDCA cycles, and handle training of personnel.

● Use of cloud-based storage

We use BOX cloud-based storage as a means of sharing information internally. It is also useful for stimulating interdepartmental collaboration, as well as that with external entities. The adoption of cloud-based storage also aids business continuity planning (BCP) and the prevention of data leaks to unauthorized external parties.



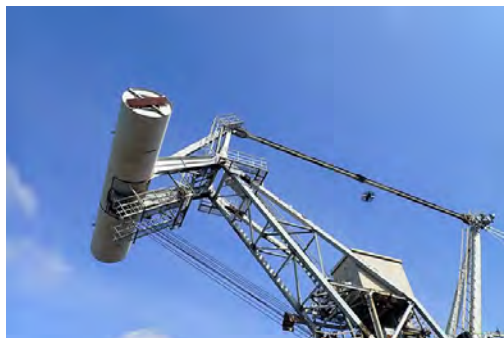
Electronic logbook for operational handover



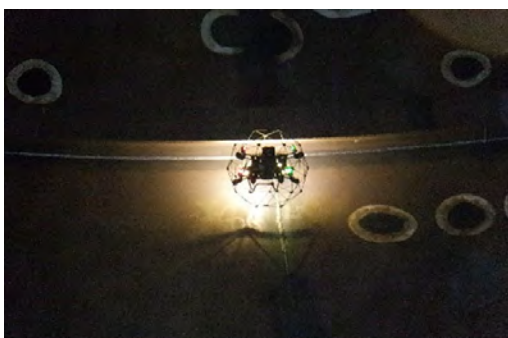
Tablet for on-site communication



Monitoring with wireless gas detectors



Drone-based visual inspection of elevated areas



Drone-based inspection of the inner surfaces of storage tanks (Yokkaichi Complex)

Safety technology initiatives

To further improve the level of safety and promote process safety, the Safety Engineering team of the Technology Center is taking the lead in introducing safety technology, based mainly on safety engineering.

- Advanced, comprehensive risk assessment

We have adopted the concept of multilayer protection for process safety evaluation, and have implemented numerous measures to raise the level of safety and thus prevent plant accidents. As a risk assessment method, we have established an advanced, comprehensive risk assessment system by adding FTA and abnormal reaction analysis to conventional methods, which are mainly based on hazard and operability studies (HAZOP).*

- Training of safety technology experts

We are developing a curriculum to train safety technology specialists. Moreover, beginning in fiscal 2022, as a means of cultivating experts in this sphere we have dispatched two staff members as contract researchers to universities with specialized safety engineering courses in fiscal 2022, and another two in fiscal 2023.

- Others

Promotion of safety technology and security equipment verification, operational support using machine learning and other methods, analysis of equipment materials for corrosion and other diagnoses, chemical and engineering technology education using practical training facilities and support for analysis of critical issues, etc.

* Hazard and operability studies (HAZOP) are means of anticipating the consequences of events that impede operations and ensuring that the necessary preparations can be made.

Emergency response

Disaster preparedness training

Tosoh conducts disaster drills at each of its complexes, laboratories, headquarters, and branch offices to raise employees' awareness of their responsibilities, and to equip them with the ability to respond to emergencies, thereby preparing them for unforeseen situations. Comprehensive disaster drills conducted in partnership with local government are also open to local community associations, not only for hypothetical accidents such as leakage and fire, but also for the evacuation that would be necessitated by a large-scale earthquake or tsunamis. Moreover, the computerization of the entrance and exit gates has created a management system to control entry to the premises in the event of an emergency.

At each plant, emergency shutdown response, emergency response to oil spills including the deployment of oil fences, hose deployment and water discharge for initial firefighting, and training in wearing protective equipment such as air respirators are regularly conducted based on documented procedures to improve on-site response and prepare for emergencies. During disaster preparedness drills, we also simulate blackouts resulting from an earthquake or tsunami and use drones to collect information from within the drill site.

Furthermore, a public relations system has been prepared for the event of an accident, based on the Public Relations Manual for Residents in the Event of Petroleum Complex Disasters. We have also prepared product-specific booklets on contingency plans and precautions to be taken in the event of an emergency in the region. Annually, we invite media representatives to give mock press conferences and practice lectures, to bolster risk communication skills.



H2 Comprehensive disaster preparedness drills (Nanyo Complex)



Comprehensive disaster preparedness drills (Yokkaichi Complex)



Comprehensive disaster preparedness drills (Tokyo Research Center)

Safe and Stable Operations

Name	Date implemented	Location	No. of participants	Details
H1 comprehensive disaster drills	July 2023	Nanyo	100	A disaster drill simulating a fire resulting from a major earthquake that caused hazardous material leakage
Comprehensive disaster drills	October 2023	Headquarters/ Yokkaichi	145	A disaster drill simulating a Nankai Trough earthquake and the subsequent hazardous material leaks and fires causing plant outages and tsunamis. Disaster prevention drones introduced to improve information gathering capabilities.
Comprehensive disaster drills	October 2023	Tokyo Research Center	455	The construction of an additional building made evacuation to the playground unfeasible. So we conducted a drill to confirm new evacuation routes and locations. We also assembled teams for handling disaster countermeasures, reporting and liaising, took roll calls for each firefighting unit, and carried out the SECOM safety confirmation. SECOM is Japan's first security system company.
Blind comprehensive disaster drills	November 2023	Yokkaichi	185	A blind disaster drill simulating fires at plants caused by hazardous material leaks. We enhanced the blind factor by deciding on the plant where the disaster occurred on the same day.
H2 comprehensive disaster drills	March 2024	Nanyo	100	A drill simulating the discovery of a hazardous material leak from a pump during a patrol
Drills by complex	Practiced throughout the year	All complexes	—	Emergency plant shutdown, water cannon training, and protective equipment fitting drills. Water cannon training conducted jointly with the Disaster Prevention Center.

Earthquake and tsunami countermeasures

In addition to evacuation and other response drills, we are also working on equipment handling. As earthquake countermeasures, we completed all seismic reinforcement work for high-pressure gas storage tanks at the Nanyo and Yokkaichi complexes.

In fiscal 2024, we continued the phased seismic reinforcement of control rooms, plants, and material warehouses where employees are stationed. As part of our tsunami countermeasures, we implemented several initiatives, including elevating electrical equipment on raised floors, installing protective fences, securing manholes to prevent them from floating, displaying flood level markers on-site, and preparing equipment to handle power outages and the loss of utilities.



On-site display of flood levels (Yokkaichi Complex)

Business continuity plan (BCP^{*}) initiatives

Tosoh's first priority is to ensure the physical safety of employees under emergency circumstances, including widespread contingencies such as the COVID-19 pandemic. At each complex, we are implementing sequential steps to secure emergency power sources, safely shut down plants, and quickly restore operations in the event of a blackout caused by an infrastructure shutdown. To ensure a stable supply of products to our customers, we are optimizing inventory and promoting purchasing from multiple sources, and are also reviewing and strengthening our disaster countermeasure regulations.

In addition, due to our global business expansion, there is increased opportunity for our employees to travel and be posted overseas. This increases the vulnerability of Tosoh personnel to global events such as wars, earthquakes, terrorism, riots, and outbreaks of infectious disease. We are therefore implementing overseas crisis management measures to ensure the safety and well-being of our employees.

^{*} BCP is an action plan to maintain operations for as long as possible in the event of a disaster, accident, or other unforeseen event, and to recover and resume operations as soon as possible following an interruption.

External evaluation

In December 2017, the Nanyo Complex reacquired certification as a Specific Accredited Completion and Safety Inspection Executor and as an Accredited Completion Inspection Executor, underwent a certification renewal audit in August 2022, and renewal was completed in December. The Yokkaichi Complex renewed this certification in November 2021. Tosoh undergoes regular external evaluation by the Japan Industrial Safety Competency Center (JSCC), a non-profit organization, to improve the security capabilities of each complex. Preparations are also underway to apply under a new certification system. In June 2023, we established the Cybersecurity DX Group within IT Strategy & Supervisory to assess cybersecurity soundness, to implement measures based on the assessment, and to introduce smart security. We have set up a digital technology introduction working group for smart security and a cybersecurity committee for cybersecurity and will promote a PDCA cycle to confirm their effectiveness.

Logistics safety

Basic concept

Tosoh's products are delivered to customers primarily by truck and ship. Since accidents during transportation can cause delays in deliveries to customers, damage to facilities, and other issues, we are actively working to eliminate such incidents.

> Related pages: List of RC Activity Targets and Achievements "Logistics Safety"

Initiatives to eliminate logistics accidents

We are working to reduce the occurrence of accidents, and to improve safety awareness by implementing logistics-specific hazard prediction training and confirming its effectiveness through surveys.

- **Support for transportation equipment**

We are also actively implementing hardware initiatives, such as initiating research into the prevention of contact accidents by installing work detection systems on forklifts. ^{*1}

- **Support for sea transport**

For ships, we conducted voyage and operation diagnoses as part of education for logistics subcontractors (8 vessels were examined in fiscal 2024), and followed up on the results of these examinations. ^{*2} We also resumed the BRM training for regular chartered vessels that we had suspended because of COVID-19 (11 vessels underwent BRM training in fiscal 2024). ^{*3} Patrols are conducted on each vessel to confirm management status.

We survey marine crew members for input on dangerous areas at delivery destinations. Based on that input, we look into improvements of the areas identified.

- **Response to road transport issues**

We are considering responding to requests from our logistics partner companies to improve our lorry delivery facilities. And lorry filling station layouts at our complexes have been improved to lower the risk of accidents involving contact with and exposure to liquids.

^{*1} A camera and sensor-equipped device installed on forklifts to detect approaching people and alert them with lamps or buzzers.

^{*2} A third-party instructor should be present during the actual voyage to confirm and evaluate the crew's judgment and knowledge.

^{*3} BRM, or bridge resource management, is a training program to prevent maritime accidents that result from human error by making use of all available resources on the bridge to realize safe, efficient vessel operation.



Occupational Safety and Health

Basic concept

Under the RC promotion system, the Tosoh Group always recognizes that "safety takes precedence over everything else" based on its basic philosophy of environment, safety, and health, and is working to ensure safety with the aim of zero lost work time accidents involved in the Group's operations. With the aim of eliminating unstable conditions and unsafe behavior that can lead to industrial accidents, Tosoh will develop safety activities based on five pillars: Comprehensive implementation of basic safety measures, improvement of risk assessment comprehensiveness, making efforts to eliminate similar incidents and industrial accidents, reinforcement of construction systems, and utilization of new technologies, and foster a culture of safety.

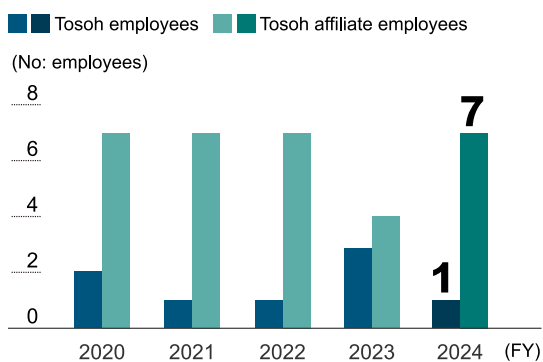
> Related pages: List of RC Activity Targets and Achievements "Safety Disaster Prevention and Occupational Health and Safety"

Fiscal 2024 results

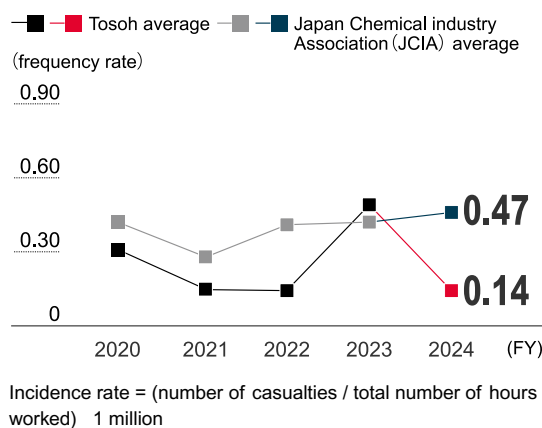
Tosoh has set a target of zero accidents resulting in lost time for employees and subcontractors. In fiscal 2024, 8 lost time accidents (1 employee and 7 at subcontractors) occurred, so we did not achieve our goal. The causes of accidents during business hours included maintenance discrepancies by employees and incorrect procedures and shortcuts by subcontractors. As a measure to prevent recurrence, we hold Safety and Health Committee meetings at our complexes to share and horizontally disseminate information on workplace accidents, and use incident investigation check sheets and other tools to more thoroughly delve into causes and countermeasures. We will continue to reconfirm work procedures, thoroughly implement hazard prediction procedures, and upgrade equipment.

In addition, 22 accidents (15 employees and 7 at subcontractors) resulting in lost time occurred at Group companies in fiscal 2024. We share information through the Accident and Industrial Accident Information Database and utilize outside safety specialists from the Japan Industrial Safety & Health Association to provide safety guidance and prevent recurrence.

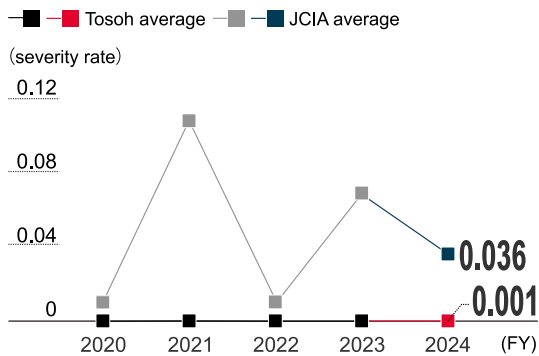
Number of Accidents Resulting in Lost Time (industrial accidents)



Industrial Accident Incidence rate

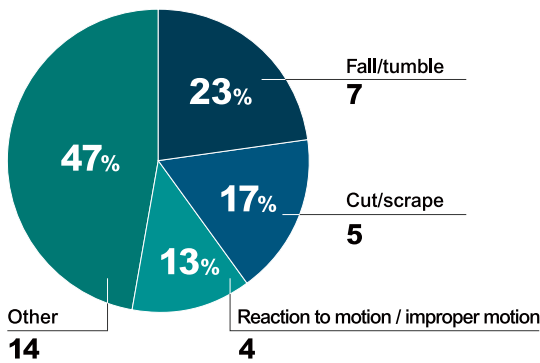


Industrial Accident Severity Rate



Severity rate = (number of days lost / total number of hours worked) 1,000

Results by type of occupational accident



【Scope of aggregation】

Tosoh: Nanyo Complex, Yokkaichi Complex, Tokyo Research Center

Fostering a culture of safety

5S* activities and RC Committee 5S inspections

Tosoh's Nanyo and Yokkaichi Complexes and research facilities participate in the 5S*—sort, set in order, shine, standardize, and sustain. This keeps work environments clean and orderly and makes it easy to detect irregularities in our complexes and equipment. The Nanyo Complex has designated the third Wednesday of each month as Plant Safety Promotion Day. All divisions join in cleanup efforts, and the headquarters' administrative division cleans up areas outside the complex premises as part of its contribution to the community. The Yokkaichi Complex is working to improve coverage by restructuring the general patrol area from 10 to 12 locations, making the area checked per person smaller and more precise. In addition to improving all areas where safety is in question at work sites, the Nanyo Complex has identified good practices and shared them across the Group.

The RC Committee chairperson conducts 5S inspections based on the policy that it is important for management to evaluate safety measures in the field and identify issues that need to be improved to maximize safety. In fiscal 2024, the RC Committee chairperson presented certificates of recognition to workplaces eligible for 5S activity excellence awards, including three at the Nanyo Complex, two at the Yokkaichi Complex, and one at the Tokyo Research Center.* These kinds of initiatives heighten motivation at each workplace.

* 5S activities maintain and improve work environments by sorting, setting in order, shining, standardizing, and sustaining.



5S Activities: Cleaning off premises (Nanyo Complex)



5S activity improvement (document management) case study



5S Activities: Painting safety corridors in-house (Yokkaichi Complex)



5S Activities: Outstanding workplace commendation (Yokkaichi Complex)



RC Committee chairperson 5S patrol (Tokyo Research Center)



5S Activity Presentation (Tokyo Research Center)

Hazard prediction activities

The Tosoh Group's complexes and research facilities work independently to establish hazard prediction training. The Nanyo Complex has revised its nonroutine work standards and introduced pull-down hazard prediction to increase familiarity with them.^{*1} Meanwhile, the Yokkaichi Complex has implemented 1R-specific hazard prediction training and is working to thoroughly strengthen one-person hazard prediction and other activities.^{*2} Moreover, we provide new employees with hazard prediction training sessions led by outside instructors that focus on the necessity of anticipating potential danger.^{*3} The Tokyo Research Center is also promoting the establishment of one-person hazard prediction. The center, moreover, also shares information and strives to heighten safety awareness by conducting prework hazard prediction training with members of the same laboratory.^{*4}

At each of Tosoh's locations, a self-motivated attitude has taken root through ongoing activities.

^{*1} Pull-down hazard prediction is a method for swiftly executing practical hazard prediction with a small number of people.

^{*2} Training to improve skills to identify hazardous sources

^{*3} Hazard prediction activities are conducted by each worker on an individual basis when he or she is about to begin work.

^{*4} Prework hazard prediction involves members of a laboratory sharing information on the details of the day's work and conducting a hazard prediction exercise therefor.



Hazard prediction activities (Nanyo Complex)



Hazard prediction training session (Yokkaichi Complex)



Group discussions during hazard prediction training (Yokkaichi Complex)

Tosoh group initiatives

To strengthen its capabilities in disaster prevention and occupational safety and health, the Tosoh Group established the Tosoh Group Safe Work Environment Network, which improves our ability to share amendments to legislation, data on accidents, and other relevant information. We issued a questionnaire on earthquake and tsunami countermeasures and confirmed the responses thereto. We plan to issue the questionnaire annually. Other initiatives include Safe Work Environment Network Meetings, which are held twice annually to bring together safety and health management representatives from Group companies for the purpose of information exchange and interaction.

In fiscal 2024, Tosoh held two environmental education sessions led by external trainers. It also conducted four other sessions on occupational safety and health education to improve the level of safety. In addition, it conducted Safe Work Environment Network Meetings where personnel from the Environment, Safety, & Quality Control department at Tosoh headquarters visited 7 companies to check on sites and exchange opinions. And the company continues to provide workplace guidance via third parties with the aim of creating opportunities to gain awareness from new perspectives.



Safe Work Environment Network Meetings



Occupational safety and health education



Safety environment exchange

Topics

Excellence Award presented at the Miyazaki Prefecture Industrial Safety and Health Convention

Tosoh Hyuga Corporation received the Excellence Award at the 2023 Miyazaki Prefecture Industrial Safety and Health Convention. The convention raises awareness among employers and employees of the need for accident prevention and for safety and health activities in the workplace.

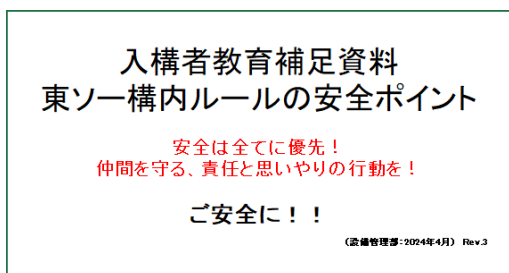
Tosoh Hyuga was recognized for zero work-related accidents. The award reflects Tosoh Hyuga's employee safety training—including hazard prediction training—and cultivation of vital safety personnel.



Initiatives toward ensuring safety

Reinforcement of construction system

Tosoh is also promoting measures for incidents and industrial accidents involving subcontractors (construction companies) as part of its efforts to reinforce the construction system. We verified the existence of systemic deficiencies based on work-related accidents that occurred on the Construction System Mechanism Verification Sheet. As we manage the verification sheet, we will continuously work to improve the construction management system. Moreover, the Nanyo Complex implemented initiatives to improve the level of subcontractors. Measures included distribution of one-person hazard prediction cards by job classification, hazard experience training, and flange connection technique certification. The causes of the accident at the Yokkaichi Complex were added to the ideal on-site patrol points.



Cover page of supplementary educational materials for visitors (Yokkaichi Complex)

一 般 事 項	① 教育受講済みワッペンをヘルメットに貼付
	② 下記掲示物を適切に運用し、見やすく掲示 「作業安全指示書」「施工手順書兼KYシート」「工物品質管理チェックリスト」
	③ 作業服・墜落防止用器具・保護具等は、作業前に点検し適正使用
	④ 作業中や道路横断時は、指差呼称を励行
	⑤ 作業場所や資材保管場所等は、常に整理整頓
	⑥ 熱中症対策(飲料水・塩分補給・適度な休憩等)を確実に実施
	⑦ 廃油・油汚類は、湿潤・密閉後に金属製容器で保管する
	⑧ 幅800mm以上の安全通路を確保
	⑨ 「緊急時の連絡系統図」を現場掲示し計器室の外線番号記載
	⑩ 機器や配管に乗っての作業は禁止
	⑪ 4トン車以上の車両・フォークリフトには輪止め措置
	⑫ 台車やポンペ等のタイヤには転がり防止措置

Excerpt from supplementary educational materials for visitors (Yokkaichi Complex)

Ensure safety of contracted work on site

Tosoh Logistics Corporation, a group company that outsources contract work such as packaging and filling at its Nanyo and Yokkaichi complexes, is promoting activities to eliminate occupational accidents at its subcontractors, surveying dangerous areas and implementing safety measures in cooperation with the production departments. The Nanyo Complex has launched activities to augment safety management for subcontracted work at all 40 of its workplaces. It also holds regular monthly meetings with Tosoh Corporation personnel to clarify its workflows and scope of outsourced work. The Nanyo Complex is in addition establishing a problem-solving system for each workplace and continuously making improvements to it. At the Yokkaichi Complex, model workplaces have been selected where safety activities have been underway since fiscal 2024. Tosoh and Tosoh Logistics conduct joint patrols at both complexes. They check workplaces, listen to workers on-site, and share issues and discuss improvements with them and between themselves. Tosoh Logistics in particular strives to eliminate workplace accidents by fortifying such workplace patrols.



SOCIETY

Quality Management

Basic concept

Under the RC promotion system, the Tosoh Group strives to enhance customer satisfaction by ensuring comprehensive quality control and logistics safety, reliable operation of our quality management system, and the timely and stable provision of products and services that reflect customer needs. Moreover, we are committed to continuous quality improvement while complying with legal and regulatory requirements applicable to our products.

> Related pages: List of RC Activity Targets and Achievements “Quality Assurance”

Maintaining and improving quality management

The Tosoh Group has established a quality management system (QMS) appropriate for its products and organizational structure, and has attained (ISO 9001 (quality management), ISO 13485 (international standard for quality management systems related to medical devices), and other certifications in the aim of raising product quality and customer satisfaction. To improve the QMS itself, certified complexes and group companies are subject to internal audits of their QMS-related activities, followed by external audits and management reviews conducted by senior general managers of complexes and plants.

Internal audits

Tosoh conducts annual internal audits within its complexes, to ensure the QMS is functioning properly and with the aim of constantly improving its operation. The company audited 62 of its departments in fiscal 2024. Those audits included confirming the following: the quality target plan results for the procurement process, the manufacturing process up to the verification of procured items, the design and development process, and the follow-up status of the correction of issues identified in the audits done the preceding year.

Tosoh's head office also conducts annual RC audits at Tosoh's domestic facilities. In fiscal 2024, the RC audits focused on reducing product complaints through augmented cooperation with related departments, preventing complaints by conducting on-site inspections and risk assessments, and confirming the status of preventive measures and the details of delivery specifications.

Group company support

Parent company Tosoh Corporation supports the quality management of its group companies, and to this end provides regular opportunities for the exchange of opinions.

Tosoh strives to maintain and improve the quality level of the entire group, by providing advice to suppliers on conducting audits and supporting the strengthening of quality assurance systems.

As part of our quality control survey in fiscal 2024, we conducted a voluntary survey of 25 group companies' quality control systems. We found no violations of laws or regulations or cases of negative impact on the environment or product safety when our products were utilized by end users.

In November 2022, we launched a two-year investigation and implementation survey of group company quality management systems. Its results allowed us in fiscal 2024 to detect vulnerabilities, including incentive, opportunity, and rationalization, the three elements that could lead to fraud in group company systems and against which we implemented countermeasures. The use of pencil and correction fluid on certain data constitutes a vulnerability, of course, but we discovered no legal violations or irregularities.

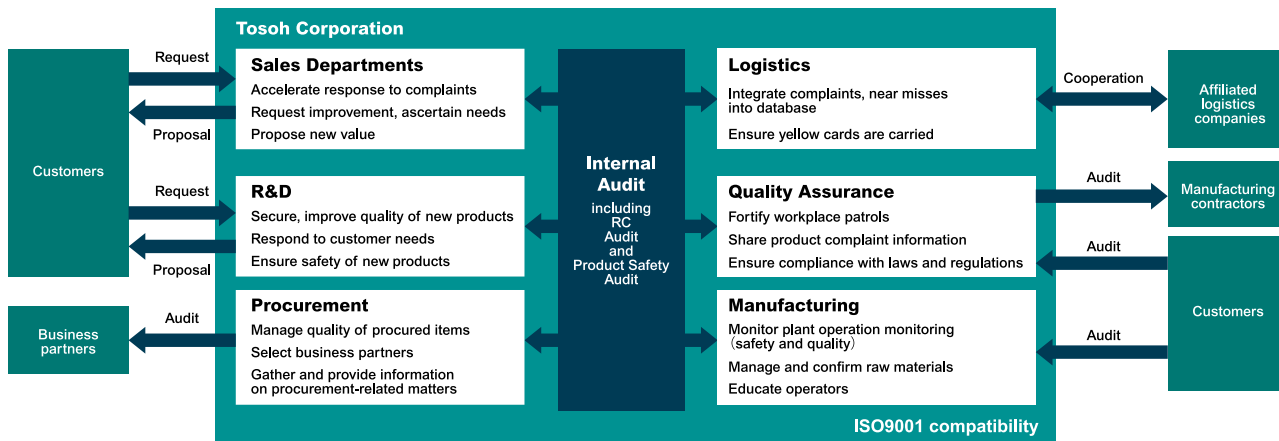
We are working to prevent fraud by providing improvement guidance and quality compliance education at Tosoh Group companies where vulnerabilities have been detected.

Supply chain initiatives

The Tosoh Group also conducts audits of its key suppliers and manufacturing contractors to confirm the efficacy of their quality management systems, quality control status, status of response to prevent recurrence of complaints, maintenance, and management of measures to prevent recurrence of past nonconformance cases, and of quality compliance activities. In fiscal 2024, Tosoh conducted on-site and paper document audits of a total of 74 suppliers and production contractors. We are currently working to address the issues and problems detected.

In addition, we regularly audit seven external tank bases to check their quality management systems and maintenance status.

Supply Chain Management Structure



Product quality improvement

Initiatives at complexes

Each complex has its own policy for maintaining and improving quality, reducing product-related complaints, and increasing customer satisfaction.

Complaints that occur at our complexes and group companies are shared as monthly bulletins, with the goal of avoiding similar complaints and issues.

In fiscal 2024, Tosoh followed up on measures to prevent recurrence of previously detected nonconformities, and confirmed the implementation status of measures against foreign matter contamination based on risk assessment, and performed a thorough review of delivery specifications. The company also conducted QMS training to raise awareness of quality control. In total, there were 12 product complaints.

There were no product liability incidents or violations of quality-related laws and regulations in fiscal 2024.

We also perform quality site inspections to prevent foreign matter contamination and product packaging material soiling or damage. Tosoh conducts quality site inspections to confirm the status of countermeasures against contamination originating from the manufacturing process, the management status of raw materials, packaging material storage areas, product storage areas, and warehouse facilities. The company further ensures that measures are properly implemented to prevent the recurrence of complaints.



Quality patrol

Product complaints, product liability incidents, number of legal violations (Tosoh Corporation)

	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024
Product complaints	10	11	15	12
Product liability incidents	0	0	0	0
Legal violations regarding product quality	0	0	0	0

Pharmaceutical and medical device initiatives

Tosoh manufactures and sells in vitro diagnostics and medical devices for the diagnosis of various diseases including heart disease, cancer, and diabetes, and for the treatment of infertility. Among these products are reagents for genetic testing, and antigen quantification tests for COVID-19.

To manufacture and sell in vitro diagnostic drugs and medical devices, we have obtained the appropriate manufacturing and sales licenses for as stipulated by the Pharmaceuticals and Medical Device Act. We have further established a management system to ensure product efficacy and safety.* In fiscal 2024, we conducted audits at five sites of manufacturing partners aimed at strengthening the quality assurance system.

* Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices

> Related pages: List of RC Activity Targets and Achievements "Pharmaceutical Affairs Act"

Reducing logistics complaints and issues

Tosoh's products are delivered to customers mainly by road and sea freight. Since some products contain substances such as hazardous and toxic materials that are regulated by law, appropriate management of cargo is essential: from loading to transportation, then unloading at the delivery destination. Therefore, the logistics department is taking the initiative in activities aimed at reducing both the number of accidents and the annual incidence rate of logistics complaints and problems.*

* Incidence rate = number of logistics accidents, complaints, and problems / number of products transported x 1 million.

> Related pages : List of RC Activity Targets and Achievements "Logistics Safety"

Initiatives toward reducing complaints and issues

The Logistics RC Promotion Committee convenes once each quarter to discuss the causes of complaints and problems, as well as countermeasures which are subsequently rolled out group-wide. Tosoh regularly educates, instructs, and audits its logistics subcontractors, with a total of 76 companies audited in fiscal 2024. Specifically, in addition to supplying comprehensive manuals and checklists for the loading and unloading of hazardous and poisonous materials, Tosoh also provides safety education on chemical product handling. We have established a model workplace where we've implemented accident prevention measures. This has lowered incidents, so we are planning to deploy the model elsewhere throughout the company. Moreover, the company surveys hazardous areas at delivery sites, and based upon this proposes improvements in the interest of preventing industrial accidents and other issues at these locations. Further, Tosoh is also working on the hardware aspect, and is actively implementing safety devices into its transportation equipment.



SOCIETY

Chemical Substance Management

Basic concept

The Tosoh Group promotes activities related to chemical substance management under the RC promotional structure. To ensure that customers can use our products safely and with peace of mind, the Tosoh Group ascertains accurate information on chemical substances, and provides information on the chemical content of its products. Tosoh gathers information and shares the latest updates with its complexes, related departments, and group companies through briefings and educational programs. This ensures compliance with Japanese and overseas laws and regulations regarding chemical substances.

> Related pages: List of RC Activity Targets and Achievements "Chemical and product safety"

Compliance with laws and regulations

When a new product is released on the market, it has to be reported, registered, and quantified according to each country's laws and regulations. Tosoh is responding to revisions to laws and regulations being studied and implemented in various countries, which requires the submission of data on existing substances.

In Japan, we submit applications for new chemical substances under the Act on the Regulation of Manufacture and Evaluation of Chemical Substances (Chemical Substances Control Law)—under which we also tender quantity notifications—and under the Industrial Safety and Health Act and did so in fiscal 2024. We handled notifications and applications for new chemical substances, including small quantities thereof, under the Chemical Substances Control Law and the Industrial Safety and Health Act and tendered quantity notifications under the Chemical Substances Control Law. We also appointed chemical substance managers and protective equipment management supervisors as mandated by revisions to Japan's Industrial Safety and Health Act and consequently experienced no issues. In addition, we submitted registration applications and conducted sales management status confirmations upon relocating our headquarters in accordance with Japan's Poisonous and Deleterious Substances Control Act.

Overseas, we continued to manage our export volumes in accordance with EU-REACH.* We initiated measures in accordance with those regulations after confirming details. In fiscal 2024, there were no violations of laws and regulations regarding the registration and notification of chemical substances.

* Regulation on the Registration, Evaluation, Authorization, and Restriction of Chemicals in Europe.

Education on chemical substance regulations

Tosoh provides education to related divisions and group companies to ensure proper compliance with chemical substance laws and regulations.

In fiscal 2024, we held explanatory sessions for departments in charge of completing and approving safety data sheets (SDS) at our head office, complexes, research facilities, and group companies to ensure compliance with Japan's revised Industrial Safety and Health Act (in May 2023, for approximately 100 attendees, and in February 2024, for about 130 attendees).* We also offered online lectures by external experts to educate employees on domestic and international regulatory trends regarding chemical substance hazards and toxicity (viewed by some 290 participants in total).

* Safety Data Sheet includes information on chemical substances and their hazardous properties.

Enhanced chemical substance management

The fifth session of the International Conference on Chemicals Management (ICCM5),^{*1} held in September 2023, replaced the Strategic Approach to International Chemicals Management, or SAICM,^{*2} with the Global Framework for Chemicals (GFC).^{*3} This established the goal “to prevent or, where prevention is not feasible, minimize harm from chemicals and waste to protect the environment and human health.” Chemicals, including chemical waste, must be managed throughout their life cycles to achieve this objective.

In Japan, revisions to the Industrial Safety and Health Act have brought into force new regulations on chemical substances. These revisions require measures for limiting exposure to hazardous and harmful-to-handle chemical substances. There has, as a result, been a noteworthy increase in the number of chemical substances subject to labeling and SDS provisions and in the scope of chemical substances subject to risk assessments based on SDS information. This makes necessary measures to, for instance, ensure that exposure concentrations faced by workers remain below standard values and that workers use protective equipment.

Tosoh continues to collect information on the enactment and revision of laws and regulations, and to implement chemical substance management appropriately, to include risk assessment and exposure control. Furthermore, through the provision of information on chemical substances contained in products to our customers, we strive to strengthen chemical substance management and minimize risks throughout the supply chain.

*1 the Fifth Session of the International Conference on Chemicals Management

*2 Strategic Approach to International Chemicals Management

*3 Global Framework on Chemicals - For a Planet Free of Harm from Chemicals and Waste

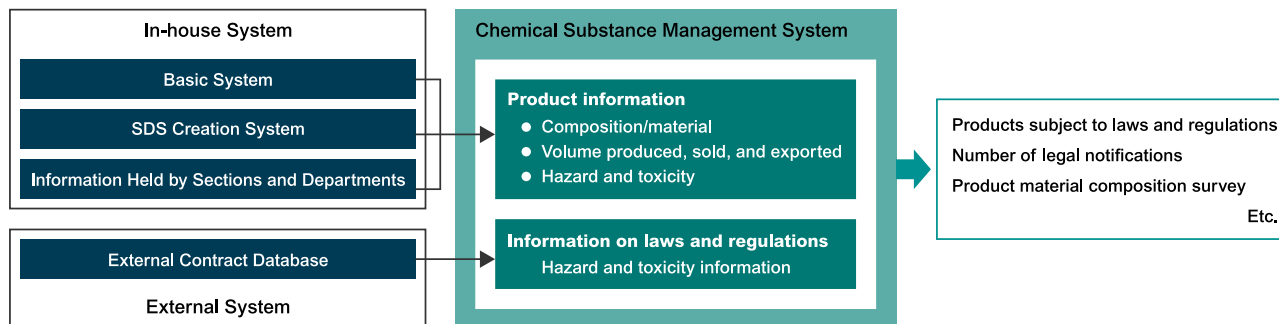
Chemical substance management system

Tosoh has introduced a chemical substance management system to centrally manage chemicals handled in-house and to comply with laws and regulations. This system involves building a database of the chemical substances in each Tosoh product that also facilitates searching for laws and regulations applicable to a particular product or chemical.

Tosoh also has certificate-issuing authority for certain products to facilitate rapid responses to customer inquiries about a product’s chemical content. That authority allows us to issue response letters or certificates from a product’s department of origin.

We continue to improve our chemical substance management system. We’re adding features to speed and raise the accuracy of our responses to inquiries.

Image of System



Chemical substance risk management

Chemical substance risk is the hazard and toxicity of a substance and the exposure concentration to it (hazard x exposure concentration). From fiscal 2024 onward, Tosoh is adopting a policy of autonomously managing chemical substance risk assessments and exposure reduction measures that aligns with revisions to Japan’s Industrial Safety and Health Act.

To assess chemical substance risk in fiscal 2024, Tosoh obtained hazard and toxicity information from SDS and other sources. It then applied such risk assessment tools as CREATE-SIMPLE to assess risks and ensure safe use at each of its facilities.

Product safety audits

In accordance with the intent of Japan's Product Liability Act, Tosoh Group employees in Japan work together to ensure product safety and provide appropriate product information. Our Product Safety Review Committee verifies the safety of products and raw materials, and deliberates on laws and regulations at each stage from R&D to sales. In fiscal 2024, the committee met 65 times.

Product Safety Audit Flow



Safety information disclosure

Product safety information disclosure

Tosoh prepares and provides SDS for each of its products to ensure safe handling. We also publish safety summaries for select products on the JCIA BIGDr—the Japan Chemical Industry Association's chemical risk assessment support portal.^{*1} To comply with, and in advance of, the revisions to the Industrial Safety and Health Act that came into force in April 2024, we updated the SDS for those of our products affected by the act's revisions and provided the updated SDS to our customers. We continue, meanwhile, to revise our product SDS to ensure the safest use of our products and to disseminate information on recommended product usages and the best protective equipment to employ with our products. In accordance with Japan's Industrial Safety and Health Act, we label products that contain the hazardous substances the act mandates for labeling.^{*2} We also, moreover, label products that include hazardous substances not cited by the act.

^{*1} Safety summaries are documents that consolidate in language easily understood by the general public the risk assessment results for chemicals manufactured and sold by Tosoh.

^{*2} The Industrial Safety and Health Act requires that all packaging for products that contain substances specified as hazardous by order of the Japanese government cabinet be labeled with the product name, the product's ingredients, the effects of those ingredients on the human body, and the precautions for storing and handling the product.

Dissemination of information on chemical substances contained in products

Tosoh is a member company of the Joint Article Management Promotion-consortium (JAMP). Since 2018, we have been promoting the acquisition, management, and communication of information on chemical substances in products in our supply chain using the chemSHERPA system promoted by JAMP. We will continue to provide information in a proactive, prompt, and reliable manner to meet our customers' needs.

SOCIETY

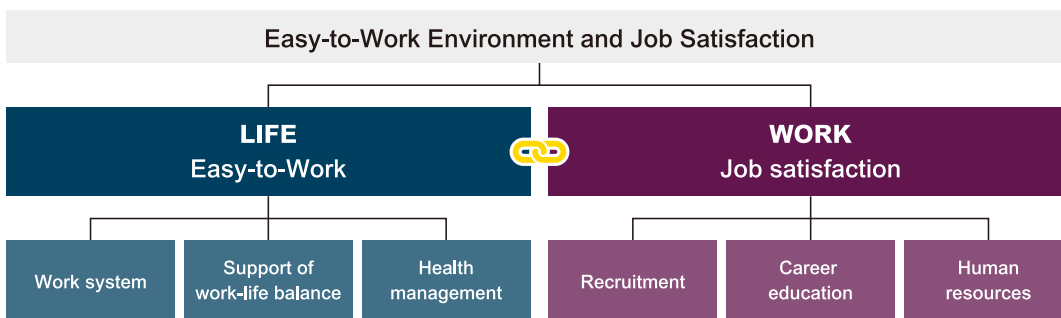


Personnel System and Human Resource Cultivation

Basic concept

Tosoh views each Tosoh Group employee as a driver of corporate value. The company thus respects and harnesses the richly diverse abilities, experiences, and perspectives of employees to foster their generation of value on the company's behalf.

Sustainable corporate value creation, moreover, requires an open work environment that promotes employee autonomy, encourages personal growth, and allows individuals to demonstrate their abilities to the fullest without compromising a healthy work-life balance. Tosoh undertakes wide-ranging initiatives to foster a supportive and comfortable workplace that guarantees employee job satisfaction.



Structure and management

Under its leadership, the Human Resources (HR) Department at Tosoh's head office remains in close contact with the HR Departments at each of the Nanyo and Yokkaichi Complexes. The three departments are responsible for collaboratively formulating and implementing Tosoh's human resources and labor, employee recruitment and training, and employee benefit policies and programs.

The HR Departments submit to the Executive Board for discussion and decision-making key personnel policies, personnel organization structuring or restructuring plans, and personnel appointments and dismissals. The Executive Board, in turn, passes on for the Tosoh Board of Directors' consideration particularly important matters. Matters related to human resources activities are regularly reported to the Board, and instructions from the Board are issued as necessary.

Personnel System

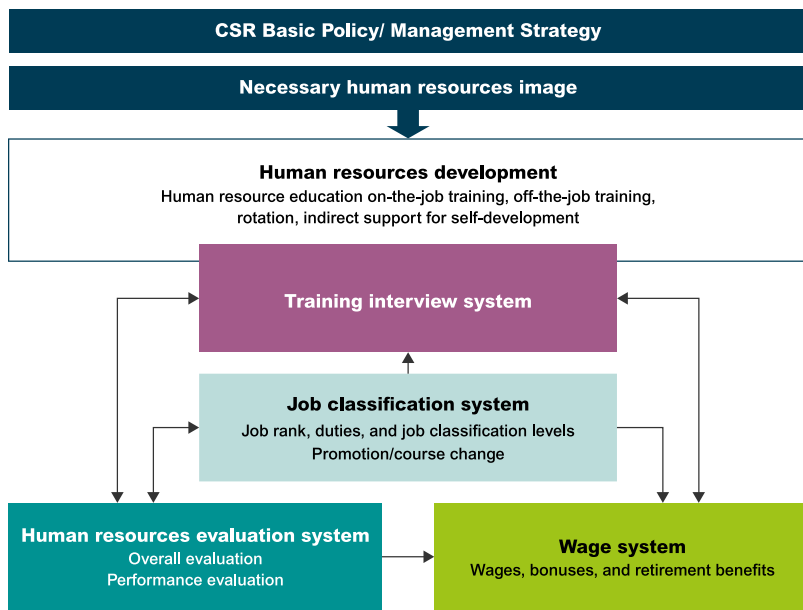
The philosophy behind Tosoh's human resources system has three pillars: a creative organization, a culture of challenge, and fair treatment. The company's personnel system highly values individuals who demonstrate strong ownership of their work.

Tosoh complements its human resource philosophy with four integrated systems: the job classification, the training and interview, the personnel evaluation, and the wage systems. This approach develops employee skills and human resources overall.

Basic philosophy of human resources system

- Creative organization that allows employees to maximize their capabilities
- Challenging culture that employs a point-based system for thorough evaluations
- Fair treatment whereby those who work hard are truly rewarded

Personnel System Chart



Employee evaluation and feedback

Job classification system

Tosoh classifies jobs based on four elements: job type, job assignment, job level, and career track. These elements clarify expectations for each individual and provide a framework for skill development and training goals.

Career tracks include positions for employees seeking to advance their careers across a broad range of fields and general positions for seasoned experts. Employees in general positions assessed with the potential to tackle career-track roles can change course and transition thereto.

Training interview system

To encourage employee ownership of career development, we have a framework where employees set annual work goals and short- and long-term career plans and identify the skills they wish to acquire. Employees undergo training interviews with their supervisors twice a year—at midyear and at fiscal year-end—to discuss their progress on that framework. The interview assesses the employee’s progress on annual work goals, on short- and long-term job plans, and on aptitude and skill and career development. This approach fosters individual growth, enhances skills, and boosts motivation, supporting overall career development.

Human resources evaluation system

Based on the results of the training interviews, supervisors evaluate employees biannually. The objective is to support human resource development. During the training interviews, supervisors offer employees feedback on areas of strength and weakness and advice on how to achieve their job-related objectives. This ensures targeted skill development and continuous professional growth.

Wage system

Tosoh's wage system is structured by job level and career track and applied equally to men and women. The system's details are transparently disclosed to all employees. For fairness and employee satisfaction, Tosoh has introduced a performance-based compensation (bonus) system that increases transparency in determining payment amounts.

We invest heavily in human resources in the belief that competitive wages are critical to attracting top talent and to motivating and energizing our workforce. Tosoh increased its base salary for the 11th consecutive year in fiscal year 2025. Management holds regular annual discussions with Tosoh's labor union on wages, including base salary increases, allowances, and bonuses.

Amid Japan's rapid generational shift, Tosoh recognizes the importance of leveraging the knowledge of its experienced employees. To maintain the motivation of these invaluable people to continue to provide us with their services beyond the retirement age of 60, we regularly review wage levels for reemployed workers.

Employee male/female wage ratio*1 in fiscal 2024 (Tosoh Corporation employees)

Category	Gender wage ratio*2 (%)
Full-time employees	73.7
Fixed-term employees	66.4
Overall	72.6

*1 Calculated in accordance with the provisions of the Act Promoting Women's Active Participation in the Workforce.

*2 Average annual salary for women/men.

The same wage system applies regardless of gender. Differences depend on job performance.

> Related pages: Respect for Human Rights "Wage management"

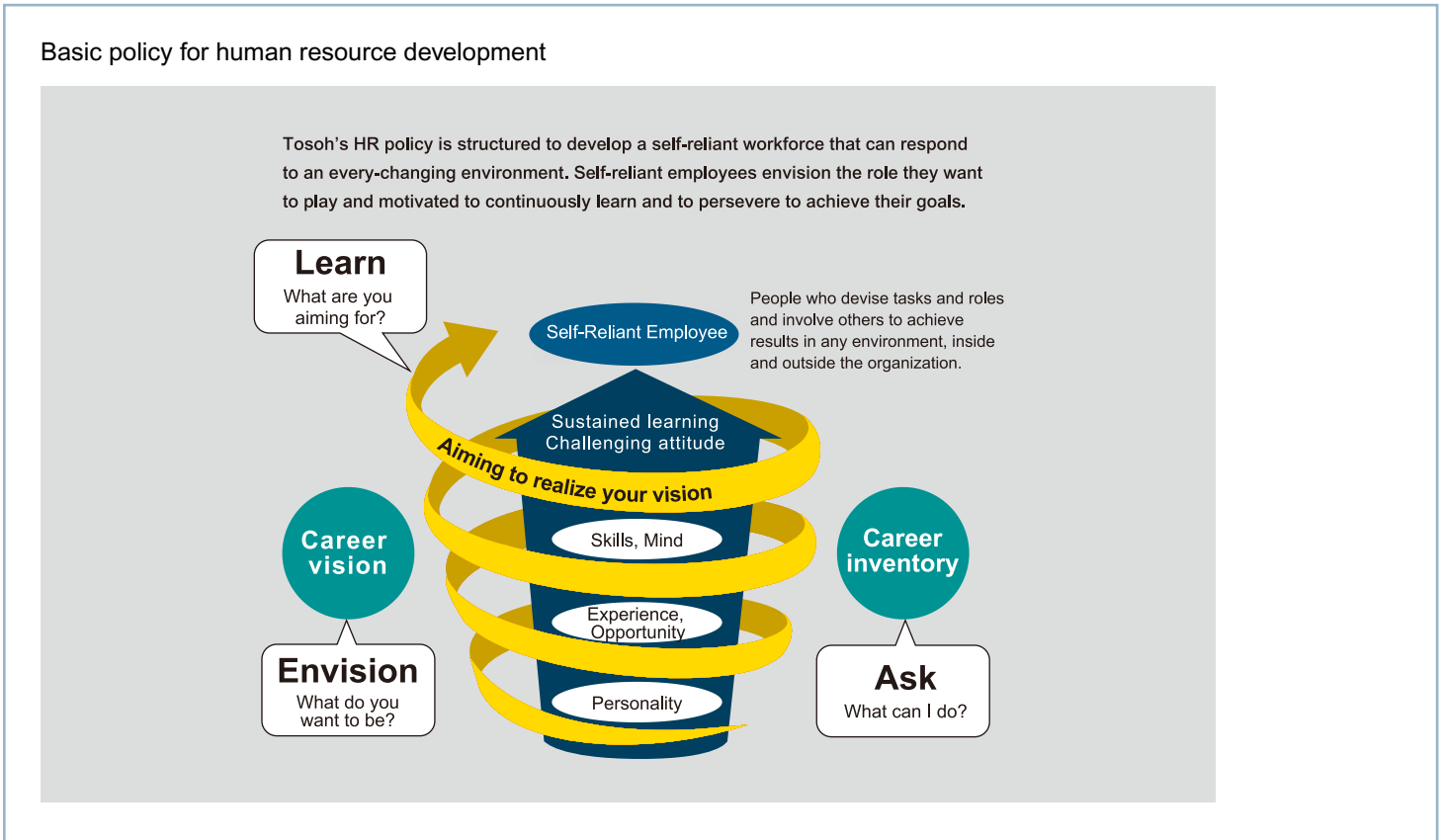
Development of Self-Reliant Human Resources

Based on our philosophy that "education is for developing the type of human resources envisioned by management, contributing to the self-realization of employees in the process," Tosoh has systematically established various educational and training programs to help employees fully develop their personal potential and qualities, cultivate the ability to think independently, and acquire knowledge and skills related to safe and stable operations.

To sustain the growth of our corporate value and remain a company trusted by our stakeholders, we believe it crucial to cultivate self-reliant human resources who can adapt to social changes and think and act independently. The human resources development policy that we established in fiscal 2022 guides us in equipping each employee to provide the high added value that underpins our corporate competitiveness.

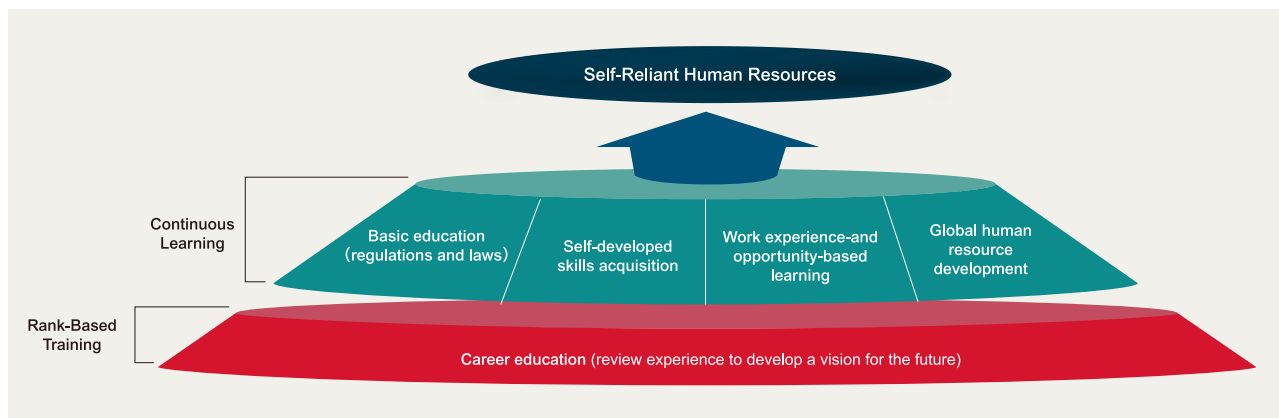
Basic policy for human resource development

Self-reliant human resources are defined as individuals who can independently craft tasks and roles for themselves and engage others, inside and outside the company, to achieve results in any environment. Our goal is to cultivate talented employees who continuously envision their goals and are capable of adapting to rapidly changing times by questioning the status quo and embracing learning. We prioritize helping employees envision where they want to be and undertake the lifelong learning that is essential to their development and achievement.



In fiscal 2022, we applied our basic policy of human resource development to the restructuring of our employee training system. We moved from a passive, skill-focused training model to active, long-term, learning-based career education. Our goal is to cultivate self-reliant human resources through continuous learning of four types: fundamental education (regulations and laws); self-developed skill acquisition; work-based experiential learning; and experience globally. We have identified five elements for success in all four types of learning and have designed an educational program that enables employees to achieve these elements progressively, step-by-step.

Career Education System



Five elements necessary for Tosoh's self-reliant human resources

Required elements	Interpretation
Ability to involve and motivate others	Rather than just accepting others' current involvement, recognize those with values different from yours and take the initiative to motivate them.
Ability to continually change oneself	Rather than accepting the status quo, look for what can change, formulate strategies, and actively influence behavior.
Determination to finish what one starts	Find alternatives even when facing challenges, believe the future can be better, and persist in achieving targets without giving up.
Ability to imagine and create	Look beyond merely solving the apparent problems, defining larger issues by imagining targets and the ideal outcome before seeking solutions.
Spirit of inquiry	Maintain an interest in a wide range of topics, creating innovations through combinations from disparate areas.

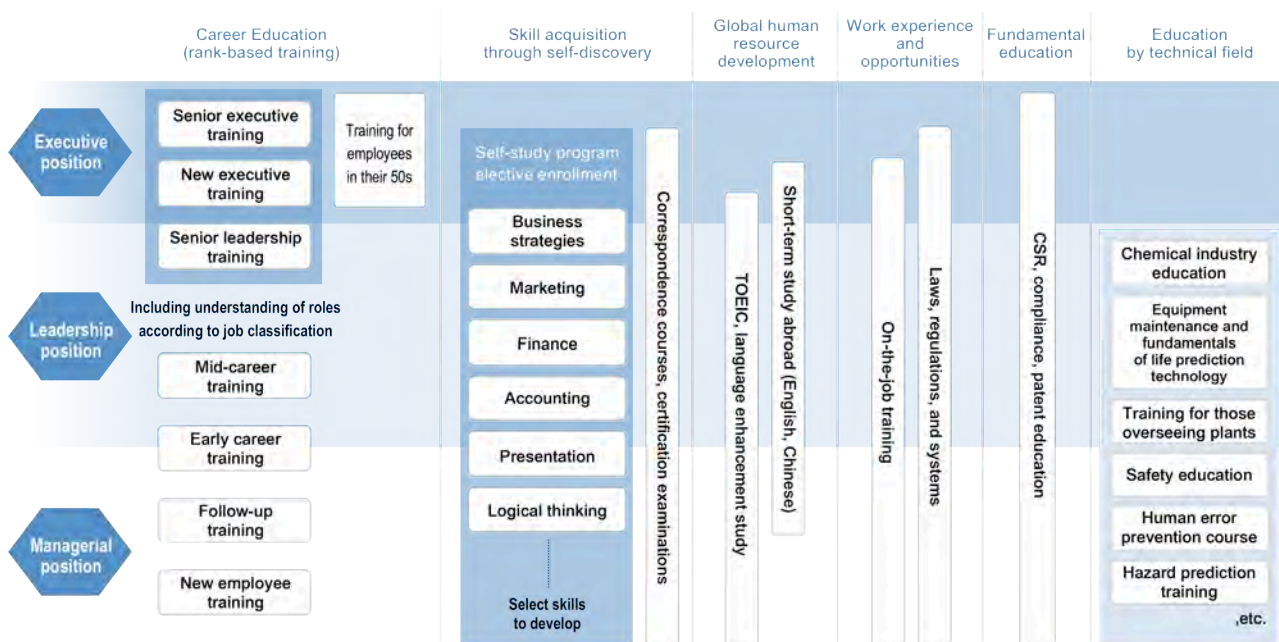
Career education

In this era of volatility, uncertainty, complexity, and ambiguity, to respond to changes in the environment it is necessary for employees to envision what they want to be, and to maintain a willingness to learn and work toward achieving that vision. We promote employee-led career development, by which employees consider what skills they need to develop for their jobs, encouraging all employees to generate significant added value and fuel Tosoh's competitiveness.

Career education is introduced in the rank-based training programs to take stock of one's career to date and to envision what one wants to be in the future. After having taken stock of their career to date and envisioning their future career path, all trainees have the opportunity to attend career counseling sessions with consultants. Through this approach, we clarify career goals, raise awareness of work targets, improve job satisfaction, and encourage personal growth. We are working to achieve a career counseling uptake of 70 percent or more among career-track employees by fiscal 2025.

Furthermore, we established a new Career Support Group in fiscal 2023 to provide an environment for all employees to discuss their careers with a nationally certified career consultant. We support our employees in thinking about their ideal careers and lifestyles, so they can flourish in various work styles, aptitudes, and circumstances. In addition to needing to be aware of their own roles and careers, executives also have the important responsibility of offering career support to their subordinates and junior staff, and Tosoh's training for executives therefore incorporates this aspect.

Career Education System Chart



* Enable young employees to take career counseling after rank-based early career training

Career-track employee training by rank in fiscal 2024 (Tosoh Corporation employees)

Training	Target	Main content of training	Training time per employee (hours)	No. of participants
New employee training	New employees	<p>Solidify attitude toward work</p> <ul style="list-style-type: none"> ● Overview of the entire company (human resource system, R&D, compliance, CSR, human rights, etc.) ● Explanation of each complex, division, and group company ● Groupwork (Theme: Tosoh's businesses, what is expected of new employees, etc.) ● Stance training (learning how to handle work as a member of society) ● Career training (Reflect on past experiences and identify sources of motivation; reflect on the experiences in which the most effort has been exerted; deepen and share ideas about what each employee hopes to gain from working; establish future "ideal vision" and clarify the actions they should take after attending the training) 	150	99 (Male: 75, Female: 24)
Follow-up training	Year 2 with company	<p>Provide opportunity for self-reflection and enlightenment through group discussions</p> <ul style="list-style-type: none"> ● Presentations within the assigned work groups ● Group discussion (Objectives: understanding personality traits and perspectives on being independent, practicing techniques to be more independent) ● Lectures and exercises (Aimed at employees who can think, judge and act independently) 	11.25	84 (Male: 60, Female: 24)
Early career training	Years 3-4 with company	<p>Clarify career direction</p> <ul style="list-style-type: none"> ● Career training (Self-understanding as a basis for job crafting, selection of target tasks for job crafting/ experiential learning, and planning for promotion of experiential learning) 	7.5	103 (Male: 87, Female: 16)
Mid-career training	Equivalent to 7 years with the company	<p>Develop medium- to long-term career vision</p> <ul style="list-style-type: none"> ● Career training (Self-resources for autonomous career development, autonomous career development methods, and workplace-based realistic career development planning) ● Compliance, harassment, CSR, human rights education 	15	70 (Male: 61, Female: 9)
Senior leadership training	Senior leadership positions	<p>Take inventory of career and understand role</p> <ul style="list-style-type: none"> ● Career training (Career review, clarify behavioral characteristics, consider senior leadership roles, set career vision, create action plan) 	11.25	44 (Male: 39, Female: 5)
New executive training	Newly appointed executives	<p>Take inventory of career and understand role as an entry-level executive</p> <ul style="list-style-type: none"> ● Career training (Career review, role of first-time executive employee, ideal vision, and action plans) ● Compliance, harassment, CSR, human rights education 	22.5	65 (Male: 64, Female: 1)
Senior executive training	Senior executive positions	<p>Reaffirm one's role and responsibilities as senior executive</p> <ul style="list-style-type: none"> ● Management improvement, compliance, internal control, management 	15	30 (Male: 29, Female: 1)

Investment Amount in Education and Training (non-consolidated)

(millions of yen)

	Fiscal 2022	Fiscal 2023	Fiscal 2024
Investments	38.1	55.7	58.0

Support for self-developed skill acquisition

Support for independent learning

Tosoh has established a correspondence education system to aid employees in acquiring the basic knowledge and general education and skills required for their work, and to support their independent learning. Participants can take courses regardless of their own work duties. Fifty to eighty percent of the course fee is subsidized for those who complete such programs. The company pays for all courses taken during childcare leave, used as self-development during leave and as preparation for returning to the workplace.

Employees taking correspondence courses (Tosoh Corporation employees)

(People)

	Fiscal 2022	Fiscal 2023	Fiscal 2024
Attendees	374	267	249

Encouraging qualification acquisition and skill testing

Tosoh supports its employees in taking examinations and courses to obtain various qualifications and licenses. Employees who obtain qualifications and licenses designated by Tosoh are publicized in internal newsletters, and receive rewards divided into five categories according to the degree of difficulty. To improve the technical skills of general employees in the manufacturing and facilities management divisions, we have set the qualifications required for promotion to all positions.

Number of qualification incentive benefits (Tosoh Corporation employees)

	Fiscal 2022	Fiscal 2023	Fiscal 2024
Number of benefits	445	739	722

Global human resources development

Tosoh's overseas sales account for more than 50 percent of its total sales. The company expects further opportunities for involvement with overseas markets in the future, regardless of business or job classification. Reflecting this, in fiscal 2023 we reviewed our global human resources development program. Tosoh defines global human resources as people who can use language as a tool to advance their work and expand Tosoh's business internationally. The company aims to raise the language capabilities of employees by providing support programs according to language level. In the future, we plan to raise the language ability level within the employees and expand the programs we offer for learning about local business practices through overseas training.

In fiscal 2024, we resumed our study-abroad program—temporarily suspended amid the COVID-19 pandemic—without altering the program content or the number of students dispatched. Living at a language school or with a host family enhances language proficiency and offers a valuable opportunity to engage with people of diverse backgrounds and values.

We will bolster our development of global human resources by expanding our programs to enable employees to increase their global knowledge and acquire the ability to grow our global business further.

New graduate and mid-career recruitment

In the interest of realizing sustainable growth, Tosoh is striving to secure the appropriate personnel, who have diverse values and can function effectively on the global stage.

In hiring new graduates, the company seeks individuals with an inquiring and pioneering spirit, who are willing to work tirelessly to learn about things in depth, and who are adept at problem-solving with a diverse group of colleagues. To this end, through its recruitment website and pamphlets, the company provides information on its priority areas, technological trends, and human aspects. Furthermore, Tosoh contacts students at an early stage through industry research seminars and one-day work experience programs. The objectives are to promote not only its corporate philosophy and management policies but also its corporate culture, through its senior employees.

To attract personnel with advanced expertise in DX and environment-related technologies, Tosoh's MI Center and IT Strategy & Supervisory are initiating DX activities. We are also highlighting projects, such as our construction of a CO₂ recovery and feedstock conversion facility and a biomass power plant, during recruitment seminars and internships to inspire interest and foster ambition among potential candidates.

In fiscal 2024, Tosoh hired 99 people for career-track positions and 86 for general positions.

For mid-career hires, the company aims to secure personnel with expertise and experience to make an immediate impact in important areas of research and technology development.

Initiatives to ensure appropriate employee allocation

To invigorate our organization, we must allocate employees based on their aptitudes and aspirations. Tosoh is for that purpose developing a talent management system that centrally manages employee data, including the work history and expertise of each individual, to ensure that employees are optimally placed. An individual's data will be shared among Human Resources Departments, the employee in question, and the employee's supervisors. This will help supervisors optimize their teams.

To further our development of self-reliant human resources, we have also introduced an internal recruitment system. It grants employees the opportunity to volunteer for roles that align with their interests and ambitions. This and other of the initiatives that we've implemented seek to optimize employee placement and harness every employee's full potential to drive individual and corporate performance higher than ever before.

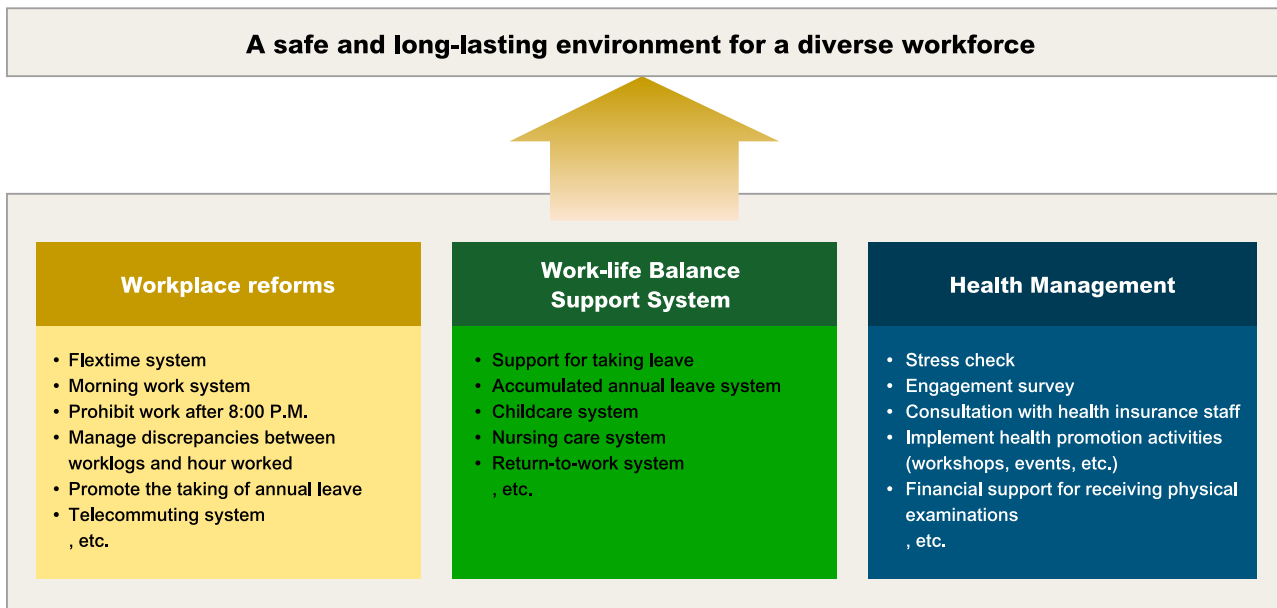
Basic concept

Tosoh recognizes that achieving work-life balance is crucial for fostering diverse talent and innovation. The company continuously enhances its policies to ensure long-term job security and employee satisfaction. Tosoh is committed to providing an inclusive work environment that respects human rights, embraces diversity, and promotes job fulfillment. Through initiatives to those ends, Tosoh aims to empower its workforce and cultivate a culture of creativity and productivity.

Internal Work Environment Policies

In order to create a safe and long-lasting environment for a diverse workforce, we are promoting a variety of initiatives, including: (1) promoting workplace reforms, (2) enhancing work-life balance support system, and (3) promoting health management.

Internal Work Environment Policies



Work style reform

We are promoting work style reforms with the aim of enhancing corporate competitiveness. Our efforts to curb long working hours and boost productivity have enhanced both employee job satisfaction and comfort while at the same time building a strong corporate culture. Specifically, we are working on various measures to foster time awareness, enhance systems for creating a comfortable work environment, and promote operational efficiency throughout the company and in each workplace.

Work style reforms undertaken (Tosoh non-consolidated)

Key activities	Purpose	Overview
Morning-oriented work	Curb long working hours and foster a sense of time awareness	<ul style="list-style-type: none"> Prohibit working after 8:00 p.m. in principle, so as to rethink the way of working, shifting from night work to morning work Employees who begin work during morning hours—specifically between 5:00 a.m. and 7:30 a.m. at plants and at 8:00 a.m. in offices—are eligible for benefits.
Flex-time system	Promote flexible work schedules	<ul style="list-style-type: none"> Eliminate core hours, enabling a better work-life balance
Systematize work time management	Appropriate working hour management	<ul style="list-style-type: none"> Systematize time and attendance management Check deviations from work applications by acquiring PC log information to promote proper attendance management
Reform web conferencing system	Leverage IT to improve operational efficiency	<ul style="list-style-type: none"> Promote further use of online conferencing by equipping workplaces and meeting rooms at each complex with the necessary equipment for web conferencing
Workplace discussions on operational efficiency	Workplace-specific operational efficiency	<ul style="list-style-type: none"> Create opportunities for each workplace to discuss issues and solutions in the workplace, and implement and promote measures to improve operational efficiency
Remote work system	Increased labor productivity Promotion of flexible work system	<ul style="list-style-type: none"> Expand telecommuting system for remote work while maintaining internal communication (twice a week and up to six times a month) No restrictions on reasons such as childcare or nursing care; available to employees who are eligible for the flex-time system and who have been approved by their department manager and the company

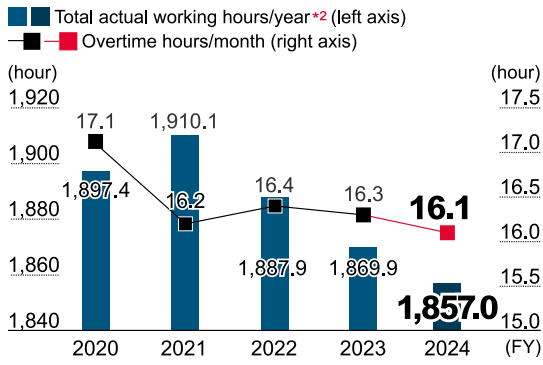
Curbing long working hours

With the aim of curbing long working hours from the viewpoint of overwork prevention and health management, Tosoh in principle prohibits employees from working after 8:00 p.m. If there are situations in which working past this time is unavoidable, we will review the work style with consideration for early morning starts. This is intended to reduce after-hours work, which contributes to long working hours, improve productivity by fostering a sense of time awareness, and realize a better balance between work and life away from the job by encouraging employees to return home early.

In fiscal year 2024, we implemented a comprehensive redesign of our attendance management system with a more user-friendly approach for employees to input their work hours and monitor their attendance status. The system features a continuous display of monthly and yearly work records and incorporates an alert mechanism that triggers warnings when overtime hours reach specified thresholds, thereby promoting awareness of excessive work hours. To ensure accurate work-time reporting, we've instituted a verification process that compares computer log-on and log-off times with employee-reported start and end times. Employees must explain any discrepancies exceeding 30 minutes to ensure the integrity of our attendance reporting system.

All employees who work in excess of 80 hours of overtime per month are required to be interviewed by an occupational physician regardless of the nature of their request. These interviews are meant to prevent physical and mental health problems among employees.

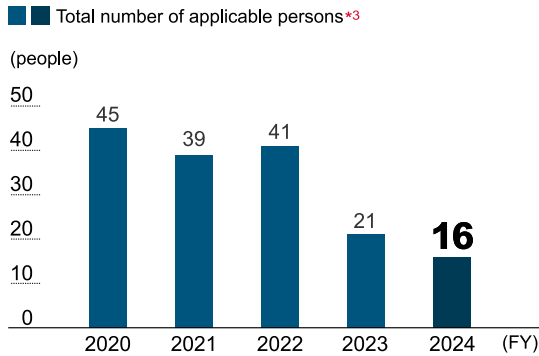
Working hours per employee*1 (Tosoh non-consolidated)



*1 Data on leadership and managerial positions

*2 Total annual hours worked = annual prescribed hours + annual overtime hours - annual paid leave, hours of absenteeism, etc.

Occurrence of overtime in excess of 80 hours per month (Tosoh Corporation)



*3 Data on leadership and managerial positions

Improvement of annual paid leave utilization rate

Tosoh believes that taking annual paid leave helps employees refresh their minds and bodies through a better work-life balance and that this, in turn, contributes to increased productivity at work. We have set a company-wide annual leave utilization rate target of at least 80 percent. Our efforts to improve the rate enabled us to achieve the target in fiscal 2024, following on from fiscal 2023. We prioritize workplaces that encourage annual leave and have implemented various awareness-raising initiatives to this end. These include utilizing a shared scheduler in each department to display planned annual leave dates. The heightened transparency and visibility of company-wide leave usage patterns engenders a culture where work-life balance and taking time off are valued.

Paid annual leave taken (Tosoh non-consolidated)

Item	Breakdown	Fiscal 2022	Fiscal 2023	Fiscal 2024
Days acquired (per person)	Executives	13.1	13.7	15.1
	Nonexecutives	16.4	17.2	17.9
	Average	15.8	16.6	17.4
Utilization rate (%)	Executives	65.6	68.7	75.8
	Nonexecutives	86.3	88.6	92.4
	Average	82.4	85.0	89.5

* The aggregation period is from July of the current year to June of the following year.

Improved operational efficiency

Tosoh considers the improvement of operational efficiency to be a key initiative in creating a comfortable workplace. To this point, we have endeavored on a company-wide scale to improve productivity by reducing the use of paper and utilizing IT.

Paper elimination initiatives	IT utilization initiatives
<ul style="list-style-type: none"> • Changing the workflow for various application procedures • Changing the workflow for approval procedures • Digitizing internal materials • Reducing internal documents • Providing support for automated faxing of order confirmations, etc. 	<ul style="list-style-type: none"> • Computer remote operation systems • Expanding work management systems • Introducing electronic lab notebooks • Introducing tablets in the Facility Management department • Introducing cloud storage • Introducing hot desking and other systems

Each workplace also reviews operations and offers encouragement in the form of improvement proposals as a measure to incentivize employees to improve operational efficiency. By encouraging employee creativity and ingenuity, promoting active participation in work, and developing new skills and honing existing ones, we create comfortable workplaces and a resilient corporate structure, leading to the further development of the company. In addition to the “Working Style Reform Award” and “Work and Office Work Improvement Award,” which are aimed at improving operations that lead to work style reform, we have also established a “Energy Saving Proposal Award” aimed at reducing CO₂ emissions to encourage improvement proposal activities.

Tosoh's wholly owned domestic group companies are also engaged in improvement proposals to further invigorate the Group overall.

Improvement proposals (Tosoh non-consolidated)

	Fiscal 2022	Fiscal 2023	Fiscal 2024
No. of proposals	10,581	14,550	13,313

TOPICS: A New Work Style at the New Head Office

In March 2024, Tosoh Corporation relocated its head office to Tokyo Midtown Yaesu (Chuo-ku, Tokyo). The company believes that its growth relies on the development of self-reliant employees and in this new headquarters has embraced the concept of an office where employees want to go and where independence and communication are prized and facilitated. Tosoh resolves to continue to cultivate comfortable, fulfilling workplaces.



Open meeting space

Support system for balancing work and home life

In the interest of actively supporting diverse human resources in balancing work and family life, we aim to realize an environment in which employees can continue to work with peace of mind, by providing and encouraging the use of work styles and various systems that suit their individual lifestyles.

Pregnancy, childbirth and childcare systems

At Tosoh, we believe that enjoying child-rearing leads to personal growth for our employees in all aspects of their lives, including work. To this end, it is also important to create an atmosphere in which the entire workplace—including supervisors—understands and is comfortable with systems related to pregnancy, childbirth and childcare. We have developed and posted on the intranet a publication outlining the systems related to pregnancy, childbirth, and childcare for employees to review. The publication also includes a section specifically for supervisors, clearly stating what they should keep in mind and a checklist to encourage them to communicate appropriately on the subject. We open lines of communication between employees and superiors to ensure all employees who wish to take childcare leave are able to do so smoothly and to reduce anxiety upon returning to work.

We also believe that increasing the number of male employees taking childcare leave will positively impact the creation of comfortable workplaces. The acquisition rate for childcare leave has shown consistent yearly growth. It reached 85.5% in fiscal 2023, significantly surpassing our 50% target. We therefore set a more ambitious target, of 90% or higher, for fiscal 2024 but fell short, at 70.4%. We observed, however, an increase in the average number of leave days taken and will continue encouraging male employees' involvement in childcare.

To support employees' professional development during childcare leave, we offer a subsidy program. We fully reimburse the cost of completed correspondence courses that will facilitate employees' smooth transition back to work. This underscores our determination to maintain and improve employees' skills and confidence while they are away from the workplace and ensures their seamless reintegration into the workplace on their return.

Childcare data (Tosoh Corporation employees)

	Male/Female	FY 2022	FY 2023	FY 2024
Childcare leave recipients	Male	72	141	131
	Female	13	19	22
	Total	85	160	153
Childcare leave acquisition rate*1 (%)	Male	40.4	85.5	70.4
	Female	100	100	100
Average number of days taken*2	Male	-	-	29.7
Return rate*3 (%)	Male	100	100	100
	Female	100	93.3	100
Retention rate of returnees*4 (%)	Male	100	100	100
	Female	100	100	92.9
Male employees childcare/paternity leave recipients		174	161	185
Male employees childcare/paternity leave acquisition rate*5 (%)		97.8	97.6	99.5
Employees taking advantage of reduced working hours to facilitate child care	Male	1	3	3
	Female	49	39	46
	Total	50	42	49

*1 Number of employees who took childcare leave/number of employees who welcomed a new child.

The average number of days taken is calculated in accordance with the stipulations of Japan's Act on Childcare Leave, Caregiver Leave, and Other Measures for the Welfare of Workers Caring for Children or Other Family Members.

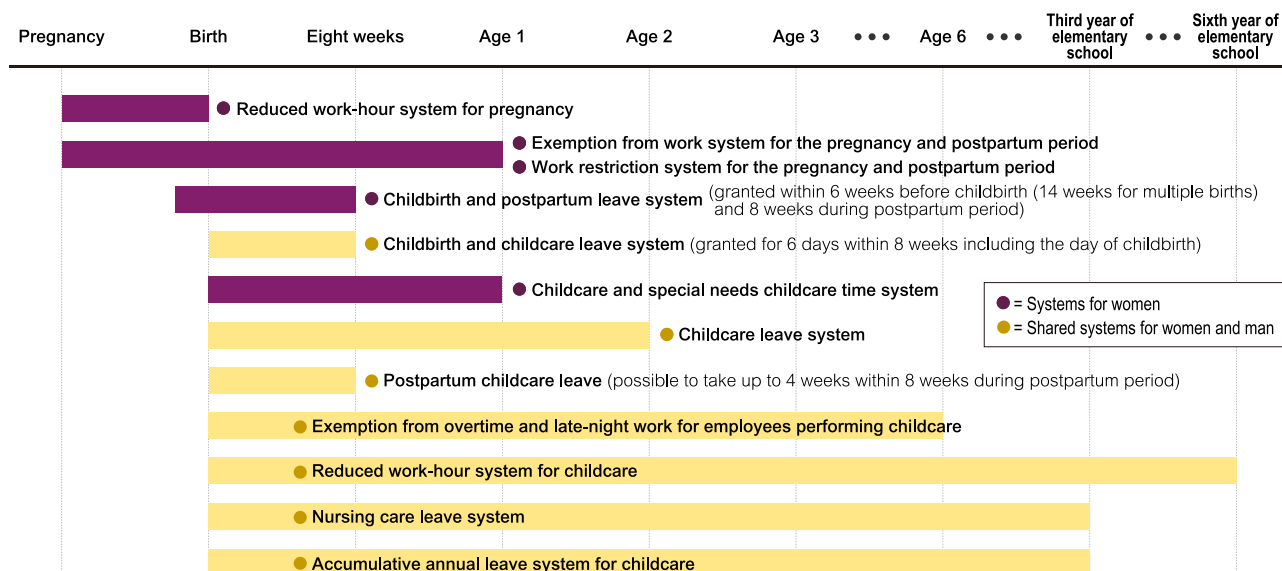
*2 The return rate refers to the percentage of employees whose childcare leave or post-childbirth leave ended during a given fiscal year.

*3 Number of employees who returned to work/number of employees who were scheduled to return.

*4 Retention rate of employees 12 months after returning to work/number of employees who returned to work in the previous fiscal year.

*5 Number of employees who took maternity or paternity leave / Number of employees who welcomed a new child.

Timeline on Pregnancy, Childbirth, and Childcare Systems(Tosoh non-consolidated)



Work-Life Balance

Support system for balancing work and Pregnancy, childbirth, and childcare (Tosoh non-consolidated)

Work-related systems	Exemption from work for the pregnancy and postpartum period	Exemption from working the required number of days and hours for reasons such as health guidance, medical examinations, and doctor's orders
	Work restriction for the pregnancy and postpartum period	Restrictions on working overtime, on days off, and night shifts
	Parental leave before and after childbirth	Female employees within six weeks before childbirth (or 14 weeks for multiple births) and eight weeks after childbirth (treated as paid)
	Maternity leave	Up to six days within eight weeks of the child's birth (treated as paid, may be split over two uses)
	Childcare leave	Until the child is two years old (first seven days treated as paid leave, may be split over two uses)
	Postnatal childcare leave	Up to four weeks within eight weeks of birth (may be split over two uses)
	Reduced working hours	Up to two hours per day during pregnancy and through the end of the child's sixth year of elementary school
	Leave to care for ill/injured child	Employees caring for children up to the third grade of elementary school or for children with certified disabilities up to the sixth grade of elementary school are eligible for flexible leave. This leave can be taken in increments as short as five minutes and is treated as paid time off. One child: Five days (40 hours) per year Two or more children: 10 days (80 hours) per year
	Using accumulated annual leave to care for sick/injured children	May use accumulated annual leave to care for a sick/injured child up to the third year of elementary school
	Using accumulated annual leave to receive fertility treatments	May use accumulated annual leave for fertility treatments
Benefit programs	Gift to celebrate birth	Paid upon childbirth
	Assistance for hospitalization expenses	Subsidy for expenses when an employee or spouse is hospitalized for procedures such as Cesarean section
	Assistance for room upgrade	Assistance to cover out-of-pocket expenses for upgrading beds when employees or their spouses are hospitalized for Cesarean sections or other procedures
	Family allowance	Monthly allowance based on number of dependents and children

Nursing care-related systems

In recent years, the number of people who have had to leave their jobs to care for family members has been on the rise in Japan. At some point, everyone faces the possibility of nursing care. That is why it is essential to create an environment in which employees can continue to work with peace of mind, and to create a culture in which the entire workplace understands and cooperates with each other to prevent employees from leaving the workforce to provide nursing care. Tosoh has published a nursing care guidebook to provide enhanced information for employees who care for family members while working and their colleagues in the workplace. It is more challenging for companies to ascertain the needs of their employees to provide nursing care than it is for childcare. As such, in 2022, we conducted a survey of all employees regarding nursing care. The results showed us that more than half of our employees may need to take care of a family member in the future. We will use the survey results to further enhance the system to allow employees to continue their work with peace of mind.

Nursing care-related data (Tosoh Corporation employees)

(People)

Item	Fiscal 2022	Fiscal 2023	Fiscal 2024
Nursing care non-paid leave recipients	0	1	1
Nursing care paid leave recipients	15	33	56
Employees who work reduced hours due to nursing care	0	0	0

Support System for Balancing Work and Nursing Care (Tosoh non-consolidated)

Work-related systems	Nursing care non-paid leave	Up to 1 year (may be split over a maximum of three installments)
	Nursing care paid leave	When taking care of a family member, leave may be taken in increments of five minutes (treated as paid leave) One family member requiring care: Five days (40 hours) per year Two or more family members requiring care: 10 days (80 hours) per year
	Reduced working hours	Up to two hours per day for a total of 1,096 days (three years)
	Using accumulated annual leave to care for family members	When taking care of a family member, accumulated annual leave may be taken in half-day increments (treated as paid leave)
Benefit programs	Separation allowance	Monthly stipend to help compensate employees who live separately from their spouse to care for family members
	Subsidy to cover the cost of caregivers	Assistance provided when an employee or family member hires a housekeeper for care needs
	Allowance for those commuting via bullet train	Subsidy for transportation expenses when commuting from the residence of a family member receiving care to work via bullet train

Other welfare programs

Tosoh has established numerous benefit programs designed to support the livelihood of its employees, help them to build assets, and support them in realizing a better work-life balance.

Program name	Details
Refreshment support leave	Encourages employees to take at least five consecutive days of annual leave each year
Active leave	At the age of 50, employees receive 10 consecutive days of leave and a travel voucher worth 300,000 yen
Restart leave	Up to seven consecutive days of leave within one month of reemployment
Using accumulated annual leave for volunteer activities	Employees can use accumulated annual leave to participate in volunteer activities, including disaster recovery assistance and social welfare
Reemployment system	Support for returning to work for employees who resigned due to marriage, spouse relocation, childcare, or nursing care
Company housing and dormitories for single employees	Company housing and dormitories for single employees are provided at each complex
Personal housing allowance	Financial assistance for employees who acquire their own housing
Rental housing allowance	Financial assistance for employees who live in rental housing
Workplace social gathering expenses	Company subsidies for workplace social gatherings and events
Shareholding association	Facilitation of employees' acquisition of company stock and support for building of assets
Hospitalization expense assistance	Assistance with hospitalization expenses when an employee or spouse is hospitalized

Health management*

Tosoh recognizes that the physical and mental health of its employees are fundamental to realizing its corporate philosophy and CSR Basic Policy. We therefore undertake physical and mental health promotion activities so that our employees can reach their potential.

Health declaration

Tosoh believes that the realization of our corporate philosophy is predicated upon the physical and mental health of our employees. As such, we actively work to maintain and improve their health and create comfortable work environments.

Health promotion activity policy

1. Continuously strive to maintain and improve the physical and mental health of our employees.
2. Focus on activities from the perspectives of prevention and early detection.
3. Aim to create a cheerful and energized workplace where all employees of Tosoh and the Tosoh Group are healthy people.

* Registered trademark of the nonprofit organization Kenkokeiei.

Promotional structure

To implement the Health Declaration, we have established a Health Promotion Committee chaired by a director involved in Human Resources to work on maintaining and promoting the health of our employees. Human Resources is responsible for implementing health promotion activities at each complex. The Tosoh Workers Union shares information on health issues between labor and management. The Tosoh Health Insurance Association is involved in finances for health activities, while the Health Management Center is staffed by specialists such as occupational physicians, public health nurses, and nurses. Together, they work to carry out various health promotion activities.

Our Health Promotion Committee meets twice annually to devise plans and policies for health promotion activities, to establish numerical targets and KPIs, to manage progress, and to report on the results of health-related activities at the Nanyo and Yokkaichi Complexes.



Health promotion initiatives

To support the physical and mental health of our employees, each complex plans and operates its own activities each year with unique ideas and approaches in addition to company-wide health promotion activities based on the three pillars of physical fitness, lifestyle improvement, and mental health.

Moreover, we have set company-wide numerical targets with fiscal 2025 as the year by which we will establish a system to implement the PDCA cycle for the purpose of further promoting health management. To achieve these targets, we will support good health through health promotion activities, and maintain and promote a comfortable work environment.

Health promotion activities

Item	Activities	Notes
Physical fitness	Company-wide walking event	Twice a year, for 3 months each, participatory events with the goal of walking 8,000 steps per day
	Walking events at complexes	Walks meant to encourage friendship as part of all locations' recreation events
	Physical fitness test	Measure 6 items, including muscle strength, agility, and cardiopulmonary endurance, with the overall evaluation expressed as a "physical fitness age." Conducted every 5 years to provide an opportunity to review employee physical fitness
Lifestyle improvement	Birth month health counseling	Employees can discuss lifestyle and mental health issues with occupational physicians, public health nurses, and registered nurses, while referring to data such as physical examination results
	Smoking cessation activities	Provides information on smoking cessation, offers financial support to those who wish to quit smoking
	Seminar	Invite lecturers from outside the company, conduct seminars for employees on lifestyle-related themes (lifestyle diseases, dietary habits, etc.)
Mental health	Mental health education	<ul style="list-style-type: none"> Conducted training on basic knowledge of mental health for general employees Conducted training held for executive personnel on workplace and individual mental health

Health promotion activity numerical targets (Tosoh Corporation employees)

(%)

		Fiscal 2022 results	Fiscal 2023 results	Fiscal 2024 results	Fiscal 2025 targets
Physical	BMI ≥ 25	20.2	20.8	21.2	18.5 or less
	Smoking rate	17.5	17.2	17.8	14.5 or less
Mental	People under extreme stress (conventional standard)	3.8	-	-	3.0 or less
	People under extreme stress (new standard)	-	6.0	5.2	4.5 or less*

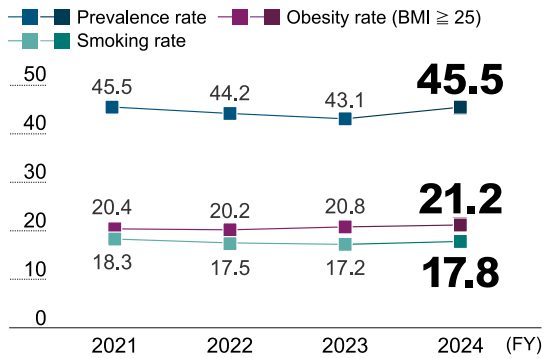
* With the update of the survey company's criteria for determining high-stress individuals, the target value has been changed from the same level of 3.0% or below to 4.5% or below.

Periodic health examinations

All employees of the Tosoh Group are covered by health insurance under the Health Insurance Act. In accordance with the Industrial Safety and Health Act, we conduct periodic health examinations, and we have succeeded in ensuring physical examinations every year for 100 percent of our employees. In addition to general periodic checkups, we also provide lifestyle-related disease examinations, while colon, stomach, prostate cancer, and dental checkups are available for those who wish to receive them. In the regular health check-ups for the fiscal year 2024, the rate of employees who discovered a condition that required further investigation was 45.5% among all examinees. For employees identified with these findings, the results of the re-examination are submitted to the company doctor, contributing to the subsequent health management of the employees.

Moreover, we conduct specific medical examinations for employees aged 40 and over to prevent serious complications from lifestyle-related diseases—such as heart disease and stroke—caused by metabolic syndrome.

Prevalence Rate Trends (Tosoh Corporation employees)



Subsidized health examinations by Tosoh Health Insurance Association

Individual/ Group	Name	Eligibility	How to get examinations	Out-of-pocket expenses	Examination restrictions
Individual	Complete physical examination	Insured employees and their dependent spouses	Employees visit the institution of their choice	10% for one-day/20% for overnight checkups (with a maximum insurance coverage of ¥100,000)	Once per fiscal year per item
	Gynecological checkup			10% as a general rule (with a maximum insurance coverage of ¥20,000)	Once per fiscal year per item
	Dental checkup (oral examinations)	Insured employees and their dependents (excluding preschool–high school students)		Amount exceeding ¥3,000 (maximum insurance coverage of ¥3,000)	Once per fiscal year
	Influenza vaccination	Insured employees and their dependents		¥1,000 per vaccination	Once per designated period (as a general rule) (twice for infants)
	Treatment for smoking cessation	Insured employees		Same amount as when covered by insurance	Once per fiscal year
	Specific medical checkups	Dependents 40 years old and older		Free (using a medical examination voucher)	Once per fiscal year
Group	Blood tests	Insured employees (if desired)	Group examinations by complex	Free	Once per fiscal year
	Dental checkup (oral examinations)				
	Colorectal examinations				
	Gastric examinations				
	Cancer markers			A portion of the complete medical checkup (10% out-of-pocket)	

Stress test engagement survey

Stress tests and engagement surveys are conducted once each year. Stress checks are used as mental health examinations, leading to the identification of issues in the workplace as well as early detection and response to problems, by understanding the mental health condition of employees.

The examination rate in fiscal 2024 was 95.3 percent, and the share of people deemed to be under extreme stress was 5.2 percent. Tosoh experienced a decrease in the proportion of individuals reporting high stress levels compared with the previous fiscal year, and this figure remains below the average reported by an external survey. In addition to working to reduce stress by encouraging employees with high levels and recommending the use of counseling, the results of workplace analysis are fed back to the heads of each department for organizational management purposes.

The engagement survey also confirms employees' work ethic, as we believe that satisfaction with the company and enthusiasm for work are important for employees to maximize their potential. The results of the survey will be used to develop HR policies and initiatives to improve productivity, with the aim of further improving engagement and invigorating the organization.

Engagement survey results

Favorable elements	Problematic elements
<ul style="list-style-type: none"> • Activities for mood change • Worker autonomy • Satisfaction with evaluations 	<ul style="list-style-type: none"> • Activities for positive thinking • Confidence in one's work

Support program for employees returning from mental health leave

Tosoh has established a return-to-work support program for employees who have been absent from work due to mental health issues. We collaborate with occupational physicians and the Tosoh Workers Union during each step of the process, from the identification of the illness until after the employee returns to work, to help alleviate employee anxiety and facilitate a smooth return.

- Step 1: Identifying and responding to disorder
- Step 2: Submission of medical certificate (in event of inability to work)
- Step 3: Care during absence from work
- Step 4: Declaration of intent to return (determination of suitability for return by the attending physician)
- Step 5: Examination by occupational physician
- Step 6: Assistance in visualizing return to work
- Step 7: Decision on whether or not to reinstate the employee at a meeting of the Reinstatement Review Committee
- Step 8: Building structure for cooperation following return to work
- Step 9: Follow-up after return to work

Labor-management relations

Tosoh Corporation and the Tosoh Workers Union have concluded a collective agreement in the spirit of Japan's Labor Union Act and Labor Standards Act. The two sides are bound to respect the other's position, deepen understanding and trust between them, and confirm their mutual cooperation to contribute to the development of the company's business and the improvement of conditions for employees. The collective agreement includes the following matters: Labor-management committee, collective bargaining, human resources, working hours, days off and paid holidays, salaries, health and safety, welfare, accident compensation and assistance for work-related illness and injury, harassment, and education. Tosoh acts as a union-organized shop, and all employees are members of the Tosoh Workers Union, excluding certain staff in executive positions and those involved in management-related work.

The Tosoh Workers Union represents its members in labor-management negotiations, and through committees and councils conducted based on specific themes has built good, stable labor-management relations with a sense of trust for discussions that can be tense. The two sides will continue to communicate closely to respect each other's position and cooperate in the interest of contributing to the development of the company's business and the improvement of conditions for employees.

Tosoh Workers Union composition

	Fiscal 2022	Fiscal 2023	Fiscal 2024
No. of union members*1	3,346	3,367	3,422
Union membership ratio*2 (%)	71.8	71.3	72.1
No. of union representatives*3	6	6	6

*1 Number of employees (including those seconded to group companies), excluding executives and certain staff involved in management-related work.

*2 Number of members/employees

*3 Representatives elected by union members

> Related page: Respect for Human Rights "Respect for freedom of association and the right to collective bargaining"

Labor-management communication

The Central Management Council meets once a month to discuss the company's management situation, human resource systems, improvement of working conditions, and other issues with the aim of achieving a common understanding of the current situation and challenges. The discussions are disclosed in the form of minutes on the company intranet and are accessible to all employees.

Tosoh Corporation provides advance notice to the Tosoh Workers Union and employees when implementing major changes in business operations that may significantly impact employees.

Additionally, all workplaces hold Health and Safety Committee meetings once per month to hear health and safety-related opinions from the Tosoh Workers Union and employees and to deliberate on measures to be taken.

Key content of the 2024 Central Management Council Meeting

- Explanation of management situation
- Recruitment plan
- Promoting the use of annual and childcare leave and related programs
- Safety and disaster prevention/occupational safety and health
- Measures to prevent excessive working hours
- Wage hikes and bonuses
- Revision of reemployment system
- Revision of leave system
- Reports, requests, etc. from labor union

History of system revisions through labor-management discussions

Fiscal year	Revisions
2022	<ul style="list-style-type: none"> ● Partially revised the paid leave rules ● Expanded the remote work system
2023	<ul style="list-style-type: none"> ● Revised the childcare leave rules ● Revised the childcare and nursing care leave rules ● Revised the rules on dual/secondary employment
2024	<ul style="list-style-type: none"> ● Regulations concerning reduced working hours for childcare ● Regulations concerning childcare leave ● Regulations concerning working from home

Basic concept

Tosoh believes that we must welcome and utilize a diversity of people and cultural values to continue to improve and generate corporate value. As such, the company is working to promote diversity. Our view is that increasing diversity internally will lead to improvement in our ability to respond flexibly and robustly to changes in the external environment, and to innovate.

Employee diversity in FY2024 (Tosoh Corporation employees)

		Age 0-17		Age 18-29		Age 30-39		Age 40-49		Age 50-59		Age 60 and above		All	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male total	Female total
		Subtotal		Subtotal		Subtotal		Subtotal		Subtotal		Subtotal		Total	
Executive positions (career-track positions)		0	0	0	0	46	0	407	11	470	3	1	0	924	14
		0		0		46		418		473		1		938	
Leadership positions Managerial positions	Career-track positions	0	0	400	108	488	57	10	2	7	0	0	0	905	167
		0		508		545		12		7		0		1,072	
	General employees	0	0	925	76	493	43	126	60	510	129	2	0	2,056	308
		0		1,001		536		186		639		2		2,364	
	Subtotal	0	0	1,325	184	981	100	136	62	517	129	2	0	2,961	475
		0		1,509		1,081		198		646		2		3,436	
Fixed-term employees		0	0	8	9	10	5	11	5	21	11	270	24	320	54
		0		17		15		16		32		294		374	
Total		0	0	1,333	193	1,037	105	554	78	1,008	143	273	24	4,205	543
		0		1,526		1,142		632		1,151		297		4,748	
Ratio(%)		0		32.1		24.1		13.3		24.2		6.3		100	
Ratio of female(%)		0		12.6		9.2		12.3		12.4		8.1		11.4	

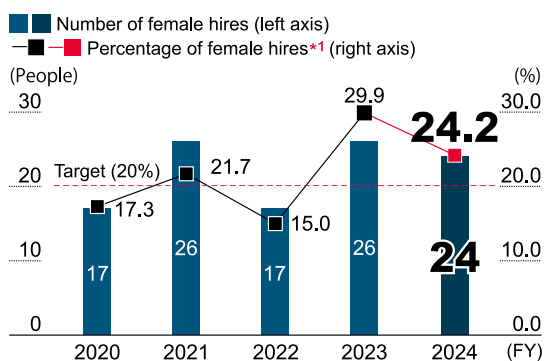
Promotion of women in the workplace

Tosoh is committed to recruiting female employees, while promoting their success and retention. The cultivation of medium- to long-term female candidates for executive positions is a challenge we must overcome in the advancement of women. To this end, the company is increasing its number of female employees, by first establishing a recruitment target based on Japan's Act on the Promotion of Women's Participation and Advancement in the Workplace. It is expanding the scope of activities of hired female employees by assigning them to manufacturing and sales departments—where they have traditionally not been posted—while considering their aptitudes and desired job types. The company is also working to retain female employees by providing career education to assist them in reviewing their careers and developing a vision of the future. Also, it is developing a work-life balance support system to eliminate departures from the workforce due to life events and to support female employees in achieving a favorable work-life balance.

> Related pages: Personnel System and Human Resource Cultivation “Career education”

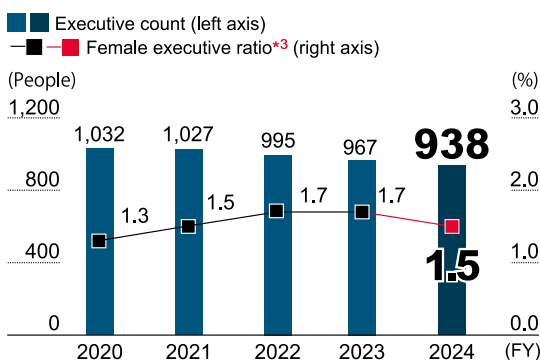
> Related pages: Work-Life Balance “Support system for balancing work and home life”

New Female Graduates Hired for Career-Track Positions (Tosoh Corporation employees)



*1 Number of new female graduates hired for career-track positions / Number of new graduates hired for career-track positions

Executive Employees*2 (non-consolidated)



*2 Full-time employees at manager level and above

*3 Number of female employees in management positions / (Number of male employees in management positions + Number of female employees in management positions)
Calculated in accordance with the provisions of the Act Promoting Women's Active Engagement in Professional Life

Promotion of senior human resources

Tosoh reemploys all retirement-age employees who wish to continue working and supports their continued engagement in the workforce. First, the company firmly communicates that the expectation for rehired employees is to use the knowledge, experience, and skills they have gained throughout their careers to maintain and boost corporate vitality and to strive to improve the company's overall skills and techniques by providing guidance and training to younger employees. Second, rehired employees and their supervisors meet twice a year for work interviews to clarify goals and foster a cooperative environment.

Moreover, from fiscal 2023, the company has started conducting training for people in their 50s to consider their future careers, helping them to envision their own post-retirement activities and creating awareness and plans in preparation for that part of their lives.

> Related pages: ESG Data at a Glance “Reemployment of retired employees”

Promoting employment of people with disabilities

Tosoh employs individuals with various disabilities, including physical disabilities, as well as those with aural, visual, intellectual, and psychological impairments, regardless of severity. In order to ensure that everyone can thrive in their respective roles, we consider adjusting workload to account for medical appointments and health conditions and creating easy-to-understand work procedures. Furthermore, we consolidate some administrative tasks and transfer them to employees with disabilities. These employees work in a satellite office with barrier-free facilities, receiving appropriate support to carry out their daily tasks. Additionally, as part of our employee welfare program, we distribute herbal tea and coffee produced through disability employment services.

We view disability employment as a corporate social responsibility and will actively promote it while considering individuals' suitability for the job.

> Related pages: ESG Data at a Glance "Employment of persons with disabilities"

Foreign employees

As stated in the Tosoh Group Code of Conduct, we pay due respect to human rights, the prohibition of discrimination, and diversity, and hire with no distinction made on the basis of nationality, race, or ethnicity.

> Related pages: ESG Data at a Glance "Foreign employees"

SOCIETY
Respect for Human Rights

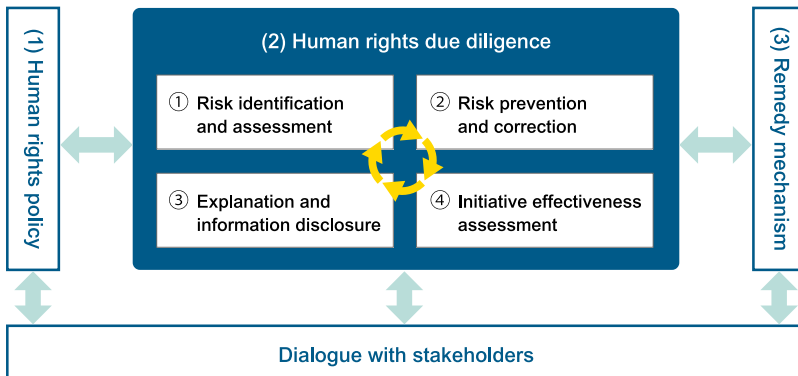
Basic concept

Tosoh Group believes that respecting human rights in all of its business activities and throughout its value chain is true to its corporate philosophy. Human rights, therefore, are a focus of our CSR efforts initiatives.

That focus is in line with the global business responses to human rights outlined in the United Nations Guiding Principles on Business and Human Rights, adopted by the UN Human Rights Council in June 2011. The Tosoh Group Human Rights Policy that we announced in April 2023 was approved by the company's CSR Committee and Board of Directors.

Moving forward, we have initiated group-wide human rights due diligence. We are in that respect demonstrating a commitment to upholding human rights in accordance with the UN's guiding principles. External expertise from Japanese law firm Nishimura & Asahi instructs and assists us in our efforts.

Regarding respecting human rights



Tosoh Group Human Rights Policy

The Tosoh Group aims for sustainable development under our corporate philosophy of contributing to society through innovation in chemistry. We believe respecting the human rights of those our business could impact is essential to realizing this philosophy. We established the following Tosoh Group Human Rights Policy based on the Guiding Principles on Business and Human Rights adopted by the United Nations Human Rights Council in June 2011.

1. Basic concept

Respect for human rights is fundamental to the Tosoh Group's business, and we respect all internationally recognized human rights. We see as the most fundamental rights those put forward in the International Bill of Human Rights—comprising the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, and the International Covenant on Economic, Social, and Cultural Rights—and the International Labor Organization's (ILO) Core Conventions listed in the ILO Declaration on Fundamental Principles and Rights at Work, which defines basic rights at work. We also support and respect the OECD Guidelines for Multinational Enterprises and the ILO's Declaration on Multinational Enterprises. Furthermore, as a signatory to the UN Global Compact, we support and respect its ten principles.

This Human Rights Policy joins the Tosoh Group corporate philosophy mentioned above, the Tosoh Group CSR Basic Policy, and the Tosoh Group Code of Conduct to form the basis for all the Group's activities. We promote initiatives to respect human rights, and our internal rules and regulations are interpreted and applied in accordance with this policy. In implementing this policy, we utilize the knowledge of external human rights experts and consult in good faith with relevant stakeholders.

2. Scope

The Tosoh Group applies this policy to all Group officers and employees. When our business, products, or services directly bring about a negative impact on human rights through our business partners or other parties in the value chain, we expect these business partners and others to act in accordance with this policy and respect human rights, and we will continue to encourage them to do so.

3. Respecting human rights

The Tosoh Group respects the dignity, rights, and diversity of all people; prohibits all forms of discrimination, forced labor, child labor, and harassment; strives to ensure that we are not complicit in human rights abuses, even indirectly; and engages or participates in activities aimed at creating a society that fulfills the promise of human rights for all.

In the event we encounter a conflict between internationally recognized human rights and the domestic laws of a country, we will seek ways to maximize respect for internationally recognized human rights.

The Appendix lists the specific human rights issues the Tosoh Group should prioritize in its current business activities. The Tosoh Group reviews, in a timely and appropriate manner, the specific human rights issues it should prioritize, accounting for social conditions, business development, and any demands we face.

4. Human rights due diligence

Recognizing the importance of ongoing human rights due diligence in accordance with the UN Human Rights Council's Guiding Principles on Business and Human Rights, the Tosoh Group identifies any negative human rights impacts of our business on or directly linked to our stakeholders, strives to prevent and mitigate such impacts, and continuously verifies the effectiveness of these efforts.

5. Corrections and remediation

When it is clear that the Tosoh Group's corporate activities or business activities along its value chain have caused or contributed to negative impacts on human rights, or when we suspect that such impacts have occurred, we will work to remedy the situation through dialogue and appropriate procedures. When our business, products, or services directly bring about a negative impact on human rights through our business partners or other parties in the value chain, we will encourage these business partners to rectify the situation.

Additionally, we will develop remedy mechanisms in line with international standards and take appropriate measures to provide relief to those whose human rights have been negatively affected.

6. Education and training

To ensure this policy is integrated into and effectively implemented in our corporate activities, the Tosoh Group will provide appropriate education and training for directors, officers, and employees and ensure that business partners and other stakeholders understand the policy.

7. Information disclosure

To continuously monitor compliance with this policy and fulfill our accountability, we disclose our efforts to address each of the aforementioned items related to respect for human rights on our website and in our Integrated Report, and provide information that ensures that our stakeholders understand the Tosoh Group's efforts.


8. Engagement and cooperation with stakeholders

To implement this policy, the Tosoh Group ensures opportunities for engagement and cooperates in good faith with relevant stakeholders, including labor unions, while utilizing the insight of external human rights experts.

Our Board of Directors has approved this policy.

Specific human rights issues that the Tosoh Group should address

- **Identifying and addressing negative human rights impacts in the raw materials supply chain**
 - Specifically, we do not tolerate forced labor, child labor, or violations of the rights of indigenous peoples. We also work to avoid using conflict minerals that involve human rights abuses.
- **Strengthen efforts within the Tosoh Group based on internationally prohibited discrimination and harassment and the systems and procedures (including grievance mechanisms) required to protect against such discrimination and harassment**
 - We do not tolerate discrimination of any kind, including on the basis of place of birth, gender, nationality, race, ethnicity, creed, age, sexual orientation, gender identity, disability, social origin, or having other diseases.
 - We do not tolerate harassment of any kind, including power harassment, sexual harassment, parental leave harassment, racial harassment, and harassment targeting disabilities.
- **Identifying and addressing negative impacts on the human rights of workers (including vulnerable foreign nationals) in construction work and transportation in Japan and abroad**
 - Specifically, we do not tolerate forced or child labor and strive to maintain adequate occupational health and safety.
- **Identifying and preventing possible negative environmental impacts on local residents in the raw materials supply chain and in the production of Tosoh Group products**
 - We respect the right to a safe, clean, healthy, and sustainable environment.
- **Continuously addressing risks of human rights violations, including actions related to product safety management and export controls related to national security**
 - We ensure user safety, assuming they use our products appropriately. When exporting our products, we comply with the Foreign Exchange and Foreign Trade Act, US export control regulations, and other applicable national security-related export control laws and regulations.

> Human rights policy formulation process 

Human rights due diligence

We will initiate human rights due diligence now that we've established our human rights policy. This is in keeping with the company's comprehensive approach to respecting human rights.

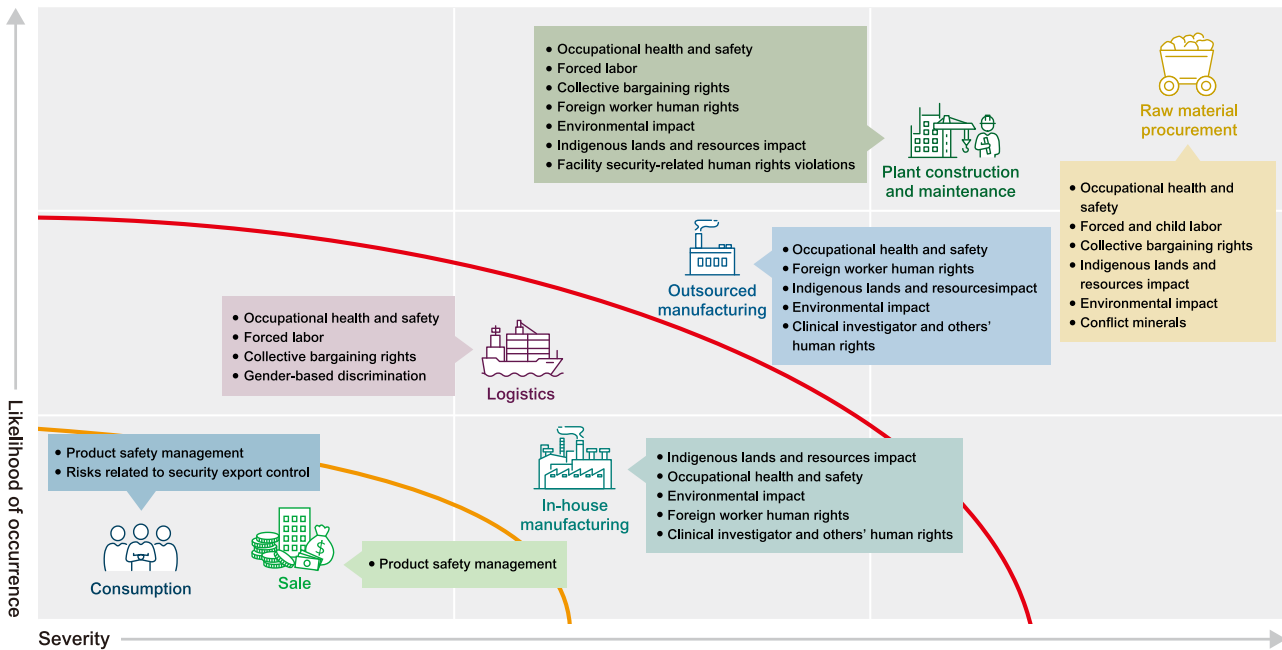
Selection of areas to address

The first step of our human rights due diligence was risk identification and assessment. Our research determined the human rights risks to prioritize. It included specific information from international organizations, such as civil society organizations (CSOs), and from cases of risk occurrence. From that, we summarized the risks to human rights that could arise in our operations and value chain. We considered risks specific to our industry, products and services, and geography.

Respect for Human Rights

Affiliated rights holders	Laborers					End users						
	Regional communities (including indigenous [tribal] peoples)											
Affiliated companies	Suppliers	Trading companies	Packing contractors Cargo unloading contractors	Product manufacturing subcontractors On-site subcontractors Plant construction contractors	Packing contractors Cargo unloading contractors							
	Suppliers		Transport contractors	Maintenance contractors	Transport contractors	Trading companies						
Value chain	Procurement	Transportation	Manufacturing	Transportation	Sale	Consumption						
	Raw material production and mining	Air	Product manufacturing (including subcontracting to subsidiaries and other companies)	Air								
	Supplier procurement	Marine	On-premises work at plants	Marine								
Major anticipated risks		Land	Plant construction	Land								
			Plant maintenance									
Major anticipated risks	<ul style="list-style-type: none"> Occupational health and safety, forced labor, etc. in the mining and collection of natural resources Impact on local communities Conflict minerals (fomenting of conflict in conflict zones) Impact on workers and local communities in procuring raw materials incorporating hazardous substances 		<ul style="list-style-type: none"> Health and safety of workers involved in hazardous material transport and storage Poor working environment, including forced labor, etc. in the logistics process Gender-based discrimination Impact on climate change Bribery 		<ul style="list-style-type: none"> Occupational health and safety during manufacturing Forced labor, child labor, restrictions on right to organize and bargain collectively, discrimination, harassment, etc. (the rights of foreign workers in particular) at key manufacturing bases and their manufacturing subcontractors Rights of foreign workers engaged in plant construction (including subcontractors) and impact on local communities 		<ul style="list-style-type: none"> Health and safety of workers involved in hazardous material transport and storage Poor working environment, including forced labor, etc. in the logistics process Gender-based discrimination Impact on climate change Bribery 		<ul style="list-style-type: none"> Risks associated with product safety management 		<ul style="list-style-type: none"> Risks associated with product safety management Risks associated with security-related export control 	

We then conducted risk mapping based on the presumed severity, in scale, scope, and correctability, and likelihood of occurrence of each identified risk.



The priority risks that we assessed relate to raw material procurement, manufacturing outsourcing, and plant construction and maintenance.

Initiatives

We will instill respect for human rights and identify risks thereto at each of our workplaces. Our particular focus will be on raw material procurement–related human rights risks. As part of our supply chain management, we will interact with our suppliers to ascertain and mitigate risks.

Human rights initiatives

Prevention of forced and child labor

To prevent forced labor, Tosoh enters into employment contracts with employees and hires them only after the working conditions have been agreed upon by both parties. Moreover, to prevent child labor, the company confirms that potential employees are 18 years of age or older by requiring official documents verifying their age at the time of hiring. Potential employees must submit to the company a copy of documents verifying their age and must retain the originals for subsequent verification if called for.

Prevention of discrimination and harassment

Tosoh's hiring practices in its recruitment activities are fair and nondiscriminatory. During the hiring selection process—including interviews—we ensure that questions or confirmation of birth, nationality, race, ethnicity, creed, religion, sexual orientation, gender identity, interests, or other matters unrelated to the applicant's aptitude or abilities are neither posed nor factored into the decision for employment. Moreover, we decide on promotions, compensation, and training availability according to job performance, ensuring fair opportunities and treatment within the same job performance rank.

Employees receive training to prevent discrimination and harassment, and the company's employee work regulations clearly state that strict disciplinary action will be taken against harassing behavior when it negatively impacts the working environment of other employees.

If harassment is confirmed, a Harassment Countermeasure Committee comprising members from both Tosoh Corporation and the Tosoh Labor Union reviews and investigates the facts surrounding the case, while ensuring that confidentiality is maintained.

Respect for freedom of association and the right to collective bargaining

Tosoh recognizes freedom of association and the right to collective bargaining as fundamental human rights that companies must uphold. In line with Japan's Labor Union Act and Labor Standards Act, Tosoh and its labor union have a labor agreement in this regard. The company recognizes the Tosoh Labor Union as a legitimate party in collective bargaining carried out with mutual respect and in good faith. Tosoh operates a union shop where all eligible employees are members of the Tosoh Labor Union.

> Related page: Work-Life Balance "Labor-management relations"

Management of working hours

In compliance with Japan's Labor Standards Act and collective labor agreements concluded between labor and management, Tosoh Corporation stipulates working hours, rest periods, overtime, days off, and vacations in its employee work regulations to ensure proper working hour management. The company has introduced a flextime system, under which employees receive an early-arrival overtime allowance in the event their actual working hours exceed the prescribed working hours (7 hours and 35 minutes). Moreover, an additional morning shift allowance is paid per half-hour for those who begin work during the morning shift (5:00 am to 7:30 am at factories and 8:00 am in cities). And the company has a compensatory holiday system for those who work on holidays and scheduled days off.

Tosoh Corporation employs a working hour management system to ascertain discrepancies between the actual computer log-on/log-off times and employees' work applications, with the aim of ensuring proper management of individual working hours.

The company grants employees a maximum of 20 days of annual paid leave. Employees are free to take these days in half-day increments, and the company is actively working to create an environment in which it is easier for employees to use them.

After confirmation of the actual results of working hours and annual leave by labor and management, Tosoh Corporation promotes the control of long working hours, prevention of health issues resulting from overwork, and improvement of the rate of annual leave utilization.

> Related page: Work-Life Balance "Creating comfortable workplaces"

Wage management

Based on the belief that it is the Tosoh Group's social responsibility to maintain employment and provide continuous, stable wages, it complies with the minimum wage and other relevant laws and regulations of each country and region in determining compensation. Tosoh Corporation stipulates appropriate wages, commuting and other benefits, bonuses, and retirement allowances in its employee work regulations based on the collective labor agreement. We pay wages on a set date each month, with consideration for a living wage that meets the basic needs of all employees and their families to ensure their well-being. The salary structure is determined by job performance, and the same structure is applied to both men and women. Employees receive electronic notification regarding wages, bonuses, and other payroll details so they can be confirmed at any time.

> Related page: Personnel System and Human Resource Cultivation "Wages and compensation"

Protection of personal information

Tosoh Corporation has established personal information handling regulations in accordance with the Act on the Protection of Personal Information. It has also created a system necessary for the handling and protection of personal information in the company to ensure its proper management and protection. Moreover, the company has established a global personal data protection system compliant with the EU General Data Protection Regulation (GDPR) and manages personal data appropriately.

Protecting the rights of clinical investigators in the Bioscience Division's clinical trials

As part of a company that manufactures and sells medical devices and in vitro diagnostics while also providing various related services, the Bioscience Division has formulated an ethics committee. By reviewing the validity of the content of clinical research, the committee is responsible for ensuring that the research is properly and smoothly conducted in accordance with Japan's Ethical Guidelines for Medical and Biological Research Involving Human Subjects, respecting human dignity and rights. To ensure the rights of clinical trial subjects are protected, Tosoh Corporation obtains appropriate informed consent and complies with regulations that stipulate the protection of personal information. The company provides education to relevant departments and works to broaden their knowledge of what is required to engage in clinical research activities.

Internal audits

Tosoh Corporation's Audit Office specializes in internal audits. It audits and evaluates the promotion system and operational status of human rights initiatives. This encompasses the prevention of forced and child labor, discrimination, harassment, management of working hours and wages, and more at Tosoh Corporation and its group companies in Japan and overseas to improve and strengthen them. The audit results show no significant risks of human rights violations at present. The results of the audits are reported to the president and auditors as appropriate.

Human rights consideration across the supply chain

Tosoh believes it crucial to consider human rights throughout the supply chain to address the human rights issues that challenge society and achieve sustainable procurement. In its CSR Procurement Guidelines, the company clearly indicates its respect for human rights, including prohibition of forced labor, inhumane treatment, child labor and discrimination, appropriate wage and working hour management, respect for employees' right to collective bargaining, handling of conflict minerals, and assurance of occupational safety and health, and asks its suppliers to cooperate in these efforts.

The status of suppliers' human rights initiatives is ascertained through the CSR survey, and the results are then fed back to each company. The results of CSR survey showed there were no suppliers that currently present a significant risk for human rights violations. If risks are discovered in the future, Tosoh will submit improvements requests to the relevant suppliers.

> Related page: CSR Supply Chain Management

Compliance and harassment consultation desk

In accordance with the amendment of the Whistleblower Protection Act, Tosoh Corporation integrated the Harassment Consultation Desk into the Compliance Consultation Desk in June 2022 to unify consultation services for all compliance matters, including human rights and harassment issues. Moreover, a Harassment Consultation Desk has been established independent of the Compliance and Harassment Consultation Desk and assigned a consultant.

Harassment consultations can be of varying degrees and forms, as can the feelings of the individual and, moreover, the circumstances in which the person is placed. The role of the harassment consultant is to listen carefully before accessing formal consultation services that initiate investigations, to hear the person's thoughts and feelings, and to help reduce the psychological burden on the complainant.

> Related page: Compliance “Consultation Hotlines”

Education on human rights and harassment

Tosoh conducts human rights education as part of new employee training as well as training appropriate for each level of employees. The company is deepening its understanding of the concept of global human rights, international standards, the responsibility and significance of corporate commitment, and global human rights issues, including forced and child labor and discrimination. This includes familiarization with the Tosoh Group Code of Conduct, within which respect for human rights is stipulated. Furthermore, the company strives to promote understanding of respect for human rights in business activities at the CSR Advancement Liaison Meeting, which brings together CSR managers to educate Group companies in Japan. It also provides education on various types of workplace harassment, including sexual, power, pregnancy-related, maternity, and childcare leave, through rank-based training for new employees and executives.

Tosoh promotes the creation of a work environment in which accurate knowledge about harassment is provided, and harassing behavior is prevented before it can occur.

Human rights and harassment training in FY2023 (non-consolidated and Japan group companies)

Name	Elegibility	Training time (hours)	No. of attendees
New Employee Training	New employees	1.0	99 (Male: 75, Female: 24)
Mid-Career Training	Equivalent to seven years with the company	1.0	70 (Male: 61, Female: 9)
Executive Training	Newly promoted executives	1.0	65 (Male: 64, Female: 1)
Group CSR Promotion Team	Domestic Group CSR staff	0.5	69
Training to address conduct perceived as power harassment (Emotional Intelligence (EQ) training)	Tosoh Corporation management	3.5	250

Human rights policy formulation process

Understanding (education)

In formulating our human rights policy, we had an expert (Nishimura & Asahi Law Offices) provide business and human rights training.

Participants: 50; Class time: 2 hours

(main content)

- Efforts required of companies involving respect for human rights
- Specific processes related to the respect for human rights required of companies
- Human rights policy significance and formulation process
- Identifying critical human rights issues
- Human rights due diligence process
- Tosoh's past efforts to respect human rights, etc.

Discussion

Through conversations among external experts and Tosoh's administrative and business divisions*, we created a list of countries from which we obtain raw materials and identified and prioritized issues related to human rights in these countries.

* Business divisions that purchase considerable volumes of raw materials

Business divisions involved with production contractors

Business divisions with solid relationships with Group production companies

Policy creation

With advice from experts, we prepared a draft human rights policy in accordance with international standards.

Management explanation

We asked outside directors and the CSR Committee Chair (the President) for their opinions on the human rights policy draft.

Deliberation and approval

CSR Committee deliberation and approval (March 2023)

Board of Directors deliberation and approval (April 2023)



SOCIETY

CSR Supply Chain Management

Basic concept

As a global company, Tosoh is engaged in various business endeavors around the world, in the course of which it procures large amounts of raw materials. In its procurement activities, the company follows a basic policy that ensures fairness and impartiality, compliance with laws and regulations, and environmental protection. Expectations for companies to contribute to the sustainable development of society have grown. Companies are expected to tackle such global social issues as human and labor rights, environment and energy, and corporate ethics. To meet these expectations, Tosoh's efforts alone are not enough; it is essential that the entire supply chain works together. In addition to enhancing relations of trust with our business partners, we have compiled CSR Procurement Guidelines that outline its resolve on social issues and sustainable procurement in its supply chain. We share these guidelines with our suppliers and request their understanding of and compliance with our CSR procurement policies, guidelines, and activities.

In fiscal year 2024, Tosoh significantly enhanced its commitment to responsible supply chain management by implementing comprehensive revisions to our CSR Procurement Guidelines and CSR Self-Assessment Questionnaire (SAQ). These updates were strategically aligned with the newly formulated Tosoh Group Human Rights Policy, reflecting our dedication to upholding global standards of ethical business practices.

Basic Procurement Policy

1. Ensuring fairness and impartiality

In selecting suppliers, we work to ensure fairness and impartiality. We are open to a wide range of domestic and overseas companies and make decisions based on the criteria of economic rationality, such as price, quality, and supply stability.

2. Complying with laws and regulations

We comply with relevant domestic and international laws and regulations and social norms related to purchasing transactions.

3. Managing information

We maintain confidentiality in important matters and information obtained in transactions with our business partners and manage such information appropriately.

4. CSR procurement

To fulfill our corporate social responsibility, we strive to procure products from suppliers who are committed to compliance with laws and regulations pertaining to environmental protection and safety, human rights, and the work environment.

CSR Procurement Guidelines

1. Corporate Social Responsibility (CSR)
 - 1) CSR promotional structure
2. Human rights and labor
 - 1) Prohibit forced labor
 - 2) Prohibit child labor, pay attention to young workers
 - 3) Prohibit discrimination
 - 4) Ensure freedom of association and rights to organize and to collective bargaining
 - 5) Prohibit inhumane treatment
 - 6) Pay appropriate wages and benefits
 - 7) Pay attention to working hours
 - 8) Insist on responsible mineral sourcing
3. Occupational health and safety
 - 1) Health and safety at work
 - 2) Health and safety management system
 - 3) Occupational safety
 - 4) Emergency preparedness
 - 5) Occupational accidents and illnesses
 - 6) Occupational health
 - 7) Health and safety for particularly demanding physical work
 - 8) Safety measures related to machinery and equipment
 - 9) Facility health and safety
 - 10) Health and safety communication
 - 11) Health management for workers
4. Environment
 - 1) Environmental permits and reporting
 - 2) Environment management system (EMS)
 - 3) Atmospheric emissions
 - 4) Water management
 - 5) Energy consumption
 - 6) GHG (greenhouse gas) emissions
 - 7) Resources and waste usage
 - 8) Chemical substance management
 - 9) Product chemical substance management
 - 10) Implement biodiversity preservation initiatives
5. Fair trade and corporate ethics
 - 1) Maintain ethical standards
 - 2) Prevent corruption
 - 3) Prevent inappropriate provision and receipt of benefits
 - 4) Prohibit abuse of a superior bargaining position
 - 5) Ensure fairness and justice
 - 6) Prohibit restrictive competition
 - 7) Respect intellectual property rights
 - 8) Manage trade
 - 9) Disclose information
 - 10) Establish whistleblower system and protect whistleblowers
 - 11) Prohibit insider trading
 - 12) Avoid relations with antisocial forces
6. Quality and safety
 - 1) Ensure product safety
 - 2) Quality management system (QMS)
 - 3) Provide accurate product and service information
7. Information security
 - 1) Protect against cyberattacks
 - 2) Secure personal information
 - 3) Prohibit confidential information leakage
8. Business continuity plan (BCP)
 - 1) Formulate business continuity plan (BCP)
9. Local community contributions
 - 1) Respect communities
 - 2) Participate in communities

Structure and management

The general manager for Purchasing & Logistics is responsible for formulating and executing plans related to procurement based on the aforementioned basic procurement policy. Tosoh Corporation promotes procurement activities in cooperation with its complexes and related teams in line with established plans.

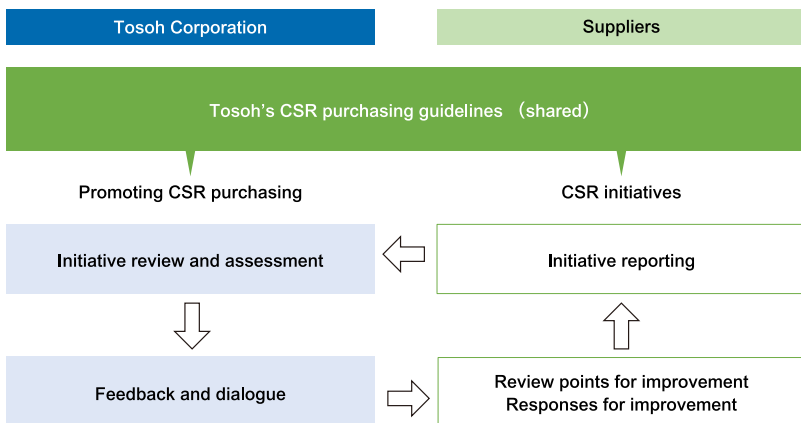
Purchasing & Logistics conducts CSR self-assessment questionnaires (SAQ) and audits of suppliers to confirm their status regularly. In addition to the procurement of raw materials and materials by Purchasing & Logistics, Tosoh also engages in procurement activities through its divisions and the administration departments at its complexes.

CSR procurement initiatives

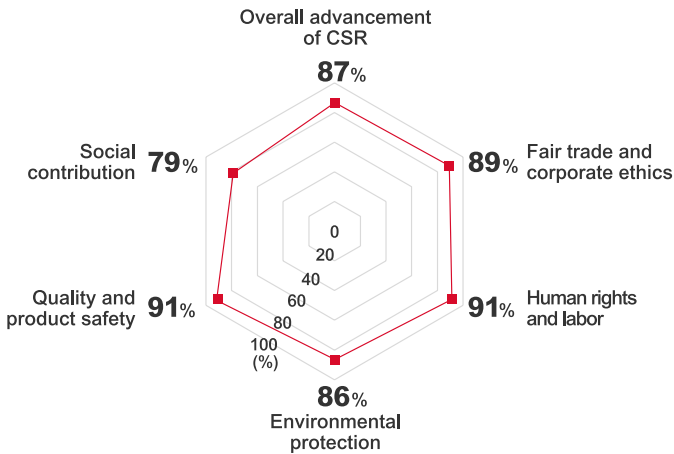
Supplier evaluation

Tosoh Corporation shares its CSR Procurement Guidelines with its suppliers and asks for their understanding of its CSR procurement-related policies and activities, as well as their compliance with the guidelines. From fiscal years 2020 through 2022, the company used its CSR SAQ to evaluate 212 suppliers overseen by the Purchasing and Logistics Department. The results did not identify significant environmental, social, or governance risks. We provided feedback to suppliers on their performance in each area and requested improvement from those with below-average scores.

In fiscal 2025, we plan to roll out updated CSR Procurement Guidelines and an updated CSR SAQ to approximately 470 suppliers and to proceed with the survey. Our ongoing assessment and mitigation of human rights–related risks in our supply chain will see us regularly administer the SAQ to monitor supplier activities. We will in addition strengthen trust with our suppliers through increased dialogue and offers to help improve CSR and sustainable procurement practices.



Average scores by item on the fiscal 2020–2022 CSR SAQ



Number of respondents: 119
Response rate: 56.1%

Conflict minerals* initiatives

Tosoh is committed to the responsible sourcing of mineral resources. Conflict minerals are those used to fund armed groups, particularly those complicit in human rights violations in conflict zones. We respond promptly and appropriately to requests from customers to investigate conflict minerals and confirm that we are not involved in their use. If we find that any of the minerals we use are linked to conflicts, we immediately stop using them.

* Tantalum, tin, gold, and tungsten produced in the Democratic Republic of the Congo and neighboring countries that have become a source of funding for armed groups and complicity in human rights abuses in conflict areas.

Sustainability information platform

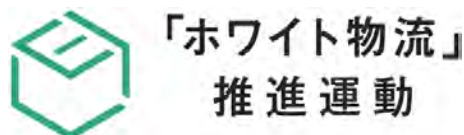
Tosoh provides information as a member of EcoVadis, an international sustainability information platform. Moreover, it cooperates with CSR procurement surveys conducted by our customers.

Participation in initiatives

White Logistics promotion activities

In September 2019, Tosoh issued a Voluntary Action Declaration to show its support for Japan's White Logistics Movement. White Logistics is a movement that aims to improve truck transportation productivity, increase logistical efficiency, and create a favorable working environment for women and elderly drivers. These measures help ensure the sustainability and stability of logistics, which are essential for people's daily lives and industrial activities, while helping to solve the shortage of truck drivers that has worsened in recent years.

Tosoh has identified 10 items to be addressed. These include the use of pallets, consolidation of delivery dates and destinations, improvement of facilities on the shipper's side, shift to alternative modes of transportation, and promotion of joint logistics.



Declaration of Partnership Building

Tosoh Corporation endorsed the objectives of the Declaration of Partnership Building and announced the statement in March 2022. The Declaration is Tosoh's principal business policy for cooperation, coexistence, and prosperity with suppliers along the supply chain and the establishment of new partnerships.



Establishment of Chemicals Working Group in the Physical Internet Realization Council

The logistics industry in Japan continues to face significant challenges, the result mostly of an aging workforce of drivers and seafarers and an ongoing personnel shortage. At the same time, the logistics burden is increasing, especially for small-lot shipments. Compounding these challenges is the looming "2024 problem," which exacerbates concerns over shortages in transportation and storage capacity—critical issues for the chemical industry.* Furthermore, because the transportation methods and conditions for chemicals vary depending on their physical properties, packaging, and cargo weight, it is difficult for individual companies to implement effective solutions on their own. In July 2023, Tosoh collaborated with Mitsubishi Chemical Group, Mitsui Chemicals, Inc., and Toray Industries, Inc., to establish the Chemicals Working Group. The four companies serve as the group's secretariat within the Physical Internet Realization Council jointly led by the Ministry of Economy, Trade and Industry (METI) and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT). The group aims for an ideal logistics vision for 2040 outlined by the council. To this end, the secretariat will develop a voluntary action plan to optimize logistics, improve productivity, and build a sustainable logistics system.

* The 2024 problem refers to various challenges emerging in the logistics industry. These include labor shortages due to the enforcement of the maximum overtime work hour limit for drivers starting in April 2024 under Japan's Act on the Arrangement of Related Acts to Promote Work Style Reform.



Communication with Stakeholders

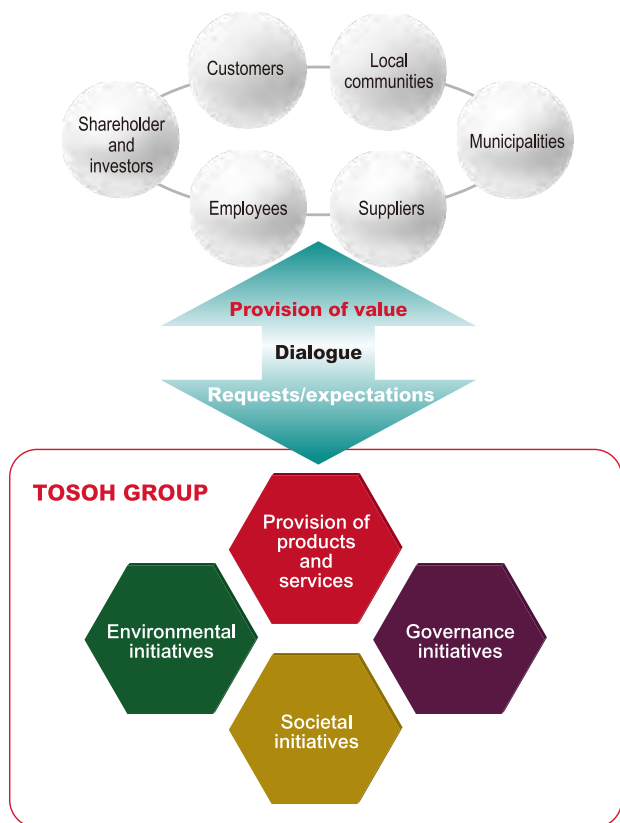
Basic concept

The Tosoh Group considers its major stakeholders to be shareholders, investors, customers, local communities, municipalities, business partners, and employees. The company actively promotes CSR initiatives through its business activities on their behalf.

Relationships with stakeholders

The Tosoh Group promotes environmental, social, and government (ESG) initiatives based on its corporate philosophy and Tosoh Group CSR Basic Policy, and provides value to its stakeholders through its products and services.

We will communicate with stakeholders to ensure the continued trust of society and the sustainable development of society and of Tosoh.



Dialogue with stakeholders

Through our website, the Integrated Report, and other means, we provide information regarding our business activities to our stakeholders in a prompt and proper manner. By creating various opportunities for dialogue, we receive evaluations and opinions from our stakeholders, which are then reflected in our business activities.

	Tosoh's role	Communication tools	Communication opportunities
Shareholders and investors	<ul style="list-style-type: none"> ● Disclosing business results, business policies, management strategy, and other information at the right time and as appropriate ● Building relationships of trust with shareholders and investors ● Ensuring appropriate return on investment 	<ul style="list-style-type: none"> ● Financial results, financial presentations ● Securities reports ● Business reports ● Corporate governance reports ● Questionnaires from ESG evaluation agencies ● Questionnaires for individual shareholders ● Tosoh Integrated Report 	<ul style="list-style-type: none"> ● General meeting of shareholders ● Financial results presentation ● Business briefings ● Teleconferences ● Small meetings ● Individual interviews ● SR interviews ● Briefings for individual investors ● Plant tours
Customers	<ul style="list-style-type: none"> ● Providing safe, secure, convenient, and high-quality products and services ● Building relationships of trust with customers ● Improving customer satisfaction by linking customer feedback to product development 	<ul style="list-style-type: none"> ● Product pamphlets ● Safety data sheets (SDS) ● Help desk 	<ul style="list-style-type: none"> ● Sales activities ● Quality assurance support ● Exhibitions ● Audits ● Call centers
Local communities	<ul style="list-style-type: none"> ● Ensuring safe and secure operations ● Contributing to community development ● Building and maintaining relationships of trust with local communities 	<ul style="list-style-type: none"> ● Pamphlets about the Nanyo and Yokkaichi Complexes and the laboratories 	<ul style="list-style-type: none"> ● Plant tours ● Exchange through community events ● Community dialogues and opportunities to exchange ideas
Municipalities	<ul style="list-style-type: none"> ● Complying with laws ● Disclosing information appropriately and in a timely fashion 	-	<ul style="list-style-type: none"> ● Filings ● Meetings
Suppliers	<ul style="list-style-type: none"> ● Ensuring fair trade 	<ul style="list-style-type: none"> ● CSR procurement guidelines ● CSR self-assessment questionnaires (SAQ) 	<ul style="list-style-type: none"> ● Purchasing activities
Employees	<ul style="list-style-type: none"> ● Providing a pleasant and meaningful place to work ● Improving systems and education to maximize the abilities of employees ● Ensuring stable lives for employees and their families 	<ul style="list-style-type: none"> ● Internal newsletters ● Intranet ● Consultation and reporting hotlines 	<ul style="list-style-type: none"> ● Labor-management council ● Safety and Health Committee ● Training ● Business reports (interviews with supervisors) ● Dialogues with management ● Workplace roundtable

Dialogue with shareholders and investors

Tosoh shares information and seeks increased opportunities for dialogue with shareholders and investors to ensure that they understand the Tosoh Group.

General meeting of shareholders

We hold our annual general meeting of shareholders in Shunan City, Yamaguchi Prefecture, where our head office is registered. We send out the notice of the convocation three weeks in advance and post a further such notice on our website one week in advance. To help prevent the spread of COVID-19, we reduced the size of the meeting in fiscal 2024 and live streamed the proceedings for shareholders not present.

For additional shareholder convenience, we've introduced Smart Convocation and Smart Exercise. The former allows shareholders to view convocation notices and business reports on smartphones, and the latter enables shareholders to vote by smartphone. Our implementation, furthermore, of ICJ Inc.'s Electronic Voting Platform permits domestic and international institutional investors to vote electronically.



General Meeting of Shareholders

Management overview briefing

Tosoh announces its quarterly financial results in the form of a briefing session or teleconference for institutional investors and analysts. The president and the head of each sector attend the briefings to promote understanding of the business situation through direct dialogue with all related parties. The company makes audio data and presentation materials from the briefing available on its website for viewing by the public. In fiscal 2024, Tosoh's president and the heads of each of its business groups explained the progress of the Tosoh Group's growth strategy, capital investment, R&D, and responses to climate change. The explanation centered on the medium-term management plan announced the previous year.



Management overview briefing

Dialogue with institutional investors

We conduct individual meetings and shareholder relations meetings with institutional investors and securities analysts in Japan and abroad. We discuss mainly business aspects in individual meetings and mainly ESG initiatives in shareholder relations meetings. Investor and analyst's opinions and suggestions are presented to our management team and used as reference for future corporate management activities.

Individual meetings with institutional investors and securities analysts (non-consolidated)

	FY 2022	FY 2023	FY 2024
Individual interviews	211	236	273
SR interviews	8	12	12

Plant tours for individual shareholders

In response to shareholder requests, we offer plant tours to individual shareholders to help them understand more about Tosoh. We ceased offering these tours since fiscal 2020 as a measure against COVID-19, but we may resume them given the virus's lessened status.

Briefings for individual investors

In June and September 2023, we held company information briefings for individual investors. We will continue to communicate with investors and shareholders to build trust.

Dialogue with customers

Communication through business activities

Tosoh constantly considers ways in which it can solve problems by understanding customers' improvement requests and needs. The company has a system in place to respond promptly to questions and requests. During visits, a representative from R&D accompanies clients in order to offer products, services, and technologies tailored to their needs. The company's sales, R&D, and manufacturing departments work together to improve customer satisfaction.

In Japan, Tosoh has offices in Tokyo (headquarters), Osaka, Nagoya, Fukuoka, Sendai, and Yamaguchi, and also conducts community-based sales activities. Further, Tosoh has strategically situated its product warehouses near its customers' bases to speed up deliveries.

Engagement with local communities, government, and municipalities

The Tosoh Group strives to build relationships of trust with local communities, governments, and municipalities by proactively creating opportunities for engagement with them in all regions, in Japan and abroad. Through this dialogue, we seek to earn understanding from local communities, governments, and municipalities about our business and initiatives, while listening to their opinions and requests to improve our future efforts.

> Related pages: Social Contribution Activities

Dialogue with suppliers

Supply chain management is a core CSR issue for Tosoh. We have established a basic procurement policy and shared our CSR Procurement Guidelines with our business partners.

Tosoh forges relationships of trust with its suppliers through fair and equitable procurement activities. We also promote CSR procurement activities throughout our supply chain.

> Related pages: [CSR Supply Chain Management](#)



SOCIETY

Social Contribution Activities

Basic concept

Tosoh contributes to the development of local communities through its business activities with the aim of coexisting and prospering with society. To this end, we are actively creating opportunities for dialogue with communities in each region—both in Japan and overseas—in an effort to form solid relationships of trust.

Coexistence with communities

Communication with communities near complexes

Each of Tosoh's complexes regularly holds meetings to exchange opinions with the local government and residents regarding environmental preservation, security and disaster prevention, and safety measures. In addition to introducing our business activities and initiatives, we also ask attendees what they feel and want from Tosoh on a daily basis, which will aid us in improving our activities. Tosoh will continue to deepen exchanges through dialogue with local residents and aim to be a safe, reliable, and trustworthy company. In fiscal 2024, the company received 2,628 visitors at its complexes and laboratories.



12th Shunan District Community Dialogue (Nanyo District)



1st Kasumigaura community disaster prevention council in fiscal 2023 (Yokkaichi area)

Number of visitors to complexes

(People)

	Fiscal 2022	Fiscal 2023	Fiscal 2024
visitors	870	953	2,628

Participation in regional events

To demonstrate to residents in our communities the openness of the Tosoh Group, we ensure opportunities for our employees to directly interact with residents to strengthen relationships of trust. The company actively takes part in events in each region, conducting dialogue and exchanges to deepen mutual understanding. Tosoh will continue its activities so that both the community and Tosoh Group can achieve continuous development.



47th Sun Festa Shinnanyo (Nanyo District)



Yamazaki Hachimangu Shrine Autumn Festival Honzan Shinto ritual (Nanyo District)

Cooperation with communities

The Nanyo Complex makes donations to local social welfare facilities and the Red Feather Community Chest. Such activity is conducted annually to help the operation of the facility and the social welfare of the community. The company supports other initiatives such as the saving of children's lives with plastic bottle caps. The proceeds from the sale of these caps are used by local governments to pay for polio vaccines and other vaccines for children in developing countries. In fiscal 2024, the cumulative total has reached approximately 5,000kg, enough to provide polio vaccines to about 2,200 people. Tosoh will continue to support bottle cap collection activities.

The Chamber of Commerce and Industry also sponsored an industrial sightseeing tour for parents and children during the summer holiday, fostering deeper relations with local residents.

Additionally, we held the 13th Tosoh Group Summer Children's Theater. This free initiative allows children to watch movies to help them develop healthy minds and rich emotions.



Donation to Kids Village Tsukushi Nursery



Donation to Red Feather Community Chest



Summer industrial sightseeing tour for parents and children



12th Tosoh Group Summer Children's Theater

Social Contribution Activities

The Yokkaichi Complex registered as a donor with Mie Prefecture's food donation system Mie-ru and provided emergency food for disaster relief. Mie-ru is a web-based system for sharing information on food that companies and organizations donate, with recipients including food banks and children's cafeteria operators. Until now, we have disposed of emergency rations for disasters except for those that employees wished to take home, but using Mie-ru allows us to give the rations to those in need. This time, Hawaiian Café Kodomo Shokudo (Children's Cafeteria) was the recipient, providing support to those in financial difficulty while also contributing to reducing food waste. Mie-ru thus supports people in need and mitigates food waste.



Emergency food provided to Hawaiian Café Kodomo Shokudo (Children's Cafeteria)



Emergency food provided

Our labor union (in this case, its Tokyo branch) also engages in donation activities. It donated to World Gift, stationery that we no longer needed because of our March 2024 head office relocation. World Gift is a nonprofit that provides food and medical assistance that it receives mainly in the form of donated goods.

Tosoh's labor union donated 11 boxes of stationery items to World Gift's relief efforts. The boxes contained ballpoint pens, scissors, and calculators that would otherwise have been thrown away.



Donation of unused stationery to NPO (head office area)

Community volunteer cleanup

We clean up the areas around each complex and research institute, as well as event sites after local fireworks displays and other events. The Nanyo Complex holds the Clean Up My Nanyo event annually to encourage local residents to use the sidewalks and parks around the complex. Fiscal 2024's cleanup was primarily of Tosoh Park Eigenzan, which was divided into five sections for the cleanup. The Yokkaichi Complex, meanwhile, held the Tosoh Cleanup Walk, in which 213 people participated. That one-hour cleanup collected 60 kilograms of mostly beverage cans and plastic bottles.

To promote such cleanups, we work to clarify the purpose and significance of these activities. We seek to raise awareness among our employees that their involvement in these activities is vital.



Clean Up My Nanyo (Nanyo area)



Tosoh Cleanup Walk (Yokkaichi area)

Fostering the next generation

Field trips

Tosoh conducts a variety of activities with the aim of encouraging children to enjoy chemistry and acquire an interest in the chemical industry. The company accepts local elementary and junior high school students on field trips, providing opportunities for them to learn about the relationship between the Tosoh Group and the community, as well as to become familiar with and enjoy the craftsmanship in the production of goods.

The Nanyo Complex offered work-study programs for junior high school students in the neighborhood. They got workplace experience and learned about Tosoh through an office tour, lessons on business manners, and hazard simulation training at the Education and Training Center.



Fukukawa Minami Elementary School visit to complex (Nanyo District)



Tomita Nishi Elementary School visit to complex (Nanyo District)



Sakurada Junior High School work experience program (Nanyo District)

Visiting lectures

Tosoh visits local elementary and junior high schools to give on-site lectures. Presentations include an overview of the complex and its projects in cooperation with the community, giving the participants a better understanding of Tosoh.

In fiscal 2024, the Yokkaichi Complex hosted the Yokkaichi Children's Science Seminar organized by the Yokkaichi Board of Education. The complex welcomed about 120 elementary school students and oversaw a hands-on experiment. The students mixed baking soda and citric acid in a bag to make bath salts, or bath bombs. Each of them completed original bath salts by sprinkling aromatic oil on the bath salts they'd produced. The children were all smiles during the activity, commenting on how much fun they had and how they wanted to make bath bombs at home. We hope this experience allowed them to become more familiar with chemistry in everyday life.



Traveling lecture at Yamate Junior High School (Yokkaichi District)



Yokkaichi Children's Science Seminar (Yokkaichi area)

TRY! Activities

The Nanyo Complex hosts diverse activities, such as chemistry experiments, for TRY! members in an effort to foster local children's interest in chemistry.* In fiscal 2024, the complex participated in the H2&FC Expo to commemorate Shunan City's 20th anniversary. The complex's objective was to give each TRY! member the opportunity to do an experiment of personal interest. Four experiments were conducted, including using baking soda to make bath salts. We will continue our efforts to make further contributions to the local community.

* TRY, or Tosoh Responsible Care Youth, is a volunteer group for youngsters conducting Responsible Care activities.



Summer junior science class



Visiting lecture at Tomita Higashi Elementary School



H2&FC Expo



Joint cleanup activities (Tosoh Park Eigenzan)

Fiscal 2024 activity results

Exhibit	Date	Number of participants	Activities & themes	Activity details
Summer Junior Science Class	7/29/2023	10 people	Making bath salts using baking soda, and liquid-based experiments using everyday liquids	<ul style="list-style-type: none"> Brief overview of Tosoh Making bath salts with baking soda, citric acid, and food coloring Experimenting with liquids, such as Mentos and Coca-Cola, polymers and water, and iodine and vitamin C, to familiarize students with chemistry
Shunan Yume Monogatari (Shunan Dream Story)	10/22/2023	13 people	Making superballs using laundry glue	<ul style="list-style-type: none"> Brief overview of Tosoh Making superballs with laundry glue, salt, water, and paint Explaining how superballs are made
H2 & FC Expo	11/19/2023	11 people	Offering visitors a choice of four experiments: using chromatography to determine color flow, using baking soda to make bath salts, using laundry glue to make superballs, and using liquids as a base	<ul style="list-style-type: none"> Brief overview of Tosoh Determining how colors flow (separation of components) using chromatography and colored pens Making bath salts using baking soda Making toy elastic balls using laundry glue, salt, water, and paint Experimenting with liquid systems in the junior classroom
Joint cleanup with Nanyo Technical High School and Shin-nanyo High School	12/13/2023	7 people	Picking up leaves and composting them at Tosoh Park Eigenzan	<ul style="list-style-type: none"> Joint cleanup in Eigenzan Park (picking up leaves) Collected leaves are added to compost boxes in the park for use as soil
Teaching at Tonda-Higashi Elementary School (Teaching classes for fourth graders)	1/30/2024	13 people	Generating CO ₂ and a plastic bottle rocket using baking soda	<ul style="list-style-type: none"> Brief overview of Tosoh Generating CO₂ using baking soda, citric acid, and soap bubbles Making a CO₂-fueled plastic bottle rocket using baking soda, citric acid, water, and a plastic bottle

LET'S activities

At the Yokkaichi Complex, members of LET'S* conduct various activities such as chemistry experiments to encourage local children to acquire an interest in chemistry. Although the pandemic prevented events from being held in fiscal 2023, the complex resumed these activities in fiscal 2025.

* Local Education with Tosoh's : A voluntary activity group comprising young people with the aim of contributing to the community

Athletic competition

The Nanyo Complex holds baseball and soccer tournaments to promote the sound development of children together with the community through sports.



16th Tosoh Shunan City School Children's Softball Tournament



27th Tosoh Cup Soccer Tournament

Supporting disaster-stricken areas

Support for areas affected by the 2024 Noto Peninsula Earthquake

Tosoh Corporation collaborated with Tosoh Logistics Corporation to transport 339 boxes of relief supplies to the affected area. Mainly drinking water but also portable, bag-type toilets; portable hand warmers, blankets, preserved food, paper diapers, and sanitary products were shipped by sea aboard the Toun Maru, managed by Koun Marine Co., Ltd. This collaborative venture involved advance coordination with a number of parties, including Japan's Ministry of Land, Infrastructure, Transport and Tourism. In recognition of their contributions to the restoration and recovery of the affected area, Tosoh Logistics and Koun Marine received letters of appreciation from the director-general of the Maritime Bureau of the Ministry of Land, Infrastructure, Transport and Tourism.

The Tosoh Group donated ¥20 million to the Japanese Red Cross Society. That sum is to be allocated to the relief and recovery of those affected by the disaster.



Landing at Nanao Port



Presentation of Certificate of Appreciation from the Ministry of Land, Infrastructure, Transport and Tourism

Global activities

Taiwan

Tosoh Quartz Co., Ltd. (Taiwan), marked its anniversary with CSR activities. It helped to clean up public areas around its facilities in the Tainan Science Park.

Conducted in partnership with its business partners, this activity promotes health while contributing to a clean environment, qualifying it as a health promotion effort under ISO 45001.



Cleanup activity

SOCIETY


External Recognition

ESG investment index

Tosoh is included in the following ESG investment indexes as of September 30, 2024.

FTSE4Good Index Series

Developed and provided by FTSE Russell, a subsidiary of the London Stock Exchange Group, this equity index of the world's leading companies evaluates the performance of companies that are demonstrating strong Environmental, Social and Governance (ESG) practices.

> [FTSE4Good Index Series](#) 



FTSE Blossom Japan Index

Developed and provided by FTSE Russell, this equity index evaluates the performance of Japanese companies that are demonstrating strong ESG practices. The index has been selected as an ESG index by the Government Pension Investment Fund (GPIF).

> [FTSE Blossom Japan Index Series](#) 



FTSE Blossom Japan Sector Relative Index

Launched by FTSE Russell, this is an index that reflects the performance of Japanese companies that excel in ESG practices. The index has been selected as an ESG index by the Government Pension Investment Fund (GPIF).

> [FTSE Blossom Japan Index Series](#) 



MSCI Japan ESG Select Leaders Index

Formed by MSCI, a U.S. financial services company, based on ESG research, the index is composed of listed Japanese stocks that excel in terms of ESG-rated performance in their respective industries. The index has been selected as an ESG index by the Government Pension Investment Fund (GPIF).

* Tosoh's inclusion in the MSCI Indexes and use of the MSCI logo, trademark, service mark or index name does not constitute sponsorship, advertising, or promotion of Tosoh by MSCI or its affiliates. MSCI and the MSCI index names and logos, which are the exclusive property of MSCI, are trademarks or service marks of MSCI or its affiliates.



Moringstar Japan ex-REIT Gender Diversity Tilt Index (GenDi J)

Utilizing Equileap's Gender Equality Score, the index focuses on companies whose gender diversity policies are embedded in their corporate culture and that are committed to equal opportunities for their employees regardless of gender.

The index has been selected as an ESG index for the Government Pension Investment Fund (GPIF).

Sompo Sustainability Index

The Sompo Sustainability Indexes, managed by Sompo Asset Management Co., Ltd., are used for sustainable management for pension funds and institutional investors, investing in a wide range of companies with superior ESG-rated performance.



S&P/JPX Carbon Efficient Index

The index was jointly developed by S&P Dow Jones Indices, Inc. of the U.S. and Japan Exchange Group, Inc. and is based on the weighting of companies on the TOPIX in accordance with their environmental information disclosure status and carbon efficiency (carbon emissions per unit of revenue). The index has been selected as a global environmental equity index by the Government Pension Investment Fund (GPIF).



iSTOXX MUTB Japan Platinum Career 150 Index

This index—jointly developed by Mitsubishi UFJ Trust and Banking Corporation and Deutsche Börse-affiliated index provider Stoxx Ltd.—selects stocks of companies actively and continuously pursuing platinum career initiatives. “Platinum career” refers to people honing and accumulating skills through autonomous learning and experience, regardless of age. Using the evaluation metrics for Platinum Career companies from Toyo Keizai’s CSR company directory, the index consists of 150 companies that actively contribute to employee career development based on the three aspects of long-term perspective, autonomous learning, and contribution to society.



External recognition

CDP2023 “B” in climate change and water security

Tosoh earned a score of “B” in both climate change and water security in the fiscal 2024 survey conducted by the Carbon Disclosure Project (CDP). CDP is an organization that queries companies around the world regarding their environmental strategies, greenhouse gas emissions, water withdrawal and wastewater management, and forest resource management, and analyzes and evaluates their responses.



Achieved EcoVadis Bronze Medal Sustainability Rating

Tosoh Corporation garnered a bronze medal rating in the 2024 sustainability assessment by international evaluation organization EcoVadis. EcoVadis is an information sharing platform built by EcoVadis of France for the purpose of promoting supply chain sustainability. The organization comprehensively assesses CSR activities from four perspectives outside the financial domain: Environment, Labor and Human Rights, Ethics, and Sustainable Procurement.



Tosoh named Outstanding Corporation under 2024 Certified Health and Productivity Management Organization Recognition Program

In March 2024, Tosoh was certified as a “Corporation of Excellent Health Management 2024” for the fifth consecutive year. This is a system under which the Ministry of Economy, Trade and Industry (METI) recognizes enterprises that are undertaking superior health management. To support the physical and mental health of our employees, the company has developed various initiatives based on the three pillars of physical fitness, lifestyle improvement, and mental health. The results of these initiatives have received praise.



Platinum Kurumin Certification

Tosoh received Platinum Kurumin Certification. Based on Japan’s Act on Advancement of Measures to Support Raising Next-Generation Children, Kurumin certification is granted by the Minister of Health, Labor and Welfare to companies that have formulated an action plan to improve the employment environment so that employees can balance work and child rearing, and that meet certain standards by achieving the goals set forth in the plan as companies that support child rearing. Among Kurumin-certified companies, those that have made progress in introducing and using support systems for balancing work and family life, and have implemented higher-level initiatives, are eligible to receive Platinum Kurumin certification as an excellent company supporting child rearing.



Participation in initiatives

United Nations Global Compact

Since 2019, Tosoh has been participating in the United Nations Global Compact (UNGC), in which each company and organization voluntarily works to create a global framework for sustainable growth. The UNGC is a voluntary initiative for each company and organization to act as good members of society and, through responsible and creative leadership, achieve sustainable growth. The Tosoh Group endorses the ten principles related to protecting human rights, eliminating unfair labor practices, maintaining environmental responsibility, and preventing corruption. We promote our business under these ten principles and a commitment from our top management. Also, in September 2020, Tosoh voiced agreement with the purpose of A Statement from Business Leaders for Renewed Global Cooperation, and became a signatory. Tosoh also participates in various subcommittees organized by Global Compact Network Japan to promote initiatives from a global perspective.

> [UNGC website](#) 



GX League

The GX League was established by Japan's Ministry of Economy, Trade and Industry (METI) as a forum for companies that are actively working to transform the overall economic and social system (GX: green transformation)—including stakeholders other than themselves—to engage in unified discussion and practice for the creation of new markets with the aim of achieving carbon neutrality.



Challenge Zero Declaration

Challenge Zero (Challenge Net Zero Carbon Innovation) is an initiative to promote innovation toward the realization of a decarbonized society, the intent of the Paris Accord. Tosoh has endorsed the Challenge Zero declaration of the Japan Business Federation (Keidanren) and publishes the details of its initiatives.

Japan Clean Ocean Material Alliance (CLOMA)

The CLOMA platform was established to promote the sustainable use of plastic products and the development and introduction of alternatives to resolve the global issue of marine plastic litter, and to bolster collaboration and accelerate innovation among a wide range of stakeholders in a variety of industries.

Keidanren Declaration for Biodiversity

Tosoh has participated in the Keidanren Declaration for Biodiversity since 2024. As stated in the Keidanren Declaration for Biodiversity and Guidelines, we will work toward "building a society in harmony with nature and realizing a sustainable economy and society."

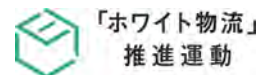
Promotion of establishing a workplace environment that allows balancing work and caregiving responsibilities

Tosoh is committed to creating an environment where employees can balance work and caregiving responsibilities and continue to work with peace of mind. We are working to establish and expand support systems for balancing work and caregiving responsibilities. Tosoh has obtained the symbol mark (called "Tomonin") from the Ministry of Health, Labor and Welfare for promoting the establishment of a workplace environment that allows balancing work and caregiving responsibilities.



White Logistics promotion activities

White Logistics is a movement that aims to improve truck transportation productivity, increase logistical efficiency, and create a favorable working environment for women and elderly drivers. These measures help ensure the sustainability and stability of logistics, which are essential for people's daily lives and industrial activities, while helping solve the shortage of truck drivers that has worsened in recent years. In September 2019, Tosoh issued a Voluntary Action Declaration to show its support for Japan's White Logistics Movement.



Declaration of Partnership Building

The Declaration of Partnership Building is Tosoh's principal business policy regarding cooperation, coexistence and prosperity with suppliers in the supply chain and the establishment of new relationships. Tosoh has endorsed the intent of the Declaration of Partnership Building and announced this in March 2022.



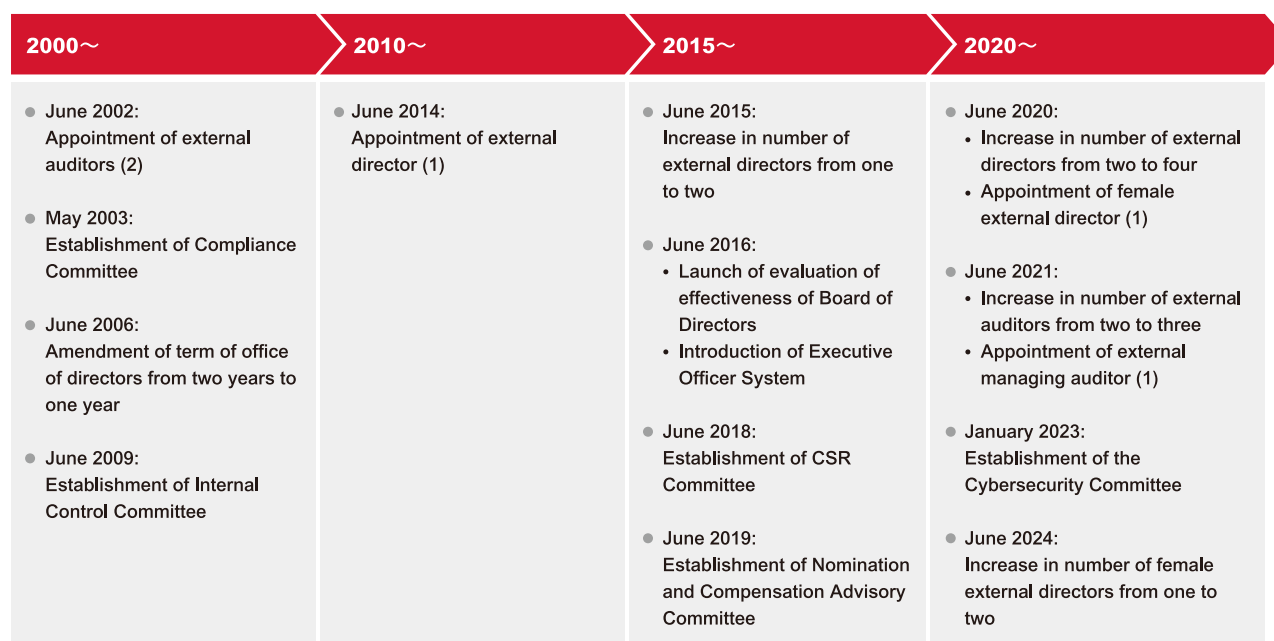


Basic concept

In order to continuously enhance corporate value, Tosoh strives to build an efficient organizational structure that can respond quickly to changes in the business environment and to conduct sound corporate management that is fair and highly transparent. While respecting the purpose and spirit of the Corporate Governance Code, we continuously seek the optimal form of corporate governance for Tosoh.

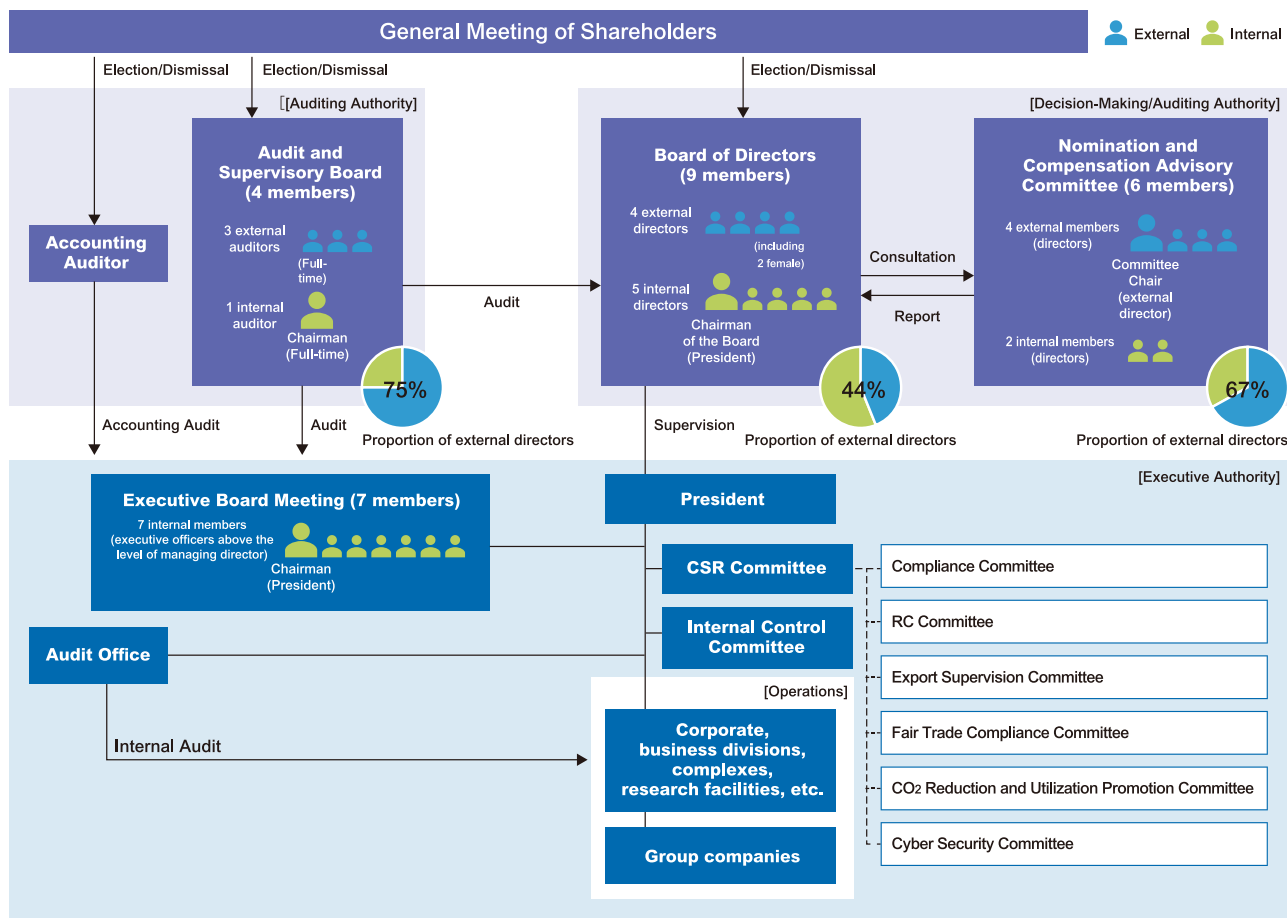
> Corporate Governance Report 

Bolstering and Changes in Corporate Governance



Corporate governance structure

Corporate Structure (as of June 30, 2024)



Overview of Organization (as of June 30, 2024)

Organization	Composition	Actual results for FY2023 (frequency of meetings)
Board of Directors	9 (4 of whom are external directors) Chaired by the president	15 times (once or twice/month)
Audit and Supervisory Board	4 (3 of whom are external auditors)	15 times (once or twice/month)
Nomination and Compensation Advisory Committee	6 (4 of whom are external directors) Committee chaired by an external director	11 times
Executive Board Meeting	7 Executive officers at the managing director level and above Chaired by the president	24 times (once/week in principle)

Board of Directors

As of June 30, 2024, Tosoh's Board of Directors consists of nine directors, including four external directors, two of whom is female. In principle, the Board meets at least once a month. Based on laws and regulations, the Articles of Incorporation, and the Board of Directors Regulations, the Board of Directors makes decisions on business planning, strategy, and other important management matters. It also oversees the performance of duties by each director and executive officer. In addition, the board makes decisions concerning appointments, dismissals, and division of duties for executive officers.

Key discussion topics by the Board of Directors in Fiscal 2024

- Management strategy, consolidated management, and CSR
- Financial results, finances, and guarantees
- Human resources and organizational reform
- Operations for all organizations
- Internal controls, auditing, and compliance
- Individual matters
- Other topics mandated by laws and regulations

Attendance at Board of Directors meetings (FY2024)

Name	Position	Attendance at Board of Directors meetings
Mamoru Kuwada	Representative director and president	100% (all 15 meetings)
Katsushi Tashiro*1	Representative director and senior executive vice president	100% (all 3 meetings)
Toru Adachi	Representative director and executive vice president	100% (all 15 meetings)
Satoru Yonezawa*1	Director and executive vice president	100% (all 3 meetings)
Toru Doi	Director and executive vice president	100% (all 15 meetings)
Akihiro Yoshimizu*2	Director and executive vice president	100% (all 12 meetings)
Takahiko Kamezaki*2	Director and executive vice president	100% (all 12 meetings)
Tsutomu Abe	External director/ Independent board member	100% (all 15 meetings)
Keiichi Miura*1	External director/ Independent board member	100% (all 3 meetings)
Yoshihiro Hombo	External director/ Independent board member	100% (all 15 meetings)
Mariko Hidaka	External director/ Independent board member	100% (all 15 meetings)
Yukimasa Nakano*2	External director/ Independent board member	100% (all 12 meetings)
Kouji Kawamoto*1	Full-time Corporate Auditor	100% (all 3 meetings)
Satoru Yonezawa*2	Full-time Corporate Auditor	100% (all 12 meetings)
Makoto Okayama	Full-time Corporate Auditor (External)/ Independent board member	100% (all 15 meetings)
Tetsuya Teramoto	Corporate Auditor (External)/ Independent board member	100% (all 15 meetings)
Tsuneyasu Ozaki	Corporate Auditor (External)/ Independent board member	100% (all 15 meetings)

*1 Resigned on June 23, 2023

*2 Appointed on June 23, 2023

Audit and Supervisory Board

The Audit and Supervisory Board consists of four auditors (as of June 30, 2024), including three external auditors who are familiar with corporate management or have considerable knowledge of legal, financial, and accounting matters. As a general rule, the Audit and Supervisory Board meets at least once a month to audit how the directors execute their duties. Each auditor attends meetings of the Audit and Supervisory Board and other important meetings in accordance with the audit policy and allocation of duties determined by the Audit and Supervisory Board, receives reports from directors and employees regarding the performance of their duties, requests explanations as necessary, inspects important approval documents, and examines the status of operations and assets at headquarters and principal industrial complexes. With regard to subsidiaries, the company communicates and exchanges information with directors and auditors of subsidiaries and receives reports on their operations as necessary. In addition, the Audit and Supervisory Board has established a secretariat in order to strengthen the function of the auditors in the execution of their duties.

Attendance at meetings of the Audit and Supervisory Board (FY2024)

Name	Position	Attendance at Audit and Supervisory Board
Kouji Kawamoto*1	Full-time Corporate Auditor	100% (all 3 meetings)
Satoru Yonezawa*2	Full-time Corporate Auditor	100% (all 11 meetings)
Makoto Okayama	Full-time Corporate Auditor (External)/ Independent board member	100% (all 15 meetings)
Tetsuya Teramoto	Corporate Auditor (External)/ Independent board member	100% (all 15 meetings)
Tsuneyasu Ozaki	Corporate Auditor (External)/ Independent board member	100% (all 15 meetings)

*1 Resigned on June 23, 2023

*2 Appointed on June 23, 2023

External Directors and Auditors

Tosoh appoints external directors with exceptional experience and insight to oversee corporate governance. These external directors monitor the execution of company business from a neutral and objective point of view. Tosoh has established its proprietary Criteria for the Independence of External Directors and Corporate Auditors, and refers to these criteria when determining whether independence is ensured. External directors and auditors attend meetings of the Board of Directors and other bodies and receive regular explanations and reports to carry out supervision and auditing.

External Director and Auditor Support Structure

1. External director support structure

The secretariat explains the detailed agenda for discussion at Board of Directors meetings to external directors in advance. They receive regular reports on critical meeting topics from department heads, while having domestic and overseas location tours and meetings with accounting auditors.

Through these efforts, our external directors learn more about our business, identify issues and risks, and make comments at Board of Directors meetings based on their findings.

2. External auditor support structure

At Board of Auditors meetings, internal auditors report and share information obtained through daily audits with external auditors, including topics discussed in management and other critical meetings and the results of on-site audits. External auditors also attend corporate auditor audits at domestic and overseas locations as necessary. And before each Board of Directors meeting, corporate auditors provide an overview of the agenda items to be discussed. External auditors also meet with the accounting auditors and the Internal Control Committee to receive audit plan progress and results reports. Through these efforts, external auditors help ensure our audits are adequate.

Executive officer

Tosoh introduced the Executive Officer System with the aim of separating management decision-making from supervisory and executive functions, thereby accelerating and streamlining decision-making. Clarification of the roles and responsibilities of business execution has made possible a management structure that can respond to rapid changes in the business environment. As of June 30, 2024, there were 28 executive officers, five of whom were also serving as directors.

Nomination and Compensation Advisory Committee

To strengthen corporate governance, Tosoh established the Nomination and Compensation Advisory Committee in June 2019 as an advisory body to the Board of Directors. The committee serves to ensure fair and transparent procedures regarding the nomination and compensation of directors, auditors, and executive officers. As of June 30, 2024, the committee consists of six directors, including four external directors, and is chaired by an external director.

Items to be discussed are as follows.

- 1) Matters to be proposed at the General Meeting of Shareholders concerning nominations of candidates for directors and corporate auditors
- 2) Matters concerning the selection and dismissal of representative directors
- 3) Matters related to the selection and dismissal of executive directors
- 4) Matters concerning the selection and dismissal of managing directors
- 5) Matters concerning the appointment and dismissal of executive officers
- 6) Matters concerning the selection and dismissal of executive officers
- 7) Matters related to succession planning (including training) of the president and representative director
- 8) Matters related to remuneration for directors and executive officers
- 9) Other matters related to nomination and compensation

Activities of the Board of Directors and the Nomination and Compensation Advisory Committee

Activities in the process of determining the amount of compensation for directors and officers in fiscal 2024 included three meetings of the Board of Directors and eight meetings of the Nomination and Compensation Advisory Committee. The Board of Directors reviews the remuneration system for directors and revises remuneration packages based on the Nomination and Compensation Advisory Committee report.

Total executive compensation in FY2024

Officer classification	Total amount of remuneration and other compensation (millions of yen)	Total amount of remuneration and other compensation by type (millions of yen)			Number of eligible officers*
		Basic compensation	Performance-based compensation	Non-monetary compensation	
Directors(external directors in parentheses)	361 (48)	236 (48)	102 (-)	22 (-)	12 (5)
Auditors(external auditors in parentheses)	69 (45)	69 (45)	—	—	5 (3)

* The above figures include three directors and one auditor who retired at the conclusion of the General Meeting of Shareholders held on June 23, 2023.

Executive Board Meeting

The Executive Board Meeting consists of seven directors and group heads (as of June 30, 2024) who also serve as executive officers, and meets once a week in principle. The group deliberates in advance on matters to be discussed at Board of Directors' meetings and on important matters related to the overall management of the Group, and has established a system to facilitate appropriate and efficient management decision-making.

Management Liaison Meeting

The Management Liaison Meeting comprises directors (including external directors), internal auditors, and divisional, departmental, and office general managers. As a general rule, it is held twice a month. All divisions report on their business, while managers explain items subject to approval and communicate other important matters.

Overview of Company-wide Committees

Tosoh has established various committees to ensure the effective functioning of corporate governance. In addition, they also make regular submissions and reports to the Board of Directors.

Committee	Overview	Number of events in FY2024
CSR Committee	Chaired by the president, the CSR Committee consists of members of the Executive Board Meeting, the head of the administrative division at headquarters, and chairpersons of company-wide committees, and is responsible for formulating CSR activity policies and managing progress on key CSR issues. The committee reports and deliberates on specific issues related to CSR initiatives and measures.	2 times
Internal Control Committee	Chaired by an executive vice president of Tosoh Corporation, the Internal Control Committee works to respond to the internal control reporting system for financial reporting under the Financial Instruments and Exchange Act and the internal control system required by the Companies Act. In addition, the committee regularly evaluates and amends the status of the development and operation of internal controls.	4 times
Compliance Committee	Chaired by an executive vice president of Tosoh Corporation, the Compliance Committee is responsible for establishing the compliance system, formulating various measures such as education, and operating the internal reporting system. The committee also periodically evaluates and amends the status of the compliance promotion plan and the operation of the internal reporting system.	2 times
RC Committee	Chaired by an executive vice president of Tosoh Corporation, the RC Committee works to establish a system for promoting RC and formulate RC annual policies. The committee also conducts RC audits on a regular basis to understand the activities of each division.	1 time
Export Supervision Committee	Chaired by the representative director of Tosoh Corporation, the Export Supervision Committee is responsible for formulating various measures for compliance with the Foreign Exchange and Foreign Trade Act, the basic policy stipulated in security export control regulations. The head of the export department is assigned to also serve as the head of the operational business unit.	1 time
Fair Trade Compliance Committee	Chaired by an executive vice president of Tosoh Corporation, the Fair Trade Compliance Committee is responsible for establishing internal regulations and manuals regarding compliance with the Antimonopoly Act and the Act Against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors, and formulating measures for implementation, while the secretariat ensures that all employees are fully aware of the importance of compliance through internal education and training. The committee also reports and deliberates on specific cases related to compliance with the law and measures to deal with them.	1 time
CO ₂ Reduction and Utilization Promotion Committee	Chaired by the president of Tosoh Corporation, the CO ₂ Reduction and Utilization Promotion Committee is responsible for planning and formulating policies on important issues related to CO ₂ reduction and utilization from the perspectives of both technology and cost. In addition, the committee regularly reports and deliberates on specific issues related to planning and measures to deal with them.	2 times
Cyber Security Committee	Chaired by an executive vice president and comprising the heads of the manufacturing, R&D, safety, facilities management, IT, and auditing, the Cyber Security Committee formulates various policies and manages progress related to general cybersecurity. It also regularly reports and deliberates on assessments of specific responses and related countermeasures.	2 times

Analysis and evaluation of the effectiveness of the Board of Directors

To ensure objectivity and transparency, Tosoh conducts an analysis and evaluation every year of the effectiveness of the Board of Directors as a whole, with directors and internal auditors being surveyed regarding the composition and operation of the Board, with the advice of a third-party organization.

A summary of the analysis and evaluation results for fiscal 2024 is as follows.

[Initiatives in fiscal 2024]

- We held open discussions in February on report themes received from the Management Section of the General Affairs Department on how management should respond to institutional investors' opinions and requests.
- The presidents of the Specialty Group and of the Petrochemical Group have attended every board meeting since the July 2023 Board of Directors meeting to explain matters under their charge.

[Evaluation results for fiscal 2024 and future initiatives]

(Evaluation results)

The overall result of the analysis and evaluation is that the Board of Directors as a whole is currently fulfilling its roles and responsibilities in an effective manner.

<The primary reasons the Board of Directors is evaluated as generally fulfilling its roles and responsibilities effectively are as follows: >

- ① Maintaining a balanced composition of internal and external directors diverse in their knowledge, experience, expertise, work history, gender, and more
- ② Risk management, based on necessary and sufficient reporting and continued monitoring and supervision of business execution, has been appropriate
- ③ Management of the Board of Directors, including the frequency of meetings, scope of agenda, deliberation time, volume of materials, timing of distribution, and related matters, has been appropriate

(Future initiatives)

While there are opinions that a certain level of discussion has been achieved regarding our response to ESG, CSR initiatives, and business portfolio policies, there are also opinions that further discussion is necessary on efforts to achieve management that is mindful of capital costs and stock prices. The company continues to ponder these issues from both perspectives.

A changed corporate environment and heightened societal demands on the Board of Directors sees Tosoh request input from its stakeholders on what issues are most in need of being discussed. The issues submitted will be taken up for discussion in order of importance.

Tosoh will continue to work tirelessly to implement initiatives based on the results of our analysis and evaluation so as to contribute to sustainable growth and the enhancement of corporate value.

List of Directors and Auditors (from June 21, 2024)

Name	Position
Mamoru Kuwada	Representative director and president
Toru Adachi	Representative director and senior executive vice president
Toru Doi	Director and executive vice president
Akihiro Yoshimizu	Director and executive vice president
Takahiko Kamezaki	Director and executive vice president
Yoshihiro Hombo	External director <input type="checkbox"/> Independent board member
Mariko Hidaka	External director <input type="checkbox"/> Independent board member
Yukimasa Nakano	External director <input type="checkbox"/> Independent board member
Yukiko Hashitera	External director <input type="checkbox"/> Independent board member
Satoru Yonezawa	Full-time Corporate Auditor
Makoto Okayama	Full-time Corporate Auditor (External) <input type="checkbox"/> Independent board member
Tetsuya Teramoto	Corporate Auditor (External) <input type="checkbox"/> Independent board member
Tsuneyasu Ozaki	Corporate Auditor (External) <input type="checkbox"/> Independent board member

Officers' Skill Matrix

Board Members		Corporate Management	Finance and Accounting	Legal, Compliance and Risk Management	Sales and Marketing	Manufacturing, R&D, and Technology	Internationality and Diversity	Human Resources and Labor	Environment and Society
Directors	Mamoru Kuwada	○			○	○		○	○
	Toru Adachi	○	○	○	○			○	
	Toru Doi	○		○		○			○
	Akihiro Yoshimizu	○				○			○
	Takahiko Kamezaki	○		○	○		○		
	Yoshihiro Hombo	○	○		○		○	○	
	Mariko Hidaka	○	○				○	○	
	Yukimasa Nakano	○	○		○		○		
	Yukiko Hashitera	○		○		○	○	○	
Auditors	Satoru Yonezawa	○	○	○			○		
	Makoto Okayama	○	○	○	○				
	Tetsuya Teramoto	○		○	○	○			
	Tsuneyasu Ozaki			○	○			○	

* This is not a comprehensive representation of the skills of the officers.

Internal control

Tosoh believes establishing an internal control system is essential for effective corporate governance. Thus, we have enacted the Basic Policy for Establishing an Internal Control System through a resolution of the Board of Directors. The company is working to comply with the internal control reporting system for financial reporting under the Financial Instruments and Exchange Act and the internal control system development required by the Companies Act. The company regularly assesses its internal control system and operations and corrects issues as they arise.

Internal auditing

As part of our internal control monitoring, Tosoh has established an Auditing team specializing in internal audits to conduct audits independently from those of our corporate auditors and accounting auditors. Under the annual audit plan, the Auditing team assesses compliance with applicable laws, regulations, and company rules, as well as the effectiveness and efficiency in maintaining and operating internal control systems. It reports audit findings to the president and auditors, with regular audit reports to the Board of Directors.

Tosoh's Auditing team works to improve the efficiency and effectiveness of audits by conducting interviews with divisions that have internal control functions and with the divisions responsible for group company operations to identify risks. It regularly audits approximately 100 departments (including production departments, laboratories, branch offices, and domestic and overseas group companies). It also shares information and discusses issues with the accounting auditors as appropriate.

Political cross-shareholdings

Tosoh holds shares in its business partners to maintain and develop business relationships. Every year, the Board of Directors confirms the rationale of these holdings and whether their benefits are commensurate with the cost of capital. As a result of these reviews, the Board of Directors considers the sale of stocks unlikely to be profitable, improve future business relationships, or enhance corporate value. In fiscal 2024, we sold all holdings in four companies and partial holdings in one company based on these reviews.

Cross-shareholdings and year-end balances

Classification	FY2024					
	Acquired		Sold		Year-end balance	
	No. of issues	Acquisition value (millions of yen)	No. of issues	Sale value (millions of yen)	No. of issues	Year-end balance (millions of yen)
Unlisted shares	4	151	3	217	77	5,315
Shares other than unlisted shares	—	—	1	174	59	42,526

Organo Corporation, a listed subsidiary, is primarily engaged in water treatment engineering. This subsidiary maintains its listing by ensuring independence in its unique business domain and corporate culture, maintaining and enhancing its brand, and conducting separate HR recruitment. In advocating dual management, Tosoh is working to develop and strengthen business groups that compensate for the earnings volatility risk of its commodity business. The subsidiary's water treatment engineering business plays a vital role in Tosoh's business portfolio and reinforces the dual management approach.

Corporate Governance Report

CORPORATE GOVERNANCE

Tosoh Corporation.

Last Update: June 21, 2024**Tosoh Corporation**

Mamoru Kuwada, Representative Director, President

Contact: Masashige Sakata,
Vice President
General Manager,
Corporate Control
& Accounting**Securities code:** 4042<http://www.tosoh.com/>

The corporate governance of Tosoh Corporation (the “Company”) is described below.

This report was translated into English from its original Japanese version. In the event of a conflict between the two versions, the Japanese version will prevail.

I. Basic views on corporate governance, capital structure, corporate profile and other basic information

1. Basic views

With the aim of continuously increasing corporate value, the Company will strive to build an efficient organizational structure capable of an agile response to changes in the business environment and to conduct fair, transparent, and sound corporate management.

Reasons for non-compliance with the principles of the corporate governance code

The Company complies with all of the principles set forth in the corporate governance code.

Disclosure based on the principles of the corporate governance code

Principle 1.4: Cross-shareholdings

The Company holds shares of business partners for the purpose of maintaining and developing business relationships. The board of directors conducts an annual assessment of the appropriateness of the purpose of such shareholdings, and whether the associated benefits and cost of capital are commensurate with the purpose. As a result of this review, the Company considers selling shares that are not expected to be profitable or to strengthen business relationships in the future and that are not seen enhancing the Company's corporate value. During the fiscal 2025 verification, some issues will be considered for sale, and the results will be reported at the following year's board of directors meeting. Of the shares considered for sale in fiscal 2024, the Company sold all holdings of four (4) stocks and a portion of holdings of one stocks.

Regarding the exercise of voting rights related to shares held by the Company as cross-shareholdings, the Company has established standards for the exercise of voting rights and takes actions in accordance with such standards. Specifically, for each individual proposal, the Company will exercise its voting rights after comprehensively considering whether or not the proposal will contribute to the maintenance and development of business relations with the Company and enhance the medium- to long-term corporate value of the Company and investees. In exercising voting rights over shares deemed to be held, the Company will also consider whether it is in the interests of the beneficiaries.

Principle 1.7: Related party transactions

Regarding conflict-of-interest transactions, the approval of the Company's board of directors is obtained, and the

results of such transactions are reported to the board. The board also approves related party transactions.

Supplementary principle 2.4.1: Disclosure on diversity in the appointment of core personnel

The Company believes that its greatest asset is its human resources and that its identity as a company that is rewarding to work for is vital in achieving sustainable growth and continuing to create value. Moreover, in the Tosoh Group CSR Basic Policy, the Company has set forth "Develop and promote a free and open corporate culture" as a basic policy and has identified diversity and inclusion as a material CSR issue. It has also established measurable goals as key performance indicators (KPIs) and is working toward achieving them.

○ Creating a comfortable workplace where a diverse workforce can thrive

Based on the belief that actively incorporating and utilizing diverse human resources and values is essential to create new value, the Company is focusing on expanding the recruitment of women and promoting their active participation and has established numerical goals for the proportion of female new graduates in career-track positions and the proportion of female executives. Moreover, while the Company has not established numerical goals regarding the hiring of foreign nationals and mid-career personnel, it hires people on an as-needed basis in specialized fields, such as by expanding the hiring of mid-career personnel. The Company is attempting to achieve work-life balance by creating an environment that allows a diverse workforce to balance career and family life and to continue to work in a rewarding manner. It provides work styles and systems that suit individual lifestyles, promotes the use of these systems, and aims to foster an environment in which employees can continue to work with peace of mind.

○ Autonomous human resource development

Based on the philosophy that education develops human resources that suit the vision of management and contribute to employees' self-realization in the process, the Company has established a systematic education and training system. Moreover, it believes that the autonomous growth of its employees is directly connected to corporate growth, and in the interest of cultivating autonomous human resources who can think and act independently, the Company established its Basic Policy for human resource development: "To develop self-reliant human resources who can envision what they want to be in response to changes in the business environment, and who have the motivation to learn and persevere to achieve their goals."

Detailed information on the status of initiatives, targets, and related data is disclosed on the Company's website.

[Diversity and Inclusion \(tosoh.com\)](https://www.tosoh.com/diversity-and-inclusion)

Principle 2.6: Role of corporate pension funds as asset owners

The Company has adopted a defined-benefit corporate pension plan, and the general manager of Corporate Control & Accounting manages the reserve funds in his or her capacity as executive director of investment management. In addition, an Asset Management Committee consisting of an equal number of company-appointed directors and subscriber-appointed directors has been established. The Asset Management Committee assesses the appropriateness of the basic investment policy and asset mix, evaluates asset management contractors, and strives to appropriately manage conflicts of interest that may arise between the beneficiaries of corporate pension plans and the Company by reflecting the opinions of beneficiaries in the asset management process.

Principle 3.1 i) to v): Full disclosure

i) Company objectives (e.g. business principles), business strategies and business plans

The Company's management philosophy and management policy are disclosed on its website. It has established and announced a medium-term business plan, the outline of which is disclosed on its website. The Company will strive to manage its affairs with the aim of achieving the goals set forth in this plan.

(<https://www.tosoh.com/investors/strategy>)

ii) Basic views and guidelines on corporate governance based on each of the principles of the corporate governance code

With the aim of continuously enhancing corporate value, the Company will build an efficient organizational structure that enables an agile response to changes in the business environment and will strive to conduct fair, transparent, and sound corporate management.

iii) Board policies and procedures in determining the compensation of the senior management and directors

As described in "II-1: Directors' compensation - policy for determining the calculation method of the amount of compensation" in this report.

iv) Board policies and procedures in the appointment/dismissal of senior management and the nomination of

candidates for directors and corporate auditor

The appointment and dismissal of senior management and nomination of candidates for directors and corporate auditor is comprehensively determined and resolved by the board of directors in accordance with the criteria outlined below. To ensure transparency and fairness in the selection and dismissal of senior management and the nomination of candidates for directors and corporate auditor, the Company obtains reports from the Nomination and Compensation Advisory Committee.

○ Criteria for the appointment of senior management and nomination of candidates for the board of directors

- 1) Be in good physical and mental health
- 2) Possess good character, dignity, and ethics
- 3) Possess leadership skills as a member of the management team
- 4) Possess the will and ability necessary to perform duties faithfully
- 5) Possess the ability to make objective judgments regarding management
- 6) External directors should have a proven track record and deep insight in their respective fields of expertise

○ Nomination criteria for corporate auditors

- 1) Be in good physical and mental health
- 2) Possess good character, dignity, and ethics
- 3) Possess a wide range of experience and insight in all aspects of management
- 4) Be able to provide useful advice and recommendations to the board of directors
- 5) External auditors should have a proven track record and deep insight in their respective fields of expertise

○ Criteria for dismissal of management executives

- 1) When a member of the executive management team no longer meets any of the criteria for selection during his or her term of office
- 2) When an executive officer satisfies the dismissal criteria (such as when an executive officer is found to have committed wrongful or unfair acts or is found to be unqualified to serve as an executive officer) as described in the Executive Officer Regulations

v) Explanations with respect to the individual appointments/dismissals and nominations based on iv

Based on iv) above, the Company's board of directors nominates candidates for directors and corporate auditor, and the reasons for individual nominations are stated in the reference documents for the Notice of the Ordinary General Meeting of Shareholders

Supplemental Principle 3.1.3: Disclose the company's sustainability initiatives

The Company is committed to the proactive disclosure of information on its management strategies and plans to enhance its corporate value over the medium to long term. It discloses its approach, policies and initiatives on its website. (<https://www.tosoh.com/investors/strategy>)

The Company believes that its greatest asset is its human resources and that its identity as a company that is rewarding to work for is vital. It is endeavoring to create a work environment in which all employees can demonstrate their abilities and remain highly motivated, and to reform the way they work toward improving work-life balance and productivity.

As a chemical manufacturer, the Company aims to create innovative products and technologies with new and unprecedented value for the realization of a sustainable and prosperous society, and as such is actively investing in R&D to resolve social issues with the SDGs in mind. Moreover, the Legal & Patents team strives to secure and utilize the technologies obtained as a result of R&D as indisputable rights, and is working to respond to research and business strategies.

With regard to the risks and opportunities associated with climate change, the Company has positioned the reduction of CO₂ emissions as its most important issue, and is pursuing it primarily through the CO₂ Reduction and Effective Use Promotion Committee with a view to improving production processes, creating innovative processes, and effectively utilizing CO₂ emissions as chemical raw materials in its own operations. In line with the framework of the Task Force on Climate-Related Financial Disclosures (TCFD), the Company is committed to analyzing and proactively disclosing risks and opportunities related to climate change, while focusing on developing new technologies and products that can contribute to resolving climate change issues.

Supplemental Principle 4-1.1: Disclose a summary of the board's judgments, decisions, and scope of delegation to management.

The matters to be resolved by the board of directors at the Company are those stipulated by laws, regulations, and the Articles of Incorporation, as well as other important matters, which are judged and decided by the board of directors. Of important management matters other than those to be resolved as stipulated in Japan's Companies Act, matters that fall below a certain level are subject to delegation of decision-making authority by establishing specific criteria in the board of directors Regulations and the Company's rules for approval of documents, etc.

Principle 4.9: Independence standards and qualification for independent external directors

The Company considers a person to be independent if none of the following criteria for determining external independence apply to him or her.

- Criteria for determining the independence of external directors / corporate auditors
 - 1) Persons who have held the position of executive director, executive officer, vice president, or other employee of the Company or its subsidiaries within the past 10 years
 - 2) Executive directors, executive officers, or vice presidents of an entity that is a major customer of the Company (a customer that provides products or services to the Company where the transaction amount is equivalent to more than 2% of said customer's annual consolidated sales in the most recent fiscal year)
 - 3) Executive directors, executive officers, or vice president of the Company's major business partners (business partners to whom the Company provides products or services where the transaction amount is equivalent to more than 2% of the Company's annual consolidated sales in the most recent fiscal year)
 - 4) Persons who receive monetary or other financial benefits of ¥10 million or more per year from the Company as consultants, accounting experts, or legal experts other than compensation for their services as directors or corporate auditors of the Company
 - 5) Those to whom 2) through 4) above have applied within the past three years
 - 6) Second-degree relatives of those to whom 1) through 5) above apply

Moreover, the Company endeavors to appoint independent external directors who can provide appropriate management oversight through decisions on important matters and provide useful advice that will contribute to the Group's sustainable growth and enhancement of corporate value.

Supplemental Principle 4.10.1: Establishment of an independent nominating and compensation committee; committee involvement and advice

The board of directors has established the Nomination and Compensation Advisory Committee as an advisory body to ensure fair and transparent procedures for the nomination and compensation of directors, corporate auditors, and executive officers. The Rules of the Nomination and Compensation Advisory Committee stipulate that this committee shall consist of at least three members, including the president, and those independent external directors shall comprise the majority. The committee consists of six members: two internal directors and four independent external directors from the perspective of gender and other diversity and skills. The committee chair is selected from among the independent external directors. As stated in Principle 4.9, an independent external director is one who has notified the Tokyo Stock Exchange of his or her status as an independent director in accordance with the criteria for determining external independence. The matters to be deliberated, secretariat, and frequency of meetings of the committee are as outlined below, and the results of these deliberations are then reported to the board of directors.

- Matters to be deliberated
 - 1) Matters to be proposed at the Ordinary General Meeting of Shareholders concerning nomination of candidates for directors and corporate auditor
 - 2) Matters concerning the selection and dismissal of representative directors
 - 3) Matters concerning the selection and dismissal of directors with special titles
 - 4) Matters concerning the selection and dismissal of executive directors
 - 5) Matters concerning the selection and dismissal of vice presidents
 - 6) Matters concerning the selection and dismissal of executive officers with special titles
 - 7) Matters concerning succession planning (including training) of the representative director and president
 - 8) Matters related to compensation for directors and executive officers
 - 9) Other matters related to nomination and compensation
- Composition of committee members

Committee Chairman (external director): Yoshihiro Honbo
 Members (external directors): Mariko Hidaka, Yukimasa Nakano, Yukiko Hashitera

(Internal directors): Mamoru Kuwada, Toru Adachi

- Secretariat
 - Corporate Secretariat
- Frequency of meetings
 - 10 times in fiscal 2024

Main topics: Formulation of director candidate proposals, matters related to compensation for directors, etc.

Supplemental principle 4.11.1: Approach to and disclosure of balance, diversity, and size of the board of directors as a whole in terms of knowledge, experience, and capabilities

Matters concerning the Company's directors and board of directors are set forth in the Articles of Incorporation and disclosed on the Company's Japanese website. (<https://www.tosoh.co.jp/ir/stocks/articles/>)

In the case of directors, the Company makes decisions based on comprehensive consideration of performance of duties, business experience, leadership skills, personality, ability, and other factors from the viewpoint of securing personnel capable of managing and supervising all divisions of the Company.

Each director has expertise in the areas of corporate planning, manufacturing and research, sales, and finance and accounting, and the Company believes that the board of directors as a whole has a well-balanced composition.

In the case of external directors and corporate directors, independence is ensured, and decisions are made based on comprehensive consideration of their abundant experience and track record in corporate management and other areas, as well as their broad-ranging knowledge and insight. The reasons for nominating candidates for directors and corporate directors are stated in the Reference Materials for the General Meeting of Shareholders in the Notices of the Ordinary General Meeting of Shareholders. With respect to the balance of knowledge, experience, and abilities of directors and auditors required for the Company's management policies and plans, the Company discloses the skills matrix of its directors and auditors on its website and elsewhere.

Supplemental Principle 4.11.2: Disclosure of concurrent directorships in other listed companies

To properly fulfill their respective roles and responsibilities, the Company's directors and corporate auditors must always devote sufficient time and effort to their work.

Moreover, when directors and corporate auditors concurrently serve as officers of other listed companies, such positions should be limited to a reasonable extent.

The Company discloses concurrent directorships with other listed companies in the business report and annual securities report.

Supplementary Principle 4.11.3: Conduct an analysis and evaluation of the effectiveness of the board of directors as a whole and disclose a summary of the results

In order to ensure objectivity and transparency, the effectiveness of the board of directors is evaluated by a questionnaire survey, which is conducted on items such as the composition and operation of the board of directors, with the advice of external organizations. As a result of analysis and evaluation based on the responses to the questionnaire, the effectiveness of the Company's board of directors as a whole is ensured, as the composition, operation, discussion, monitoring, function, etc. of the Company's board of directors were generally positively evaluated.

Reasons for judging that the company is generally fulfilling its roles and responsibilities effectively

- Continuation of a balanced composition of the board of directors, both within and outside the Company, with diversity in terms of knowledge, experience, expertise, career, gender, etc.
- Continuation of appropriate risk management and monitoring and supervision of business execution based on sufficient reporting
- Continuation of appropriate operation of the board of directors (frequency of meetings, scope of agenda items, deliberation time, volume and timing of distribution of materials, etc.)

Moreover, while there is some opinion that the board of directors have been able to discuss responses to ESG, efforts to address CSR, and business portfolio policies, there are opinions that further efforts to realize management that is conscious of the cost of capital and stock price, and we will continue to consider these opinions. The board of directors is asked for its opinions on topics that should be discussed in light of changes in the corporate environment and social

demands on the board. The Company will select themes for discussion in consideration of what are deemed to be the most pressing issues. It will continue to work based on the results of the board's analysis and evaluation to contribute to the sustainable growth and enhancement of the Group's corporate value.

Supplemental Principle 4.14.2: Disclosure of training policies for directors and corporate auditors

To ensure sound management and comprehensive compliance with laws and regulations, the Company regularly holds lectures by lawyers and other experts to provide directors and corporate auditors with opportunities to fully understand the roles and responsibilities required of them. The contents of the meeting include the authority and responsibilities of directors and corporate auditors, legal risks, and matters related to internal control. The Company holds lectures by lawyers for newly appointed directors and corporate auditors. In addition, directors and corporate auditors have the opportunity to participate in outside seminars at the Company's expense to acquire necessary knowledge and update it appropriately.

Principle 5.1: Policy for constructive dialogue with shareholders

1. Basic Policy

- To contribute to sustainable growth and medium- to long-term enhancement of corporate value, the Company shall establish a system for timely and appropriate disclosure to shareholders, investors, and securities analysts (hereinafter referred to as "shareholders and investors") of information on management strategies, financial and business performance, and other relevant matters.
- The Company aims to gain the trust and appropriate evaluation from shareholders and investors by engaging in dialogue to enable them to clearly understand the Company's management strategies.
- The Company will refer to the opinions and requests received from shareholders and investors in corporate management toward improving corporate value.

2. System for information disclosure and dialogue

- The executive officers responsible for investor relations (IR) will be in charge of IR activities.
- The director in charge of IR is appointed as the general manager, and the department in charge of IR activities is placed under his or her control.
- The department in charge of IR shall exchange information with the corporate strategy, accounting, finance, legal, general affairs, and other related departments in a timely manner, establish a system of organic cooperation, consider methods and content of dialogue, and disclose information appropriately.
- The contents shall be reviewed and information disclosed appropriately. Moreover, the management team responsible for each department will work together to oversee and promote these activities.

3. Upgrading methods of conducting dialogue

The Company will implement the following initiatives as means to enhance dialogue. In addition, it will strive to conduct IR activities in an interactive manner, emphasizing fairness, accuracy, and continuity when engaging in dialogue.

- i) Implementation of analyst and institutional investor briefings, and conducting plant tours and small-scale meetings
- ii) Implementation of individual meetings for analysts and institutional investors, and information sessions for individual investors
- iii) Conducting company briefings utilizing domestic and international securities company conferences
- iv) Conducting plant tours for individual shareholder
- v) Disclosing information to investors in Japan and overseas on the website and providing opportunities to post opinions
- vi) Conducting questionnaires for shareholders on the website

4. IR quiet period

- A certain period of time prior to the announcement of financial results will be designated as an IR quiet period, during which time the Company will refrain from responding to financial results inquiries and from holding individual meetings. If there is a possibility that earnings may deviate significantly from the company's forecasts, however, information will be disclosed as appropriate.

5. Methods of feedback

- Opinions and concerns identified through dialogue with shareholders and investors shall be reported in a timely manner at meetings of the board of directors, and feedback shall be provided to management and relevant departments.

6. Management of insider information

- The Company shall thoroughly manage undisclosed material facts in accordance with insider trading prevention regulations.
- When discussing with shareholders and investors, the Company will take the utmost care to prevent the leakage of insider information.
- It will conduct periodic training to ensure thorough management of insider information.

7. Understanding of shareholder structure

- The Company conducts periodic surveys of substantial shareholders to better understand the shareholder structure.

【Measures for realizing management that is conscious of the cost of capital and stock price】

The Company has set a target of achieving ROE (return on equity) of at least 10%, which is well above the cost of equity. ROE fell below 10% in fiscal 2023 and 2024, but has continued to exceed the cost of equity. However, looking at PBR (price book-value ratio) over the last 5 years, PBR has fallen below 1 except for a part of fiscal 2022 which reached a new profit record. The Company recognizes that this is partly due to the fact that the market did not understand the company's growth into the future.

The Company aims to expand profits by investing management resources in growth fields, centered on Specialty businesses that are highly efficient in investment. Moreover, in the Commodity businesses, the Company will formulate future plans and work to overcome challenges such as decarbonization and the shrinking domestic market. In order to improve our PBR, the Company believes it is crucial to earn the confidence of the marketplace in its growth by ensuring that the Company executes its growth strategy per the medium-term business plan and maintain its track record.

【Status of Dialogue with Shareholders】

The following is a summary of the main activities of dialogue between our management and shareholders and investors.

<Implemented in FY2024>

- 1) Methods of conducting dialogue
Small-scale meetings, management briefings, briefings on each business, individual interviews
- 2) The Company's attendees
president, executive vice presidents, and senior general managers of divisions under their charge
- 3) Dialogue partner
Major domestic and overseas institutional investors
- 4) Main themes of dialogue
Medium-term business plan, growth strategy, decarbonization measures, ESG related, etc.
- 5) Feedback to the board of directors, etc.
Periodically report and share opinions and suggestions obtained from the dialogue

2. Capital structure

Foreign shareholding ratio	20% or more and less than 30%
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Status of major shareholders

Name or company name	Number of shares owned	Percentage (%)
The Master Trust Bank of Japan, Ltd. (Trust account)	51,050,200	16.03
Custody Bank of Japan, Ltd. (Trust account)	22,793,500	7.16
JPMorgan Securities Japan Co., Ltd.	7,217,177	2.27
Mizuho Bank, Ltd.	7,046,755	2.21
Sumitomo Mitsui Trust Bank, Limited	6,702,000	2.10
Nippon Life Insurance Company	6,683,337	2.10

BNYMSANV as Agent / Clients Lux Ucits Non Treaty 1	6,013,800	1.89
Mitsui Sumitomo Insurance Company, Limited	5,624,000	1.77
Tosoh Employee Shareholding Association	5,595,400	1.76
The Norinchukin Bank	4,992,500	1.57

Name of controlling shareholder, if applicable (excluding parent company)	Not applicable
Name of parent company, if applicable	Not applicable

Supplementary explanation

BlackRock Japan Co., Ltd. and four other companies hold 11,260,000 shares as of February 29, 2024, according to a substantial shareholding report submitted on March 5, 2024 by BlackRock Japan Co., Ltd.

Mizuho Bank, Ltd. and two other companies hold 16,947,000 shares as of February 29, 2024, according to a substantial shareholding report submitted on March 7, 2024 by Mizuho Bank, Ltd.

Nomura Securities Co., Ltd. and two other companies hold 17,545,000 shares as of May 15, 2024, according to a substantial shareholding report submitted on May 20, 2024 by Nomura Securities Co., Ltd.

Silchester International Investors LLP hold 16,459,000 shares as of June 4, 2024, according to a substantial shareholding report submitted on June 5, 2024 by Silchester International Investors LLP

Sumitomo Mitsui Trust Bank, Limited and two other companies hold 21,063,000 shares as of May 31, 2024, according to a substantial shareholding report submitted on June 6, 2024 by Sumitomo Mitsui Trust Bank, Limited

3. Corporate attributes

Listed stock exchange and market segment (updated)	Prime Market
Fiscal year-end	March
Business sector	Chemicals
Number of employees (consolidated) as of the end of the previous fiscal year	1,000 or more
Net sales (consolidated) as of the end of the previous fiscal year	¥1 trillion or more
Number of consolidated subsidiaries as of the end of the previous fiscal year	50 or more and less than 100

4. Policy on measures to protect minority shareholders in conducting transactions with controlling shareholder

Not applicable

5. Other special circumstances which may have material impact on corporate governance

[Group management philosophy and policies]

The Tosoh Group being an advocate of hybrid management, we are working to develop and strengthen high-added-value businesses that compensate for the earnings fluctuation risk of the Commodity business, thereby stabilizing and expanding earnings and ultimately improving our corporate value.

[The significance of having a listed subsidiary]

Organo Corporation (hereafter "Organo"), which is listed on the Tokyo Stock Exchange Prime Market, is a consolidated subsidiary of the Company. Organo is engaged in the water treatment engineering business and has established a strong position in the supply of ultrapure water production equipment for the electronics industry, which is a growing field. Due to its profitability and high growth potential, Organo's business plays an important role as one of the business portfolios that strengthens the hybrid management of the Tosoh Group.

On the other hand, the company maintains its listing due to the uniqueness of its business field and unique corporate culture, as well as the need to maintain and improve brand recognition and recruit highly specialized personnel.

Furthermore, since autonomous management while interacting with diverse stakeholders contributes to the growth of the company, we believe that maintaining Organo's listing will lead to an increase in the corporate value of the entire Tosoh Group.

While we regularly share management policies and issues with Organo's management, we do not require prior approval from the Company for Organo's business activities, and Organo is able to operate its business independently. In addition, Organo's business has almost no overlap in products and services with the Company or other Group companies, and there is no competition for business opportunities within the Group. In addition, there are no contracts or group financial management structures restricting management between Organo and the Company.

[Measures to ensure the effectiveness of the governance system of listed subsidiaries]

Organo has established and operates a governance system independent of the Company. Organo's executive candidates are decided by its board of directors after obtaining the opinion of its Nomination and Compensation Committee, and the independence of the executive nomination process is ensured because the majority of the members of both the Nomination and Compensation Committee and the Board of Directors are independent outside directors.

With regard to proposals related to the appointment of Organo's executives, the Company exercises its voting rights while fully respecting the judgment of Organo's Nomination and Compensation Committee, which has the function of nomination and taking into consideration the qualities of the executive candidates. In addition, when an executive of the Company becomes president of Organo, the person resigns from the Company and is nominated and elected according to the process described above before taking office.

II. Business management organization and other corporate governance systems regarding decision-making, execution of business, and oversight in management

1. Organizational composition and operation

Corporate governance system	Company with corporate auditor*
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*Referred to in the corporate governance code reference translation as "Company with *Kansayaku* Board"

Directors

Number of directors stipulated in articles of incorporation	Twelve 12
Directors' term of office stipulated in articles of incorporation	One (1) year
Chairperson of the board	President
Number of directors	Nine (9)
Election of external directors	Elected
Number of external directors	Four (4)
Number of independent directors	Four (4)

External directors' relationship with the Company (1)

Name	Attributes	Relationship with the Company*										
		a	b	c	d	e	f	g	h	i	j	k
Yoshihiro Hombo	From another company					△						

Mariko Hidaka	CPA																		
Yukimasa Nakano	From another company												△	△					
Yukiko Hashitera	From another company																		

*Categories for "Relationship with the Company".

(Use "○" when the director presently falls or has recently fallen under the category; "△" when the director fell under the category in the past; "●" when a close relative of the director presently falls or has recently fallen under the category; and "▲" when a close relative of the director fell under the category in the past.)

- Person who executes business of the Company or a subsidiary
- Person who executes business or a non-executive director of a parent company
- Person who executes business of a fellow subsidiary
- Person/entity for which the Company is a major client or a person who executes business for such person/entity
- Major client of the Company or a person who executes business for such client
- Consultant, accounting expert, or legal expert who receives large amounts of cash or other assets in addition to director/corporate auditor compensation from the Company
- Major shareholder of the Company (in cases where the shareholder is a corporation, a person who executes business of the corporation)
- Person who executes business for a client of the Company (excluding persons categorized as any of d, e, or f above) (applies to self only)
- Person who executes business for another company holding cross-directorships/cross-auditorships with the Company (applies to self only)
- Person who executes business for an entity receiving contributions from the Company (applies to self only)
- Other

External directors' relationship with the Company (2)

Name	Designation as independent director	Supplementary explanation of the applicable relationship	Reasons for appointment
Yoshihiro Hombo	○	<p>Mr. Yoshihiro Hombo is director, vice chairman of Valqua, Ltd. The Company has no business relationship with Valqua, Ltd. Mr. Hombo retired as counselor of Mitsui & Co., Ltd., Limited in March 2019. Currently he is not an executive of the said company. The Company has a business relationship involving sale of products and purchase of raw materials, etc. with said company, and the scale of such transactions is approximately two percent of the annual consolidated sales of the Company. The Company believes that there is no risk of a conflict of interest with general shareholders.</p> <p>Brief Personal History Apr. 1979: Joined Mitsui & Co., Ltd. Apr. 2010: Executive officer Apr. 2012: Managing executive officer Apr. 2014: Senior executive managing officer Jun. 2014: Representative director; senior executive managing officer Apr. 2017: Representative director; executive vice president Apr. 2018: Director Jun. 2018: Counselor Apr. 2019: Vice president and executive officer of VALQUA, LTD. Jun. 2019: Representative director, president & COO</p>	<p>Mr. Hombo has extensive experience such as in sales and marketing, overseas operations, business supervision and corporate management, and he provides useful advice and appropriate management supervision, taking an objective view of the Tosoh Group. Going forward the Company believes he will provide appropriate management supervision through decision-making on important matters, has deemed that he will provide useful advice for sustainable growth of the group and raising corporate value, and therefore proposes him as a candidate for external Director.</p> <p>In addition, since all of the items listed in the Company's independence of external directors/corporate auditors do not apply to him, the Company has determined that he has independence that is unlikely to cause any conflict of interest with general shareholders, and has designated him as an independent director.</p>

		<p>Jun. 2020: External director of the Company (current position) Jun. 2024: Director, vice chairman of VALQUA, LTD. (current position)</p>	
Mariko Hidaka	○	<p>Ms. Mariko Hidaka retired as senior partner of Ernst & Young ShinNihon (currently Ernst & Young ShinNihon LLC) in July 2020. Currently she is not an executive of the said company. There is no business relationship between Ernst & Young ShinNihon and the Company. In addition, although the Company has business relationship with KYOKUTO BOEKI KAISHA, LTD., where she concurrently holds a position, there is no special relationship. There is no business relationship between Hidaka CPA Office, which she represents, or SBI Sumishin Net Bank, Ltd., where she holds a concurrent position, and the Company. The Company believes that there is no risk of a conflict of interest with general shareholders.</p> <p>Brief Personal History Apr. 1984: Joined Chuo Audit Corporation Apr. 1987: Registered as certified public accountant Jul. 2000: Partner of Chuo Audit Corporation Jul. 2006: Senior partner of ChuoAoyama Audit Corporation Aug. 2007: Senior partner of Ernst & Young ShinNihon (currently Ernst & Young ShinNihon LLC) Jun. 2020: External director of the Company (current position) Aug. 2020: Representative of Hidaka CPA Office (current position) Jan. 2021: External corporate auditor of SBI Sumishin Net Bank, Ltd. (current position) Jun. 2021: External director (Audit and Supervisory Committee member) of KYOKUTO BOEKI KAISHA, LTD. (current position)</p>	<p>Ms. Hidaka has extensive experience such as in accounting and auditing as well as supporting corporate management, and she provides useful advice and appropriate management supervision, taking an objective view of the Tosoh Group. Going forward, the Company believes she will provide appropriate management supervision through decision-making on important matters, has deemed that she will provide useful advice for sustainable growth of the group and raising corporate value, and therefore proposes her as a candidate for External Director. She has never been directly involved in the management of a company, except as an external officer. However, the Company judges she will appropriately fulfill her duties as an External Director based on the above reasons.</p> <p>In addition, since all of the items listed in the Company's criteria for determining the independence of external directors/corporate auditors do not apply to her, the Company has determined that she has independence that is unlikely to cause any conflict of interest with general shareholders, and has designated her as an independent director.</p>
Yukimasa Nakano	○	<p>Mr. Yukimasa Nakano retired as Director of Taiheiyo Cement Corporation in June 2023. Currently he is not an executive of the said company. The Company has a business relationship involving sale of products and purchase of raw materials, etc. with said company, and the scale of such transactions is approximately one percent of the annual consolidated sales of the Company. The Company believes that there is no risk of a conflict of interest with general shareholders. Mr. Shinhachiro Emori, a former employee of the Company, has been appointed as an external director of Taiheiyo Cement Corporation and is scheduled to retire from its board of directors in</p>	<p>Mr. Nakano has extensive experience in accounting, sales and marketing, business coordination, corporate management, and other areas. He provides useful advice and appropriate management supervision, taking an objective view of the Tosoh Group. The Company believes he will provide appropriate management supervision through decision-making on matters important for the group, has deemed that he will provide advice beneficial for the sustainable growth of the group and raising corporate value, and therefore proposes him as a candidate for External Director.</p> <p>In addition, since all of the items listed in the Company's independence of external directors/corporate auditors do</p>

		<p>late June 2024. Moreover, Mr. Shingo Tsutsumi, a former employee of the Company, is scheduled to be appointed as an external director of Taiheiyo Cement Corporation in late June 2024.</p> <p>Brief Personal History Apr. 1982: Joined Onoda Cement Co., Ltd. Apr. 2016: General manager of Kyushu Branch, Taiheiyo Cement Corporation Apr. 2017: Executive officer Apr. 2020: Managing executive officer Apr. 2022: Senior executive officer Jun. 2022: Director, senior executive officer Apr. 2023: Director Jun. 2023: External director of the Company (current position)</p>	<p>not apply to him, the Company has determined that he has independence that is unlikely to cause any conflict of interest with general shareholders, and has designated him as an independent director.</p>
Yukiko Hashitera	○	<p>Ms. Yukiko Hashitera is CEO of Phoenixi Co Ltd. The Company has no business relationship with Phoenixi Co Ltd. In addition, the Company has no business relationship with Nissha Co., Ltd., where she concurrently holds a position. The Company believes that there is no risk of a conflict of interest with general shareholders.</p> <p>Brief Personal History Apr. 1989: Joined Ueno Fine Chemicals Industry, Ltd. Apr. 2001: Joined R-TECH UENO, LTD. Apr. 2006: CEO of R-TECH UENO, LTD. Jul. 2013 : Joined Lucas LLC Mar. 2018: CEO and Founder of Phoenixi Co Ltd (current position) Mar. 2024: External director of Nissha Co., Ltd. (current position) Jun. 2024: External director of the Company (current position)</p>	<p>Ms. Hashitera has extensive experience in R&D, quality control, human resource development, and other areas. The Company believes she will provide appropriate management supervision through decision-making on matters important for the group, has deemed that she will provide advice beneficial for the sustainable growth of the group and raising corporate value, and therefore proposes her as a candidate for External Director.</p> <p>In addition, since all of the items listed in the Company's independence of external directors/corporate auditors do not apply to her, the Company has determined that she has independence that is unlikely to cause any conflict of interest with general shareholders, and has designated her as an independent director.</p>

Voluntary establishment of committee(s) equivalent to nomination committee or compensation committee	Established
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Status of voluntarily established committee(s), attributes of members constituting the committee and the committee chair (chairperson)

	Committee's name	All members	Full-time members	Internal directors	External directors	External experts	Other	Chairperson
Voluntarily established committee equivalent to nomination committee	Nomination and Compensation Advisory Committee	6	0	2	4	0	0	External director
Voluntarily established committee equivalent to compensation committee	Nomination and Compensation Advisory Committee	6	0	2	4	0	0	External director

- f. Person/entity for which the Company is a major client or a person who executes business for such person/entity
- g. Major client of the Company or a person who executes business for such client
- h. Consultant, accounting expert, or legal expert who receives large amounts of cash or other assets in addition to director/Audit and Supervisory Board Member compensation from the Company
- i. Major shareholder of the Company (in cases where the shareholder is a corporation, a person who executes business of the corporation)
- j. Person who executes business for a client of the Company (excluding persons categorized as any of f, g, or h above) (applies to self only)
- k. Person who executes business for another company holding cross-directorships/cross-auditorships with the Company (applies to self only)
- l. Person who executes business for an entity receiving contributions from the Company (applies to self only)
- m. Other

External directors' relationship with the Company (2)

Name	Designation as independent director	Supplementary explanation of the applicable relationship	Reasons for appointment
Makoto Okayama	○	<p>Mr. Makoto Okayama retired as representative director of Japan Investor Solutions & Technologies Co., Ltd. in June 2021. Currently, he is not a business executor of the company. Mr. Okayama also served as deputy president and executive officer of Mizuho Trust & Banking Co., Ltd. He is not currently an executive officer of the Bank. The Company has no business relationship with Mizuho Trust & Banking Co., Ltd., In addition, there is no business relationship between WOWOW Inc. where he holds a concurrent position, and the Company. The Company believes that there is no risk of a conflict of interest with general shareholders.</p> <p>Brief personal history: Apr. 1983: Joined The Industrial Bank of Japan, Limited Oct. 2010: General manager of Trust Business Department III, Mizuho Trust & Banking Co., Ltd. Apr. 2011: Executive officer Apr. 2012: Managing executive officer Apr. 2013: Executive officer of Mizuho Financial Group, Inc. and executive officer of Mizuho Trust & Banking Co., Ltd. Apr. 2016: Retired as executive officer of Mizuho Financial Group, Inc. deputy president & executive officer of Mizuho Trust & Banking Co., Ltd. Apr. 2018: Retired as deputy president & executive officer; administrative officer Jun. 2018: Retired as administrative officer; president and representative director of Japan Investor Solutions and Technologies Co., Ltd. Jun. 2021: Full-time corporate auditor of the Company (external) (current position) Jun. 2024: External director (Audit and Supervisory Committee member) of WOWOW Inc. (current position)</p>	<p>Mr. Okayama has abundant experience in finance and corporate management, and the Company believes that he will be able to properly audit the execution of duties by the directors from a neutral and fair standpoint based on such experience.</p> <p>In addition, since all of the items listed in the Company's criteria for determining the independence of external directors/corporate auditors do not apply to him, the Company has determined that he has independence that is unlikely to cause any conflict of interest with general shareholders, and has designated him as an independent director.</p>
Tetsuya Teramoto	○	Mr. Tetsuya Teramoto served as director, and then president and chief executive	Mr. Teramoto has abundant experience in corporate management, etc., and the

		<p>officer, and finally chairman of EIKEN CHEMICAL CO., LTD., and retired from the company's board of directors in June 2018. Currently, he is not an executive officer of the company. Although the Company has a business relationship with the company including product sales, which account for less than 1% of the Company's total annual consolidated sales. The Company believes that there is no risk of a conflict of interest with general shareholders.</p> <p>Brief Personal History Mar. 1970: Joined EIKEN CHEMICAL CO., LTD. Jun. 1996: Director Jun. 2005: Director, managing executive officer Jun. 2006: Director, senior managing executive officer Apr. 2007: Director, representative executive officer president & CEO Jun. 2014: Director, representative executive officer Chairman of the board Jun. 2014: External corporate auditor of the Company (current position) Jun. 2016: Director, chairman of the board of EIKEN CHEMICAL CO., LTD.</p>	<p>Company has elected him because it believes that he will be able to properly audit the execution of duties by the directors from a neutral and fair standpoint based on such experience. In addition, since all of the items listed in the Company's criteria for determining the independence of external directors/corporate auditors do not apply to him, the Company has determined that he has independence that is unlikely to cause any conflict of interest with general shareholders, and has designated him as an independent director.</p>
Tsuneyasu Ozaki	○	<p>Mr. Tsuneyasu Ozaki is the head of Nishimura & Asahi LPC's Fukuoka branch. The Company requests legal services from this Firm on an as-needed basis, and transactions account for less than 1% of the Firm's annual transaction volume. There is no business relationship between the Company and CellSource Co., Ltd., where he concurrently holds a position. The Company has determined that there is no risk of a conflict of interest with general shareholders.</p> <p>Brief Personal History Apr. 1996: Appointed as public prosecutor Jul. 2004: Assistant division chief, Administrative Management Bureau of the Ministry of Internal Affairs and Communications Jul. 2005: Resigned as public prosecutor Aug. 2005: Registered as an attorney at law Jan. 2008: Partner of Nishimura & Asahi Jul. 2013: Representative partner of Nishimura & Asahi, Fukuoka Branch Jun. 2014: External corporate auditor of the Company (current position) Sept. 2016: Chairperson, Corporate Governance Committee of TAKADA CORPORATION Jan. 2019: External corporate auditor of CellSource Co., Ltd. Jan. 2023: External director (Audit and Supervisory Committee member) of CellSource Co., Ltd.</p>	<p>Mr. Ozaki has professional knowledge and extensive experience as an attorney at law. Based on this experience, the Company believes that he will be able to properly audit the execution of duties by the directors from a neutral and fair standpoint, and has therefore elected him as a director. Although he has never been directly involved in corporate management in any way other than as an external officer, for the reasons stated above, the Company has determined that he will be able to appropriately perform his duties as an external Audit and Supervisory Board member of the Company.</p> <p>In addition, since all of the items listed in the Company's criteria for determining the independence of external directors/corporate auditors do not apply to him, the Company has determined that he has independence that is unlikely to cause any conflict of interest with general shareholders, and has designated him as an independent director.</p>

Matters concerning independent directors and independent corporate auditors

Number of independent directors and independent corporate auditors	Seven (7)
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Other matters concerning independent directors and independent corporate auditors

The Company designates all of its external directors and external corporate auditors as independent directors and corporate auditors.

Incentives

Implementation status of measures related to incentives granted to directors	Introduction of performance-linked compensation scheme
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Supplementary explanation for applicable items

As described in "II-1 Directors' Compensation - Policy for determining the calculation method of the amount of compensation" in this report.

Persons eligible for stock options

Supplementary explanation for applicable items

Not applicable

Director compensation

Status of disclosure of individual directors' compensation	Disclosure for only partial directors' compensation
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Supplementary explanation for applicable items

- The total amount of compensation, etc. for directors and corporate auditors for the fiscal year ending March 31, 2024 is as follows
 - 1) Twelve (12) directors, total amount of compensation ¥361 million (including five (5) external directors, total amount of compensation ¥48 million)
 - 2) Five(5) corporate auditors, total amount of compensation ¥69 million (including three (3) external auditors, total amount of compensation ¥45 million)
 The above includes three (3) directors (including one external director) and one corporate auditor who retired at the conclusion of the 124th Ordinary General Meeting of Shareholders held on June 23, 2023.
- Total amount of compensation, etc. per director/officer
Individuals with total compensation of ¥100 million or more are disclosed separately in the Annual Securities Report.

Policy on determining compensation amounts and the calculation methods thereof	Established
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Disclosure of policy on determining compensation amounts and the calculation methods thereof

1. Policy for determining the calculation method of the amount of compensation
The Company's basic policy is to design the compensation system to sustainably improve corporate performance and value, and to secure excellent human resources. Compensation for directors is determined within the range of the total amount of compensation resolved at the General Meeting of Shareholders. The date of the resolution of the general meeting of shareholders regarding the compensation, etc. of directors of the Company is June 21, 2024, and the content of the resolution is that the total amount of compensation, etc. of directors shall be within ¥670 million per year (this amount is broken down as follows: (1) the cash compensation portion is ¥590 million (of which, ¥80 million or less for external directors), and (2) the stock-based compensation portion is ¥80 million, not including salaries and

bonuses for officers who also serve as employees). The number of directors at the end of this general meeting of shareholders is nine (including four external directors).

2. Policy for determining individual director compensation, etc.

Specific details in accordance with the basic policy are as follows.

1) Policy on determining how to calculate the amount of fixed compensation

Fixed compensation is regarded as consideration for the position, and is determined for each position in consideration of the compensation level in the survey results of the management compensation compiled by an external organization.

2) Policy on determining the content of performance indicators related to performance-based compensation and the method of calculating the amount of performance-based compensation

The performance-based compensation uses, as a performance indicator, the consolidated ordinary income of the previous fiscal year, which shows the results of the entire business, including both ordinary operating activities and financial activities. The amount will be determined for each position based on the ratio to the fixed compensation and the performance-based range, in consideration of the compensation level, etc. in the survey results of management compensation compiled by external organizations.

(Specific target indicators are not decided for determination of the compensation amount.)

The Board of Directors meeting held on April 23, 2024, decided the introduction of two types of new performance-based compensation from July 2024. Such introduction is in addition to the above-mentioned performance-based compensation by using the consolidated ordinary income of the previous fiscal year, as a performance indicator that shows the results of the entire business, including both ordinary operating activities and financial activities. One is performance-based compensation calculated by using an annual dividend per share based on the financial results of the previous fiscal year, as a performance indicator showing shareholder returns. The other is performance-based compensation based on the achievement level of KPI of the Company's CSR key issues for the previous fiscal year. The achievement level shows a performance indicator for promoting contribution to a sustainable society.

3) Policy on determining the content of non-monetary compensation (stock-based compensation) and the method of calculating the amount of non-monetary compensation

The allotment of restricted shares, which is non-monetary compensation, will be decided for each position by comprehensively considering various matters such as the degree of contribution.

4) Policy on determining the ratio of the amount of fixed compensation, performance-based compensation, and non-monetary compensation to the amount of individual compensation, etc. for directors

The ratio of fixed compensation, performance-based compensation, and non-monetary compensation (stock-based compensation) to the amount of individual compensation, etc. shall be determined for each position, in consideration of the compensation level in the survey results of the management compensation compiled by an external organization. Moreover, external directors shall receive only fixed compensation from the perspective of their role and independence.

5) Policy on determining the timing or conditions for giving compensation, etc. to directors

Fixed compensation and performance-based compensation are paid monthly. Fixed compensation based on the position of the current fiscal year and performance-based compensation based on the performance of the previous fiscal year are paid monthly as the compensation for the current fiscal year. As for the restricted share compensation, which is a non-monetary compensation, restricted shares are allotted annually in accordance with the allotment agreement, and the transfer restriction will be removed upon retirement.

6) How to determine the content of individual compensation, etc. for directors other than the above

Individual compensation, etc. for directors will be decided by the Board of Directors based on a report of the Nomination and Compensation Advisory Board, the majority of whose members are independent external directors.

Support system for external directors and/or external corporate auditors

If deemed necessary, a system of communication is established for external directors from the secretariat of the board of directors and for external corporate auditors from a dedicated person in charge of the secretariat of the audit and supervisory board. Explanations are provided by distributing materials in advance for matters to be resolved by the board of directors. Periodic reports are provided on the deliberations of important meetings.

Statutes of persons who have retired as representative director and president, etc.

Information on persons holding advisory positions (*sodanyaku, komon*, etc.) after retiring as representative director and president, etc.

Name	Job title/ position	Responsibilities	Terms and conditions of employment (Full/part time, with/without compensation, etc.)	Date when former role as president/ CEO ended	Term
-	-	-	-	-	-

Number of persons holding advisory positions (*Sodanyaku, Komon*, etc.) After retiring as representative director and president, etc.

-

Other related matters

- Appointment of advisors is determined by the board of directors.
- The Company has established bylaws concerning advisors, special advisors, and honorary advisors.
- The Company has established bylaws concerning the corporate advisors, special advisors, and honorary advisors, and the corporate advisors, special advisors, and honorary advisors may provide advice on management and business matters, but are not involved in the execution or supervision of business.

2. Matters concerning functions of business execution, auditing and supervision, nomination, and compensation decisions (Overview of current corporate governance system)

1) Corporate governance structure

- Directors, board of directors

The board of directors of the Company consists of nine (9) directors (including four (4) external directors) and in principle meets at least once a month to make decisions on important management matters and to supervise the execution of duties by directors and executive officers (held 15 times in fiscal 2024). In addition, the selection and dismissal of executive officers and the division of duties are determined through resolution of the board of directors. Moreover, with the aim of accelerating the decision-making process, the executive board meeting convenes weekly in principle to deliberate important management issues. Furthermore, a management liaison meeting consisting of directors, corporate auditors, general managers of business divisions, and general managers of related departments is held twice a month in principle to report on the business status of each division, explain matters to be approved, and communicate other important matters.

- Corporate auditors and audit and supervisory board

The Company has adopted an audit and supervisory board system, and the audit and supervisory board (which meets once a month in principle) consists of four (4) members (including three (3) external members) who are well versed in corporate management or have considerable knowledge of legal, financial, and accounting matters. Specifically, they attend meetings of the board of directors and other important meetings, receive reports from directors, and inspect important approval documents. With regard to vital matters affecting management and business performance, a liaison meeting of directors and corporate auditors is established, and the latter receive reports in a timely and accurate manner. The Company also exchanges information and opinions with the Auditing department, the Internal Control Committee, and the accounting auditor as appropriate to improve audit efficiency and effectiveness. Moreover, the Company cooperates with the auditors of Group companies and exchanges information and opinions with them on a regular basis. The Audit and Supervisory Board has also established a secretariat to support the corporate auditors in the execution of their duties.

- Internal auditing

Tosoh Auditing was established as a department specializing in internal audits and currently has 18 employees. Auditing evaluates the effectiveness and efficiency of compliance with applicable laws and regulations, company regulations, and the development and operation of internal control systems based on an annual audit plan. The results of such audits are reported to the president and representative director and the corporate auditors, and the status of audits is regularly reported to the board of directors. Auditing conducts interviews with departments with internal control functions and business divisions of Group companies to identify risks to improve the efficiency and effectiveness of audits. 100 divisions (including manufacturing departments, laboratories, branches, and domestic and overseas group companies) are subject to regular audits. The auditing department also exchanges information and opinions with the accounting auditors as appropriate.

- Others

Tosoh has established the CSR Committee, Compliance Committee, Fair Trade Compliance Committee, Export

Supervision Committee, RC Committee, CO₂ Reduction and Effective Use Promotion Committee, Cyber Security Committee, and Internal Control Committee, as well as the Tosoh Group Code of Conduct. In addition, the Company seeks advice from attorneys and other professionals as necessary. And, to enhance management transparency, the Company strives to disclose information proactively and promptly by, for instance, accelerating the announcement of financial results, and also discloses a wide range of information via the Internet. In response to the internal control reporting system for financial reporting, the Internal Control Committee formulates evaluation plans and conducts effectiveness evaluations in cooperation with the Auditing department.

2) Status of accounting audits

Kentaro Yamamoto, Takashi Watanabe, and Koichi Hamaguchi were the certified public accountants who performed the accounting audit of the Company in fiscal 2024, and belong to KPMG AZSA LLC. In addition, four (4) certified public accountants and 18 other assistants were assigned to the accounting audit.

3) Outline of the contents of the liability limitation agreement

The Company and its directors (excluding those who are executive directors, etc.) and corporate auditors have entered into a liability limitation agreement for damages under Article 423, Paragraph 1 of the Companies Act, pursuant to Article 427, Paragraph 1 of the Companies Act and the Company's Articles of Incorporation. The maximum amount of liability for damages under such agreements is the minimum liability amount stipulated in Article 425, Paragraph 1 of the Companies Act.

3. Reasons for adoption of current corporate governance system

The Company believes that the appointment of external directors and external corporate auditors, who are independent and have a wide range of experience and insight, will ensure an appropriate governance system by providing a neutral and objective oversight function of the Company's business execution.

III. Implementation of measures for shareholders and other stakeholders

1. Measures to vitalize the general shareholder meetings and facilitate exercise of voting rights

	Supplementary explanation
Early posting of notice of the general shareholders meeting	Sent three weeks prior to the General Meeting of Shareholders
Electronic exercise of voting rights	Effective from the 113th General Meeting of Shareholders (held on June 28, 2012)
Participation in a platform for the electronic exercise of voting rights and other initiatives to enhance environment for institutional investors to exercise voting rights	Participated in the electronic voting platform from the 113th General Meeting of Shareholders (held on June 28, 2012)
Provision of notice (or summary of notice) of the general shareholders meeting in English	Notice of Convocation posted on the Company's website in English
Other	Accessibility of the Notice of Convocation and Business Report Posting of the convocation notice on the Company's website prior to the date of dispatch

2. Status of IR-related activities

	Supplementary explanation	Explanation by a representative director or a representative executive officer
Regular investor briefings held for analysts and institutional investors	Management briefings are held at least once a year (video of the briefings are available on the website). Conference calls are held immediately after the announcement of quarterly and year-end financial results (audio recordings of the conference calls are available on the Company's Japanese website).	Held
Online disclosure of IR information	Financial results, financial results briefing materials, annual and quarterly securities reports, business reports, annual reports, electronic public notices, etc.	

	are posted on the "IR Information" section of the website. Are accessible from the INVESTORS pull-down menu on the top page of the Tosoh English website (www.tosoh.com).
Establishment of department and/or placement of a manager in charge of IR	The Corporate Communications department is in charge.

3. Status of measures to ensure due respect for stakeholders

	Supplementary explanation
Implementation of environmental preservation activities and CSR activities, etc.	<p>1) Environmental preservation activities Recognizing that environmental preservation and assurance of safety and health are the most important management issues, the Company has established the Basic Principles Regarding the Environment, Safety and Health and Action Guidelines and each complex has its own environmental policy. In addition, the Company is engaged in Responsible Care (RC), a voluntary management activity to implement environmental and safety measures and improvements from product development to manufacturing, use, and disposal.</p> <p>2) Implementation of CSR activities The Company has positioned CSR activities as the core of management. The Company has formulated the Tosoh Group Basic CSR Policy and are sharing and implementing it throughout the entire Group with the aim of realizing our corporate philosophy. In addition, the CSR Committee, chaired by the president, formulates policies for CSR activities and monitors the progress of key CSR issues, which are then presented to the board of directors. For the purpose of reporting on these activities, the Company publishes the Tosoh Report once a year and discloses it on the Company's website.</p>

IV. Matters concerning the internal control system

1. Basic views on internal control system and status of development

The Company believes that the establishment of an internal control system is essential for corporate governance to function effectively. The basic policy on the development of internal control systems adopted by the board of directors is as follows

- 1) System to ensure that the execution of duties by directors and employees complies with laws, regulations, and the Articles of Incorporation
 - The Company shall establish rules and regulations concerning compliance, establish a code of conduct for directors and employees, and a Compliance Committee to ensure the thorough implementation of such rules and regulations, as well as to conduct internal education and other company-wide efforts.
 - The Company shall work to establish a whistleblower system and strive to ensure its effectiveness at all times.
 - The Auditing department will audit the status of compliance implementation.
- 2) System for storage and management of information related to execution of duties by directors
 - The Company shall appropriately store and manage documents and other information related to the execution of duties by directors in accordance with the internal rules.
 - Directors and corporate auditors shall have access to these documents at all times.
- 3) Regulations and other systems for managing risk of loss
 - The Company shall establish rules and regulations and develop a risk management system to deal with various risks associated with the performance of manufacturing and sales activities.
 - Each department shall operate independently under the supervision of the director in charge for the management of individual risks in daily business activities.
- 4) System to ensure the efficient execution of duties by directors
 - Important matters related to business operations shall be deliberated at the executive board meeting in

- accordance with internal rules, and executive decisions shall be made by the board of directors.
- At the executive board meeting consisting of directors, corporate auditors, general managers of business divisions, general managers of related departments, and others, reports on the business status of each division, explanations in advance of approval requests, and other important matters shall be communicated.
- 5) System to ensure the appropriateness of business operations of the Group
- The Company shall establish rules for subsidiary management and operation and ensure their proper operation.
 - The Company shall request reports from subsidiaries regarding their business operations on a regular or as-needed basis.
 - The Company shall also dispatch directors and auditors to subsidiaries to provide advice and guidance for risk management and efficient business execution.
 - The Tosoh Group shall establish and disseminate its compliance-related action guidelines.
 - General Affairs and the Legal Group shall conduct group-wide compliance and Responsible Care (RC) activities.
 - The Auditing department shall conduct audits of subsidiaries.
- 6) Matters concerning employees requested by corporate auditors to assist them in their duties, independence of such employees from directors, and ensuring the effectiveness of instructions given by corporate auditors to such employees
- The secretariat shall be established under the audit and supervisory board and full-time employees shall be assigned to the secretariat to assist the members in the performance of their duties.
 - The secretariat shall receive instructions and orders directly from the corporate auditors.
 - Personnel matters related to the secretariat shall be discussed in advance with, and approved by, the audit and supervisory board.
- 7) System for directors and employees to report to corporate auditors and other systems related to reporting to corporate auditors
- Directors and employees shall report the status of execution of duties and related matters to corporate auditors in an appropriate and timely manner through the board of directors and other important meetings.
 - Important approval documents and minutes of various meetings shall be forwarded to the corporate auditors.
 - Directors and employees shall make necessary reports to the corporate auditors on a regular or timely basis as requested by the members.
 - The content of reports received by the contact point of the internal reporting system shall be reported to the corporate auditors.
 - Corporate auditors shall be one of the reporting parties under the whistleblowing system.
 - The Company shall stipulate in its regulations that whistleblowers shall not be subject to any disadvantageous treatment due to having submitted a report.
- 8) System for reporting to corporate auditors by directors, Corporate auditors, and employees of subsidiaries or those who receive reports from them
- The Company shall report to the corporate auditors as appropriate on reports received from subsidiaries concerning their business operations.
 - The Company shall request directors and other members of subsidiaries to report to the Company's corporate auditors as appropriate.
 - The whistleblowing system accepts reports related to subsidiaries as well as reports from subsidiaries.
- 9) Matters concerning procedures for prepayment or reimbursement of expenses incurred in the execution of duties by corporate auditors and other policies concerning the treatment of expenses or liabilities incurred in the execution of such duties
- Corporate auditors may request the Company to settle expenses or debts deemed necessary for the execution of their duties.
- 10) Other systems to ensure that audits by corporate auditors are conducted effectively
- The Company's corporate auditors and representative directors will meet regularly to exchange opinions on matters concerning overall management.
 - The Company shall ensure information is regularly exchanged between the Audit and Supervisory Board and the Audit department to ensure mutual cooperation.

2. Basic Views on Measures for Eliminating Anti-Social Forces and Status of Development

- Basic policy on elimination of antisocial forces

1) Basic approach for eliminating antisocial forces

The company have instituted the Tosoh Group Code of Conduct, which is distributed to all employees. The Code states that we resolutely respond to antisocial forces and will not engage with them, and if we receive an improper demand from such forces, we will not resolve the situation by paying them money or the like.

2) How the system is developed to eliminate antisocial forces

As to the elimination of antisocial forces, the department in charge is designated as General Affairs, and the department have a system in which the department cooperate with external specialized institutions such as lawyers and the police to take concrete measures. The department also gather information regarding antisocial forces from these specialized external organizations, and convey it, as necessary, to the associated departments and the subsidiaries and affiliated companies.

V. Other

1. Adoption of anti-takeover measures

Adoption of anti-takeover measures

Not adopted

Supplementary explanation for applicable items

At a meeting of the board of directors held on February 28, 2006, the Company resolved to adopt the "Policy on Large-Scale Purchases of the Company's Shares and Other Securities" (hereinafter referred to as the "Policy"). The Company's shareholders approved the Policy at the 107th Ordinary General Meeting of Shareholders held on June 29, 2006, and the Company has continued to follow the Policy by having the proposal for the selection of directors approved at subsequent Ordinary General Meetings of Shareholders. However, following a review of the Policy, the Company determined that the business environment has changed compared to when the Policy was adopted, and that the significance of continuing it has relatively decreased in terms of further improving the Group's corporate value. The Company will continue to work group-wide to ensure and enhance its corporate value and the common interests of shareholders over the medium to long term. Even after the abolition of the Policy, the Company will take appropriate measures to the extent permitted by the Financial Instruments and Exchange Law, the Companies Act, and other applicable laws and regulations. This includes requesting that any person who intends to conduct a large-scale purchase of the Company's shares provide necessary and sufficient information to allow shareholders to make an appropriate judgment as to whether the large-scale purchase is appropriate as well as disclosing the opinions of the board of directors of the Company to give shareholders time to consider the proposal.

2. Other matters concerning the corporate governance system

1. A diagram of the corporate governance structure, including an overview of the internal control system, is shown in attachment 1.

2. Outline of timely disclosure system

The status of the Company's internal system for timely disclosure of corporate information is as follows.

Regarding timely disclosure, the corporate control and accounting department is responsible for information handling, while the corporate planning department handles disclosure.

1) Disclosure of decisions

Of the decisions made by the board of directors, those deemed by the officer in charge of the corporate control and accounting department to fall under the category of timely disclosure shall be disclosed in a timely manner through the corporate planning department.

2) Disclosure of occurrence

In the event of the occurrence of a fact that is deemed to be material fact, each relevant department that becomes aware of the occurrence shall report it to the officer in charge of the corporate control and accounting department and, if necessary, to the board of directors. as in the case of a decision, the officer in charge of the corporate control and accounting department will disclose the fact in a timely manner through the public relations office if it is deemed to be related to timely disclosure.

3) Disclosure of financial results

After the resolution of the board of directors, financial information is promptly disclosed in a timely manner through the corporate planning department under the direction of the officer in charge of the corporate control and accounting department.

4) Disclosure of information related to subsidiaries

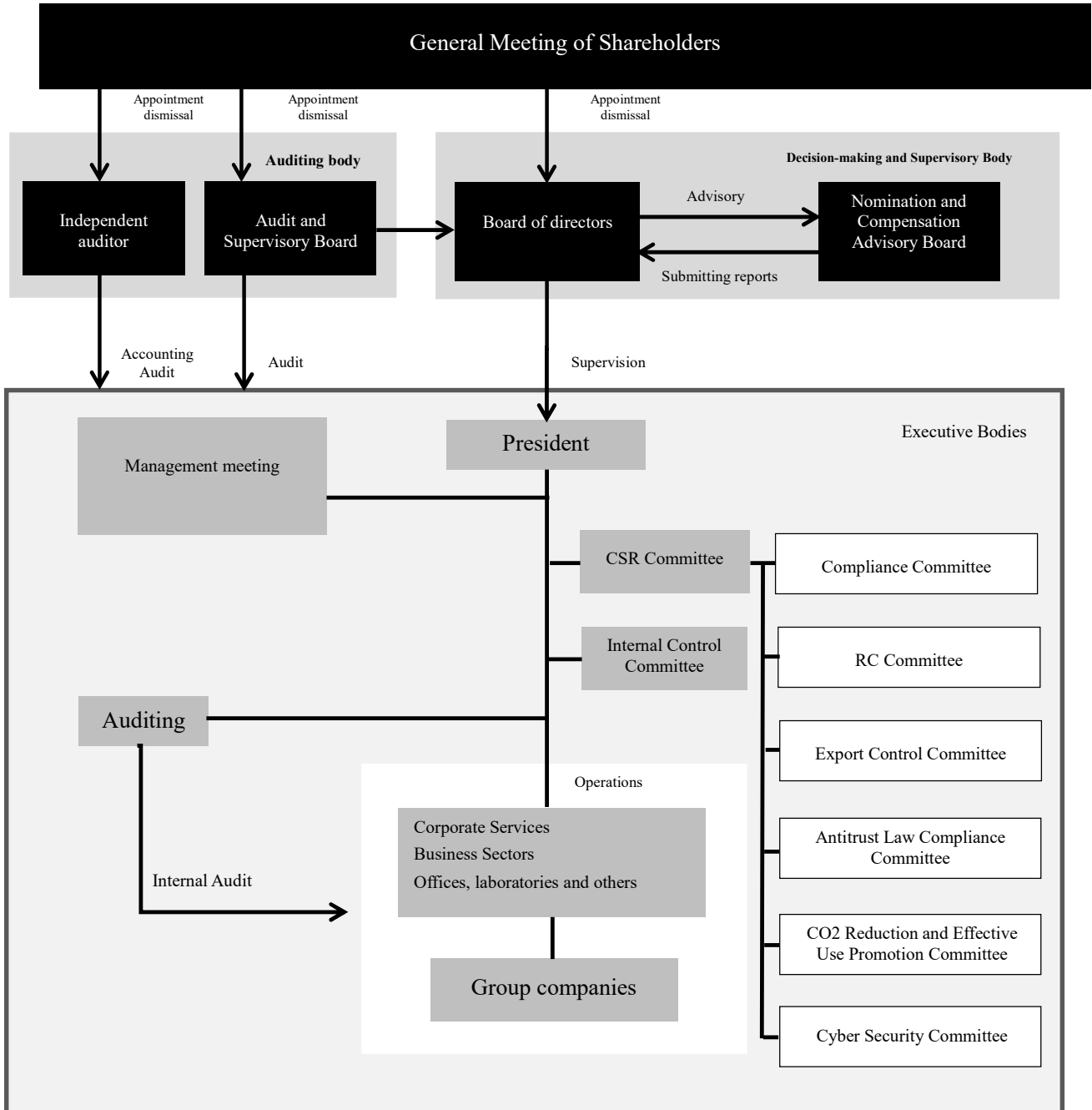
Each relevant department that recognizes the possibility that information concerning a subsidiary may also fall under the category of material facts shall report such information to the director in charge of the corporate management office. If this director determines that the information is subject to timely disclosure, the corporate control and accounting department will disclose the information in a timely manner through the corporate planning department.

5) Management of internal information

The Company ensures the management of internal information by its officers and employees through the operation of its internal regulations for the prevention of insider trading. A diagram regarding the outline of the timely disclosure system is shown in attachment 2.

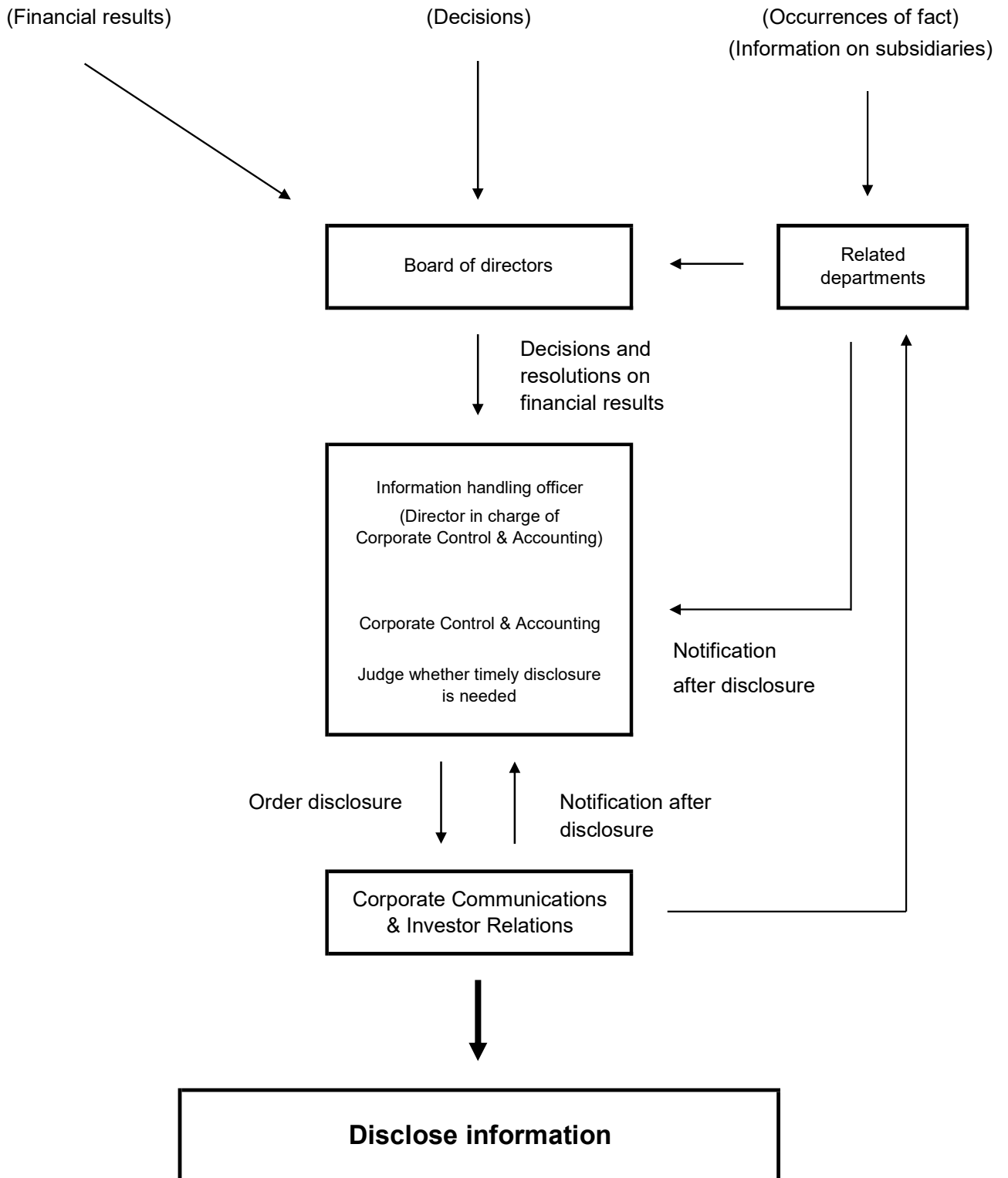
Attachment 1

Diagram of corporate governance system of the Company



Attachment 2

Timely disclosure workflow





Message from External Directors

Yoshihiro Hombo
External Director



Reaffirm the Significance of Dual Management in a Challenging Environment

China's continued expansion of its petrochemical facilities is forcing Japanese chemical manufacturers to deal with an ethylene supply glut. Tosoh was one of the first chemical companies in Japan to shift to dual management. We have a solid commodity revenue base, but specialties make us resilient to changing market conditions. Although we do not anticipate achieving the goals of our medium-term business plan, we feel that we are steadily approaching our overall objective.

As geopolitical risks increase globally, the world is heading toward a temporary return to fossil fuels, to nationalism, to fragmentation. Dizzying changes to the global environment make it evident to me that the vision and time for sustainability are also changing. Once a goal is established, there is a tendency to stubbornly adhere to its pursuit, for better or worse. I believe in flexibility, in resetting goals, for example, that benefit all stakeholders.

All business decisions involve risk. A goal at Tosoh is to enable the Board of Directors to overcome risk and to determine whether initiatives are worth it. As external directors, we strive to point out risks and to encourage the company to undertake initiatives for which it and its stakeholders are best suited.

Sharpen the External Dissemination of Information

Recent frenetic changes in our external operating environment make it difficult for Tosoh to achieve the targets of its medium-term business plan. All the more admirable is the company's calm in moving forward with investment projects with a long-term perspective rather than a superficial one.

The Board of Directors believes, however, that Tosoh must communicate its interim and year-end results and its forecasts for the final year of its medium-term business plan and for future performance in an easy-to-understand, concrete manner. The company has extensive internal public relations, but its appeal to the outside world is understated. And that needs to be addressed given Tosoh's broadening investor base and imperative to hire capable personnel. We must elevate in volume and quality the information that we disseminate externally, ensuring that we provide only careful, clear explanations of what we do and achieve.

In fiscal year 2025, meanwhile, Tosoh's Nomination and Compensation Advisory Committee has resolved to introduce performance-based compensation linked to nonfinancial information. It often takes time to quantify the effects of our investments, our R&D, and our human capital initiatives, so the committee discussed at length what performance indicators should be used. I believe that this has resulted in a well-balanced system.

I believe, too, that improvements in Tosoh's plants and understanding have fostered progress for women in its workplaces over the past several years. More women have been hired for career-track positions, and systems have been implemented to ensure that their numbers increase. I am confident that the Tosoh Group will benefit from establishing workplaces that are comfortable not just for women but for all employees. I also look forward to an environment where the youngest employees play heightened roles.

Mariko Hidaka
External Director



Expect Steady Efforts Toward Vision 2030

Yukimasa Nakano
External Director



The atmosphere at Board of Directors' meetings is frank and open. Explanations and discussions of technical details regarding R&D, facility renovations, and other issues are conducted and conveyed carefully.

Among these discussions is the topic of increasing the capacity at manufacturing facilities for the thin-film deposition materials (sputtering targets) used in semiconductors and elsewhere. Discussions have led to high hopes for this project. This is an area of swift technological innovation and fierce competition, but I am confident in Tosoh's prospects for success.

Numerous factors, meanwhile, make Tosoh's achievement of its medium-term business plan's target for operating income challenging. The company is nevertheless making steady progress, in R&D and facility capacity expansion, toward its Vision 2030 goal of achieving ¥100 billion in operating income in the Specialty business. My hope is that Tosoh will rise to the challenges of its next medium-term business plan.

Those challenges include sustainability. To tackle carbon neutrality, Tosoh is introducing facilities for biomass power generation and the capture and conversion of CO₂. Optimizing how to utilize human capital is yet another challenge where positive progress is visible. Tosoh has implemented an internal recruitment and a fellow system.

Tosoh is steadily revitalizing its workplace environments with new and renewed R&D facilities and a relocated headquarters. I expect this to give rise to a concerted, company-wide effort toward Vision 2030.

Yukiko Hashitera
External Director



Look to Generate Value through Sustainable Growth

I made a career change to management in my 30s when the pharmaceutical firm I was working for spun off the business unit where I was a drug development researcher. In 2018, I founded Phoenixi Co., Ltd., a company that operates a social incubator in support of businesses working to resolve social issues.

I want to leverage my experience to contribute to Tosoh's governance and sustainability. My hope is to detect medium- to long-term changes in the company's business environment.

My first encounter with Tosoh occurred as I paged through a testing equipment catalog while in a university laboratory. The company's offerings of highly advanced methods of analysis sparked my interest in knowing more about Tosoh and such technologies.

Upon being appointed to the company's Board of Directors, I was surprised to learn that Tosoh manufactures a diverse lineup of various grades of chemical products indispensable to society. I was also impressed with Tosoh's early awareness of the circular economy approach. The company has long used manufacturing process by-products to develop high-value-added products.

Corporate sustainability is generally understood to entail the development of three values of lasting duration: economic, social, and environmental. Corporations, moreover, must also cultivate further value to survive, especially if they operate globally.

The Board of Directors is of the belief that it is necessary to share a vision with employees of how to realize both the crucial three values and the continual generation of additional value. We all must work in unison to implement that vision and to assess our efforts. Our goal is to deepen an understanding of Tosoh among employees and to have them share in the company's innovation and development of human resources using the experience of their careers, ultimately for Tosoh's sustainable value.

Basic concept

The basic policy of the Tosoh Group is to ensure compliance, pursue profits through fair competition, and continue to be a useful entity for society at large. The basis of the Group's compliance activities is for all employees and each and every officer to practice compliance sincerely, fairly, and ethically. Expectations for us to fulfill our corporate social responsibility are greater than ever. So we will unite as a group to further promote compliance activities.

Tosoh Group Code of Conduct

In March 2004, Tosoh initiated compliance action guidelines and in April 2014 introduced the Tosoh Group Code of Conduct to unify and raise compliance awareness group-wide. The Code of Conduct prohibits all forms of corruption, respects human rights, and describes how to deal with important matters that must be observed in conducting business activities.

Based on the acknowledgment by top management that compliance is the foundation of the Tosoh Group's management and should take precedence over all other interests, all employees and officers of the Tosoh Group are obliged to comply with the Tosoh Group Code of Conduct.

In formulating the Tosoh Group Human Rights Policy in April 2024, certain items were tailored to satisfy international requirements. In addition to the Japanese, English, Chinese, and Korean versions, the Tosoh Group Code of Conduct has been translated into the languages of the respective regions in which the Group's overseas businesses are located.



Tosoh Group Code of Conduct

Tosoh Group Code of Conduct Items

I . Ensuring a Comfortable Workplace Where Every Group Member Can Fully Display His/Her Ability

1. Compliance with Laws, Regulations, and Norms in Society
2. Ensure Safe and Stable Operations
3. Compliance with Rules of Employment
4. Human Rights Protection and Discrimination Prevention and Respect for Diversity
5. Harassment Prevention
6. Healthy Workplace
7. Personal Information Protection
8. Proper Use of Corporate Assets
9. Proper Use of Information Technology Systems

II . Meeting the Trust of Customers and Business Partners, Meeting Shareholders' Expectations

10. Bribery and Corruption Prevention
11. Prohibition of Inappropriate Gift Exchanges and Entertainment
12. Security Export Control
13. Compliance with Import and Export Laws and Regulations
14. Compliance with Competition Laws and Regulations
15. Fair Procurement Practices
16. Product and Service Quality and Safety Control
17. No Relations with Antisocial Forces
18. Compliance with Noncompetition Laws
19. Financial Integrity, Records Management, and Timely Disclosure
20. Intellectual Property Rights Policy
21. Confidential Information Management and Control
22. Prohibition of Insider Dealings
23. Political Donation Control

III . Contributing to the Development of a Sustainable Society

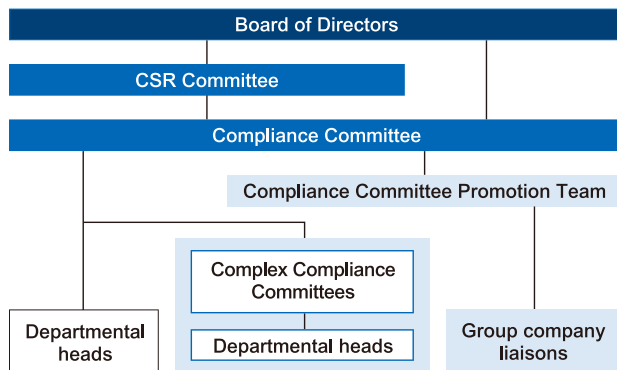
24. Environmental Conservation and Protection
25. Stewardship of Social Responsibility

> [Tosoh Group Code of Conduct](#) 

Promotional structure

Tosoh believes that practicing compliance, which means following the established rules, not only protects employees from accidents and other disasters, but also strengthens the management structure of the entire Tosoh Group. To this end, the company has established a promotion system to ensure that employees are aware of the importance of compliance and are able to practice it.

Promotion Structure Overview



Compliance

Compliance Committee

The Committee is chaired by an officer appointed by the president with the heads of relevant divisions among its members, and meets twice a year. The Committee establishes the Tosoh Group Code of Conduct and related regulations, formulates systems and measures designed to ensure comprehensive compliance, submits proposals to the Company, and promotes activity by investigating and ascertaining promotion status. The decisions made by the Compliance Committee are reported to the Board of Directors, which oversees and directs compliance activities, including the prevention of bribery and corruption.

Compliance Committee Promotion Team

The company submits its opinions to the Compliance Committee and promotes compliance activities in accordance with the Committee's direction. To ensure thorough compliance throughout the Tosoh Group, we hold group meetings once a year with domestic Group companies to confirm the status of compliance-related activities and exchange information to support the promotion of compliance. Moreover, the company serves as a contact point for compliance and harassment consultation, and investigates and responds to matters that require consultation.

Complex Compliance Committees

These committees plan, formulate, and implement various compliance promotion measures at each manufacturing complex.

Division Heads

A responsible person has been appointed in each division to promote compliance. Tosoh conducts compliance training and other activities within departments in accordance with the Committee's direction to ensure that each employee is in compliance.

Consultation Hotlines

Tosoh Corporation has established Hotlines for the purpose of swiftly recognizing and responding to actual or potential violations in Japan. To prevent or quickly correct compliance violations, the company has established Hotlines for the purpose of swiftly recognizing and responding to actual or potential violations. Under the hotline system, Tosoh has established three consultation desks: internal, external, and an auditor's desk. Directors and employees of Tosoh and its domestic and overseas Group companies, temporary employees, and people who are employed on a contract basis may choose to submit reports or request consultations to any of these desks. Tosoh employees are given a Hotline Pocket Card to make it more convenient to avail themselves of the service at any time.

Consultations are accepted regarding general corrupt practices such as violations of laws and regulations, harassment, human rights violations, and bribery. The company confirms the facts, investigates, and takes action, whether the consultation initiated under a real or an anonymous name. For guidance and supervision, the details of each consultation are reported to the auditor.

The company has established internal rules for the protection of the consultants in investigating and responding to consultation matters, and takes all necessary precautions. Tosoh's Hotline is for Tosoh Group in Japan and as such, utilizes our official Japanese website as a contact point for inquiries that can be consulted from outside the company. Consultation services have also been established at Tosoh Group abroad.

Compliance and harassment consultation service operation standards (excerpt)

- The informant's name and other personal information will only be shared among people directly involved in the consultation. This includes personnel at the Compliance and Harassment Consultation Hotline and related investigatory parties. Personal information about the informant will not be disclosed to others unless it is necessary to do so for the investigation, for a response to the investigation, or for legitimate reasons required by law.
- Informants will not face dismissal or requests to resign, discipline or harassment, nonrenewal of contract, or any unfavorable treatment for submitting a report that aligns with applicable rules.
- If it is confirmed that an informant has been poorly treated, Tosoh will redress the situation.

Tosoh Hotline: Number of consultations

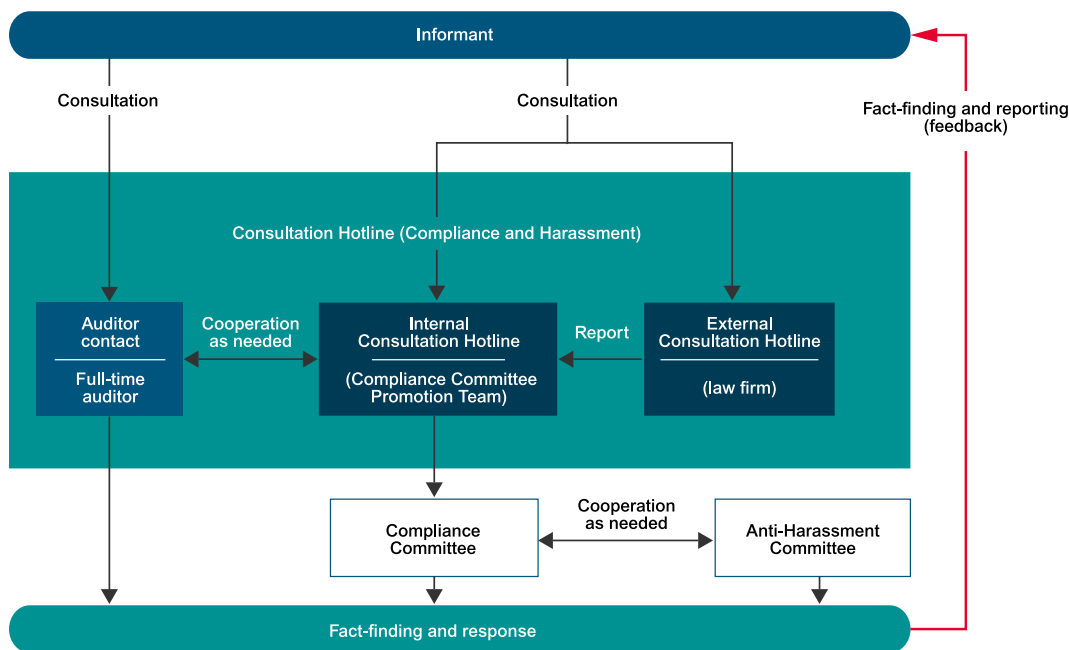
	FY 2022	FY 2023	FY 2024
Number of consultations	15	33	50
Overseas*	2	1	4

* Number of consultations from overseas group company

In fiscal 2024, the company received 50 consultations in Japan and four reports from overseas, but none of the cases were serious enough to affect the company's business activities.

In terms of content, many consultations were related to alleged incidents of harassment. In each case, consultants take necessary actions such as collecting facts and cautioning parties involved, and then following up with them to clarify the situation.

Tosoh Hotline System



Compliance survey

Tosoh conducts a compliance survey annually to ascertain the status of compliance activities and the extent of understanding of the compliance system and consultation services. The company aims to leverage the survey results to further heighten employees' awareness of compliance and promotion of activities, and link this to compliance education and the planning of various related measures. In fiscal 2024, Tosoh distributed a survey to all its employees in Japan, and the response rate was 85.9%. With the aim of collecting a broad range of opinions, the survey incorporates an open-ended section, and opinions expressed are then reflected in future compliance activities as part of our promotional efforts.

Compliance education

Compliance training

Training is conducted annually for new employees and employees at all levels on matters related to compliance and the prevention of bribery and corruption. The content of the program is oriented toward heightening awareness by featuring easy-to-understand case studies to enable employees to feel more comfortable with the program. In addition, Tosoh conducts annual compliance training at each workplace to instill awareness and ensure rules are being complied with. Furthermore, the company uses the intranet and e-learning to share information with Group companies and promote Group-wide compliance education.

Legal briefings

The Antimonopoly Act, the Act Against Delay in Payment of Subcontract Proceeds to Subcontractors, the Unfair Competition Prevention Act, the Foreign Exchange and Foreign Trade Act (Security Export Control), the prohibition of bribery in various countries, and other important laws and regulations—as well as points to bear in mind when conducting business—are outlined and explained to employees at all levels and to employees, including those of domestic Group companies. Moreover, the company provides education for employees posted overseas, including points to bear in mind regarding local laws and regulations.

The company also continues to educate employees through e-learning and other means on important laws and regulations, as well as by disseminating information via the company intranet.

Promotion of awareness and understanding of the 'Tosoh Hotline'

Tosoh is raising the awareness of its Tosoh Hotline. We are distributing pocket cards with the desk's contact information to all Tosoh Corporation and Tosoh Group company employees in Japan. We are also providing all domestic workplaces with posters displaying information about the desk.

Internal audit

The Tosoh Auditing team is dedicated to conducting internal audits of operations and other activities to improve and strengthen internal controls at Tosoh and its Group companies. It also conducts internal compliance audits to evaluate the promotion systems and operational status of Tosoh and its Group companies.

Audit results are reported to the president and corporate auditors as appropriate.

Tosoh Group Code of Conduct

TOSOH GROUP CODE OF CONDUCT

I. Ensuring a Comfortable Workplace Where Every Group Member Can Fully Display His/Her Ability

1. Compliance with Laws, Regulations, and Norms in Society

(a) We will always act with sound common sense and responsibility as a member of society. Sound common sense and responsibility require genuine and fair respect for societal norms and compliance with applicable laws and rules. Compliance with applicable laws and rules means compliance with the laws listed in this Code, other local, national and international laws and regulations, and internal Tosoh policies/rules that are applicable to our business activities.

(b) In our production and research and development activities, we will comply with business laws applicable to high-pressure gas, poisonous and deleterious substances, and pharmaceutical and other affairs which may apply to our business activities.

2. Ensure Safe and Stable Operations

(a) We will continue to cultivate a culture of safety and further strengthen our safety infrastructure in order to ensure safe and stable operations.

(b) We will conduct timely reviews of our emergency response procedures and conduct training accordingly.

(c) In the event of an accident, disaster, abnormality, etc., we will take emergency measures to minimize damage and promptly contact related departments and government agencies.

3. Compliance with Rules of Employment

We will not act unfairly or dishonestly in violation of the requirements and policies stated in our employee manual.

4. Human Rights Protection and Discrimination Prevention and Respect for Diversity

(a) We will respect human rights and diversity, will not disadvantageously treat nor discriminate against any person on the basis of their origin, gender, nationality, race, religion, age, social origin, various disability, medical condition, sexual orientation, gender identity, hobby, etc., and will encourage our co-workers to do the same.

(b) We will not commit acts that infringe on human rights such as child labor, human trafficking, or forced or compulsory labor.

5. Harassment Prevention

(a) We will not condone any form of harassment, including sexual and power harassment, will not violate human rights by means of violence, bullying, etc., and will encourage our co-workers to do the same.

(b) We will not use improper language and behaviors toward any person that are offensive to or may libel and slander the person involved or that cause harm to the working environment, and will encourage our co-workers to do the same.

6. Healthy Workplace

(a) We will comply with applicable labor laws and strive to maintain and improve our work environment.

(b) We will control our working days or hours in accordance with labor standard laws

(c) We will continue to promote and facilitate smooth communication in the workplace and create a good work environment for all employees.

(d) We will continue to promote the maintenance and/or improvement of mental and physical health by supporting good work-life balance.

(e) We will not allow the consumption or possession of alcohol at the workplace except for specific situations with appropriate, advance corporate authorization, such as company-sponsored events. We will not allow the consumption or possession of any illegal drug at the workplace.

(f) We will not engage in political or religious activities at the workplace, including solicitation on behalf of political or religious groups or requests for votes, except for specific situations with appropriate, advance corporate authorization.

Tosoh Group Code of Conduct

7. Personal Information Protection

(a) We will place strict confidentiality controls on the personal information of our directors and employees and will use the information only for the duties assigned to the individual.

(b) We will place strict confidentiality controls on the personal information of a person working for non-Tosoh parties and will use the information only for the purposes authorized by that party or person.

8. Proper Use of Corporate Assets

(a) We will utilize both tangible and intangible assets of the company only in the most efficient manner and under appropriate control and maintenance.

(b) We will acquire, sell, and dispose of company assets only in accordance with the company's internal rules.

(c) We will not use company assets (including money) for personal expenses or benefit. We will report business expenses (such as business travel expenses) strictly in accordance with the company's internal rules.

9. Proper Use of Information Technology Systems

(a) We will use the company's IT system only for work duties and not for personal use.

(b) We will safeguard the user ID and password that we use to access the company's IT system and will not disclose them to anyone other than a company IT person when there is a need for it.

(c) We will not use the Tosoh user ID and password of another Tosoh person in an unlawful manner.

(d) We will not invade or hack into the computers of other people or other companies.

(e) When engaging in social media for personal reasons, we will keep in mind that information on the Internet is in the public domain and that we must not speak or represent Tosoh in such activities or disclose other people's personal information or company trade secrets.

II. Meeting the Trust of Customers and Business Partners, Meeting Shareholders' Expectations

10. Bribery and Corruption Prevention

(a) We will not provide, propose or promise to provide any gift, entertainment or other special favors to government or public officers for them to perform their duties, locally or worldwide.

(b) We will comply with the National Public Service Ethics Act and any other laws, regulations, etc. prescribed by public offices, etc., and we will not provide or propose or promise to provide any gift, entertainment or other special favors to government or public officers even if they have no business relationship with us.

11. Prohibition of Inappropriate Gift Exchanges and Entertainment

(a) We will not give a customer or business partner any gift or entertainment that is outside accepted social norms.

(b) We will comply with all moral codes and other related codes, and we will not receive any gift or entertainment from a customer or business partner that is outside accepted social norms.

12. Security Export Control

We will export our products and their related technologies only in accordance with applicable laws, regulations, and internal Tosoh policies and procedures to prevent them from being used for arms and weapons.

13. Compliance with Import and Export Laws and Regulations

We will export and import products only in accordance with applicable laws and regulations as well as the established custom procedures and, when necessary, with government approval.

14. Compliance with Competition Laws and Regulations

(a) We will compete fairly in the local and worldwide markets. We will not participate in a cartel on market prices or production/sales volumes with competitors or in bid rigging in the public sector.

Tosoh Group Code of Conduct

(b) We will place an order for production, maintenance, or other services to a contractor with a written document that specifies all purchase conditions, and we will not engage in unfair treatment of contractors, including unjustified delay in payment, unjustified return, or unjustified discount to the agreed price.

15. Fair Procurement Practices

We will exercise fair and rational judgment in the selection of suppliers. Selection will be made after a comprehensive evaluation of factors such as product quality, price, and delivery date, including suppliers' compliance systems and their efforts to social responsibility. We will not engage in unfair practices, including giving unjustified favorable treatment to any supplier.

16. Product and Service Quality and Safety Control

(a) We will obtain and maintain ISO or other appropriate certifications and will observe their procedures to enhance product/service quality assurances and keep the continued trust of our customers.

(b) We will provide our customers with accurate product information.

(c) We will design and develop our products and manufacturing processes in accordance with applicable laws and standards for product safety as well as in consideration of the environment, safety, and health.

(d) We will comply with the procedures relating to Safety Data Sheets (SDS) when we supply our products to customers and carriers.

(e) We will comply with terms and conditions as agreed in contracts with our customers and ensure reliability of all products and services that we offer.

(f) We will respond accordingly and always regard the safety of customers and consumers as top priority in the event of an accident or any incident related to our products/services.

17. No Relations with Antisocial Forces

We will not engage with antisocial forces. If we receive a threat or demand from such forces, we will consult the relevant authorities

immediately and will not resolve the situation by paying them money or complying with their threat or demand.

18. Compliance with Noncompetition Laws

Tosoh personnel may not be employed by others without appropriate permission from the company, and they may not conduct business that competes with the company.

19. Financial Integrity, Records Management, and Timely Disclosure

(a) We will comply with applicable laws, regulations, and internal Tosoh rules and process all business transactions using proper accounting procedures to ensure the reliability of our financial reports and fulfill all tax obligations accordingly.

(b) We will manage and maintain all records of our business transactions and activities properly and in accordance with applicable laws and regulations as well as relevant internal Tosoh rules.

(c) We will provide the appropriate cooperation to internal and external audits as well as investigations by public authorities, and we will not obstruct them by discarding, concealing, or tampering with records.

(d) For investor relations, we will disclose timely and precise information regarding company business operations and financial results that could materially influence investors' judgments.

20. Intellectual Property Rights Policy

(a) We will obtain intellectual property rights strategically and utilize them to the company's maximum benefit.

(b) We will use the intellectual property rights of a third party only pursuant to agreed contract terms and will not use them unlawfully.

(c) We will not infringe on the intellectual property rights of any third party. We will not use an illegal software copy or any publicly disclosed information that is protected by patent or copyright laws.

21. Confidential Information Management and Control

(a) We must strictly control the confidential information of the company (including the trade secrets disclosed to us by third parties). Tosoh

Tosoh Group Code of Conduct

personnel must not disclose or use the confidential information of the company for any purpose other than to carry out assigned duties.

(b) When we disclose the confidential information of the company to a third party in conducting our assigned duties, we must enter into a nondisclosure agreement to prevent unauthorized disclosure and use.

(c) We will not acquire the trade secrets of a third party in a wrongful manner.

(d) We will not use the trade secrets of third parties that we know were acquired or possibly acquired in a wrongful manner.

(e) We will not disclose or use the confidential information of the company after leaving the employ of the company.

22. Prohibition of Insider Dealings

If a Tosoh employee is informed of an important fact (an issue that will influence the company's stock price as defined by applicable laws governing securities and financial instruments exchange) concerning Tosoh Corporation, a Tosoh Group company, or a Tosoh business partner, he/she will not sell or purchase the relevant company's stocks or bonds until the important fact is disclosed publicly. Even if the stock trades are indirect or without any profit earned, they are not allowed.

23. Political Donation Control

We will comply with applicable laws when we donate to a politician, a political party, or any other political organization.

III. Contributing to the Development of a Sustainable

Society

24. Environmental Conservation and Protection

(a) We will respect the value of environmental conservation and protection, and we will comply with applicable environmental laws, regulations, and internal Tosoh rules.

(b) We will be responsible for the entire process from research and development to waste disposal. We will endeavor to reduce

material consumption, save energy, decrease waste, and protect the environment.

(c) We will address climate change by working to reduce greenhouse gas emissions.

(d) We will analyze the ecological impact of our business activities and commit to efforts directed to environment conservation.

25. Stewardship of Social Responsibility

(a) We will endeavor to continuously innovate products and services that contribute to the healthy development of society, provide a reliable supply of our products, and acquire the trust of society.

(b) We must recognize that healthy societal development can only be achieved when a company has gained the trust and support of members of society. We will actively communicate with the various stakeholders surrounding Tosoh Group such as shareholders, business partners and local communities. We will strive to be a prosperous business and a cooperative and contributing member of the communities by respecting the human rights of people who may be affected by our business activities.

(c) We will respect and continue to deepen our understanding of cultures and customs of other regions.

(d) We will continue to contribute to the development of communities through our business activities.

(e) We will fulfill our role as a good corporate citizen by proactively engaging in activities that contribute to society.

Basic concept and promotional structure

Tosoh recognizes that the protection of its technical and management information; its supplier and group company information; and its business activity and supply chain information to ensure security, quality, and environmental standards is a social responsibility and a vital management issue. It maintains the sustainable development of the company and is deemed so essential that Tosoh has established an information security policy.

Information security policy (excerpts)

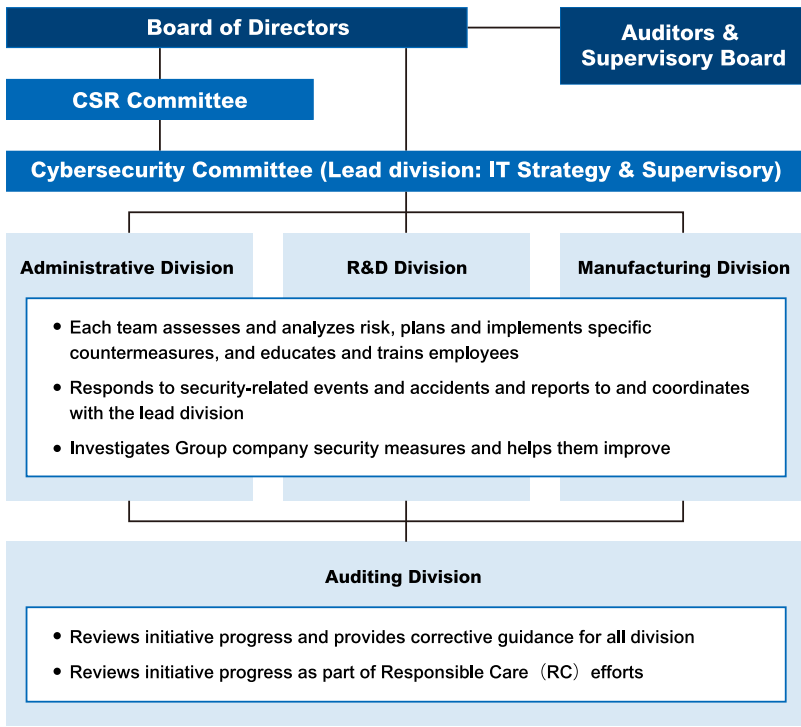
- Tosoh provides ongoing training to ensure that each of its employees recognizes the significance of information security in their daily work and complies with the rules on information security.
- The company conducts risk assessments for information assets and implements countermeasures according to the level of risk.
- The Tosoh Group has established the following cybersecurity policy to ensure the implementation of its information security policy:
 1. Obligation to adopt antivirus software
 - Introduce regularly updated virus protection software for businesses and further measures to prevent business cessation caused by computer viruses and the like and by aging and obsolete virus protection software.
 - Enforce the prohibition on connecting unauthorized devices to the company network.
 2. Obligation to prohibit the connection of unauthorized devices
 - Prevent virus infections and information leaks by prohibiting the use of unapproved USB flash drives and laptops in the company environment.
 - Require prior confirmation before allowing USB flash drives to be connected to control devices at companies with production functions.
 3. Obligation to provide notification in the event of a cyber incident
 - Promptly notify Tosoh IT Strategy & Supervisory and the department responsible for the business affected in the event of virus infections or information leaks.
 - Rely on the IT Strategy & Supervisory to assist in resolving the issue, to arrange for and mediate with security contractors, and to notify government agencies and the police.

Promotion structure

Tosoh has established IT Strategy & Supervisory under the supervision of the director in charge of information security management, to promote information security measures throughout the Tosoh Group. Moreover, with the aim of promoting robust cyber security not only in information systems but also in production and R&D, related divisions cooperate under the Cyber Security Committee and report to the Board of Directors as appropriate.

To expedite and execute these initiatives effectively, we have established a support system called the 'Systemization Promotion Officer System,' wherein each department selects 1-2 individuals as designated officers. These officers compile workplace-specific deployment and requests regarding information systems and cybersecurity, and conduct educational and awareness-raising activities. Furthermore, we endeavor to enhance security awareness among all employees by providing incentives to those who acquire qualifications related to information security.

Promotion Structure Overview



Security countermeasures

The leak, loss, or damage of plant control and other mission-critical systems, of research content and results, and of confidential and personal information and deviations from environmental, security, and quality standards can result in supply chain interruptions and damage to public trust and our competitiveness. To prevent this, we are using various cybersecurity frameworks and particularly the Cybersecurity Management Guidelines issued by Japan's Ministry of Economy, Trade and Industry. The company is also formulating response policies and strengthening its group-wide risk management.

Security education for employees

As part of our employee education activities, Tosoh holds regular briefings at the Nanyo and Yokkaichi Complexes on compliance with the Information Security Policy. The briefings further serve to alert employees on warning and protection measures through incident case studies. This information is intended not only for Tosoh Corporation employees but also for employees of Group companies. The aim is to heighten awareness of the entire supply chain and of case studies based on the latest trends and other information.

Conduct targeted attack e-mail drills

The company conducts attack e-mail drills to allow employees to experience the threat of cyberattacks and to raise awareness of information security. This is a hands-on training program that delivers simulated targeted attack e-mails to all employees to enhance their ability to respond appropriately in a genuine attack situation. Since attack e-mails are becoming more and more sophisticated every year, the company continuously trains each employee to act appropriately.

Addressing risks in the supply chain

With cybersecurity risks on the rise, we recognize the need to address risks within the supply chain, including group companies, to ensure adequate security and provide our clients with safe and stable products and services.


To that end, we are working to improve security measures for the entire supply chain by understanding our current security measures and risks at domestic and overseas group companies, bolstering our efforts, and sharing information.

Participation in working groups

The environment surrounding information security changes on a daily basis. Tosoh participates in industry association working groups to keep abreast of the latest information. Information obtained through this process is shared with relevant departments and incorporated into in-house training to bolster the company's security measures.

ESG Data at a Glance

Environment

See the [boundary list](#)  for the scope of aggregation.

Addressing Climate Change Issues

Greenhouse gas emissions

Items	Scope	Unit	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Scope 1 emissions	Tosoh Corporation and Tosoh Group* ¹	kilotons-CO ₂ e	7,881* ²	7,727	7,588	7,787	7,645	7,333
Scope 2 emissions			535	516	496	518	467	468
Scope 1+2 emissions			8,416* ²	8,243	8,085	8,304	8,112	7,801
Scope 1+2 emissions per unit of sales		tons/100 million yen	977* ²	1,049	1,103	904	762	784
Scope 3 emissions		kilotons-CO ₂ e	6,014	7,066	6,596	7,039	5,891	5,834

*¹ Includes production and logistics bases of 53 domestic and overseas consolidated subsidiaries. However, Scope 3 emissions for FY2019-2021 are production sites of 26 domestic and overseas consolidated subsidiaries.

*² Reviewed based on revisions to the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

Energy consumption (crude oil equivalent)

Items	Scope	Unit	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Energy consumption (crude oil equivalent)	Tosoh Corporation	1,000 kl	2,156	2,131	2,098	2,122	2,100	2,056
	Tosoh Group*		217	221	220	309	287	258
	Tosoh Corporation and Tosoh Group		2,373	2,352	2,318	2,431	2,387	2,314

* Includes production and logistics bases of 53 domestic and overseas consolidated subsidiaries. However, the energy consumption for FY2019-2021 are production sites of 26 domestic and overseas consolidated subsidiaries.

Environmental Protection

Atmospheric emissions

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
NOx emissions	Tosoh Corporation	tons	8,606	8,161	8,527	8,498	7,842
	Tosoh Group		86	112	110	61	105
	Tosoh Corporation and Tosoh Group		8,692	8,274	8,637	8,558	7,947
SOx emissions	Tosoh Corporation	tons	334	315	323	362	306
	Tosoh Group		473	504	391	321	369
	Tosoh Corporation and Tosoh Group		807	818	714	682	675
Dust emissions	Tosoh Corporation	tons	171	170	163	160	150
	Tosoh Group		18	12	6	6	16
	Tosoh Corporation and Tosoh Group		189	182	169	166	167
Volatile Organic Compound (VOCs) emissions	Tosoh Corporation	tons	694	450	403	441	180
	Tosoh Group		11	10	11	7	155
	Tosoh Corporation and Tosoh Group		705	459	414	449	335
Refrigerant emissions (tons - CO ₂)	Tosoh Corporation	tons - CO ₂	36,156	20,127	26,067	58,446	31,411

Water-related emissions (pollutants)

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Chemical oxygen demand (COD) emissions	Tosoh Corporation	tons	955	988	1,092	981	902
	Tosoh Group		20	10	25	14	60
	Tosoh Corporation and Tosoh Group		975	998	1,117	995	962
Total nitrogen emissions	Tosoh Corporation	tons	290	289	377	428	375
	Tosoh Group		16	6	9	8	22
	Tosoh Corporation and Tosoh Group		305	295	385	437	397
Total phosphorus emissions	Tosoh Corporation	tons	28	23	21	24	27
	Tosoh Group		0.25	0.18	0.19	0.20	1.47
	Tosoh Corporation and Tosoh Group		29	23	21	24	28

Water-related emissions (intake, discharge, consumption)

Items	Detail	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Water input by source	Seawater	Tosoh Corporation	kilotons	1,303,196	1,326,061	1,303,654	1,346,565	1,331,390
		Tosoh Group		0	0	13	17	8
		Tosoh Corporation and Tosoh Group		1,303,196	1,326,061	1,303,667	1,346,583	1,331,399
	Rivers/lakes/ponds	Tosoh Corporation	kilotons	0	0	0	0	0
		Tosoh Group		0	0	0	0	0
		Tosoh Corporation and Tosoh Group		0	0	0	0	0
	Groundwater/wells	Tosoh Corporation	kilotons	2,485	2,557	2,585	2,585	2,772
		Tosoh Group		17	11	6	7	5
		Tosoh Corporation and Tosoh Group		2,502	2,569	2,591	2,592	2,778
	Water extracted from quarries	Tosoh Corporation	kilotons	0	0	0	0	0
		Tosoh Group		0	0	0	0	0
		Tosoh Corporation and Tosoh Group		0	0	0	0	0
	Rainwater	Tosoh Corporation	kilotons	0	0	0	0	0
		Tosoh Group		0	0	0	0	0
		Tosoh Corporation and Tosoh Group		0	0	0	0	0
	Industrial-use water	Tosoh Corporation	kilotons	64,327	67,045	68,804	69,684	67,927
		Tosoh Group		9,161	8,506	9,575	9,001	10,461
		Tosoh Corporation and Tosoh Group		73,488	75,551	78,379	78,686	78,387
	Water supply system	Tosoh Corporation	kilotons	1,018	1,182	1,228	1,207	1,049
		Tosoh Group		226	184	281	287	270
		Tosoh Corporation and Tosoh Group		1,244	1,366	1,509	1,494	1,319
Total water withdrawal volume	Tosoh Corporation	kilotons	1,371,027	1,396,846	1,376,272	1,420,042	1,403,138	
	Tosoh Group		9,404	8,701	9,874	9,313	10,745	
	Tosoh Corporation and Tosoh Group		1,380,430	1,405,547	1,386,146	1,429,355	1,413,883	

ESG Data at a Glance

Items	Detail	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Water discharge by destination	Seawater	Tosoh Corporation	kilotons	1,158,627	1,166,067	1,178,660	1,200,214	1,205,303
		Tosoh Group		5,830	5,415	6,139	5,850	5,654
		Tosoh Corporation and Tosoh Group		1,164,457	1,171,482	1,184,799	1,206,064	1,210,956
	Rivers/lakes/ponds	Tosoh Corporation	kilotons	36	19	20	17	0
		Tosoh Group		957	956	1,053	1,069	2,658
		Tosoh Corporation and Tosoh Group		993	974	1,073	1,086	2,658
	Underground/wells	Tosoh Corporation	kilotons	0	0	0	0	0
		Tosoh Group		0	0	0	0	0
		Tosoh Corporation and Tosoh Group		0	0	0	0	0
	Wastewater treated by outsourced organizations	Tosoh Corporation	kilotons	1,333	1,510	1,634	1,624	1,579
		Tosoh Group		1,767	1,561	1,585	1,839	1,653
		Tosoh Corporation and Tosoh Group		3,100	3,072	3,219	3,463	3,231
	Total water discharge volume	Tosoh Corporation	kilotons	1,159,997	1,167,596	1,180,315	1,201,856	1,206,881
		Tosoh Group		8,553	7,932	8,777	8,757	9,965
		Tosoh Corporation and Tosoh Group		1,168,550	1,175,528	1,189,092	1,210,614	1,216,846
Amount of consumption	Tosoh Corporation	kilotons	211,030	229,250	195,957	218,186	196,257	
	Tosoh Group		851	769	1,097	555	780	
	Tosoh Corporation and Tosoh Group		211,880	230,018	197,054	218,741	197,037	

PRTR-designated substance emissions

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Atmospheric emissions	Tosoh Corporation	tons	328	351	344	337	494
	Tosoh Group		131	115	144	66	273
	Tosoh Corporation and Tosoh Group		459	466	488	403	767
Water emissions	Tosoh Corporation	tons	55	58	69	62	4,681*
	Tosoh Group		2	2	3	3	4
	Tosoh Corporation and Tosoh Group		57	60	72	65	4,685
Land emissions	Tosoh Corporation	tons	0	0	0	0	0
	Tosoh Group		0	0	0	0	0
	Tosoh Corporation and Tosoh Group		0	0	0	0	0
Total	Tosoh Corporation	tons	383	409	413	399	5,175*
	Tosoh Group		133	117	147	69	277
	Tosoh Corporation and Tosoh Group		517	526	560	468	5,452

* Significant increase owing to enforcement of revised Chemical Substances Control Law on April 1, 2023 (Class 1 Designated Chemical Substances changed from 462 to 515).

Industrial waste

Items	Detail		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024	
Industrial waste volume	Volume generated (including specially controlled industrial waste)		Tosoh Corporation	tons	409,892	408,491	424,217	440,884	417,752	
			Tosoh Group		42,688	50,490	56,683	55,000	61,512	
			Tosoh Corporation and Tosoh Group		452,580	458,981	480,900	495,883	479,264	
	In-house processing		Reused	Tosoh Corporation	tons	366,390	366,226	381,201	399,976	292,034
				Tosoh Group		1,778	1,683	1,839	2,023	2,055
				Tosoh Corporation and Tosoh Group		368,168	367,910	383,040	401,998	294,089
			Incineration	Tosoh Corporation	tons	12,129	12,498	10,931	10,839	8,058
				Tosoh Group		39	0	0	0	0
				Tosoh Corporation and Tosoh Group		12,168	12,498	10,931	10,839	8,058
			Final landfill disposal	Tosoh Corporation	tons	0	0	0	0	0
				Tosoh Group		25,119	33,749	38,729	36,876	38,211
				Tosoh Corporation and Tosoh Group		25,119	33,749	38,729	36,876	38,211
	Total	Tosoh Corporation	tons	378,519	378,724	392,132	410,815	300,092		
		Tosoh Group		26,936	35,432	40,568	38,899	40,266		
		Tosoh Corporation and Tosoh Group		405,455	414,157	432,700	449,713	340,357		
	Processing outside the company		Reused	Tosoh Corporation	tons	24,487	19,240	21,834	20,031	19,543
				Tosoh Group		3,301	2,694	3,157	2,868	6,325
				Tosoh Corporation and Tosoh Group		27,789	21,934	24,991	22,899	25,868
			Intermediate disposal	Tosoh Corporation	tons	5,967	9,604	9,602	9,164	5,752
				Tosoh Group		10,793	10,875	10,597	10,747	9,868
				Tosoh Corporation and Tosoh Group		16,760	20,479	20,199	19,910	15,620
Final landfill disposal			Tosoh Corporation	tons	919	923	649	874	507	
			Tosoh Group		1,658	1,489	2,360	2,486	4,048	
			Tosoh Corporation and Tosoh Group		2,577	2,412	3,010	3,360	4,555	
Total			Tosoh Corporation	tons	31,373	29,767	32,085	30,069	25,802	
			Tosoh Group		15,752	15,058	16,115	16,100	20,241	
			Tosoh Corporation and Tosoh Group		47,125	44,825	48,200	46,169	46,043	

ESG Data at a Glance

Items	Detail	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Volume of specially controlled industrial waste (in parentheses)	Specified hazardous industrial waste	Tosoh Corporation	tons	/	689	1,166	1,114	1,353
		Tosoh Group			92	9	92	122
		Tosoh Corporation and Tosoh Group			781	1,175	1,207	1,475
	Other	Tosoh Corporation	tons		86,198	95,031	96,187	90,506
		Tosoh Group			1,038	995	876	884
		Tosoh Corporation and Tosoh Group			87,236	96,027	97,063	91,389
	Total	Tosoh Corporation	tons		86,887	96,197	97,301	91,859
		Tosoh Group			1,130	1,005	968	1,005
		Tosoh Corporation and Tosoh Group			88,017	97,202	98,269	92,864

* Each item's totals may not add up because figures have been rounded.

ISO certifications

Items	Detail	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
ISO9001 Certification	Number of companies that are certified	Tosoh Corporation	Companies	/				1
		Tosoh Group*1			53			
		Tosoh Corporation and Tosoh Group			54			
ISO14001 Certification	Number of companies that are certified	Tosoh Corporation	Companies					1
		Tosoh Group*1			30			
		Tosoh Corporation and Tosoh Group			31			
ISO13485 Certification	Number of companies that are certified	Tosoh Corporation	Companies					1
		Tosoh Group*1			9			
		Tosoh Corporation and Tosoh Group			10			
OHSAS18001/ISO45001 Certification*2	Number of companies that are certified	Tosoh Corporation	Companies				0	
		Tosoh Group*1		6				
		Tosoh Corporation and Tosoh Group		6				

*1 Includes a total of 107 companies of consolidated subsidiaries.

*2 Companies that have not obtained certification have established a management system for occupational health and safety.

ISO certification status (as of May 2024)

Upper level: Certification number

Lower level: Expiration date

Companies	Operations	ISO9001	ISO14001	ISO13485	OHSAS18001/ ISO45001
Tosoh Corporation	Nanyo Complex	18429575 December 2026	4719421 November 2025	—	—
	Yokkaichi Complex	JP023038 December 2025	18823111 February 2027	—	—
	Bioscience Division / Nanyo's Separation Media Production	01-100-028410 August 2025	—	SX2048822 August 2025	—
Asia Industry Co., Ltd.		RQ0332 June 2024	—	—	—
Organo Corporation	Production facilities	JP023338 March 2026	—	—	—
	Tsukuba Plant	4514686 July 2026	JP022484 July 2025	—	—
	Specialty Product Business Unit	4157900 August 2024	—	—	—
Organo Plant Service Corporation		4714548 June 2025	—	—	—
Sankyo Chemical Industry Inc.		—	JP024861 June 2027	—	—
Seiwakouki Co., Ltd.		MSA-QS-2486 March 2025	—	—	MSA-SS-430 March 2025
Taihei Chemicals Ltd.		JMAQA-2591 May 2026	JMAQA-E904 May 2026	—	—
Taiyo Vinyl Corporation		JP023038 December 2025	18823111 February 2027	—	—
Tosoh AIA, Inc.		01-100-028410 August 2025	—	SX2048822 August 2025	—
Tosoh SGM Corporation		JP022482 July 2025	4719421 November 2025	—	—
Tosoh Quartz Corporation	Yamagata Factory	JP022018 September 2026	JP023792 May 2025	—	JP022977 November 2025
	Yonezawa Factory	JP022018 September 2026	JP023792 May 2025	—	JP022977 November 2025
	Sakata Factory	JP022018 September 2026	JP023792 May 2025	—	JP022977 November 2025
	Tokyo Headquarters	JP022018 September 2026	JP023792 May 2025	—	JP022977 November 2025
Tosoh Information Systems Corporation	Nanyo Branch	—	4719421 November 2025	—	—
	Yokkaichi Branch	—	18823111 February 2027	—	—
Tosoh Silica Corporation		JP024082 December 2026	4719421 November 2025	—	—

ESG Data at a Glance

Companies	Operations	ISO9001	ISO14001	ISO13485	OHSAS18001/ ISO45001
Tosoh Speciality Materials Corporation		JP022490 May 2025	JP022548 June 2025	—	—
Tosoh Zeolum, Inc.		JP022455 June 2025	—	—	—
Tosoh Ceramics Co., Ltd.)		—	—	MD607327 January 2026	—
Tosoh General Services Co., Ltd.	Nanyo Branch	—	4719421 November 2025	—	—
	Yokkaichi Branch	—	18823111 February 2027	—	—
Tosoh Techno-System, Inc.		01-100-028410 August 2025	—	SX2048822 August 2025	—
Tosoh Hi-Tec, Inc.	Fukukawa Plant/Tonda Plant/TRC Plant	01-100-028410 August 2025	—	SX2048822 August 2025	—
Tosoh Hyuga Corporation		JP024634 April 2027	JP021847 November 2024	—	—
Tosoh Finechem Corporation		JSAQ 001 May 2026	4719421 November 2025	—	—
Tosoh Logistics Corporation	Nanyo Head Office/Yamaguchi Koun Corporation/Koun Marine Co., Ltd.	4719049 December 2025	—	—	—
	Yokkaichi Branch/Yokkaichi Koun Corporation	4719049 December 2025	—	—	—
	Osaka Sales Division/Kansai Kaiun Corporation	4719049 December 2025	—	—	—
	Tokyo Branch/Funabashi Logistics Center/Ibaraki Sales Division/Satte Sales Division/Keiyo Koun Corporation	4719049 December 2025	—	—	—
Tosoh Analysis and Research Center Co., Ltd.	Nanyo	JCQA-1070 March 2026	4719421 November 2025	—	—
	Yokkaichi	JCQA-1070 March 2026	18823111 February 2027	—	—
	Tokyo Sales Division (including Yamagata, Tsuchiura, Totsuka)	JCQA-1070 March 2026	—	—	—
Toho Acetylene Co., Ltd.		00QR · 428 October 2024	05ER · 496 January 2026	—	—
Tohoku Denki Tekko Co., Ltd.		18975555 December 2026	—	—	—
Tohoku Tosoh Chemical Co., Ltd.	Sakata Plant	JP023238 January 2026	JP023239 February 2026	—	—
Tohoku Maintenance Co., Ltd.		—	JP023995 October 2026	—	—
Nippon Miractran Co., Ltd.		Q4559 August 2026	E2096 August 2026	—	—
Hyuga Unyu Co., Ltd.		MSA-QS-3387 March 2026	—	—	—

ESG Data at a Glance

Companies	Operations	ISO9001	ISO14001	ISO13485	OHSAS18001/ ISO45001
Plas-Tech Corporation	Nabari Plant	JP023088 December 2025	—	—	—
	Tsukuba Plant	JP023088 December 2025	—	—	—
Hokuetsu Kasei Co., Ltd.		4295287-2A February 2025	—	—	—
Rin Kagaku Kogyo Co., Ltd.		JP021310 August 2024	JP022552 July 2025	—	—
Rensol Co., Ltd.		4295287-2B February 2025	—	—	—
Lonseal Corporation		2153 January 2026	E1840 December 2025	—	—
Mabuhay Vinyl Corporation		TUV100 05 3003 September 2026	TUV104 05 2592 June 2025	—	TUV106 05 2593 June 2025
Organo (Asia) Sdn Bhd		QMS 02003 by SIRIM QAS April 2027	EMS 00165 by SIRIM QAS April 2027	—	—
Organo (Suzhou) Water Treatment Co., Ltd.		CN047188 December 2026	CN047187 January 2027	—	—
Organo Technology Co., Ltd.		69078-2009-AQ-RGC-UKAS January 2027	—	—	—
Organo Thailand (Thailand) Co., Ltd.		TH81128A October 2026	—	—	—
Organo Vietnam (Vietnam) Co., Ltd.		JQA-QMA16270 October 2026	—	—	—
Philippine Resins Industries, Inc.		CPI/4338IQ/10/09/725 October 2025	CPI/4338IE/10/09/725 October 2025	—	—
Tosoh Advanced Materials Sdn. Bhd.		01 100 1835567 February 2025	01 104 1835567 February 2025	—	01 213 1835567 March 2027
Tosoh Bioscience GmbH		01 100 1910005 February 2025	—	—	—
Tosoh Bioscience, Inc.		—	—	SX 1284590-1 October 2024	MDSAP MD 1284590-1 November 2025
Tosoh Bioscience LLC		QSR-1930 August 2026	—	—	—
Tosoh Bioscience, Ltd.		01 100 1910005 February 2025	—	SX 1936892-1 February 2025	—
Tosoh Bioscience S.r.l.		01 100 1910005 February 2025	—	SX 1936892-1 February 2025	—
Tosoh Europe N.V.		01 100 1910005 February 2025	—	SX 1936892-1 February 2025	—
Tosoh Hellas Single Member S.A.		GR002662 April 2025	GR003490 January 2026	—	—

ESG Data at a Glance

Companies	Operations	ISO9001	ISO14001	ISO13485	OHSAS18001/ ISO45001
Tosoh India Pvt. Ltd.		—	—	MD-QMS/91/R/1/2820 & MD-QMS/91/R/N/2820 January 2026	—
Tosoh Quartz Co., Ltd.		TW001/00834 December 2024	TW06/01032 November 2026	—	TW17/01126 January 2026
Tosoh Quartz, Inc. (Portland)		NQA-10527 August 2026	—	—	—
Tosoh Quartz, Inc. (Durham)		NQA-8376 June 2026	—	—	—
Tosoh Quartz Korea Co., Ltd.		KQA-Q213096 June 2024	—	—	—
Tosoh Polyvin Corporation		01 100 033496 August 2024	—	—	—
Tosoh SMD, Inc.		21975 October 2024	21976 October 2024	—	—
Tosoh SMD Korea, Ltd.		—	EMS-0089 November 2024	—	—
Tosoh (Guangzhou) Chemical Industries, Inc.		CN15/31335 October 2024	—	—	—
Tosoh SMD Shanghai Co., Ltd.		00624Q30353R4M April 2027	00623E30453R3M April 2026	—	—
Tosoh (Shanghai) Polyurethane Co., Ltd.		00321Q30494R1S November 2024	00321E20325R1S November 2024	—	—
Tosoh (Ruian) Polyurethane Co., Ltd.		00320Q30434R1M December 2026	—	—	—

Society

Safe and Stable Operation

Major Security Accidents

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of occurrences	Tosoh Corporation	Events	3	6	4	3	4
	Tosoh Group*1		1	0	3	2	3
Level of severity*2 according to the CCPS point evaluation system	Tosoh Corporation	-	1	16	2	5	1
	Tosoh Group*1		4	0	1	2	12

*1 Includes a total of 50 consolidated subsidiaries in Japan

*2 Quantitative values for the severity of each accident, based on the self-assessment criteria of the Japan Petrochemical Industry Association (in accordance with the evaluation method of the The Center for Chemical Process Safety (CCPS))

Safety Education

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of participants	Tosoh Corporation	People	1,975	599	519	664	641

Occupational Safety & Health

Industrial Accidents

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of people involved in industrial accidents	Tosoh Corporation	People	2	1	1	3	1
	Tosoh Group*1		10	24	21	14	16
	Affiliated companies		7	7	7	4	7
Industrial accident incidence rate*2	Tosoh Corporation	-	0.31	0.15	0.15	0.48	0.14
	Tosoh Group*1		0.84	1.99	1.7	1.12	1.28
	JCIA average		0.42	0.28	0.41	0.43	0.47
Industrial accident severity rate*3	Tosoh Corporation	-	0.00	0.00	0.00	0.00	0.00
	Tosoh Group*1		0.05	0.061	0.038	0.028	0.666
	JCIA average		0.01	0.11	0.01	0.07	0.036
Number of people involved in fatal accidents	Tosoh Corporation	People	0	0	0	0	0
	Tosoh Group*1		0	0	0	0	1
	Affiliated companies		0	0	0	0	0

*1 Includes a total of 50 consolidated subsidiaries in Japan

*2 (Number of casualties/total number of hours worked) x 1,000,000

*3 (Number of days of labor loss/total number of hours worked) x 1,000

Labor-Related Data

Click [here](#) for details on tabulation.

Number of employees by region and gender

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Japan	Male	Consolidated*	People	-	-	-	-	9,343
	Female			-	-	-	-	1,523
	Total			10,161	10,410	10,584	10,840	10,866
	Ratio of female		%	-	-	-	-	14.0
	Proportion by region			-	-	-	-	75.5
China	Male		People	-	-	-	-	399
	Female			-	-	-	-	145
	Total			503	511	528	548	544
	Ratio of female		%	-	-	-	-	26.7
	Proportion by region			-	-	-	-	3.8
Asia excluding China	Male		People	-	-	-	-	1,363
	Female			-	-	-	-	427
	Total			1,522	1,564	1,684	1,725	1,790
	Ratio of female		%	-	-	-	-	23.9
	Proportion by region			-	-	-	-	12.4
America	Male		People	-	-	-	-	725
	Female			-	-	-	-	238
	Total			916	905	820	906	964
	Ratio of female		%	-	-	-	-	24.7
	Proportion by region			-	-	-	-	6.7
Europe	Male	People	-	-	-	-	154	
	Female		-	-	-	-	70	
	Total		234	241	242	247	224	
	Ratio of female	%	-	-	-	-	31.3	
	Proportion by region		-	-	-	-	1.6	
Total	Male	People	-	-	-	-	11,984	
	Female		-	-	-	-	2,403	
	Total		13,336	13,631	13,858	14,266	14,388	
	Ratio of female	%	-	-	-	-	16.7	
Male	Male	Tosoh registry	People	3,240	3,320	3,373	4,197	4,205
Female	Female			336	363	385	523	543
Total	Total			3,576	3,683	3,758	4,720	4,748
Ratio of female	Ratio of female			%	9.4	9.9	10.2	11.1

* The total number of employees includes those of unspecified gender, so it may not equal the sum of male and female employees.

Number of employees by Group

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Petrochemical Group	Consolidated*	People (%)	1,161 (8.7)	1,194 (8.8)	1,207 (8.7)	1,226 (8.6)	1,243 (8.6)
Chlor-alkali Group			3,087 (23.1)	3,155 (23.1)	3,167 (22.9)	3,194 (22.4)	3,167 (22.0)
Specialty Group			4,402 (33.0)	4,463 (32.7)	4,463 (32.2)	4,688 (32.9)	4,805 (33.4)
Engineering Group			2,667 (20.0)	2,757 (20.2)	2,916 (21.0)	2,950 (20.7)	2,972 (20.7)
Ancillary			2,019 (15.1)	2,062 (15.1)	2,105 (15.2)	2,208 (15.5)	2,201 (15.3)
Total			13,336	13,631	13,858	14,266	14,388

Number of contract employees

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024		
Number of contract employees	Consolidated	People	Male	-	-	-	-	352	
			Female	-	-	-	-	286	
			Total	-	-	-	-	638	
Ratio*		%	-	-	-	-	4.2		
Number of contract employees		Tosoh Corporation	People	Male	-	-	-	-	60
				Female	-	-	-	-	117
	Total			157	176	177	181	177	
Ratio*	%		4.2	4.6	4.5	3.7	3.6		

* Number of contract employees / (number of employees + number of contract employees)

Composition by age (FY2024)

Items	Scope	Unit	0-17 years	18-29 years	30-49 years	50- years
Male	Consolidated*	People	0	2,747	5,610	3,627
Female			0	588	1,162	653
Total			0	3,335	6,773	4,280
Ratio of female		%	0	17.6	17.2	15.3

* Total includes employees of unspecified gender.

Average age

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male	Consolidated*	Years	-	-	-	-	41.2
Female			-	-	-	-	40.4
Average			-	-	-	-	41.1
Male	Tosoh Corporation employees	Years	39.1	38.8	38.3	39.1	39.0
Female			39.5	39.5	39.4	39.3	39.1
Average			39.1	38.8	38.4	39.1	39.0

* Average includes employees of unspecified gender.

Average years of continuous service

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male	Consolidated*	Years	-	-	-	-	12.3
Female			-	-	-	-	10.1
Average			-	-	-	-	11.9
Male	Tosoh Corporation employees	Years	14.6	14.4	14.0	14.5	14.4
Female			14.4	14.0	13.9	13.9	13.7
Average			14.6	14.4	14.0	14.4	14.3

* Average includes employees of unspecified gender.

Total new hires

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male	Consolidated*	Years	-	-	-	-	904
Female			-	-	-	-	308
Total			-	-	-	-	1,213
Male	Tosoh Corporation employees	Years	199	209	199	161	159
Female			34	33	26	41	37
Total			233	242	225	202	196

* Total includes employees of unspecified gender.

Average age of new hires

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Under 30 years	Consolidated	People	-	-	-	-	643
30 -49 years			-	-	-	-	450
Above 50 years			-	-	-	-	120
Under 30 years	Tosoh Corporation employees	People	217	235	217	189	186
30 -49 years			16	7	8	13	10
Above 50 years			0	0	0	0	0

New graduates recruitment

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male		Japan	People	291	305	310	263	269
Female				63	78	67	80	57
Total				354	383	377	343	326
Career-track positions (clerical positions)	Male	Tosoh Corporation employees	People	12	12	13	11	19
	Female			7	6	7	7	6
	Total			19	18	20	18	25
Career-track positions (technical positions)	Male		People	69	82	83	50	56
	Female			10	20	10	19	18
	Total			79	102	93	69	74
General employees	Male		People	95	102	95	88	76
	Female			15	7	9	13	10
	Total			110	109	104	101	86
Total	Male		People	176	196	191	149	151
	Female			32	33	26	39	34
	Total			208	229	217	188	185

Mid-career recruitment

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male		Japan	People	321	229	213	299	275
Female				71	55	46	52	72
Total				392	284	259	351	347
Ratio*			%	71.5	63.8	61.1	68.5	51.6
Male		Tosoh Corporation employees	People	23	13	8	12	8
Female				2	0	0	2	3
Total				25	13	8	14	11
Ratio*			%	10.7	5.4	3.6	6.9	5.6

* Number of mid-career hires/(Number of new graduates hire + number of mid-career hire)

Employee retention rate (three years after joining)

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Retention rate		Tosoh Corporation employees	%	96.9	97.2	96.3	93.8	94.5

* Number of new graduates hired three years ago as of fiscal year-end/number of new graduates hired three years ago.

Number of resigned employees*1

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of employees leaving the company	Male	Consolidated	People	-	-	-	-	532
	Female			-	-	-	-	152
	Total			-	-	-	-	684
Employee turnover rate*2	Male		%	-	-	-	-	4.4
	Female			-	-	-	-	6.3
	Total			-	-	-	-	4.7
Number of employees leaving the company	Male	Tosoh Corporation employees	People	23	22	16	42	44
	Female			9	5	4	15	9
	Total			32	27	20	57	53
Employee turnover rate*2	Male		%	0.7	0.7	0.5	1.0	1.0
	Female			2.7	1.4	1.0	2.9	1.7
	Total			0.9	0.7	0.5	1.2	1.1

*1 Employees who resigned for personal reasons or because of a change in employment.

*2 Number of resigned employees/number of employees

Average age of resigned employees*

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Under 30 years	Consolidated	People	-	-	-	-	225	
30 - 49 years			-	-	-	-	336	
Above 50 years			-	-	-	-	123	
Under 30 years	Tosoh Corporation employees	People	18	11	10	32	28	
30 - 49 years			13	15	9	24	22	
Above 50 years			1	1	1	1	3	

* Employees who resigned for personal reasons or because of a change in employment.

Composition of union members

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of union members*1	Consolidated	People	-	-	-	-	6,589	
Proportion of union members*2		%	-	-	-	-	45.8	
Number of union members*1	Tosoh Corporation employees	People	3,140	3,258	3,346	3,367	3,422	
Proportion of union members*2		%	69.4	70.4	71.8	71.3	72.1	

*1 Excludes some employees in executive positions and some engaged in management-related work and fixed-term employees.

*2 Number of union members/number of employees.

Starting salary (FY 2024)

Items	Scope	Monthly salary (yen)	Compared with minimum wage (%)
High school	Tosoh Corporation employees	198,751	116
Junior college		202,647	119
Technical college		220,725	129
University		255,390	149
Graduate school (Master's degree)		272,745	160

* Calculated based on Tokyo minimum wage (¥1,113/hour); 20.25 days/month; 7 hours, 35 minutes/day.

Average monthly salary for 30-year-olds in career-track positions

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Monthly salary	Tosoh Corporation employees	Yen	353,945	354,467	354,467	356,557	380,801

Salary ratio by gender (FY2024)*1

Items	Scope	Unit	Ratio*2
Full-time employees	Tosoh Corporation employees	%	73.7
Fixed-term employees			66.4
Total			72.6

*1 Calculated in accordance with the regulations of the Act on the Promotion of Women's Active Engagement in Professional Life.

The same salary system is applied to men and women, with differences in salary based on rank, classification, grade, and vocational career track.

*2 Average income of women/average income of men.

Work-Life Balance

Total working hours

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Total overtime working hours/month	Tosoh Corporation employees*	Hours/person	17.1	16.2	16.4	16.3	16.1
Annual total working hours			1,897.4	1,910.1	1,887.9	1,869.9	1,857.0

* Data on leadership positions and persons in charge. Excludes seconded employees.

Annual paid leave*1

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Use of annual paid leave	Manager	Japan	Days/person	-	-	-	-	13.6
	Non-manager			-	-	-	-	15.9
	Average			-	-	-	-	15.5
Ratio	Manager		%	-	-	-	-	82.5
	Non-manager			-	-	-	-	89.2
	Average			-	-	-	-	88.0
Use of annual paid leave	Manager	Tosoh Corporation employees*2	Days/person	11.9	12.2	13.1	13.7	15.1
	Non-manager			16.0	15.9	16.4	17.2	17.9
	Average			15.2	15.2	15.8	16.6	17.4
Ratio	Manager		%	60.1	61.5	65.6	68.7	75.8
	Non-manager			84.3	83.5	86.3	88.6	92.4
	Average			79.2	79.2	82.4	85.0	89.5

*1 Period: July 2023 - June 2024

*2 Excludes seconded employees.

Childcare leave recipients

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of childcare leave recipients	Male	Japan	People	38	69	92	186	194
	Female			35	39	44	46	43
	Total			73	108	136	232	237
Rate of childcare leave recipients*1	Male		%	-	-	-	62.0	61.4
	Female			-	-	-	100	100
Number of childcare leave recipients	Male		Tosoh Corporation employees	People	26	63	72	141
	Female	14			18	13	19	22
	Total	40			81	85	160	153
Rate of childcare leave recipients*1	Male	%		14.9	35.2	40.4	85.5	70.4
	Female			100	100	100	100	100
Average number of days taken*2	Male	Days		-	-	-	-	29.7
Rate of childcare leave recipients who returned to work*3	Male	%	100	100	100	100	100	
	Female		100	88.2	100	93.3	100	
Retention rate*4	Male	%	100	100	100	100	100	
	Female		100	100	100	100	92.9	

*1 Number of childcare leave recipients/number of employees who gave birth to a child

Calculated based on the provisions of the Act on the Welfare of Workers Who Take Care of Children or Other Family Members.

*2 Average number of days taken by employees whose childcare leave and maternity/parental leave ended during the relevant fiscal year.

*3 Number of employees who returned to work/number of employees who were scheduled to return to work

*4 Number of employees retained 12 months after returning to work/number of employees who returned to work in the previous year

Maternity leave recipients for male employees

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Maternity leave recipients	Tosoh Corporation employees	People	157	171	174	161	185
Rate of maternity leave recipients*		%	89.7	95.5	97.8	97.6	99.5

* Number of maternity leave recipients/number of employees who gave birth to a child

Employees working reduced hours to facilitate childcare

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male	Japan	People	-	-	-	-	6
Female			-	-	-	-	85
Total			-	-	-	-	91
Male	Tosoh Corporation employees	People	0	0	1	3	3
Female			38	38	49	39	46
Total			38	38	50	42	49

Family care leave recipients

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Recipients	Japan	People	1	2	2	3	4
Recipients	Tosoh Corporation employees	People	0	0	0	1	1

Extended family care leave recipients

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male	Tosoh Corporation employees	People	-	-	-	-	40
Female			-	-	-	-	16
Total			19	14	15	33	56

Employees working reduced hours to facilitate family care

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Recipients	Tosoh Corporation employees	People	0	0	0	0	0

Annual health checkup

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Annual health checkup rate	Tosoh Corporation employees	%	100	100	100	100	100
Rate of persons with findings			46.7	45.5	44.2	43.1	45.5
Rate of healthy weight maintenance(BMI of 18.5 to 24.9)			-	20.4	20.2	20.8	21.2
Smoking rate			20.6	18.3	17.5	17.2	17.8

Absenteeism

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Rate of occurrence*	Tosoh Corporation employees	%	0.48	0.38	0.45	0.44	0.48

* Number of employees on sick leave/number of employees.

Stress checkup rate

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Recipients	Tosoh Corporation employees	%	96.3	97.2	98.4	97.3	95.3

Number of serious violations of Labor Standards Act

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Cases	Tosoh Corporation employees	Case	0	0	0	0	0

Diversity

Employee diversity (FY 2024)

		Age 0-17		Age 18-29		Age 30-39		Age 40-49		Age 50-59		Age 60 and above		All	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male total	Female total
		Subtotal		Subtotal		Subtotal		Subtotal		Subtotal		Subtotal		Total	
Executive positions (career-track positions)		0	0	0	0	46	0	407	11	470	3	1	0	924	14
		0		0		46		418		473		1		938	
Leadership positions Managerial positions	Career-track positions	0	0	400	108	488	57	10	2	7	0	0	0	905	167
		0		508		545		12		7		0		1,072	
	General employees	0	0	925	76	493	43	126	60	510	129	2	0	2,056	308
		0		1,001		536		186		639		2		2,364	
Subtotal		0	0	1,325	184	981	100	136	62	517	129	2	0	2,961	475
		0		1,509		1,081		198		646		2		3,436	
Fixed-term employees		0	0	8	9	10	5	11	5	21	11	270	24	320	54
		0		17		15		16		32		294		374	
Total		0	0	1,333	193	1,037	105	554	78	1,008	143	273	24	4,205	543
		0		1,526		1,142		632		1,151		297		4,748	
Ratio(%)		0		32.1		24.1		13.3		24.2		6.3		100	
Ratio of female(%)		0		12.6		9.2		12.3		12.4		8.1		11.4	

Total number of employees in managerial positions**1

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male	Consolidated	People	-	-	-	-	2,315
Female			-	-	-	-	175
Total			-	-	-	-	2,490
Proportion of female in managerial positions**2		%	-	-	-	-	7.0
Male	Tosoh Corporation employees	People	1,019	1,012	978	951	924
Female			13	15	17	16	14
Total			1,032	1,027	995	967	938
Proportion of female in managerial positions**2		%	1.3	1.5	1.7	1.7	1.5

*1 Full-time employees at the section manager level and above.

*2 Number of women in executive positions / (number of men in executive positions + number of women in executive positions).

Calculated in accordance with the regulations of the Act on the Promotion of Women's Active Engagement in Professional Life.

Proportion of female regular employees hired

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Proportion of female in managerial positions	Tosoh Corporation employees	%	17.3	21.7	15.0	29.9	24.2

* Number of recent female graduates hired for career-track positions/number of new graduates hired for career-track positions.

Number of re-employed workers

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of re-employed workers	Tosoh Corporation employees	People	47	74	113	132	80
Rate of re-employed workers upon reaching retirement age*		%	94.0	84.1	83.7	92.3	92.0

* Number of rehired persons/number eligible for rehiring.

* 100% employment rate for rehired applicants.

Disabled person employment rate

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Employees	Tosoh Corporation employees	People	68	66	76	95	94
Ratio*		%	2.00	2.14	2.01	2.04	2.35

* The data is as of June 1 of each fiscal year. Calculated in accordance with the regulations of the Act for Promotion of Employment of Persons with Disabilities.

Number of foreign employees

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Male	Japan	People	-	-	48	67	79
Female			-	-	22	24	27
Total			42	45	70	91	106
Male	Tosoh Corporation employees	People	11	13	14	16	15
Female			4	7	8	9	9
Total			15	20	22	25	24

Human Resource Development

Training results by rank*1

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Ratio of training participants*2	Japan	%	-	-	-	-	39.1
Training time per employee*3		hours	-	-	-	-	121.5
Training fee per employee		Thousand yen	-	-	-	-	24.5
Ratio of training participants*2	Tosoh Corporation employees	%	23.4	8.7	25.5	25.9	23.5
Total training hours		hours	26,781	36,306	35,097	29,391	28,059
Training time per employee*3			6.0	7.9	7.6	6.2	5.9
Training days per employee		days	0.8	1.1	1.0	0.8	0.8
Training fee per employee		Thousand yen	14.5	6.6	8.2	11.8	12.2

*1 Applies only to training sponsored by Tosoh's Human Resources Department.

*2 Number of training participants/number of employees.

*3 Total training hours/number of employees.

Career counseling for career-track positions

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Implementation rate*	Tosoh Corporation employees	%	Implementation began in fiscal year 2022.		22.0	13.9	14.0

* Number of times career counseling provided to career-track employees/number of career-track employees.

Social Contribution Activities

Social expenditure

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Amount of expenditure	Tosoh Corporation	Millions of yen	143	140	140	121	138

ESG Data at a Glance

Number of visitors to business sites (plants)

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of visitors	Tosoh Corporation	People	3,412	548	870	953	2,628

Donations

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Amount of donation	Tosoh Corporation	Millions of yen	83	80	84	81	99

Governance

Board of Directors*1

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Structure	Number of directors	Tosoh Corporation	People	7	9	9	9	9
	External directors			2	4	4	4	4
	Independent directors			2	3	4	4	4
	Female directors			0	1	1	1	1
	Tosoh Corporation	Tosoh Corporation	%	0	11.1	11.1	11.1	11.1
Compensation	Excludes external auditors	Tosoh Corporation	million yen	323	310	299	332	313

Audit and Supervisory Board*1

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Structure	Number of auditors	Tosoh Corporation	People	4	4	4	4	4
	External auditors			2	2	3	3	3
	Independent auditors			2	2	3	3	3
	Female auditors			0	0	0	0	0
Compensation	Excludes external auditors	Tosoh Corporation	million yen	48	48	30	24	24

Nomination and Compensation Advisory Committee

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Structure	Proportion of independent auditors	Tosoh Corporation	%	66.7%	80.0%	66.7%	66.7%	66.7%

External directors

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Compensation		Tosoh Corporation	million yen	45	63	87	93	93

Executive directors

Items		Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Number of executive directors		Tosoh Corporation	People	25	27	27	27	27
Female executive directors				0	0	0	0	0

Compliance

Items	Scope	Unit	FY2020	FY2021	FY2022	FY2023	FY2024
Major legal violations	Tosoh Corporation, Tosoh Group*2	Events	0	0	0	0	0
Number of incidents reported to Tosoh's internal whistleblower system	Tosoh Corporation, Tosoh Group*2	Events	25	11	17	34	54

*1 The number of individuals after the official appointment at the General Shareholders' Meeting

*2 Japan and overseas consolidated subsidiaries

GRI Table

(Statement on Use) With reference to the GRI Standards, the Tosoh Group reports the information listed in this GRI Content Index for the period from April 1, 2023, to March 31, 2024 (this report includes information following this date).

(GRI 1 used) GRI 1:2021 as basis

GRI2: General Disclosures 2021

1. The organization and its reporting practices

Indicators		Disclosures	Applicable Pages Heading
2-1	Details of Organization	a. Report its legal name b. Report its nature of ownership and legal form c. Report the location of its headquarters d. Report its countries of operation	-
2-2	Entities included in the organization's sustainability reporting	a. List all its entities included in its sustainability reporting; b. If the organization has audited consolidated financial statements or financial information filed on public record, specify the differences between the list of entities included in its financial reporting and the list included in its sustainability reporting; c. If the organization consists of multiple entities, explain the approach used for consolidating the information, including: <ul style="list-style-type: none"> i. Whether the approach involves adjustments to information for minority interests; ii. How the approach takes into account mergers, acquisitions, and disposal of entities or parts of entities; iii. Whether and how the approach differs across the disclosures in this Standard and across material topics. 	-
2-3	Reporting period, frequency and contact point	a. Specify the reporting period for, and the frequency of, its sustainability reporting; b. Specify the reporting period for its financial reporting and, if it does not align with the period for its sustainability reporting, explain the reason for this; c. Report the publication date of the report or reported information; d. Specify the contact point for questions about the report or reported information.	Fiscal Year 2024 (April 2023 - March 2024), including some information after April 2024
			Annual
			About Our Reporting

GRI Table

Indicators		Disclosures	Applicable Pages Heading
2-4	Restatements of information	a. Report restatements of information made from previous reporting periods and explain: <ul style="list-style-type: none"> i .The reasons for the restatements; ii .The effect of the restatements. 	Important CSR Issues
			GHG Emissions and Energy Use Results
			Diversity
			Personnel System and Human Resource Cultivation
			Work-Life Balance
			ESG Data at a Glance
2-5	External assurance	a. Describe its policy and practice for seeking external assurance, including whether and how the highest governance body and senior executives are involved; b. If the organization's sustainability reporting has been externally assured: <ul style="list-style-type: none"> i .Provide a link or reference to the external assurance report(s) or assurance statement(s); ii .Describe what has been assured and on what basis, including the assurance standards used, the level of assurance obtained, and any limitations of the assurance process; iii .Describe the relationship between the organization and the assurance provider. 	-

2. Activities and workers

Indicators		Disclosures	Applicable Pages Heading
2-6	Activities, value chain and other business relationships	a. Report the sector(s) in which it is active;	Social Issues Solution
		b. Describe its value chain, including: <ul style="list-style-type: none"> i .The organization's activities, products, services, and markets served; ii .The organization's supply chain; iii .The entities downstream from the organization and their activities; 	ESG Data at a Glance
		c. Report other relevant business relationships;	CSR Supply Chain Management
		d. Describe significant changes in 2-6-a, 2-6-b, and 2-6-c compared to the previous reporting period.	
2-7	Employees	a. Report the total number of employees, and a breakdown of this total by gender and by region;	Diversity
		b. Report the total number of: <ul style="list-style-type: none"> i .Permanent employees, and a breakdown by gender and by region; ii .Temporary employees, and a breakdown by gender and by region; iii .Non-guaranteed hours employees, and a breakdown by gender and by region; iv .Full-time employees, and a breakdown by gender and by region; v .Part-time employees, and a breakdown by gender and by region; 	
		c. Describe the methodologies and assumptions used to compile the data, including whether the numbers are reported: <ul style="list-style-type: none"> i .In head count, full-time equivalent (FTE), or using another methodology; ii .At the end of the reporting period, as an average across the reporting period, or using another methodology; 	ESG Data at a Glance
		d. Report contextual information necessary to understand the data reported under 2-7-a and 2-7-b;	
		e. Describe significant fluctuations in the number of employees during the reporting period and between reporting periods.	
2-8	Workers who are not employees	a. Report the total number of workers who are not employees and whose work is controlled by the organization and describe: <ul style="list-style-type: none"> i .The most common types of worker and their contractual relationship with the organization; ii .the type of work they perform; 	Work-Life Balance
		b. Describe the methodologies and assumptions used to compile the data, including whether the number of workers who are not employees is reported: <ul style="list-style-type: none"> i .In head count, full-time equivalent (FTE), or using another methodology; ii .At the end of the reporting period, as an average across the reporting period, or using another methodology; 	ESG Data at a Glance
		c. Describe significant fluctuations in the number of workers who are not employees during the reporting period and between reporting periods.	

Governance

Indicators		Disclosures	Applicable Pages Heading
2-9	Governance structure and composition	<p>a. Describe its governance structure, including committees of the highest governance body;</p> <p>b. List the committees of the highest governance body that are responsible for decision making on and overseeing the management of the organization's impacts on the economy, environment, and people;</p> <p>c. Describe the composition of the highest governance body and its committees by:</p> <ul style="list-style-type: none"> i .Executive and non-executive members; ii .Independence; iii .Tenure of members on the governance body; iv .Number of other significant positions and commitments held by each member, and the nature of the commitments; v .Gender; vi .Under-represented social groups; vii .Competencies relevant to the impacts of the organization; viii .Stakeholder representation. 	Corporate Governance
			CSR Management
			Corporate Governance Report
2-10	Nomination and selection of the highest governance body	<p>a. Describe the nomination and selection processes for the highest governance body and its committees;</p> <p>b. Describe the criteria used for nominating and selecting highest governance body members, including whether and how the following are taken into consideration:</p> <ul style="list-style-type: none"> i .Views of stakeholders (including shareholders); ii .Diversity; iii .Independence; iv .Competencies relevant to the impacts of the organization. 	Corporate Governance
			Corporate Governance Report
2-11	Chair of the highest governance body	<p>a. Report whether the chair of the highest governance body is also a senior executive in the organization;</p> <p>b. If the chair is also a senior executive, explain their function within the organization's management, the reasons for this arrangement, and how conflicts of interest are prevented and mitigated.</p>	Corporate Governance
			Corporate Governance Report

GRI Table

Indicators		Disclosures	Applicable Pages Heading
2-12	Role of the highest governance body in overseeing the management of impacts	<p>a. Describe the role of the highest governance body and of senior executives in developing, approving, and updating the organization's purpose, value or mission statements, strategies, policies, and goals related to sustainable development;</p> <p>b. Describe the role of the highest governance body in overseeing the organization's due diligence and other processes to identify and manage the organization's impacts on the economy, environment, and people, including:</p> <ul style="list-style-type: none"> i .Whether and how the highest governance body engages with stakeholders to support these processes; ii .How the highest governance body considers the outcomes of these processes; <p>c. Describe the role of the highest governance body in reviewing the effectiveness of the organization's processes as described in 2-12-b, and report the frequency of this review.</p>	Corporate Governance
			Communication with Stakeholders
			CSR Management
			Important CSR Issues
2-13	Delegation of responsibility for managing impacts	<p>a. Describe how the highest governance body delegates responsibility for managing the organization's impacts on the economy, environment, and people, including:</p> <ul style="list-style-type: none"> i .Whether it has appointed any senior executives with responsibility for the management of impacts; ii .Whether it has delegated responsibility for the management of impacts to other employees; <p>b. Describe the process and frequency for senior executives or other employees to report back to the highest governance body on the management of the organization's impacts on the economy, environment, and people.</p>	Corporate Governance Report
			Corporate Governance
			CSR Management
2-14	Role of the highest governance body in sustainability reporting	<p>a. Report whether the highest governance body is responsible for reviewing and approving the reported information, including the organization's material topics, and if so, describe the process for reviewing and approving the information;</p> <p>b. If the highest governance body is not responsible for reviewing and approving the reported information, including the organization's material topics, explain the reason for this.</p>	CSR Management
2-15	Conflicts of interest	<p>a. Describe the processes for the highest governance body to ensure that conflicts of interest are prevented and mitigated;</p> <p>b. Report whether conflicts of interest are disclosed to stakeholders, including, at a minimum, conflicts of interest relating to:</p> <ul style="list-style-type: none"> i .Cross-board membership; ii .Cross-shareholding with suppliers and other stakeholders; iii .Existence of controlling shareholders; iv .Related parties, their relationships, transactions, and outstanding balances. 	Corporate Governance
			Corporate Governance Report
			Compliance
2-16	Communication of critical concerns	<p>a. Describe whether and how critical concerns are communicated to the highest governance body;</p> <p>b. Report the total number and the nature of critical concerns that were communicated to the highest governance body during the reporting period.</p>	Corporate Governance
2-17	Collective knowledge of the highest	<p>a. Report measures taken to advance the collective knowledge, skills, and experience of the highest governance body on sustainable development.</p>	CSR Management
			Important CSR Issues
2-18	Evaluation of the performance of the highest governance body	<p>a. Describe the processes for evaluating the performance of the highest governance body in overseeing the management of the organization's impacts on the economy, environment, and people;</p> <p>b. Report whether the evaluations are independent or not, and the frequency of the evaluations;</p> <p>c. Describe actions taken in response to the evaluations, including changes to the composition of the highest governance body and organizational practices.</p>	Corporate Governance
			Corporate Governance Report

GRI Table

Indicators		Disclosures	Applicable Pages Heading
2-19	Remuneration policies	<p>a. Describe the remuneration policies for members of the highest governance body and senior executives, including:</p> <ul style="list-style-type: none"> i .Fixed pay and variable pay; ii .Sign-on bonuses or recruitment incentive payments; iii .Termination payments; iv .Clawbacks; v .Retirement benefits; <p>b. Describe how the remuneration policies for members of the highest governance body and senior executives relate to their objectives and performance in relation to the management of the organization's impacts on the economy, environment, and people.</p>	Corporate Governance
			Corporate Governance Report
2-20	Process to determine remuneration	<p>a. Describe the process for designing its remuneration policies and for determining remuneration, including:</p> <ul style="list-style-type: none"> i .Whether independent highest governance body members or an independent remuneration committee oversees the process for determining remuneration; ii .How the views of stakeholders (including shareholders) regarding remuneration are sought and taken into consideration; 	Corporate Governance
			Corporate Governance Report
2-21	Annual total compensation ratio	<p>a. Report the ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees(excluding the highest-paid individual);</p> <p>b. Report the ratio of the percentage increase in annual total compensation for the organization's highest-paid individual to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual);</p> <p>c. Report contextual information necessary to understand the data and how the data has been compiled.</p>	-

4. Strategy, policies and practices

Indicators		Disclosures	Applicable Pages Heading
2-22	Statement on sustainable development strategy	a. Report a statement from the highest governance body or most senior executive of the organization about the relevance of sustainable development to the organization and its strategy for contributing to sustainable development.	Message from the President
2-23	Policy commitments	<p>a. Describe its policy commitments for responsible business conduct, including:</p> <ul style="list-style-type: none"> i .The authoritative intergovernmental instruments that the commitments reference; ii .Whether the commitments stipulate conducting due diligence; iii .Whether the commitments stipulate applying the precautionary principle; iv .Whether the commitments stipulate respecting human rights; <p>b. Describe its specific policy commitment to respect human rights, including:</p> <ul style="list-style-type: none"> i .The internationally recognized human rights that the commitment covers; ii .The categories of stakeholders, including at-risk or vulnerable groups, that the organization gives particular attention to in the commitment; <p>c. Provide links to the policy commitments if publicly available, or, if the policy commitments are not publicly available, explain the reason for this;</p> <p>d. Report the level at which each of the policy commitments was approved within the organization, including whether this is the most senior level;</p> <p>e. Report the extent to which the policy commitments apply to the organization's activities and to its business relationships;</p> <p>f. Describe how the policy commitments are communicated to workers, business partners, and other relevant parties.</p>	CSR Management
			Respect for Human Rights
			CSR Supply Chain Management
			Safe and Stable Operation
			Quality Management
			Occupational Safety and Health
			Chemical Substance Management
			Compliance
			Responsible Care Activities (Environment, safety, and health basic principles)
			Work-Life Balance
Personnel System and Human Resource Cultivation			
Addressing Climate Change Issues			
2-24	Embedding policy commitments	<p>a. Describe how it embeds each of its policy commitments for responsible business conduct throughout its activities and business relationships, including:</p> <ul style="list-style-type: none"> i .How it allocates responsibility to implement the commitments across different levels within the organization; ii .How it integrates the commitments into organizational strategies, operational policies, and operational procedures; iii .How it implements its commitments with and through its business relationships; iv .Training that the organization provides on implementing the commitments. 	Respect for Human Rights
			Compliance
			CSR Supply Chain Management

GRI Table

Indicators		Disclosures	Applicable Pages Heading
2-25	Processes to remediate negative impacts	<p>a. Describe its commitments to provide for or cooperate in the remediation of negative impacts that the organization identifies it has caused or contributed to;</p> <p>b. Describe its approach to identify and address grievances, including the grievance mechanisms that the organization has established or participates in;</p> <p>c. Describe other processes by which the organization provides for or cooperates in the remediation of negative impacts that it identifies it has caused or contributed to;</p> <p>d. Describe how the stakeholders who are the intended users of the grievance mechanisms are involved in the design, review, operation, and improvement of these mechanisms;</p> <p>e. Describe how the organization tracks the effectiveness of the grievance mechanisms and other remediation processes, and report examples of their effectiveness, including stakeholder feedback.</p>	Compliance
			Safe and Stable Operation
			Addressing Climate Change Issues
			Quality Management
			Occupational Safety & Health
			Chemical Substance Management
			Information Disclosure Based on TCFD Recommendations
			Initiatives to Cut GHGs
			Environmental Protection
			Work-Life Balance
			Diversity
			Communication with Stakeholders
			Personnel System and Human Resource Cultivation
			CSR Supply Chain Management
Cybersecurity			
Biodiversity Preservation			
Respect for Human Rights			
2-26	Mechanisms for seeking advice and raising concerns	<p>a. Describe the mechanisms for individuals to:</p> <p>i . Seek advice on implementing the organization's policies and practices for responsible business conduct;</p> <p>ii . Raise concerns about the organization's business conduct.</p>	Corporate Governance
			Compliance
			Respect for Human Rights

GRI Table

Indicators		Disclosures	Applicable Pages Heading
2-27	Compliance with laws and regulations	a. Report the total number of significant instances of non-compliance with laws and regulations during the reporting period, and a breakdown of this total by: <ul style="list-style-type: none"> i .Instances for which fines were incurred; ii .Instances for which non-monetary sanctions were incurred; b. Report the total number and the monetary value of fines for instances of noncompliance with laws and regulations that were paid during the reporting period, and a breakdown of this total by: <ul style="list-style-type: none"> i .Fines for instances of non-compliance with laws and regulations that occurred in the current reporting period; ii .Fines for instances of non-compliance with laws and regulations that occurred in previous reporting periods; c. Describe the significant instances of non-compliance; d. Describe how it has determined significant instances of non-compliance.	Important CSR Issues
			ESG Data at a Glance
2-28	Membership associations	a. Report industry associations, other membership associations, and national or international advocacy organizations in which it participates in a significant role.	-

5. Stakeholder engagement

Indicators		Disclosures	Applicable Pages Heading
2-29	Approach to stakeholder engagement	a. Describe its approach to engaging with stakeholders, including: <ul style="list-style-type: none"> i .The categories of stakeholders it engages with, and how they are identified; ii .The purpose of the stakeholder engagement; iii .How the organization seeks to ensure meaningful engagement with stakeholders. 	Communication with Stakeholders
			CSR Supply Chain Management
			Work-Life Balance
			Safe and Stable Operation
			Chemical Substance Management
2-30	Collective bargaining agreements	a. Report the percentage of total employees covered by collective bargaining agreements; b. For employees not covered by collective bargaining agreements, report whether the organization determines their working conditions and terms of employment based on collective bargaining agreements that cover its other employees or based on collective bargaining agreements from other organizations.	ESG Data at a Glance
			Important CSR Issues
			Respect for Human Rights
			Work-Life Balance

GRI3: Material Topics 2021

Indicators		Disclosures	Applicable Pages Heading
3-1	Process to determine material topics	<p>a. Describe the process it has followed to determine its material topics, including:</p> <ul style="list-style-type: none"> i .How it has identified actual and potential, negative and positive impacts on the economy, environment, and people, including impacts on their human rights, across its activities and business relationships; ii .How it has prioritized the impacts for reporting based on their significance; <p>b. Specify the stakeholders and experts whose views have informed the process of determining its material topics.</p>	About Our Reporting
3-2	List of material topics	<p>a. List its material topics;</p> <p>b. Report changes to the list of material topics compared to the previous reporting period.</p>	Important CSR Issues
			GHG Emissions and Energy Use Results

GRI Table

Indicators		Disclosures	Applicable Pages Heading
3-3	Management of material topics	<p>a. Describe the actual and potential, negative and positive impacts on the economy, environment, and people, including impacts on their human rights;</p> <p>b. Report whether the organization is involved with the negative impacts through its activities or as a result of its business relationships, and describe the activities or business relationships;</p> <p>c. Describe its policies or commitments regarding the material topic;</p> <p>d. Describe actions taken to manage the topic and related impacts, including:</p> <ul style="list-style-type: none"> i .Actions to prevent or mitigate potential negative impacts; ii .Actions to address actual negative impacts, including actions to provide for or cooperate in their remediation; iii .Actions to manage actual and potential positive impacts; <p>e. Report the following information about tracking the effectiveness of the actions taken:</p> <ul style="list-style-type: none"> i .Processes used to track the effectiveness of the actions; ii .Goals, targets, and indicators used to evaluate progress; iii .The effectiveness of the actions, including progress toward the goals and targets; iv .Lessons learned and how these have been incorporated into the organization's operational policies and procedures; <p>f. Describe how engagement with stakeholders has informed the actions taken (3-3-d) and how it has informed whether the actions have been effective (3-3-e).</p>	CSR Management
			Respect for Human Rights
			CSR Supply Chain Management
			Safe and Stable Operations
			Quality Management
			Occupational Safety & Health
			Chemical Substance Management
			Information Disclosure Based on TCFD Recommendations
			Initiatives to Cut GHGs
			Compliance
			Important CSR Issues
			Addressing Climate Change Issues
			Environmental Protection
			Work-Life Balance
Diversity			
Communication with Stakeholders			
Personnel System and Human Resource Cultivation			
Cybersecurity			
Biodiversity Preservation			
Responsible Care Activities			

200: Economic

Economic Performance

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
201-1	Direct economic value generated and distributed	<p>a. Direct economic value generated and distributed (EVG&D) on an accruals basis, including the basic components for the organization's global operations as listed below. If data are presented on a cash basis, report the justification for this decision in addition to reporting the following basic components:</p> <ul style="list-style-type: none"> i .Direct economic value generated: revenues; ii .Economic value distributed: operating costs, employee wages and benefits, payments to providers of capital, payments to government by country, and community investments; iii .Economic value retained: 'direct economic value generated' less 'economic value distributed'. <p>b. Where significant, report EVG&D separately at country, regional, or market levels, and the criteria used for defining significance.</p>	-
201-2	Financial implications and other risks and opportunities due to climate change	<p>a. Risks and opportunities posed by climate change that have the potential to generate substantive changes in operations, revenue, or expenditure, including:</p> <ul style="list-style-type: none"> i .A description of the risk or opportunity and its classification as either physical, regulatory, or other; ii .A description of the impact associated with the risk or opportunity; iii .The financial implications of the risk or opportunity before action is taken; iv .The methods used to manage the risk or opportunity; v .The costs of actions taken to manage the risk or opportunity. 	Information Disclosure Based on TCFD Recommendations
201-3	Defined benefit plan obligations and other retirement plans	<p>a. If the plan's liabilities are met by the organization's general resources, the estimated value of those liabilities.</p> <p>b. If a separate fund exists to pay the plan's pension liabilities:</p> <ul style="list-style-type: none"> i .The extent to which the scheme's liabilities are estimated to be covered by the assets that have been set aside to meet them; ii .The basis on which that estimate has been arrived at; iii .When that estimate was made. <p>c. If a fund set up to pay the plan's pension liabilities is not fully covered, explain the strategy, if any, adopted by the employer to work towards full coverage, and the timescale, if any, by which the employer hopes to achieve full coverage.</p> <p>d. Percentage of salary contributed by employee or employer.</p> <p>e. Level of participation in retirement plans, such as participation in mandatory or voluntary schemes, regional, or country-based schemes, or those with financial impact.</p>	-
201-4	Financial assistance received from government	<p>a. Total monetary value of financial assistance received by the organization from any government during the reporting period, including:</p> <ul style="list-style-type: none"> i .Tax relief and tax credits; ii .Subsidies; iii .Investment grants, research and development grants, and other relevant types of grant; iv .Awards; v .Royalty holidays; vi .Financial assistance from Export Credit Agencies (ECAs); vii .Financial incentives; viii .Other financial benefits received or receivable from any government for any operation. <p>b. The information in 201-4-a by country.</p> <p>c. Whether, and the extent to which, any government is present in the shareholding structure.</p>	-

Market Presence

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	<p>a. When a significant proportion of employees are compensated based on wages subject to minimum wage rules, report the relevant ratio of the entry level wage by gender at significant locations of operation to the minimum wage.</p> <p>b. When a significant proportion of other workers (excluding employees) performing the organization's activities are compensated based on wages subject to minimum wage rules, describe the actions taken to determine whether these workers are paid above the minimum wage.</p> <p>c. Whether a local minimum wage is absent or variable at significant locations of operation, by gender. In circumstances in which different minimums can be used as a reference, report which minimum wage is being used.</p> <p>d. The definition used for 'significant locations of operation'.</p>	Work-Life Balance
			ESG Data at a Glance
202-2	Proportion of senior management hired from the local community	<p>a. Percentage of senior management at significant locations of operation that are hired from the local community.</p> <p>b. The definition used for 'senior management'.</p> <p>c. The organization's geographical definition of 'local'.</p> <p>d. The definition used for 'significant locations of operation'.</p>	-

Indirect Economic Impacts

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
203-1	Infrastructure investments and services supported	<p>a. Extent of development of significant infrastructure investments and services supported.</p> <p>b. Current or expected impacts on communities and local economies, including positive and negative impacts where relevant.</p> <p>c. Whether these investments and services are commercial, in-kind, or pro bono engagements.</p>	Social Contribution Activities
203-2	Significant indirect economic impacts	<p>a. Examples of significant identified indirect economic impacts of the organization, including positive and negative impacts.</p> <p>b. Significance of the indirect economic impacts in the context of external benchmarks and stakeholder priorities, such as national and international standards, protocols, and policy agendas.</p>	-

Procurement Practices

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
204-1	Proportion of spending on local suppliers	<p>a. Percentage of the procurement budget used for significant locations of operation that is spent on suppliers local to that operation (such as percentage of products and services purchased locally).</p> <p>b. The organization's geographical definition of 'local'.</p> <p>c. The definition used for 'significant locations of operation'.</p>	-

Anti-corruption

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
205-1	Operations assessed for risks related to corruption	<p>a. Total number and percentage of operations assessed for risks related to corruption.</p> <p>b. Significant risks related to corruption identified through the risk assessment.</p>	Compliance
205-2	Communication and training about anti-corruption policies and procedures	<p>a. Total number and percentage of governance body members that the organization's anti-corruption policies and procedures have been communicated to, broken down by region.</p> <p>b. Total number and percentage of employees that the organization's anti-corruption policies and procedures have been communicated to, broken down by employee category and region.</p> <p>c. Total number and percentage of business partners that the organization's anti-corruption policies and procedures have been communicated to, broken down by type of business partner and region. Describe if the organization's anti-corruption policies and procedures have been communicated to any other persons or organizations.</p> <p>d. Total number and percentage of governance body members that have received training on anti-corruption, broken down by region.</p> <p>e. Total number and percentage of employees that have received training on anti-corruption, broken down by employee category and region.</p>	Compliance
			Personnel System and Human Resource Cultivation
205-3	Confirmed incidents of corruption and actions taken	<p>a. Total number and nature of confirmed incidents of corruption.</p> <p>b. Total number of confirmed incidents in which employees were dismissed or disciplined for corruption.</p> <p>c. Total number of confirmed incidents when contracts with business partners were terminated or not renewed due to violations related to corruption.</p> <p>d. Public legal cases regarding corruption brought against the organization or its employees during the reporting period and the outcomes of such cases.</p>	-

Anti-competitive Behavior

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	<p>a. Number of legal actions pending or completed during the reporting period regarding anti-competitive behavior and violations of anti-trust and monopoly legislation in which the organization has been identified as a participant.</p> <p>b. Main outcomes of completed legal actions, including any decisions or judgments.</p>	Not applicable

300: ENVIRONMENT

Materials

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
301-1	Materials used by weight or volume	a. Total weight or volume of materials that are used to produce and package the organization's primary products and services during the reporting period, by: i .Non-renewable materials used; ii .Renewable materials used.	Environmental Protection
301-2	Recycled input materials used	a. Percentage of recycled input materials used to manufacture the organization's primary products and services.	Environmental Protection
301-3	Reclaimed products and their packaging materials	a. Percentage of reclaimed products and their packaging materials for each product category. b. How the data for this disclosure have been collected.	-

Energy

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
302-1	Energy consumption within the organization	a. Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used. b. Total fuel consumption within the organization from renewable sources, in joules or multiples, and including fuel types used. c. In joules, watt-hours or multiples, the total: i .Electricity consumption ii .Heating consumption iii .Cooling consumption iv .Steam consumption d. In joules, watt-hours or multiples, the total: i .Electricity sold ii .Heating sold iii .Cooling sold iv .Steam sold e. Total energy consumption within the organization, in joules or multiples. f. Standards, methodologies, assumptions, and/or calculation tools used. g. Source of the conversion factors used.	Environmental Protection
			GHG Emissions and Energy Use Results
			ESG Data at a Glance
302-2	Energy consumption outside of the organization	a. Energy consumption outside of the organization, in joules or multiples. b. Standards, methodologies, assumptions, and/or calculation tools used. c. Source of the conversion factors used.	GHG Emissions and Energy Use Results
			ESG Data at a Glance
302-3	Energy intensity	a. Energy intensity ratio for the organization. b. Organization-specific metric (the denominator) chosen to calculate the ratio. c. Types of energy included in the intensity ratio; whether fuel, electricity, heating, cooling, steam, or all. d. Whether the ratio uses energy consumption within the organization, outside of it, or both.	GHG Emissions and Energy Use Results
			ESG Data at a Glance

GRI Table

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
302-4	Reduction of energy consumption	<p>a. Amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives, in joules or multiples.</p> <p>b. Types of energy included in the reductions; whether fuel, electricity, heating, cooling, steam, or all.</p> <p>c. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.</p> <p>d. Standards, methodologies, assumptions, and/or calculation tools used.</p>	GHG Emissions and Energy Use Results
302-5	Reductions in energy requirements of products and services	<p>a. Reductions in energy requirements of sold products and services achieved during the reporting period, in joules or multiples.</p> <p>b. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.</p> <p>c. Standards, methodologies, assumptions, and/or calculation tools used.</p>	GHG Emissions and Energy Use Results

Water and Effluents

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
303-1	Interactions with water as a shared resource	<p>a. A description of how the organization interacts with water, including how and where water is withdrawn, consumed, and discharged, and the water-related impacts caused or contributed to, or directly linked to the organization's activities, products or services by a business relationship (e.g., impacts caused by runoff).</p> <p>b. A description of the approach used to identify water-related impacts, including the scope of assessments, their timeframe, and any tools or methodologies used.</p> <p>c. A description of how water-related impacts are addressed, including how the organization works with stakeholders to steward water as a shared resource, and how it engages with suppliers or customers with significant water-related impacts.</p> <p>d. An explanation of the process for setting any water-related goals and targets that are part of the organization's management approach, and how they relate to public policy and the local context of each area with water stress.</p>	Environmental Protection
			ESG Data at a Glance
303-2	Management of water discharge-related impacts	<p>a. A description of any minimum standards set for the quality of effluent discharge, and how these minimum standards were determined, including:</p> <ul style="list-style-type: none"> i .How standards for facilities operating in locations with no local discharge requirements were determined; ii .Any internally developed water quality standards or guidelines; iii .Any sector-specific standards considered; iv .Whether the profile of the receiving waterbody was considered. 	Environmental Protection
			ESG Data at a Glance

GRI Table

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
303-3	Water withdrawal	<p>a. Total water withdrawal from all areas in megaliters, and a breakdown of this total by the following sources, if applicable:</p> <ul style="list-style-type: none"> i .Surface water; ii .Groundwater; iii .Seawater; iv .Produced water; v .Third-party water. <p>b. Total water withdrawal from all areas with water stress in megaliters, and a breakdown of this total by the following sources, if applicable:</p> <ul style="list-style-type: none"> i .Surface water; ii .Groundwater; iii .Seawater; iv .Produced water; v .Third-party water, and a breakdown of this total by the withdrawal sources listed in i-iv. <p>c. A breakdown of total water withdrawal from each of the sources listed in Disclosures 303-3-a and 303-3-b in megaliters by the following categories:</p> <ul style="list-style-type: none"> i .Freshwater (1,000 mg/L Total Dissolved Solids); ii .Other water (>1,000 mg/L Total Dissolved Solids). <p>d. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</p>	ESG Data at a Glance
303-4	Water discharge	<p>a. A description of how the organization interacts with water, including how and where water is withdrawn, consumed, and discharged, and the water-related impacts caused or contributed to, or directly linked to the organization's activities, products or services by a business relationship (e.g., impacts caused by runoff).</p> <p>b. A description of the approach used to identify water-related impacts, including the scope of assessments, their timeframe, and any tools or methodologies used.</p> <p>c. A description of how water-related impacts are addressed, including how the organization works with stakeholders to steward water as a shared resource, and how it engages with suppliers or customers with significant water-related impacts.</p> <p>d. An explanation of the process for setting any water-related goals and targets that are part of the organization's management approach, and how they relate to public policy and the local context of each area with water stress.</p>	ESG Data at a Glance
303-5	Water consumption	<p>a. Total water consumption from all areas in megaliters.</p> <p>b. Total water consumption from all areas with water stress in megaliters.</p> <p>c. Change in water storage in megaliters, if water storage has been identified as having a significant water-related impact.</p> <p>d. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modeled, or sourced from direct measurements, and the approach taken for this, such as the use of any sector-specific factors.</p>	<p>Environmental Protection</p> <hr/> <p>ESG Data at a Glance</p>

Biodiversity

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<p>a. For each operational site owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas, the following information:</p> <ul style="list-style-type: none"> i .Geographic location; ii .Subsurface and underground land that may be owned, leased, or managed by the organization; iii .Position in relation to the protected area (in the area, adjacent to, or containing portions of the protected area) or the high biodiversity value area outside protected areas; iv .Type of operation (office, manufacturing or production, or extractive); v .Size of operational site in km² (or another unit, if appropriate) vi .Biodiversity value characterized by the attribute of the protected area or area of high biodiversity value outside the protected area (terrestrial, freshwater, or maritime ecosystem); vii .Biodiversity value characterized by listing of protected status (such as IUCN Protected Area Management Categories, Ramsar Convention, national legislation). 	Biodiversity Preservation
304-2	Significant impacts of activities, products, and services on biodiversity	<p>a. Nature of significant direct and indirect impacts on biodiversity with reference to one or more of the following:</p> <ul style="list-style-type: none"> i .Construction or use of manufacturing plants, mines, and transport infrastructure; ii .Pollution (introduction of substances that do not naturally occur in the habitat from point and non-point sources); iii .Introduction of invasive species, pests, and pathogens; iv .Reduction of species; vi .Habitat conversion; vii .Changes in ecological processes outside the natural range of variation (such as salinity or changes in groundwater level). <p>b. Significant direct and indirect positive and negative impacts with reference to the following:</p> <ul style="list-style-type: none"> i .Species affected; ii .Extent of areas impacted; iii .Duration of impacts; iv .Reversibility or irreversibility of the impacts. 	Biodiversity Preservation
304-3	Habitats protected or restored	<p>a. Size and location of all habitat areas protected or restored, and whether the success of the restoration measure was or is approved by independent external professionals.</p> <p>b. Whether partnerships exist with third parties to protect or restore habitat areas distinct from where the organization has overseen and implemented restoration or protection measures.</p> <p>c. Status of each area based on its condition at the close of the reporting period.</p> <p>d. Standards, methodologies, and assumptions used.</p>	-
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	<p>a. Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk:</p> <ul style="list-style-type: none"> i .Critically endangered ii .Endangered iii .Vulnerable iv .Near threatened v .Least concern 	-

Emissions

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
305-1	Direct (Scope 1) GHG emissions	a. Gross direct (Scope 1) GHG emissions in metric tons of CO2 equivalent. b. Gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. c. Biogenic CO2 emissions in metric tons of CO2 equivalent. d. Base year for the calculation, if applicable, including: i .The rationale for choosing it; ii .Emissions in the base year; iii .The context for any significant changes in emissions that triggered recalculations of base year emissions. e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source. f. Consolidation approach for emissions; whether equity share, financial control, or operational control. g. Standards, methodologies, assumptions, and/or calculation tools used.	GHG Emissions and Energy Use Results
			ESG Data at a Glance
			Environmental Protection
305-2	Energy indirect (Scope 2) GHG emissions	a. Gross location-based energy indirect (Scope 2) GHG emissions in metric tons of CO2 equivalent. b. If applicable, gross market-based energy indirect (Scope 2) GHG emissions in metric tons of CO2 equivalent. c. If available, the gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. d. Base year for the calculation, if applicable, including: i .The rationale for choosing it; ii .Emissions in the base year; iii .The context for any significant changes in emissions that triggered recalculations of base year emissions. e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source. f. Consolidation approach for emissions; whether equity share, financial control, or operational control. g. Standards, methodologies, assumptions, and/or calculation tools used.	GHG Emissions and Energy Use Results
			ESG Data at a Glance
			Environmental Protection
305-3	Other indirect (Scope 3) GHG emissions	a. Gross other indirect (Scope 3) GHG emissions in metric tons of CO2 equivalent. b. If available, the gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. c. Biogenic CO2 emissions in metric tons of CO2 equivalent. d. Other indirect (Scope 3) GHG emissions categories and activities included in the calculation. e. Base year for the calculation, if applicable, including: i .The rationale for choosing it; ii .Emissions in the base year; iii .The context for any significant changes in emissions that triggered recalculations of base year emissions. f. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source. g. Standards, methodologies, assumptions, and/or calculation tools used.	GHG Emissions and Energy Use Results
			ESG Data at a Glance
305-4	GHG emissions intensity	a. GHG emissions intensity ratio for the organization. b. Organization-specific metric (the denominator) chosen to calculate the ratio. c. Types of GHG emissions included in the intensity ratio; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3). d. Gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all.	GHG Emissions and Energy Use Results
			ESG Data at a Glance

GRI Table

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
305-5	Reduction of GHG emissions	a. GHG emissions reduced as a direct result of reduction initiatives, in metric tons of CO2 equivalent. b. Gases included in the calculation; whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all. c. Base year or baseline, including the rationale for choosing it. d. Scopes in which reductions took place; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3). e. Standards, methodologies, assumptions, and/or calculation tools used.	GHG Emissions and Energy Use Results
			Initiatives to Cut GHGs
			ESG Data at a Glance
305-6	Emissions of ozone-depleting substances (ODS)	a. Production, imports, and exports of ODS in metric tons of CFC-11 (trichlorofluoromethane) equivalent. b. Substances included in the calculation. c. Source of the emission factors used. d. Standards, methodologies, assumptions, and/or calculation tools used.	Environmental Protection
			ESG Data at a Glance
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	a. Significant air emissions, in kilograms or multiples, for each of the following: i .NOx ii .SOx iii .Persistent organic pollutants (POP) iv .Volatile organic compounds (VOC) v .Hazardous air pollutants (HAP) vi .Particulate matter (PM) vii .Other standard categories of air emissions identified in relevant regulations b. Source of the emission factors used. c. Standards, methodologies, assumptions, and/or calculation tools used.	Environmental Protection
			ESG Data at a Glance

Waste

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
306-1	Waste generation and significant wasterelated impacts	a. For the organization's significant actual and potential waste-related impacts, a description of: i .The inputs, activities, and outputs that lead or could lead to these impacts; ii .Whether these impacts relate to waste generated in the organization's own activities or to waste generated upstream or downstream in its value chain.	Environmental Protection
			ESG Data at a Glance
306-2	Management of significant wasterelated impacts	a. Actions, including circularity measures, taken to prevent waste generation in the organization's own activities and upstream and downstream in its value chain, and to manage significant impacts from waste generated. b. If the waste generated by the organization in its own activities is managed by a third party, a description of the processes used to determine whether the third party manages the waste in line with contractual or legislative obligations. c. The processes used to collect and monitor waste-related data.	Environmental Protection
			ESG Data at a Glance
306-3	Waste generated	a. Total weight of waste generated in metric tons, and a breakdown of this total by composition of the waste. b. Contextual information necessary to understand the data and how the data has been compiled.	Environmental Protection
			ESG Data at a Glance

GRI Table

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
306-4	Waste diverted from disposal	<p>a. Total weight of waste diverted from disposal in metric tons, and a breakdown of this total by composition of the waste.</p> <p>b. Total weight of hazardous waste diverted from disposal in metric tons, and a breakdown of this total by the following recovery operations:</p> <ul style="list-style-type: none"> i .Preparation for reuse; ii .Recycling; iii .Other recovery operations. <p>c. Total weight of non-hazardous waste diverted from disposal in metric tons, and a breakdown of this total by the following recovery operations:</p> <ul style="list-style-type: none"> i .Preparation for reuse; ii .Recycling; iii .Other recovery operations. <p>d. For each recovery operation listed in Disclosures 306-4-b and 306-4-c, a breakdown of the total weight in metric tons of hazardous waste and of non-hazardous waste diverted from disposal:</p> <ul style="list-style-type: none"> i .onsite; ii .offsite. <p>e. Contextual information necessary to understand the data and how the data has been compiled.</p>	Environmental Protection
			ESG Data at a Glance
306-5	Waste directed to disposal	<p>a. Total weight of waste directed to disposal in metric tons, and a breakdown of this total by composition of the waste.</p> <p>b. Total weight of hazardous waste directed to disposal in metric tons, and a breakdown of this total by the following disposal operations:</p> <ul style="list-style-type: none"> i .Incineration (with energy recovery); ii .Incineration (without energy recovery); iii .Landfilling; iv .Other disposal operations. <p>c. Total weight of non-hazardous waste directed to disposal in metric tons, and a breakdown of this total by the following disposal operations:</p> <ul style="list-style-type: none"> i .Incineration (with energy recovery); ii .Incineration (without energy recovery); iii .Landfilling; iv .Other disposal operations. <p>d. For each disposal operation listed in Disclosures 306-5-b and 306-5-c, a breakdown of the total weight in metric tons of hazardous waste and of non-hazardous waste directed to disposal:</p> <ul style="list-style-type: none"> i .Onsite; ii .Offsite. <p>e. Contextual information necessary to understand the data and how the data has been compiled.</p>	Environmental Protection
			ESG Data at a Glance

Environmental Compliance

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
307-1	Non-compliance with environmental laws and regulations	<p>a. Significant fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations in terms of:</p> <ul style="list-style-type: none"> i .Total monetary value of significant fines; ii .Total number of non-monetary sanctions; iii .Cases brought through dispute resolution mechanisms. <p>b. If the organization has not identified any non-compliance with environmental laws and/or regulations, a brief statement of this fact is sufficient.</p>	Not applicable

Supplier Environmental Assessment

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
308-1	New suppliers that were screened using environmental criteria	a. Percentage of new suppliers that were screened using environmental criteria.	-
308-2	Negative environmental impacts in the supply chain and actions taken	a. Number of suppliers assessed for environmental impacts. b. Number of suppliers identified as having significant actual and potential negative environmental impacts. c. Significant actual and potential negative environmental impacts identified in the supply chain. d. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which improvements were agreed upon as a result of assessment. e. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which relationships were terminated as a result of assessment, and why.	CSR Supply Chain Management

400: Social

Employment

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
401-1	New employee hires and employee turnover	a. Total number and rate of new employee hires during the reporting period, by age group, gender and region. b. Total number and rate of employee turnover during the reporting period, by age group, gender and region.	ESG Data at a Glance
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	a. Benefits which are standard for full-time employees of the organization but are not provided to temporary or part-time employees, by significant locations of operation. These include, as a minimum: i .Life insurance; ii .Health care; iii .Disability and invalidity coverage; iv .Parental leave; v .Retirement provision; vi .Stock ownership; vii .Others. b. The definition used for 'significant locations of operation'.	Work-Life Balance
401-3	Parental leave	a. Total number of employees that were entitled to parental leave, by gender. b. Total number of employees that took parental leave, by gender. c. Total number of employees that returned to work in the reporting period after parental leave ended, by gender. d. Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work, by gender. e. Return to work and retention rates of employees that took parental leave, by gender.	Work-Life Balance
			ESG Data at a Glance

Labor/Management Relations

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
402-1	Minimum notice periods regarding operational changes	a. Minimum number of weeks' notice typically provided to employees and their representatives prior to the implementation of significant operational changes that could substantially affect them. b. For organizations with collective bargaining agreements, report whether the notice period and provisions for consultation and negotiation are specified in collective agreements.	Work-Life Balance

Occupational Health and Safety

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
403-1	Occupational health and safety management system	a. A statement of whether an occupational health and safety management system has been implemented, including whether: <ul style="list-style-type: none"> i .The system has been implemented because of legal requirements and, if so, a list of the requirements; ii .The system has been implemented based on recognized risk management and/or management system standards/guidelines and, if so, a list of the standards/guidelines. b. A description of the scope of workers, activities, and workplaces covered by the occupational health and safety management system, and an explanation of whether and, if so, why any workers, activities, or workplaces are not covered.	Occupational Safety & Health
			Safe and Stable Operation
403-2	Hazard identification, risk assessment, and incident investigation	a. A description of the processes used to identify work-related hazards and assess risks on a routine and non-routine basis, and to apply the hierarchy of controls in order to eliminate hazards and minimize risks, including: <ul style="list-style-type: none"> i .How the organization ensures the quality of these processes, including the competency of persons who carry them out; ii .How the results of these processes are used to evaluate and continually improve the occupational health and safety management system. b. A description of the processes for workers to report work-related hazards and hazardous situations, and an explanation of how workers are protected against reprisals. c. A description of the policies and processes for workers to remove themselves from work situations that they believe could cause injury or ill health, and an explanation of how workers are protected against reprisals. d. A description of the processes used to investigate work-related incidents, including the processes to identify hazards and assess risks relating to the incidents, to determine corrective actions using the hierarchy of controls, and to determine improvements needed in the occupational health and safety management system.	Occupational Safety & Health
			Safe and Stable Operation
403-3	Occupational health services	a. A description of the occupational health services' functions that contribute to the identification and elimination of hazards and minimization of risks, and an explanation of how the organization ensures the quality of these services and facilitates workers' access to them.	Occupational Safety & Health
			Safe and Stable Operation
403-4	Worker participation, consultation, and communication on occupational health and safety	a. A description of the processes for worker participation and consultation in the development, implementation, and evaluation of the occupational health and safety management system, and for providing access to and communicating relevant information on occupational health and safety to workers. b. Where formal joint management–worker health and safety committees exist, a description of their responsibilities, meeting frequency, decision-making authority, and whether and, if so, why any workers are not represented by these committees.	Occupational Safety & Health
			Safe and Stable Operation
			Work-Life Balance
403-5	Worker training on occupational health and safety	a. A description of any occupational health and safety training provided to workers, including generic training as well as training on specific work-related hazards, hazardous activities, or hazardous situations.	Safe and Stable Operation
			Occupational Safety & Health
			Personnel System and Human Resource Cultivation

GRI Table

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
403-6	Promotion of worker health	<p>a. An explanation of how the organization facilitates workers' access to non-occupational medical and healthcare services, and the scope of access provided.</p> <p>b. A description of any voluntary health promotion services and programs offered to workers to address major non-work-related health risks, including the specific health risks addressed, and how the organization facilitates workers' access to these services and programs.</p>	Work-Life Balance
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	<p>a. A description of the organization's approach to preventing or mitigating significant negative occupational health and safety impacts that are directly linked to its operations, products or services by its business relationships, and the related hazards and risks.</p>	-
403-8	Workers covered by an occupational health and safety management system	<p>a. If the organization has implemented an occupational health and safety management system based on legal requirements and/or recognized standards/guidelines:</p> <ul style="list-style-type: none"> i .The number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system; ii .The number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system that has been internally audited; iii .The number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system that has been audited or certified by an external party. 	Occupational Safety & Health
		<p>b. Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.</p> <p>c. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</p>	ESG Data at a Glance
403-9	Work-related injuries	<p>a. For all employees:</p> <ul style="list-style-type: none"> i .The number and rate of fatalities as a result of work-related injury; ii .The number and rate of high-consequence work-related injuries (excluding fatalities); iii .The number and rate of recordable work-related injuries; iv .The main types of work-related injury; v .The number of hours worked. <p>b. For all workers who are not employees but whose work and/or workplace is controlled by the organization:</p> <ul style="list-style-type: none"> i .The number and rate of fatalities as a result of work-related injury; ii .The number and rate of high-consequence work-related injuries (excluding fatalities); iii .The number and rate of recordable work-related injuries; iv .The main types of work-related injury; v .The number of hours worked. 	Responsible Care Activities
		<p>c. The work-related hazards that pose a risk of high-consequence injury, including:</p> <ul style="list-style-type: none"> i .How these hazards have been determined; ii .Which of these hazards have caused or contributed to high-consequence injuries during the reporting period; iii .Actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls. 	Occupational Safety & Health
		<p>d. Any actions taken or underway to eliminate other work-related hazards and minimize risks using the hierarchy of controls.</p> <p>e. Whether the rates have been calculated based on 200,000 or 1,000,000 hours worked.</p>	Safe and Stable Operation
		<p>f. Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.</p> <p>g. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</p>	ESG Data at a Glance

GRI Table

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
403-10	Work-related ill health	<p>a. For all employees:</p> <ul style="list-style-type: none"> i .The number of fatalities as a result of work-related ill health; ii .The number of cases of recordable work-related ill health; iii .The main types of work-related ill health. <p>b. For all workers who are not employees but whose work and/or workplace is controlled by the organization:</p> <ul style="list-style-type: none"> i .The number of fatalities as a result of work-related ill health; ii .The number of cases of recordable work-related ill health; iii .The main types of work-related ill health. <p>c. The work-related hazards that pose a risk of ill health, including:</p> <ul style="list-style-type: none"> i .How these hazards have been determined; ii .Which of these hazards have caused or contributed to cases of ill health during the reporting period; iii .Actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls. <p>d. Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.</p> <p>e. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</p>	Work-Life Balance
			ESG Data at a Glance

Training and Education

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
404-1	Average hours of training per year per employee	<p>a. Average hours of training that the organization's employees have undertaken during the reporting period, by:</p> <ul style="list-style-type: none"> i .Gender; ii .Employee category. 	Safe and Stable Operation
			Occupational Safety & Health
			Personnel System and Human Resource Cultivation
			ESG Data at a Glance
404-2	Programs for upgrading employee skills and transition assistance programs	<p>a. Type and scope of programs implemented and assistance provided to upgrade employee skills.</p> <p>b. Transition assistance programs provided to facilitate continued employability and the management of career endings resulting from retirement or termination of employment.</p>	Personnel System and Human Resource Cultivation
			Diversity
404-3	Percentage of employees receiving regular performance and career development reviews	<p>a. Percentage of total employees by gender and by employee category who received a regular performance and career development review during the reporting period.</p>	Work-Life Balance
			Personnel System and Human Resource Cultivation

Diversity and Equal Opportunity

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
405-1	Diversity of governance bodies and employees	a. Percentage of individuals within the organization's governance bodies in each of the following diversity categories: <ul style="list-style-type: none"> i . Gender; ii .Age group: under 30 years old, 30-50 years old, over 50 years old; iii .Other indicators of diversity where relevant (such as minority or vulnerable groups). b. Percentage of employees per employee category in each of the following diversity categories: <ul style="list-style-type: none"> i . Gender; ii .Age group: under 30 years old, 30-50 years old, over 50 years old; iii .Other indicators of diversity where relevant (such as minority or vulnerable groups). 	Diversity
			ESG Data at a Glance
405-2	Ratio of basic salary and remuneration of women to men	a. The total number of cases of discrimination that occurred during the reporting period b. The circumstances of the cases and the actions taken, include the following: <ul style="list-style-type: none"> i. Cases identified by the organization ii. Remediation plans in place iii. Remediation plans in place and results identified through regular internal management review processes iv. Cases where action is no longer necessary 	Personnel System and Human Resource Cultivation There is no difference in base salary by gender.

Non-discrimination

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
406-1	Incidents of discrimination and corrective actions taken	a. Total number of incidents of discrimination during the reporting period. b. Status of the incidents and actions taken with reference to the following: <ul style="list-style-type: none"> i .Incident reviewed by the organization; ii .Remediation plans being implemented; iii .Remediation plans that have been implemented, with results reviewed through routine internal management review processes; iv .Incident no longer subject to action. 	Compliance
			Respect for Human Rights

Freedom of Association and Collective Bargaining

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	a. Operations and suppliers in which workers' rights to exercise freedom of association or collective bargaining may be violated or at significant risk either in terms of: <ul style="list-style-type: none"> i .Type of operation (such as manufacturing plant) and supplier; ii .Countries or geographic areas with operations and suppliers considered at risk. b. Measures taken by the organization in the reporting period intended to support rights to exercise freedom of association and collective bargaining.	Work-Life Balance
			CSR Supply Chain Management

Child Labor

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
408-1	Operations and suppliers at significant risk for incidents of child labor	a. Operations and suppliers considered to have significant risk for incidents of: <ul style="list-style-type: none"> i .Child labor; ii .Young workers exposed to hazardous work. b. Operations and suppliers considered to have significant risk for incidents of child labor either in terms of: <ul style="list-style-type: none"> i .Type of operation (such as manufacturing plant) and supplier; ii .Countries or geographic areas with operations and suppliers considered at risk. c. Measures taken by the organization in the reporting period intended to contribute to the effective abolition of child labor.	Respect for Human Rights
			CSR Supply Chain Management

Forced or Compulsory Labor

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	a. Operations and suppliers considered to have significant risk for incidents of forced or compulsory labor either in terms of: <ul style="list-style-type: none"> i .Type of operation (such as manufacturing plant) and supplier; ii .Countries or geographic areas with operations and suppliers considered at risk. b. Measures taken by the organization in the reporting period intended to contribute to the elimination of all forms of forced or compulsory labor.	CSR Supply Chain Management
			Respect for Human Rights

Security Practices

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
410-1	Security personnel trained in human rights policies or procedures	a. Percentage of security personnel who have received formal training in the organization's human rights policies or specific procedures and their application to security. b. Whether training requirements also apply to third-party organizations providing security personnel.	-

Rights of Indigenous Peoples

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
411-1	Incidents of violations involving rights of indigenous peoples	a. Total number of identified incidents of violations involving the rights of indigenous peoples during the reporting period. b. Status of the incidents and actions taken with reference to the following: <ul style="list-style-type: none"> i .Incident reviewed by the organization; ii .Remediation plans being implemented; iii .Remediation plans that have been implemented, with results reviewed through routine internal management review processes; iv .Incident no longer subject to action. 	Not applicable

Human Rights Assessment

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
412-1	Operations that have been subject to human rights reviews or impact assessments	a. Total number and percentage of operations that have been subject to human rights reviews or human rights impact assessments, by country.	-
412-2	Employee training on human rights policies or procedures	a. Total number of hours in the reporting period devoted to training on human rights policies or procedures concerning aspects of human rights that are relevant to operations. b. Percentage of employees trained during the reporting period in human rights policies or procedures concerning aspects of human rights that are relevant to operations.	Respect for Human Rights
			Personnel System and Human Resource Cultivation
			ESG Data at a Glance
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	a. Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening. b. The definition used for 'significant investment agreements'.	-

Local Communities

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
413-1	Operations with local community engagement, impact assessments, and development programs	a. Percentage of operations with implemented local community engagement, impact assessments, and/or development programs, including the use of: <ul style="list-style-type: none"> i .Social impact assessments, including gender impact assessments, based on participatory processes; ii .Environmental impact assessments and ongoing monitoring; iii .Public disclosure of results of environmental and social impact assessments; iv .Local community development programs based on local communities' needs; v .Stakeholder engagement plans based on stakeholder mapping; vi .Broad based local community consultation committees and processes that include vulnerable groups; vii .Works councils, occupational health and safety committees and other worker representation bodies to deal with impacts; viii .Formal local community grievance processes. 	Social Contribution Activities
413-2	Operations with significant actual and potential negative impacts on local communities	a. Operations with significant actual and potential negative impacts on local communities, including: <ul style="list-style-type: none"> i .The location of the operations; ii .The significant actual and potential negative impacts of operations. 	Not applicable

Supplier Social Assessment

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
414-1	New suppliers that were screened using social criteria	a. Percentage of new suppliers that were screened using social criteria.	-
414-2	Negative social impacts in the supply chain and actions taken	<p>a. Number of suppliers assessed for social impacts.</p> <p>b. Number of suppliers identified as having significant actual and potential negative social impacts.</p> <p>c. Significant actual and potential negative social impacts identified in the supply chain.</p> <p>d. Percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of assessment.</p> <p>e. Percentage of suppliers identified as having significant actual and potential negative social impacts with which relationships were terminated as a result of assessment, and why.</p>	CSR Supply Chain Management

Public Policy

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
415-1	Political contributions	<p>a. Total monetary value of financial and in-kind political contributions made directly and indirectly by the organization by country and recipient/beneficiary.</p> <p>b. If applicable, how the monetary value of in-kind contributions was estimated.</p>	-

Customer Health and Safety

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
416-1	Assessment of the health and safety impacts of product and service categories	a. Percentage of significant product and service categories for which health and safety impacts are assessed for improvement.	Quality Management
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	<p>a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of products and services within the reporting period, by:</p> <ul style="list-style-type: none"> i. Incidents of non-compliance with regulations resulting in a fine or penalty; ii. Incidents of non-compliance with regulations resulting in a warning; iii. Incidents of non-compliance with voluntary codes. <p>b. If the organization has not identified any non-compliance with regulations and/or voluntary codes, a brief statement of this fact is sufficient.</p>	Quality Management

Marketing and Labeling

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
417-1	Requirements for product and service information and labeling	<p>a. Whether each of the following types of information is required by the organization's procedures for product and service information and labeling:</p> <ul style="list-style-type: none"> i .The sourcing of components of the product or service; ii .Content, particularly with regard to substances that might produce an environmental or social impact; iii .Safe use of the product or service; iv .Disposal of the product and environmental or social impacts; v .Other (explain). <p>b. Percentage of significant product or service categories covered by and assessed for compliance with such procedures.</p>	Quality Management
			Chemical Substance Management
417-2	Incidents of non-compliance concerning product and service information and labeling	<p>a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning product and service information and labeling, by:</p> <ul style="list-style-type: none"> i .Incidents of non-compliance with regulations resulting in a fine or penalty; ii .Incidents of non-compliance with regulations resulting in a warning; iii .Incidents of non-compliance with voluntary codes. <p>b. If the organization has not identified any non-compliance with regulations and/or voluntary codes, a brief statement of this fact is sufficient.</p>	Quality Management
417-3	Incidents of non-compliance concerning marketing communications	<p>a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by:</p> <ul style="list-style-type: none"> i .Incidents of non-compliance with regulations resulting in a fine or penalty; ii .Incidents of non-compliance with regulations resulting in a warning; iii .Incidents of non-compliance with voluntary codes. <p>b. If the organization has not identified any non-compliance with regulations and/or voluntary codes, a brief statement of this fact is sufficient.</p>	Not applicable

Customer Privacy

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	<p>a. Total number of substantiated complaints received concerning breaches of customer privacy, categorized by:</p> <ul style="list-style-type: none"> i .Complaints received from outside parties and substantiated by the organization; ii .Complaints from regulatory bodies. <p>b. Total number of identified leaks, thefts, or losses of customer data.</p> <p>c. If the organization has not identified any substantiated complaints, a brief statement of this fact is sufficient.</p>	Not applicable

Socioeconomic Compliance

No.	Title	Indicators for Reporting Requirements	Applicable Pages Heading
419-1	Non-compliance with laws and regulations in the social and economic area	a. Significant fines and non-monetary sanctions for non-compliance with laws and/or regulations in the social and economic area in terms of: <ul style="list-style-type: none"> i . Total monetary value of significant fines; ii . Total number of non-monetary sanctions; iii . Cases brought through dispute resolution mechanisms. b. If the organization has not identified any non-compliance with laws and/or regulations, a brief statement of this fact is sufficient. c. The context against which significant fines and non-monetary sanctions were incurred.	Important CSR Issues
			ESG Data at a Glance

SASB Table

Topics Concerning Sustainability Disclosure and Accounting Standards

Item	Indicator	Unit	Code	Disclosure details/publication location
Greenhouse gas (GHG) emissions	Global total of Scope 1 emissions, and proportion subject to emission restriction regulations	tons-CO ₂ e %	RT-CH-110a.1	GHG Emissions and Energy Use Results > Scope-specific GHG emissions (Tosoh Group) ESG Data (Environment) Proportion subject to emission restriction regulations: 99% * Data from World Bank on emissions from areas where carbon taxes and trading have been introduced.
	Discussion of long- and short-term strategies or plans for managing Scope 1 emissions, emission reduction targets, and analysis of performance against those targets	n/a	RT-CH-110a.2	Addressing Climate Change Issues > Basic concept Disclosing Information Based on TCFD Recommendations > Indicators and targets
Atmospheric Quality	Atmospheric emissions of the following pollutants: (1) Nitrogen Oxides (NO _x), excluding nitrous oxide (N ₂ O) (2) Sulfur Oxides (SO _x) (3) Volatile organic compounds (VOCs) (4) Hazardous air pollutants (HAPs)	Ton	RT-CH-120a.1	(1)(2) Environmental Protection > Atmospheric preservation ESG Data (Environment) (3)(4) Environmental Protection > Emission reduction measures for substances in the PRTR ESG Data (Environment)
Energy Management	(1) Total energy consumption (2) Percentage of grid electricity (3) Percentage of renewable energy (4) Total self-generated energy	GJ, %	RT-CH-130a.1	(1) GHG Emissions and Energy Use Results > Energy consumption index of energy used (Tosoh Group) 89,681 thousand gigajoules (GJ) (2) 6.1% (3) 1.4% (4) - (Cogeneration of in-house power)

SASB Table

Item	Indicator	Unit	Code	Disclosure details/publication location
Water Management	(1) Total water withdrawal volume (2) Areas where percentage of total water consumption and baseline water stress are high or extremely high	Thousands of cubic meters, %	RT-CH-140a.1	(1) Environmental Protection > Water preservation > Water utilization ESG Data (Environment) Percentage of areas where water stress is high or extremely high: 24% (2) Environmental Protection > Water preservation > Water ESG Data (Environment) * Total water consumption = Total water withdrawal volume - total water discharge Percentage of areas where water stress is high or extremely high: 24% * From risk assessments of all sites using Aqueduct
	Number of violations associated with water quality permits, standards, and regulations	Number of cases	RT-CH-140a.2	Environmental Protection > Water preservation ESG Data (Environment)
	Description of water management risks, and discussion of strategies and practices to mitigate those risks	n/a	RT-CH-140a.3	Environmental Protection > Water preservation > Water utilization
Hazardous Waste Management	Generation of hazardous waste, recycling rate	ton,%	RT-CH-150a.1	Environmental Protection > Industrial waste ESG Data (Environment)
Relationship with Community	Discussion of engagement process to manage risks and opportunities associated with benefits to community	n/a	RT-CH-210a.1	Communication with Stakeholders > Dialogue with shareholders
Occupational Safety and Health	(a) Direct employees and (b) contract employees (1) Total recordable incident rate (TRIR) (2) Fatality rate	Ratio	RT-CH-320a.1	Occupational Safety and Health > Fiscal 2024 results ESG Data (Society)
	Description of initiatives to evaluate, monitor, and reduce employee and contractor exposure to long-term (chronic) health risks	n/a	RT-CH-320a.2	Work-Life Balance > Health management
Product Design for Efficiency in the Usage Stage	Earnings from products where resource efficiency is considered in the usage stage	Yen	RT-CH-410a.1	-
Chemical Safety and Environmental Stewardship	(1) Percentage of products containing Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and Category 2 health and environmental hazardous substances (2) Percentage of the above products that have been evaluated for hazards.	Percentage of sales, %	RT-CH-410b.1	-
	(1) Manage chemicals of concern (2) Discuss strategies to reduce impact on humans and environment	n/a	RT-CH-410b.2	Chemical Substance Management > Enhanced chemical substance management > Product safety audits
Genetically Modified Crops	Percentage of revenue from products containing genetically modified organisms (GMOs)	Percentage of sales, %	RT-CH-410c.1	Not applicable

SASB Table

Item	Indicator	Unit	Code	Disclosure details/publication location
Managing Legal and Regulatory Environment	Explanation of Tosoh's stance on environmental and social government regulations and policy recommendations that affect the industry	n/a	RT-CH-530a.1	Responsible Care (RC) activities > Environment, safety, and health basic principles and Action guidelines Environmental Protection Addressing Climate Change Issues > Basic concept
Operational Safety, Preparedness, and Response to Emergencies	Process Safety Incident Count (PSIC); Process Safety Total Incident Rate (PSTIR); and Process Safety Incident Severity Rate (PSISR)	Number of cases, rate	RT-CH-540a.1	Safe and Stable Operations > Fiscal 2024 results ESG Data (Society)
	Number of accidents during transport	Number of cases	RT-CH-540a.2	Responsible Care (RC) Activities

Activity Indicators

Indicator	Unit	Code	Disclosure details/publication location
Productivity by Reportable Segment	Cubic meters and/or tons	RT-CH-000.A	-

Tosoh Group environmental date boundary list

Tosoh Group environmental date boundary list

	Addressing Climate Change Issues		Environmental Protection			
	Greenhouse gas emissions/Raw material/Product	Energy consumption (crude oil equivalent)	Atmospheric emissions	Water-related emissions	PRTR-designated substance emissions	Industrial waste
Tosoh Corporation	4	4	3	3	3	4
1 Nanyo Complex	◎	◎	○	○	○	○
2 Yokkaichi Complex	◎	◎	○	○	○	○
3 Tokyo Research Center	◎	◎	○	○	○	○
4 Head office & branch offices	◎	◎				●*3

Group companies (domestic)	34	34	27	27	28	28
1 Hokuetsu Kasei Co., Ltd.	◎	◎	○	○	○	○
2 Sankyo Chemical Industry, Inc.	○	○	○	○	○	○
3 Rensol Co., Ltd.	◎	◎	○	○	○	○
4 Toyo Polymer Co., Ltd.	◎	◎	○	○	○	○
5 Ace Pack Co., Ltd.	○	○	○	○	○	○
6 Tohoku Tosoh Chemical Co., Ltd.	◎	◎	○	○	○	○
7 Minamikyushu Chemical Industry Co., Ltd.	◎	◎	○	○	○	○
8 Taiyo Vinyl Corporation	●*1	●*1			○	○
9 Taihei Chemicals Ltd.	○	○	○	○	○	○
10 Plas-Tech Corporation	○	○	○	○	○	○
11 Asia Industry Co., Ltd.	◎	◎	○	○	○	○
12 Nippon Miractran Co., Ltd.	◎	◎	○	○	○	○
13 Tosoh Finechem Corporation	◎	◎	○	○	○	○
14 Tosoh AIA, Inc.	◎	◎	○	○	○	○
15 Tosoh Hi-Tec, Inc.	○	○	○	○	○	○
16 Tosoh Hyuga Corporation	◎	◎	○	○	○	○
17 Tosoh Ceramics Co., Ltd.	◎	◎	○	○	○	○
18 Tosoh Zeolum, Inc.	◎	◎	○	○	○	○
19 Tosoh Speciality Materials Corporation	◎	◎	○	○	○	○
20 Tosoh SGM Corporation	◎	◎	○	○	○	○
21 Tosoh Quartz Corporation	◎	◎	○	○	○	○
22 Tosoh Silica Corporation	◎	◎	○	○	○	○
23 Rin Kagaku Kogyo Co., Ltd.	◎	◎	○	○	○	○
24 Organo Corporation	○	○				
25 Organo Food Tech Co., Ltd.	○	○				
26 Tohoku Denki Tekko Co., Ltd.			○	○	○	○
27 Seiwakouki Co., Ltd.			○	○	○	○
28 Sanwa Construction, Co., Inc.			○	○	○	○
29 Tosoh Kasumi Engi Inc.			○	○	○	○
30 Tosoh Logistics Corporation	○	○				
31 Koun Industry Co., Ltd.	○	○				
32 Keiyo Koun Corporation	○	○				
33 Yokkaichi Koun Corporation	○	○				
34 Yamaguchi Koun Corporation	○	○				
35 Koun Marine Co., Ltd.	○	○				
36 Toho Unyu Co., Ltd.	○	○				
37 Hyuga Unyu Co., Ltd.	○	○				
38 Kansai Kaiun Co., Ltd.	○	○				
39 Kasumi Kyodo Jigyo			○	○	○	○

Group companies (overseas)	19	19				
1 Mabuhay Vinyl Corporation	◎	◎				
2 Philippine Resins Industries, Inc.	◎	◎				
3 Tosoh (Guangzhou) Chemical Industries, Inc.	◎	◎				
4 PT. Standard Toyo Polymer	◎	◎				
5 Tosoh Polyvin Corporation	◎	◎				
6 Tosoh (Ruian) Polyurethane Co., Ltd.	◎	◎				
7 Tosoh (Shanghai) Polyurethane Co., Ltd.	◎	◎				
8 Tosoh Bioscience LLC	○	○				
9 Tosoh Hellas Single Member S.A.	◎	◎				
10 Tosoh Advanced Materials Sdn. Bhd.	◎	◎				
11 Tosoh SMD, Inc.	○	○				
12 Tosoh SMD Korea, Ltd.	○	○				
13 Tosoh SMD Shanghai Co., Ltd.	○	○				
14 Tosoh Quartz, Inc.	○	○				
15 Tosoh Quartz Co., Ltd.	○	○				
16 Tosoh Quartz Korea Co., Ltd.	○	○				
17 Tosoh Namhae Silica Corporation	△	△				
18 Tosoh Logistics Warehouse Co., Ltd.	○	○				
19 Oriental Marine Corporation	●*2	●*2				

Addressing Climate Change Issues

◎ Target of calculation from FY2019.

○ Target of calculation from FY2022, however Scope2 emissions from FY2019 to FY2021 have been retroactively revised to match the date calculation method for FY2022.

△ Target of calculation from FY2024.

*1 Yokkaichi Plant data is included within that of the Yokk

*2 Included in Tosoh Logistics Corporation

*3 Includes head office only

Scope of aggregation

【Scope of aggregation】

* If the scope of aggregation is Tosoh Corporation employees, unless otherwise noted, the table below applies.

From fiscal 2023, the scope of aggregation will be changed to Tosoh Corporation employees (including loaned staffs, excluding accepted seconded person).

* If the scope of aggregation is consolidated, it includes Tosoh and 93 domestic and overseas consolidated subsidiaries.

* If the scope of aggregation is Japan, it includes Tosoh and 50 domestic consolidated subsidiaries.

* The aggregation period is from April 1st to March 31st of each fiscal year, or as of March 31st, unless otherwise noted.

The aggregation period for overseas group companies is from January 1st to December 31st of each fiscal year, or as of December 31st

Tosoh Corporation employees	Employees * Including loaned staffs	Full-time employees	Career-track positions	Executive positions
				Leadership positions, Managerial positions
			General employee	Leadership positions, Managerial positions
		Fixed-term employees	Rehired employees	
			Contract worker	Full-time contract workers and special duty contract worker
Other		Accepted seconded person		
		Part-time contract worker		
		Temporary employees		
		Other (part-time employees)		

About Our Reporting

Editorial Policy

This report (*Tosoh CSR Reporting 2024*) provides comprehensive information on the Tosoh Group's nonfinancial performance, including details on its environmental, social, and governance (ESG) initiatives, and a message from its president. For fiscal year 2024, we have expanded the content on the social impact of our products and strengthened the disclosures related to our response to climate change and our commitment to human rights.

We also publish the *TOSOH REPORT 2024*, which relates the Tosoh Group's initiatives targeted at a broad range of stakeholders, including investors, to enhance its corporate value over the medium to long term. The Tosoh Report offers insights into the Tosoh Group's activities and vision and resolve to engage with its stakeholders to further its corporate value.

Guidelines

- GRI Global Reporting Initiative Sustainability Reporting Guidelines
- SASB (Sustainability Accounting Standards Board) Standards
- ISO 26000
- Japan Ministry of the Environment, Environmental Reporting Guidelines 2018
- Japan Ministry of the Environment, Environmental Accounting Guidelines 2005
- Japan Ministry of Economy, Trade and Industry, Guidance for Collaborative Value Creation



Scope of Report

Unless otherwise stated, this report covers Tosoh Corporation on a nonconsolidated basis. Financial information, however, is presented on a consolidated basis.

Reporting Period

April 1, 2023, through March 31, 2024 (some information from April 2024 onward is included)

Issue

January 2025