

# TOYOBO GROUP SUSTAINABILITY REPORT 2023

## ● Sustainability

Sustainability of the Toyobo group is to contribute to solving issues for people and the Planet through our business, and to aim for our "Sustainable Growth".

### SUSTAINABLE VISION 2030 >

We launched our SUSTAINABLE VISION 2030 in May 2022



- [Corporate Philosophy Framework TOYOBO PVVs](#)
- [TOYOBO Group Charter of Corporate Behavior](#)
- [Sustainable Vision 2030](#)
- [Sustainability Management](#)
- [Our Value Creation Process](#)
- [Materiality](#)
- [TCFD](#)

- [Dialogue with Stakeholders](#)
- [Dialogue with ESG Investors](#)
- [External Evaluation \(ESG Factors\)](#)

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## Activity Report



### Environment >

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- [Eco-Conscious Products](#)
- [Climate Change](#)
- [Plastic Resource Circulation](#)
- [Waste Reduction](#)
- [Water Resources](#)
- [Chemical Substance Management and Reducing Environmental Impact](#)
- [Biodiversity](#)



### Social >

- [Respect for Human Rights](#)
- [Safety, Disaster Prevention](#)
- [Quality](#)
- [Supply Chain Management](#)
- [Human Resource Management](#)
- [Diversity & Inclusion](#)
- [Health and Productivity Management](#)
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### Governance >

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- [Compliance](#)
- [Risk Management](#)
- [Tax Affairs Policy](#)

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## ESG Related Data

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[Report Library](#) →

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[TCFD Index](#) →

[External Assurance](#) →

[Editorial Policy](#) →

# TOYOBO

# TOYOBO GROUP SUSTAINABILITY REPORT 2023

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# Message from the President

~ Aiming to be a sustainable company that contributes to the sustainability of society ~

To Our Stakeholders,

Our company celebrated 140 years of business in May 2022. I would like to express my sincere gratitude to all of our stakeholders for their understanding and support over the years since our founding.

With our corporate philosophy of "*Jun-Ri-Soku-Yu*" (adhering to reason leads to prosperity) as its starting point, our Group's vision is to become a group that continues to create the solutions needed by people and the planet with our materials and science. In May 2022, we formulated our Sustainable Vision 2030, which aims to achieve sustainable growth. This sustainable growth means that we contribute to the sustainability of the planet and society through our products, services and technologies, and thereby achieve sustainable growth for ourselves.

In the recent global situation, geopolitical tensions triggered by Russia's invasion of Ukraine, the prolonged impact of COVID-19, and the intensification and increase in the frequency of natural disasters due to climate change, have all brought the sustainability of society into further question. In addition, there is a growing demand for greenhouse gas reduction and various initiatives to achieve carbon neutrality are accelerating around the world, while there is an urgent need to respect human rights in order to eliminate human rights violations such as forced labor and child labor.

To date, our group has taken numerous challenges and strived to provide products and services that respond to changes in the social environment surrounding us with the understanding and support of our stakeholders. Now, at this time, I am strongly convinced that our mission is to address these pressing issues and contribute through our business to the realization of a sustainable society, that is, a "prosperous" society where people can live with peace of mind, and that it is my mission to lead this endeavor, which will lead to a sustainable increase in the corporate value of our group.

Our group will enter a new turning point in April 2023 with the launch of Toyobo MC Corporation, a joint venture with Mitsubishi Corporation. The cutting-edge technologies and products that Toyobo has cultivated over the years and Mitsubishi Corporation's network of operations in Japan and overseas. We will carve out a new future through business innovation brought about by the "integration and fusion" of different cultures and strengths.

In order to continue to be a corporate group that is required by people and the planet, the Toyobo Group will not be afraid to change, will enjoy change and will create change.

We look forward to your continued support and encouragement.



April 1, 2023  
President and Representative Director, CEO & Co-CEO

*Shouji Takemichi*

A message from the president is also posted here.

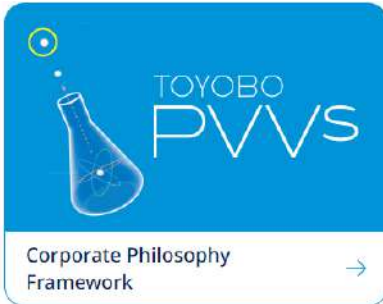
• [Sustainable Vision 2030 \(2.1MB\)](#) 

• [CEO Message in the Integrated Report 2023 \(453KB\)](#) 

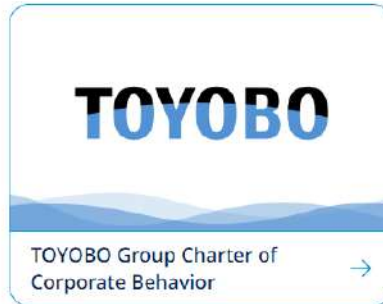
**< Related information >**

- Corporate Philosophy Framework TOYOBO PVVs  
<https://www.toyobo-global.com/company/philosophy.html>
- 2025 Medium-Term Management Plan  
<https://ir.toyobo.co.jp/en/ir/library/plan.html>
- Sustainable Vision 2030  
[https://www.toyobo-global.com/pdf/sustainability/topmessage/en\\_sustainable\\_vision2030.pdf](https://www.toyobo-global.com/pdf/sustainability/topmessage/en_sustainable_vision2030.pdf) (2.1MB) 
- 140th anniversary project  
<https://www.toyobo-global.com/140th/logo-and-monument/>

# TOYOBO Group's Sustainability



In March 2019, we established the corporate philosophy framework TOYOBO PVWS. "PVWS" is the name of the TOYOBO group's and philosophy framework and is a combination of the English acronyms for "principle," "vision," and "values".



We will act with high ethical standards and social common sense based on the ten principles in order to continue being a corporation that people trust.



Sustainable Vision 2030 projects changes in the future business environment and shows the ideal state we seek based on our corporate philosophy, as well as our sustainability indices and action plans.



We are instilling the concept of sustainability along with our corporate philosophy into our business approach and integrating sustainability into our management and business strategies as we seek to fulfill our long-term vision.



Our value creation process takes the TOYOBO PVWS corporate philosophy framework as its starting point, and demonstrates how we use various types of capital to create value and increase value for all stakeholders.



Our materiality is organized along the two axes of "materiality for stakeholders" and "materiality for the group." We will also regularly review the material issues.



We announced our support for the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD), and have been working on initiatives and disclosures that follow them.

# Corporate Philosophy Framework

We systematized the TOYOBO Group philosophy of "Jun-Ri-Soku-Yu".

The TOYOBO PVVs is the foundation on which we actively seek to build a flourishing society while also growing as a company.

P V V S

## Principle

TOYOBO's founding spirit and beliefs

## Vision

What kind of added value should we provide to society?

## Values

TOYOBO Spirit

The standards that we prize

## Principle

### "Jun-Ri-Soku-Yu"

Adhering to reason leads to prosperity

#### "Jun-Ri"

Do what should be done (positive standpoint)  
Don't do what should not be done (defensive standpoint)

#### "Soku-Yu"

Adhering to "Jun-Ri" leads to a prosperous society while also realizing self-growth

# Vision

**We will continue to create  
the solutions needed by people  
and the earth with our materials  
and science.**

We aim to go beyond mere manufacturing (providing materials) to create science, in other words: new value through ingenuity and ideas.

We aim to be a group that realizes unique benefits (provides solutions) by combining materials and science.

# Values

**We welcome change, enjoy change, and create change.**

## TOYOBO Spirit 9 Commitments

### Challenge Value the courage to try reaching beyond conventional limits



#### Think Ahead

Constantly look for changes and needs, and swiftly do what must be done



#### Create

Approach our daily routines with a flexible mind and devise better ways to carry out our jobs



#### Accomplish

Think of feasible ways to fulfill our work without compromising quality. Complete to the very end

### Reliability Value a safe and secure workplace and solutions that surpass customers' expectations



#### Safety First

Priority on safety first for ourselves, our associates, and society



#### Customer Satisfaction

Do our utmost to discern precisely what the customer wants and always stay one step ahead



#### Factual Basis

Go to the actual worksite, verify the actual conditions, and identify the actual issue

### Collaboration Value individuality and diverse viewpoints



#### Mutual Communication

Discuss issues with everyone involved regardless of their position in their company, the organizational structure, or the client's company until a mutually acceptable solution is found



#### Diversity

Recognize the value of people with different opinions and backgrounds and work together to achieve high targets



#### Providing Opportunities

People grow by trying, no matter if they succeed or fail. Provide opportunities to the next generation and learn for ourselves



# TOYOBO Group Charter of Corporate Behavior

This Charter of Corporate Behavior applies to all directors, corporate auditors, executive officers, and employees of the Toyobo Group (TOYOBO CO., LTD. and all of its affiliated companies). The term "Toyobo Group" as used in this charter refers to all of these people.

We here at the Toyobo Group contribute to the realization of a sustainable society by aiming to become a Group that continues to create the solutions needed by people and the earth with materials and science. Also, in order to continue being a corporation that people trust, we will act with high ethical standards and social common sense based on the following ten principles.

## 1. Contribution to a sustainable society

We will contribute to sustainable economic growth and the resolution of social issues by developing and providing products and services that will create a safe and affluent future.

## 2. Fair business practices

We will maintain a sound relationship with society, including our customers and business partners, by engaging in fair competition and transactions, and responsible procurement.

- 2-1. We will appropriately use and manage trade secrets, personal data and other such forms of information.
- 2-2. We will engage in fair and unrestricted competition in adherence to laws and regulations relevant to fair competition such as antitrust law.
- 2-3. We will establish proper transaction policies and engage in responsible procurement and logistics in a manner that supports development of a sustainable society.
- 2-4. We will properly manage and declare cargo when importing and exporting, in adherence to relevant laws and regulations.
- 2-5. We will not engage in corrupt practices such as offering gifts, hospitality, monies, or other benefits to public officials, customers or business partners, whether locally or overseas, that would result in gaining unfair benefits, or accepting offers of such gifts, hospitality, monies or other benefits.
- 2-6. We will build highly transparent relationships with those in politics and government.
- 2-7. We will protect and make effective use of our intellectual property rights derived from results we have obtained through research and development, and will likewise respect the intellectual property rights of others. We will appropriately display our trademarks and otherwise take steps to heighten the brand value of the Toyobo Group.
- 2-8. We will not engage in accounting practices that would result in erroneous financial statements.
- 2-9. We will make decisions based on our *Jun-Ri-Soku-Yu* (adhering to reason leads to prosperity) corporate philosophy and adhere to our in-house rules.

## 3. Communication with stakeholders

We will carry out fair and appropriate information disclosure and enhance corporate value through communication with our stakeholders.

- 3-1. We will appropriately disclose information in a timely manner and otherwise strive to maintain constructive dialogue with society.
- 3-2. We will carefully handle information and will not engage in insider trading.

## 4. Respect for human rights

We support the International Bill of Human Rights and Guiding Principles on Business and Human Rights and will conduct business activities that respect the human rights of all persons.

- 4-1. We will conduct our business activities in a manner that shuns harassment and discrimination on grounds of race, religion, gender, age, family origin, nationality, disability, sexual orientation or otherwise. Moreover, we will reject child and forced labor. We will also respect collective bargaining rights and freedom of association based on the laws and regulations of the countries and regions in which we do business.

## **5. Earn customers' trust and satisfaction**

We will strive to ensure the quality and safety of our products and services and earn the trust and satisfaction of customers and consumers.

- 5-1. We will take steps to ensure the quality and safety of our products and services by building appropriate Quality Management System.
- 5-2. We will provide accurate and precise information regarding our products and services in order to earn our customers' satisfaction and trust.
- 5-3. We will engage the proper procedures in carrying out quality inspections and other such testing, and will appropriately handle data and other information.
- 5-4. We will strive to develop products that contribute to society. Moreover, we will appropriately manage and use external funds particularly those covering research expenses, and will strongly refrain from acts that involve fabrication or falsification of data results.
- 5-5. We will sincerely address customer inquiries, complaints and other interactions and will strive to manufacture products and provide services in a manner that leverages such feedback.

## **6. Active employee participation**

We will respect employee diversity and support work practices that allow employees to demonstrate their individual skills. Also, we will provide workplaces that are conducive to productive work while taking health and safety into consideration.

- 6-1. We will work toward developing workplace environments that facilitate active participation among a diverse range of human talent.
- 6-2. We will prevent various types of harassment and other forms of mistreatment in our workplaces, and accordingly we will not engage in discriminatory practices neither in regard to hiring nor terms of employment.
- 6-3. We will strive to create workplaces that are safe, hygienic and rewarding, and will work to prevent excessive workloads and reduce overtime work.

## **7. Engagement in environmental issues**

We will strive to improve energy conservation and reduce/recycle the resources used by our business, and move forward with the development of products and technologies that contribute to reducing the burden on the environment.

- 7-1. We will strive to improve energy conservation and reduce/reuse the resources used by our business, and will implement measures that address our environmental risks.

## **8. Social contribution**

We will actively participate in society as a good corporate citizen and contribute to its development.

## **9. Thorough crisis management**

We will conduct thorough crisis management in the face of actions by antisocial forces, terrorism, cyber attacks, natural disasters and other crises that pose a threat to corporate activity.

- 9-1. We will strive to prevent disasters and will also develop a crisis management framework for addressing emergency situations.
- 9-2. We will take a firm stand against antisocial forces and otherwise fully reject any and all ties therewith.
- 9-3. We will strive to ensure cyber-security.

## **10. Responsibilities of the management**

Directors and the Board of Directors, operating under the spirit of this Charter, shall strive to resolve issues while working together with the entire Group and should also encourage behavior based on the principles of this Charter within the Group's supply chain. In the event that the Group violates the spirit of this Charter and loses the trust of society, directors and the Board of Directors shall proactively take responsibility to respond to the situation, including resolving the problem, investigating the causes, and preventing the problem from recurring.

Seiji Narahara  
Representative Director, President and CEO, Co-COO  
TOYOBDO CO., LTD.  
October 26, 2020

# Sustainable Vision 2030

## Sustainable Vision 2030

In May 2022, Toyobo observed the 140th anniversary of its founding. We launched our Sustainable Vision 2030 and 2025 Medium-Term Management Plan.

Sustainable Vision 2030 anticipates changes in the business environment of the future and shows the ideal state we seek based on our corporate philosophy, as well as our sustainability indicators and action plans. We want to be a sustainable company that helps promote sustainability, while changing our corporate culture to one oriented toward sustainable growth.

## Realizing Sustainable Growth

Toyobo has formulated Sustainable Vision 2030 in May 2022 to achieve sustainable growth while moving away from survival thinking that overemphasizes short-term results. Through innovation and the 3Ps (people, planet, and prosperity), we aim to usher in both a prosperous society and the enhancement of corporate value by making contributions to solving social issues.

### From survival thinking

Deficits are bad, surpluses are good

### to sustainable-growth orientation

- Contributing to social sustainability
- Becoming a sustainable (growing) company

## In formulating the vision

We have formulated this vision with a strong determination to make sustainability the cornerstone of our management. The subtitle of our long-term vision is "Achieving Sustainable Growth". Going forward, we will make a major shift to a "sustainable growth orientation," moving away from the culture of "survival thinking" that was fostered during the long-term structural reform period, in other words, away from an emphasis on short-term results.

Our company's "Sustainable Growth" has two meanings. The first is that our company itself is sustainable and sustainable. The second is to improve the sustainability of society. "Sustainable Growth" expresses our desire to realize the former by contributing to the latter.

## Our Vision for 2030

– Realization of a "prosperous" society where people can live with peace of mind and a spiral increase in corporate value –

From the perspective of sustainability, which is a global issue, we have clarified more specifically "in what areas and how we will contribute to sustainability."

The "ideal state" of our group in 2030 is a state of spiral improvement, in which we realize a "prosperous" society where people can live with peace of mind by solving the following five social issues, and as a result, our corporate value will also increase.

### "Jun-Ri-Soku-Yu": adhering to reason leads to prosperity

|  |  |  |   |  |
|--|--|--|---|--|
| Ideals we seek to realize  | <b>Innovation</b> To be a group that continually creates materials and science that become solutions for people and the planet   |  |   |  |
| Social change and trends in 2030   | Standardization in handling safety, human rights and social justice issues   | Increased and diversified needs concerning access to medical care/health promotion | Demographic changes, humancentric innovation, accelerated urbanization  | Decarbonization, resource circulation, limited natural resources   |
| Social issues to be solved through commitment  | <b>People</b>  |  | <b>Planet</b>   |  |
|  |  |  | <b>1 Employee well-being and human rights in the supply chain</b><br>• People First: employee safety, company pride and rewarding work<br>• Respect for human rights across the entire supply chain |  |
| <b>2 A healthy lifestyle and health care</b><br>• Contributing to the field of epidemiology<br>• Contributing to improve quality of life |  |  |   |  |
| Goals for the future   |  |  | <b>3 Smart communities and comfortable spaces</b><br>• Contributing to the realization of a humancentric digital society<br>• Creating comfortable spaces   | <b>4 A decarbonized and circular society</b><br>• Contributing to carbon neutrality<br>• Establishing an ecosystem for circulating resources |
|  |  |  | <b>5 Clean water areas, air and soil, and the preservation of biodiversity</b><br>• Improving the environment through solutions<br>• Food loss reduction and sustainable food                       |  |
| Where we'd like to be by 2030  | <b>Prosperity</b> Ushering in both a prosperous society where people can live with peace of mind, and the enhancement of corporate value   |  |   |  |
|  | 1) Contributing to solving social issues through our business<br>2) Sustainable growth: a solid foundation and trajectory for future growth<br>3) People First: safe and secure workplaces, rewarding work employees can be proud of, and the opportunity for personal development |  |   |  |
|  | <b>■ Sustainability Indicators</b><br>Serious incidents <b>zero</b><br>Employee engagement score <b>over 70%</b><br>GHG emissions cut (over FY2014) Scope1 and 2 <b>over 46%</b><br>Ratio of green materials in main business operations* <b>60%</b>                               |  | <b>■ Financial Indicators</b><br>Consolidated sales <b>600 billion yen</b><br>Operating profit margin <b>over 8.3%</b><br>ROE <b>over 9%</b><br>ROIC <b>over 7%</b>                                 |  |

## Challenges toward the future — Solving five social issues —

With an eye on various environmental changes and issues, we forecast how the business environment will evolve in the next 10 years. Based on these forecasts, we have established "five social issues" that the group can contribute to solving, such as human rights throughout the supply chain, people's health, creating comfortable spaces, and realizing a decarbonized society. We will contribute to solving these issues through our own endeavors and by providing solutions.

### "People: contributing to solutions for social issues in a humancentric way"

1. Employee well-being and human rights in the supply chain
2. A healthy lifestyle and health care
3. Smart communities and comfortable spaces

### "Planet: contributing to solutions for social issues in consideration of the entire Earth"

1. A decarbonized and circular society
2. Clean water areas, air and soil, and the preservation of biodiversity

What society requires, what Toyobo can contribute, and targets for FY2030 (478KB)



## Sustainability goals by social issue

### Five Social Issues

### FY2031 target



**Employee well-being and human rights in the supply chain**

- **Zero** industrial accidents in workplaces
- Employee engagement score: **over 70%**
- Respect for human rights across the entire supply chain
- Expanding and improving educational and training systems for employees

- [Human Resource Management](#)
- [Health and Productivity Management](#)
- [Diversity & Inclusion](#)
- [Supply Chain Management](#)



### A healthy lifestyle and health care

- Number of tests conducted by the provision of infectious disease diagnostics: **10 million per year**
- Number of dialysis patients provided with dialysis membranes: **250,000**
- Share in the market of raw materials for biochemical and other tests: **30%**
- Number of patients provided with regenerative inducers: **100,000 per year**
- Proliferation and expanded sales of 3D network-structured fiber materials in the medical and nursing care fields



### Smart communities and comfortable spaces

- Sales volume of product groups supporting DX: **1.5-fold** increase over FY2021
- Total sales of car cabin air filters: **1.2 million units**
- **Creation of a comfortable space** inside electric vehicles through sound and heat management



### A decarbonized and circular society

#### A decarbonized society

- Cutting emissions in Scope 1 & 2 by **over 46%** in FY2031 vs FY2014  
**Net zero** in FY2051 (Avoided emissions > Amount of GHG emissions throughout the entire value chain)
- **Entry into new solution fields**  
Osmotic power generation, offshore cables and insulating resin for wind power generation, adhesive sheets for cells used in fuel cell vehicles, electrode materials for large storage batteries, hydrogen-related materials, etc

#### A circular society

- Achieve final disposal rate from business activities: **less than 1%**
- Ratio of green films: **60%**
- Join resource circulation ecosystem (R PLUS JAPAN)

- [Climate Change](#)
- [Plastic Resource Circulation](#)
- [Waste Reduction](#)
- [Chemical Substance Management and Reducing Environmental Impact](#)



### Clean water areas, air and soil, and preservation of biodiversity

- Air volume treated by the volatile organic compound recovery unit: **7 billion Nm<sup>3</sup> per year**
- Desalination of sea water by membrane: equivalent to the volume of tap water for **10 million people**
- Sales volume of highly functional films that contribute to reducing food loss: **fourfold** increase over FY2021
- Entry into sustainable food field

- [Water Resources](#)
- [Biodiversity](#)

Note) "Employees' well-being and human rights in the supply chain" corresponds to the materialities of "human capital" and "safety and disaster prevention."  
Others correspond to their similarly named materialities.

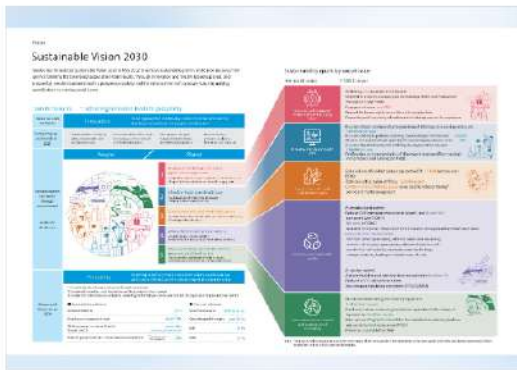
## For achieving sustainable vision 2030 — the people at our worksites —

Being a company where each and every person works with a sense of pride and purpose is fundamentally essential to achieving sustainable growth. The people at our worksites are naturally the central players in the long-term vision. The long-term vision shows clearly the company what we want to be and the areas we want to contribute. Linking the work in front of us to company's future gives meaning to the work each of us is doing so we can all make the vision our own.

## Fiscal 2023 initiatives that contribute to solving the five social issues



Fiscal 2023 initiatives that contribute to solving the five social issues(143KB)



Sustainable Vision 2030 in the Integrated Report 2022 (1.7MB)



Sustainable Vision 2030 press release (2.1MB)



- [Medium-Term Management Plan](#)

# Sustainability Management

↓ Our officer's commitment   ↓ Policy and approach   ↓ Participation in initiatives

## Our officer's commitment

We accomplish sustainable growth by solving social issues through our business and with steady advancement of our initiatives



Nobuya Fujiwara  
Managing Executive Officer  
Head of Corporate  
Sustainability Division

Toyobo group has strengthened its sustainability initiatives since fiscal 2021, and has achieved definite results over these past three years. In Sustainable Vision 2030, the long-term vision we announced in May 2022, we identified five social issues that we can solve through our contributions, given the society we envision for 2030, including climate change, biodiversity, and human rights.

Regarding measures against climate change, we revised our GHG Emissions Reduction Plan, raising the fiscal 2031 reduction target for Scope 1 and 2 from 30% of the fiscal 2014 level to 46% or higher, and also setting a new reduction target for Scope 3. Our reduction target has been recognized as adhering to the levels stipulated by the Paris Agreement, and was also certified by the global Science Based Targets initiative in December 2022. As we work to reduce GHG emissions throughout our supply chain, we will strengthen our collaboration with our diverse stakeholders.

Our biodiversity conservation efforts include joining the 30 by 30 Alliance for Biodiversity in November 2022, an initiative to conserve 30% or more of land and sea as healthy ecosystems by the year 2030. We also applied for OECM international certification for forests owned by our group. We are implementing activities toward the (nature-positive) goal of stopping biodiversity loss and effecting restoration.

Regarding business and human rights, in October 2020 we laid out Toyobo Group Human Rights Policy, and have stated our “respect for human rights throughout our supply chain” at the top of Sustainable Vision 2030. Having begun practicing due diligence in human rights from fiscal 2023, we place priority for our group on gaining a thorough understanding of the operational status of non-Japanese technical trainees. After starting the effort in Japan, we will implement a phased expansion to other countries in the future. Regarding our supply chain, we have established CSR Procurement Guidelines for all suppliers, and are advancing efforts to ensure our policies are understood, including through dialogue with suppliers that have issues.

Corporate sustainability consists of solving social issues through our business.

We have numerous products and solutions that contribute directly to solving social issues, and while expanding those products, we will generate new businesses by evolving and integrating our stock of technologies accumulated in the past. We could, for example, expand our products that bring about a reduction in carbon footprint through a combination of Scope 1 and 2 reductions and the use of recycled and biomass raw materials, thinning of components, etc. We will expand products and solutions that contribute to measures against climate change and to preservation of biodiversity, such as seawater desalination using less energy and renewable sources of energy, reuse of water, power generation using membranes, and devices that collect and reuse the volatile organic compounds used in the manufacture of electric vehicle batteries.



Genetic test reagents for PCR tests are helping with measures against the spread of COVID-19 and other infectious diseases. Biomanufacturing, which combines polymer technology and biomedical technology, the core technologies involved in genetic test reagents, can create businesses that solve issues in both climate change countermeasures and biodiversity conservation. We have, for example, started conducting basic research on uses for unutilized biomass. Future potential is thus hidden in such raw materials as those produced by thinning our group-owned forests.

We have been operating businesses that contribute to solving the social issues of the times ever since our founding in 1882, and our business portfolio has therefore been changing. One of the mottoes of our company's founder, Eiichi Shibusawa, was "*Jun-Ri-Soku-Yu* (Adhering to reason leads to prosperity)." With this as our corporate philosophy, we aim to be a group that continues to create solutions needed by people and the earth.

Being oriented toward sustainable growth means becoming a company that achieves sustainable growth through its contributions to the sustainability of society. Spreading and promoting this awareness is my duty.

## Policy and approach

### Policy:

1. Management that takes the sustainability of society into consideration, and thus management that increases the sustainability of our company
2. Sustainability that builds a solid management foundation: the axis of our management foundation (ESG)
3. Sustainability that strengthens our competitiveness and drives growth: the axis of our business (CSV)

### Conceptual Framework-Sustainability, CSV and ESG



## Approach:

Since being founded in 1882 as Japan's first large-scale spinning mill company in the private sector, Toyobo group has addressed a range of issues as a good member of society through the supply of clothing fibers. We have also expanded and grown with the times and contributed to solving social issues with a focus on the environment in our aim to realize better lives for people around the world.

In 2019, we redefined our corporate philosophy "*Jin-Ri-Soku-Yu* (adhering to reason leads to prosperity)." After many discussions based on it, we enhanced our corporate philosophy framework TOYOBO PVVs. Through this discussion process, we were convinced that the essence of Toyobo group's activities to date lies in making a contribution to ensuring the sustainability of people and the earth.

We announced our Sustainable Vision 2030 (long-term vision) in May 2022.

### [Sustainable Vision 2030](#)

Contributing to the realization of a sustainable society is the embodiment of Toyobo group's vision "We will continue to create the solutions needed by people and the earth with materials and science." This expresses Toyobo group's approach to sustainability.

At the same time, it is important to continually enhancing corporate value. Toyobo group's contribution to realizing a sustainable society generates profits leading to enhancement of the group's corporate value. This enhancement of corporate value leads in turn to the next level of realization of a sustainable society through growth in the group's business. Maintaining this positive spiral is what Toyobo group regards as sustainability.

To meet the expectations of stakeholders, Toyobo group will further enhance its dissemination of information as well as taking active initiatives so that all employees feel personally involved in sustainability in order to promote companywide activities as a united force.

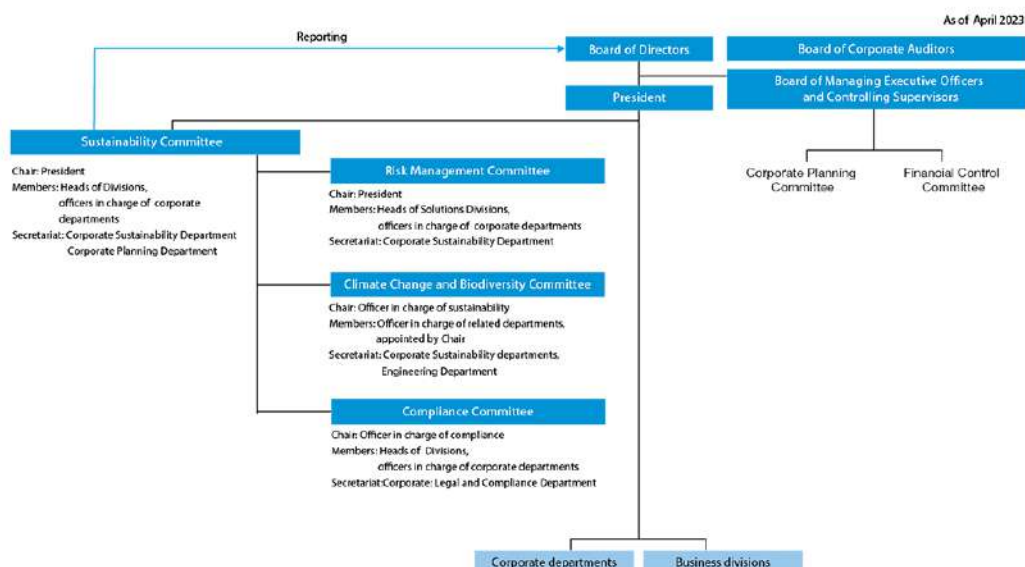
## Sustainability management structure

Toyobo group has established a Sustainability Committee, with our President serving as chairperson. Committee meetings were held four times in fiscal 2023, with deliberations covering themes including checking on company-wide sustainability action, GHG emission reduction targets, nature-positive matters, geopolitical risk, and committee structure in consideration of the requirements of ISSB, etc.

In April 2023, we reviewed our vision for our Sustainability Committee as a component of the sustainability management required by the Corporate Governance Code and by international sustainability standards. We reformed the committee into a system for integrated deliberations with a focus on medium to long-term sustainability themes related to our company-wide long-term strategy. This new structure transfers the roles of eight committees previously under the Sustainability Committee umbrella to the respective divisions in charge, which will be responsible for advancing their activities. We are continuing with the Risk Management Committee and Compliance Committee, which require company-wide cross-organizational discussions and tasks, and have established a new Climate Change and Biodiversity Committee. Meeting six times a year beginning in fiscal 2024, the committee will advance sustainability initiatives that lead us toward our envisioned ideal. It will engage in integrated discussions of priority issues (materialities), deliberate on strategies, measures, and indicators from the perspective of risk and opportunity, and manage the progress.

We have also established a Corporate Sustainability Division, which is responsible for drafting and promoting various specific measures, communicating them externally, and encouraging dialogue.

### Sustainability Promotion Structure



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## Our sustainability activities

Since our group's founding by Eiichi Shibusawa, we have taken the philosophy of one of his mottoes, "*Jun-Ri-Soku-Yu* (Adhering to reason leads to prosperity)," as the basis for our concept that we grow our own business by enriching society. By putting this into practice, we have anticipated modern CSV.

Since fiscal 2021, we have been moving ahead with activities under a full-fledged sustainability management orientation. Our efforts have been particularly directed toward carbon neutrality, the circular economy, human rights, human capital, and biodiversity, and upon formulating these strategies, we have specified milestones.

| Period    | Initiatives and their purpose   |
|-----------|---|
| Jan. 2020 | Became a signatory to the United Nations Global Compact and joined the Global Compact Network Japan.<br>Endorsed the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD).  |
| Apr. 2020 | Established the Corporate Sustainability Department. Incorporated ESG elements into management and strategy, and strengthened communication of information to stakeholders.<br>Established the Sustainability Committee (renamed the CSR Committee), chaired by the President.  |
| Apr. 2021 | Placed Corporate Sustainability Department under direct control of the President.<br>Established the Risk Management Committee, chaired by the President.<br>Established a system to promote efforts toward carbon neutrality. Established the Carbon Neutral Strategies Council and the Carbon Neutral Strategies Cross-Functional Team. |
| Apr. 2022 | Established the Corporate Sustainability Division.  |
| May 2022  | Announced Sustainable Vision 2030<br>Formulated the GHG Emission Reduction Plan by 2050   |
| Nov. 2022 | Joined the 30 by 30 Alliance for Biodiversity   |
| Dec.2022  | Obtained Science based target(SBT) certification  |
| Apr. 2023 | Restructured the Sustainability Committee   |

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## Participation in initiatives

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### UN Global Compact (UNGC)

In January 2020, we became a signatory to the United Nations Global Compact (UNGC) and joined the Global Compact Network Japan, which comprises Japanese companies and organizations that are UNGC signatories. We have done so because we agree with the principle of solving global issues and achieving sustainable growth as a responsible corporate citizen. Moreover, through participating in subcommittees of the Global Compact Network Japan (on ESG, supply chains, environmental management, Kansai, reporting research, etc.), we gather information that we apply in our day-to-day activities.

Moving forward, we will strengthen our efforts in keeping with the Ten Principles of the UNGC as we contribute to the realization of a sustainable society.



## The Ten Principles of UNGC

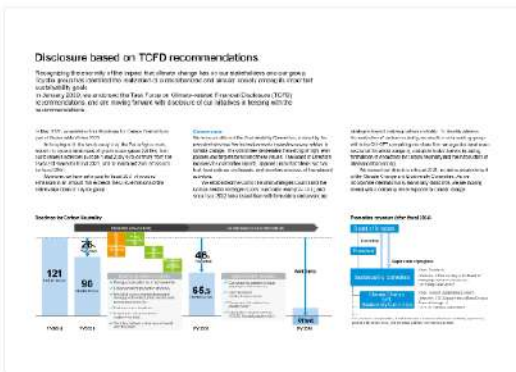
|                 |  |
|-----------------|--|
| Human Rights    | Principle 1:<br>Businesses should support and respect the protection of internationally proclaimed human rights; and                     |
|                 | Principle 2:<br>make sure that they are not complicit in human rights abuses.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

# Task Force on Climate-related Financial Disclosures (TCFD)

Recognizing the scale of the impact of climate change on our group and stakeholders, we have identified a “decarbonized society and circular society” as one of our materialities. In January 2020, we announced our support for the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD), and have been working on initiatives and disclosures that follow them.



Based on the below 2°C scenario and the 4°C scenario, we identified climate change-specific risks and opportunities for the group. While we focused on the films business in the previous fiscal year, we expanded the scope to include all of the group's businesses in the current fiscal year. We compiled the identified risks and opportunities and rearranged them in view of changes in society and then explored measures to address each of them.



Disclosure based on TCFD Recommendations in the Integrated Report 2023 (308KB)

- [Climate Change](#)

# Disclosure based on TCFD recommendations

Recognizing the enormity of the impact that climate change has on our stakeholders and our group, Toyobo group has identified the realization of a decarbonized and circular society among its important sustainability goals.

In January 2020, we endorsed the Task Force on Climate-related Financial Disclosure (TCFD) recommendations, and are moving forward with disclosure of our initiatives in keeping with the recommendations.

In May 2022, we published our Roadmap for Carbon Neutrality as part of Sustainable Vision 2030.

In keeping with the levels sought by the Paris Agreement, we aim to reduce emissions of greenhouse gases (GHGs) from our business activities (Scope 1 and 2) by 46% or more from the fiscal 2014 level by fiscal 2031, and to reach net zero emissions by fiscal 2051.

Moreover, we have set a goal for fiscal 2051 of avoided emissions in an amount that exceeds the GHG emissions of the entire value chain of Toyobo group.

## Governance

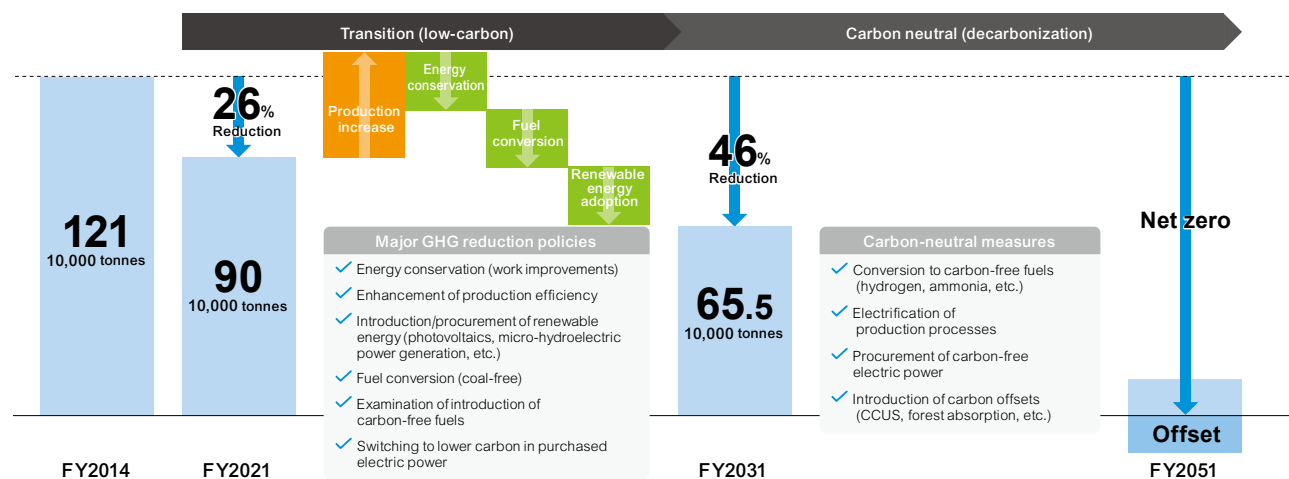
We have established the Sustainability Committee, chaired by the president who has the highest seniority regarding issues related to climate change. The committee deliberates the setting of high-level policies and targets for solving these issues. The Board of Directors receives the committee reports, approves important items such as high-level policies and targets, and monitors progress of the relevant activities.

We established the Carbon Neutral Strategies Council and the Carbon Neutral Strategies Cross-Functional Team (CN-CFT), and since fiscal 2022 have tasked them with formulating and advancing

strategies toward realizing carbon neutrality. To steadily address the realization of carbon neutrality, we also formed a working group within the CN-CFT comprising members from an organizational cross section of the whole company, and undertook initiatives including formulation of a roadmap for carbon neutrality and the introduction of internal carbon pricing.

We revised our structure in fiscal 2023, including establishment of the Climate Change and Biodiversity Committee. As we incorporate international sustainability standards, we are moving ahead with a company-wide response to climate change.

## Roadmap for Carbon Neutrality



## Promotion structure (after fiscal 2024)



\*The president, vice-president, heads of divisions, executive officers in controlling supervisory positions, the chairperson, and corporate auditors may express opinions.

# Disclosure based on TCFD recommendations

## Risk management

In fiscal 2022, our group set up a Risk Management Committee, which performs uniform group-wide management of risks including climate change issues. In addition to its overall administration of risk management activities (identification, analysis, assessment, and response), the committee formulates policy related to risk management for the whole group, builds and operates effective, sustainable organizations and systems by running the PDCA cycle, and works to strengthen the risk management system.

As our point of departure for risk management activities, we identify serious company-wide risks requiring intensive attention from the results of evaluations in terms of the two axes of severity of impact\*1 and likelihood of occurrence\*\*2 based on each risk scenario. Toyobo group manages its important risks based on a company-wide assessment of risks that include natural disasters such as flooding (floods, storm surges, etc.), which are increasing in severity due to climate change.

\*1 Scope of impact, duration of business operation stoppage, personal harm, reputation, and financials are evaluated on a three-point scale that includes "major damage equivalent," "moderate damage equivalent," and "minor damage equivalent."

\*\*2 Evaluations use a three-point scale including "occurs frequently," "occurs occasionally," and "occurs infrequently."

## Strategy

In Sustainable Vision 2030, Toyobo group has identified the realization of a decarbonized and circular society among its important sustainability goals.

In keeping with the TCFD recommendations, we also analyzed and compiled future risks and business opportunities under climate change scenarios based on the Paris Agreement. After identifying the financial and other impacts of these risks and opportunities, we intend to boost the resilience of our business strategy by specifying countermeasures together with indicators and targets.

### Scenario analysis

Although a wide range of scenarios are conceivable depending on how global warming countermeasures are implemented, we referenced the scenario shown in the diagram on the right as being typical. We considered the impact on our business and new opportunities for our group through 2050 under each of two scenarios: One in which the average global temperature increase is kept under 2°C, and one in which it rises by 4°C.

## Summary scenario analysis

| Specified scenario          | Under 2°C scenario   | 4°C scenario  |
|-----------------------------|--|---|
| Description of society      | Sweeping policies and technological innovations are advanced in efforts to keep the average atmospheric temperature increase by the end of the century to within 1.5°C, and to achieve sustainable development of society. We will have a society in which social changes accompanying a shift to a decarbonized society will be highly likely to impact business.<br><br>Case example<br><ul style="list-style-type: none"> <li>Introduction of a carbon tax and increased carbon prices</li> <li>Shift to vehicle electrification, spread of renewable energy</li> </ul> | Even with the implementation of intended nationally determined contributions established by Paris Agreement signatory countries in line with the agreement, average atmospheric temperature rises by as much as 4°C under business as usual by the end of the century. We will have a society in which changes in climate, including rising temperatures, will be highly likely to impact business.<br><br>Case example<br><ul style="list-style-type: none"> <li>Increase in flooding damage due to heavy rains</li> </ul> |
| Reference scenarios         | <ul style="list-style-type: none"> <li>SDS (IEA WEO2021/ETP2020)</li> <li>NZE (IEA Net Zero by 2050 A Roadmap for the Global Energy Sector)</li> <li>RCP2.6 (IPCC AR5)</li> <li>SSP1-1.9 (IPCC AR6)</li> </ul>   | <ul style="list-style-type: none"> <li>RCP8.5 (IPCC AR5)</li> <li>SSP5-8.5 (IPCC AR6)</li> <li>STEPS (IEA WEO2022/ETP2020)</li> </ul>   |
| Risk and opportunity trends | In the transition, risks and opportunities emerge more readily   | Physical risks and opportunities emerge more readily  |

## Risks, opportunities, and their countermeasures under each scenario

| Social change and its impact   | Risks and opportunities      |                      |  | Measures taken by the Toyobo group  |
|--|------------------------------|----------------------|--|---|
|  | Category                     | Period               | Details  |   |
| Impacts of the transition to a decarbonized society (sweeping changes in policy, laws and regulations, technology, markets, etc.)                      | Transition and risk          | Short Term           | Introduction of carbon pricing   | <ul style="list-style-type: none"> <li>Advancement of GHG reduction plans (energy conservation, better production efficiency, fuel conversion, renewable energy adoption, etc.)</li> <li>Use of internal carbon pricing systems</li> </ul>  |
|  |                              | Medium to long term  | Increase in raw material prices (carbon price pass-through, etc.)  | <ul style="list-style-type: none"> <li>Appeals to and collaboration with suppliers (low-carbon raw material development, production technology assistance, etc.)</li> <li>Diversification of raw material procurement methods (expanded multiple purchasing and local procurement)</li> </ul>   |
|  |                              |                      | Increase in costs resulting from promotion of energy conservation, adoption of high-efficiency equipment, etc.<br>Cost increases due to adoption of renewable energy | <ul style="list-style-type: none"> <li>Innovation in production processes and pursuit of super-efficiency</li> <li>Greater efficiency of production throughout the value chain (affiliate integration, stronger partnerships, M&amp;A, etc.)</li> </ul>   |
|  | Transition and opportunities | Medium term          | Cost increases due to requirements for low-carbon and decarbonized product manufacturing   | <ul style="list-style-type: none"> <li>Renewable energy procurement method selection</li> <li>Expansion of renewable energy adoption and procurement</li> <li>Promotion of greater efficiency and energy conservation in production processes</li> <li>Fuel conversion for (coal-free) in-house power generation</li> <li>Study of carbon-free fuel utilization (hydrogen, ammonia, etc.)</li> <li>Study of adoption of CCU/CCS or other innovative technologies</li> </ul> |
|  |                              |                      | Increasing demand for petroleum-derived resource reduction and replacement   | <ul style="list-style-type: none"> <li>Acceleration in the shift in raw materials toward recycled and biomass-derived materials</li> <li>Study of withdrawal from general-purpose materials business that relies on petroleum-derived resources</li> <li>Acceleration in the shift in raw materials toward recycled and biomass-derived materials</li> </ul>  |
|  |                              | Medium term          | Increase in demand for low-carbon and decarbonized materials and products  | <ul style="list-style-type: none"> <li>Addressing of procurement issues (shortages) with raw materials (recycled and biomass-derived materials)</li> <li>Advancement of development and planning of products with low-carbon and decarbonized materials</li> <li>Enhanced production and quality control systems for low-carbon and decarbonized products</li> </ul>  |
| Impacts from progressive climate change (direct damage to assets, indirect impact of supply chain fragmentation, changes in technology, markets, etc.) | Physical risks               | Short to medium term | Stoppage of raw material supply due to natural disasters<br>Facilities damage and operational shutdowns due to flooding (floods, storm surges, etc.)                 | <ul style="list-style-type: none"> <li>Review of inventory levels and expansion of multiple purchasing</li> <li>BCP training implementation</li> <li>Enhancement of durability of production and power facilities, relocating or elevating them to higher locations</li> <li>Production site dispersal, relocation, and consolidation</li> </ul>  |
|  |                              | Medium term          | Increase in demand for civil engineering work  | <ul style="list-style-type: none"> <li>Expansion of products used in disaster mitigation and restoration work</li> <li>"Sand-proofing sheets, concrete delamination prevention sheets, soft roadbed improvement materials, etc."</li> </ul>   |
|  | Physical opportunities       | Medium term          | Increased demand for seawater desalination due to water shortages and droughts   | <ul style="list-style-type: none"> <li>Expanded sales of (RO/FO, etc.) membranes for seawater desalination</li> <li>Energy-conserving and high-durability development for RO/FO membranes, etc.</li> <li>Strengthening of production and quality control system for RO/FO membranes, etc.</li> </ul>  |
|  |                              | Long term            | Increased demand for (prevention and treatment) measures against infectious diseases associated with temperature increases   | <ul style="list-style-type: none"> <li>Expanded demand for products related to food packaging</li> <li>Promotion of research and development of products and technologies related to infectious diseases</li> </ul>   |

## Disclosure based on TCFD recommendations

### • Determining risks and opportunities under each scenario

We worked out the group's risks and opportunities focused on climate change in the under-2°C scenario and the 4°C scenario. Only the film business was under consideration in fiscal 2022, but the study was expanded to cover all group businesses in fiscal 2023. We compiled the specified risk and opportunity items, reclassified them from the standpoint of social changes, and then considered countermeasures proposed for each (diagram: "Risks, opportunities, and their countermeasures under each scenario"). Risks and opportunities we recognize as being particularly important upon evaluation along the two axes of severity of impact and likelihood of occurrence are described as follows.

We recognize GHG emissions reduction throughout the supply chain, including in raw material procurement, as a means of both reducing risk and creating opportunity. Specifically, through planned Scope 1 and 2 reductions, we will lighten the future burden of carbon pricing as we prepare to reliably meet our customers' requirements for decarbonization. In addition, shifting to recycled and biomass materials for our raw materials will lower our reliance on petroleum-derived resources, reduce future business risk, and lead us to obtain and expand business opportunities. With respect to the water shortage issue, which poses a growing worldwide risk, we intend to obtain and expand business opportunities through solving this social issue by selling membranes for seawater desalination, which enables low-energy fresh water production.

### Risks and opportunities recognized as particularly important

#### • Important risk 1: Risk of damage to buildings and facilities due to flooding (floods, storm surges, etc.)

Our group's primary plants at Tsuruga, Iwakuni, and Inuyama, are all located near rivers and coastline and are situated in low-lying areas, which puts them at risk of flood damage. In the event that climate change progresses, we assume that rising sea levels and changes in rainfall patterns will further heighten the flood damage risk. Our estimate of asset decrease (the amount of damage to buildings and equipment) due to flood damage in the 2030s, calculated from book value, indicated a maximum total for all three plants of approximately ¥50 billion. To obtain our estimate of the

amount of asset decrease from flood damage at these three plants, we multiplied the book value of their buildings and equipment by the flood damage rate\* published by the Ministry of Land, Infrastructure, Transport and Tourism.

Because our group understands the flood damage risk to our plants to be an important climate-related risk, we are implementing a phased reinforcement of our flood damage countermeasures that includes moving items such as our production and power facilities to higher locations.

\*\*"Flood Control and Economic Research Manual (Draft)" (April 2020), Ministry of Land, Infrastructure, Transport and Tourism

#### • Important risk 2: Carbon pricing implementation

Under a business-as-usual (BAU\*) scenario taking fiscal 2021 (actual 900,000 tonnes CO<sub>2</sub>) as the base year, Scope 1 and 2 will increase to approximately 1.3 million tonnes CO<sub>2</sub> in fiscal 2031 as sales expand. Assuming that the unit price for carbon is ¥15,000 per tonne CO<sub>2</sub> in fiscal 2031, our annual cost would be approximately ¥20 billion under a BAU scenario.

Our group understands Scope 1 and 2 increases to be an important climate-related risk, and published Sustainable Vision 2030 in fiscal 2023, which includes our Roadmap for Carbon Neutrality through fiscal 2031. With the roadmap, we are targeting reductions in Scope 1 and 2 in fiscal 2031 to 655,000 tonnes CO<sub>2</sub> or less through energy optimization measures that involve energy conservation (including increased production efficiency), fuel conversion, and adoption of renewable energy. In such a case, our annual cost incurred from carbon pricing would be approximately ¥10 billion, resulting in the cost reduction effect of approximately ¥10 billion compared to under the BAU scenario. We plan to include the cumulative amount of investments through 2025 under our Roadmap for Carbon Neutrality in our investments in the environment, safety, and disaster prevention (approximately ¥33 billion).

\*BAU: "Business as Usual," indicating a case in which no particular GHG emission reduction measures are taken.

#### • Important risk 3: Increase in demand for reduction and replacement of petroleum-derived resources

#### • Important opportunity 1: Increase in demand for low-carbon and decarbonized materials and products

Our group's core films and functional materials businesses represent more than 40% of total group sales. Amid the change (transition) of society into future decarbonization, we can expect to see increasing demands from society, including our customers, that we reduce or replace our use of petroleum-derived resources, and we acknowledge that this is an important climate-related risk. At the same time, we recognize that there are business opportunities in the simultaneous increase in demand for low-carbon and decarbonized materials and products.

Of our current film business sales, approximately 90%, or ¥120 billion, depend on petroleum-derived resources. In Sustainable Vision 2030, we have defined the technologies and initiatives\* that bring about reductions in petroleum-derived resource use as "greening," and have set the goal of greening 60% of our film products by fiscal 2031. Film products that cut down on petroleum-derived resource use are also low-carbon or decarbonized products, and by promoting the greening of our film products, we intend to reduce risk while also obtaining and expanding business opportunities.

Of our film business sales target for fiscal 2031 of approximately ¥220 billion, approximately ¥130 billion is to come from obtaining and expanding these opportunities.

\*Development of films using biomass raw materials, and films of thin, lightweight materials (strengthening), environmentally friendly design facilitating post-use film recycling (mono-materialization), development of films using recycled raw materials and of recycling technology



## Disclosure based on TCFD recommendations

### ● Important opportunity 2: Increase in demand for seawater desalination

Our group recognizes that the advance of climate change will increase the risks of water shortages and droughts worldwide. Securing water will become an issue in many regions, not just for industrial uses, but for domestic uses as well. This is expected to further intensify the demand for seawater desalination.

Our group's HOLLOWSEP® hollow fiber reverse osmosis membrane module has characteristics that include resistance to contamination, giving it particular advantages in desalination of seawater in enclosed sea areas (such as in the Middle East) that are susceptible to proliferation of microorganisms. Since its superior chlorine resistance enables HOLLOWSEP® to supply chlorinated raw water directly to the module, this controls microbial growth within the module at a relatively low cost, while easy maintenance also helps improve desalination plant operating rates.

As we work toward obtaining and expanding business opportunities through solving societal issues, our group set the goal in Sustainable Vision 2030 of using seawater desalination with membranes to produce a volume of tap water equivalent to the needs of 10 million people in fiscal 2031.

### Indicators and targets

Our group has set targets with respect to climate change, and we are moving forward with measures for each of them. Our targets for Scope 1 and 2, as well as for Scope 3\*, are based on levels sought by the Paris Agreement, and were certified as Science Based Targets under the SBT Initiative in December 2022.

Amid a 6.4% year-on-year increase in sales, we produced 894 thousand t-CO<sub>2</sub> under Scope 1 and 2 in fiscal 2023 (a 1% decrease from 903 thousand t-CO<sub>2</sub> the previous fiscal year).

\*Indirect emissions other than Scope 1 and 2. This SBT certification concerns GHG emissions resulting from activities (manufacturing, etc.) related to the purchase of products and services, and to the use of sold products.

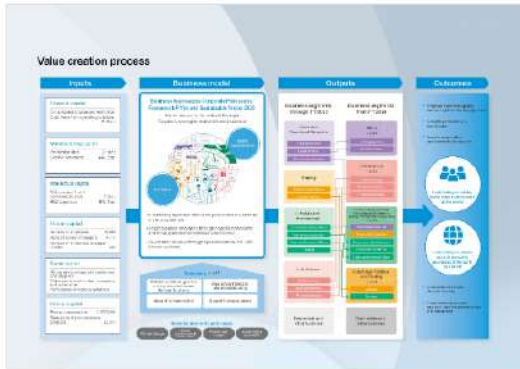
### Indicators and targets

| Category                      | Indicator  | Target   | Key measures   |
|-------------------------------|--|--|--|
| GHG                           | GHG emissions  | Scope 1, 2<br>FY2031: 27% reduction (SBT)*<br>(From FY2014: Equivalent to a 46% reduction)<br>*Base year: FY2021   | <ul style="list-style-type: none"> <li>Improved energy conservation, improved production efficiency, fuel conversion, adoption of renewable energy, etc.</li> </ul>  |
|                               |  | FY2051: Net zero   | <ul style="list-style-type: none"> <li>Adoption of carbon-free fuels, renewable energy procurement, production process innovation, etc.</li> </ul>   |
|                               |  | Scope 3<br>(Categories 1 and 11)<br>FY2031: 12.5% reduction (SBT)*<br>*Base year: FY2021   | <ul style="list-style-type: none"> <li>Category 1*: Acceleration in the shift in raw materials toward recycled and biomass-derived materials</li> <li>*Emissions from activities (manufacturing, etc.) related to purchased raw materials and services</li> <li>Category 11*: Energy conservation with VOC recovery equipment, etc.</li> <li>*Emissions from the use of products sold</li> </ul> |
| Climate-related opportunities | Green ratio of film products<br>(Specified also as an indicator for transition risk reduction) | FY2031: 60% or more  | <ul style="list-style-type: none"> <li>Progress in material and chemical recycling, development and increased adoption of biomass raw materials, reduction of film thickness, etc.</li> </ul>  |
|                               | Seawater desalination with membranes   | FY2031: Equivalent of tap water volume for 10 million people   | <ul style="list-style-type: none"> <li>Expansion of sales of (RO/FO, etc.) membranes for seawater desalination</li> <li>Energy-conserving and high-durability development for RO/FO membranes, etc.</li> <li>Strengthening of production and quality control system for RO/FO membranes, etc.</li> </ul>   |
| Capital allocation            | Capital investment   | FY2023-26 cumulative total: ¥33 billion<br>(Total capital investment for environment, safety, and disaster prevention)   | <ul style="list-style-type: none"> <li>Carbon reduction for in-house power generation facilities, adoption of renewable energy facilities, etc.</li> </ul>   |
| Internal carbon pricing       | -  | <ul style="list-style-type: none"> <li>Set an in-house carbon price of ¥10,000 per tonne CO<sub>2</sub> (revised annually as needed)</li> <li>Expansion of decision-making on capital investment and investment in development facilities which increase or decrease CO<sub>2</sub> emissions</li> </ul> |  |
| Compensation                  | -  | <ul style="list-style-type: none"> <li>Consideration of officer's compensation set according to the state of GHG reduction</li> </ul>  |  |

# Our Value Creation Process

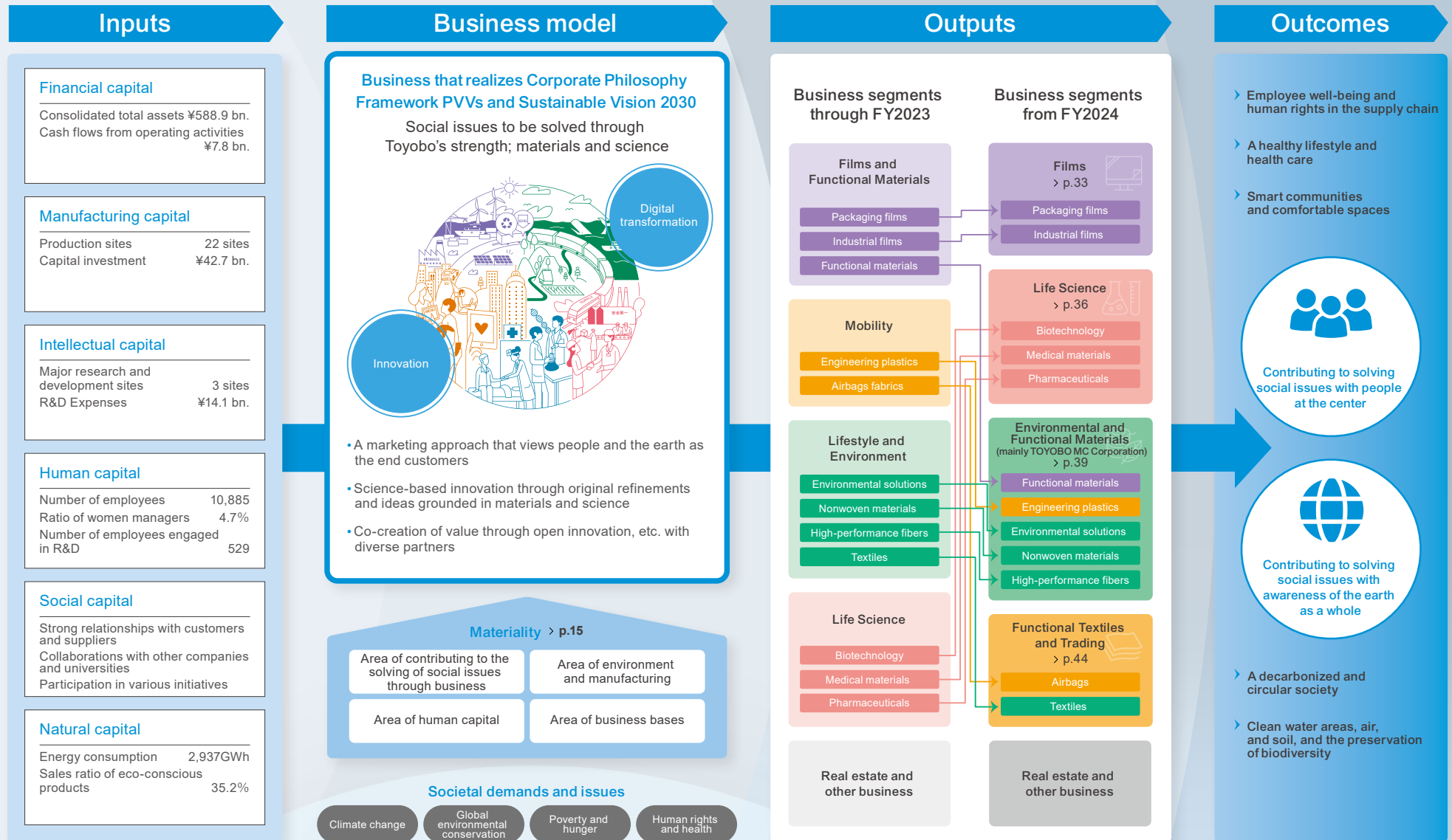
Our value creation process arises from TOYOBOKO PVV's corporate philosophy framework and demonstrates how we use various types of capital to create value and increase value for all stakeholders. Through this process, Toyobo group aims to accumulate and convert capital to continue creating the solutions needed by people and the earth.

- [Materiality](#)



Value Creation Process in the Integrate Report 2023 (1.4MB) 

# Value creation process



# Materiality

## Toyobo group's materiality

Our group's material issues are set on the basis of Sustainable Vision 2030, which we announced in May 2022.

Working from the two axes of influence on stakeholders and influence on our group, we clarified high-priority targets and organized them into four areas: "contributing to the solving of social issues through business," "human capital," "environment and manufacturing," and "business bases."

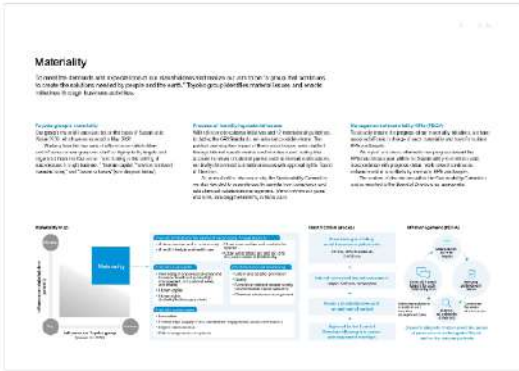
As a result of the discussions by the Sustainability Committee, we also decided to separate quality agenda from compliance and add chemical substances management. We will review our goals and KPIs, including these items, in fiscal 2024.

## Process of identifying material issues

With reference to external initiatives and 12 international guidelines, including the GRI Standards, we selected candidate items. The positive and negative impact of these social issues were clarified through internal questionnaires and interviews, and, taking into account the views of external parties such as institutional investors, we finally determined our material issues with approval by the Board of Directors.

### Materiality map





Materiality in the Integrate Report 2023 (175KB) 

## Targets and KPIs

To steadily ensure the progress of our materiality initiatives, we have assigned officers in charge of each materiality and have formulated KPIs and targets. We report and share information on progress toward the KPIs two times a year within the Sustainability Committee, and, in accordance with progress status, work toward continuous enhancement of our efforts by reviewing KPIs and targets.

Toyobo group materiality/KPIs and Targets (As of April 1, 2023) (222KB) 

















Toyobo group materiality/KPIs and Targets (As of April 18, 2022) (133KB) 

\* Three year performance data is available. The data for the most recent year is in one file, and the data for the past two years is in another file.

# Materiality

## Materiality KPIs

April 1, 2023

| Category  | Major items  | Related SDGs   | Officer in charge  | KPIs: Timeframe for achievement set for each theme  |   |   |
|---|--|--|--|---|---|---|
|   |  |  |  | Themes  | Targets (single fiscal year targets)  | FY2023 results  |
| Area of contributing to the solving of social issues through business | <b>E</b> : A decarbonized and circular society   |    | Taichi Sakai<br>Managing Executive Officer<br>Head of Safety and Disaster Management Division          | 1) Scope 1, 2 greenhouse gas emissions (consolidated)<br>2) Expansion of ECO-PARTNER SYSTEM® products and services that contribute to the environment (TOYOBO CO., LTD. only)   | 1) Reduction of emissions by at least 46% compared to FY2014*<br>2) Sales ratio of 40%**<br><br>*Target set in anticipation of increase in greenhouse gas emissions associated with expansion of targeted sales in FY2031 (assumed ¥500 billion in FY2031)<br>**FY2031 target   | 1) 26.4% reduction (894 thousand t-CO <sub>2</sub> )<br>2) 35%  |
|   | <b>S</b> : Employee well-being (diversity and inclusion, health and productivity management, occupational safety and health)<br><b>S</b> : Human capital |  <br>  | Takehiko Inada<br>Executive Officer<br>Controlling Supervisor of HR, Administration and Legal Division | 1) Number of core overseas personnel undergoing training in Japan<br>2) Training investment per employee (and training time)<br>3) Ratio of women managers<br>4) Ratio of annual paid leave taken<br>5) Reduction in annual time worked outside specified working hours (no. of employees working more than 360 hours of overtime per year / total no. of employees)<br>6) Ratio of men employees taking childcare leave<br>7) Certification as a "Top 500 Company" for Outstanding Health and Productivity Management<br>8) Improvement in how positive employees feel about their work, based on employee engagement surveys<br>a. Percentage of respondents agreeing with the statement that they do not feel that their day-to-day work is difficult to perform<br>b. Percentage of respondents agreeing with the statement that the company respects the diverse views and ideas of each individual employee | 1) 15 employees per year*<br>2) ¥50,000 per year, 21 hours*<br>3) 5.0% or above*<br>4) 75%*<br>5) 2.0% or lower (reduction of 20% from FY2020)*<br>6) At least 80% of eligible men employees taking childcare leave, with average leave of 14 days or more (20% increase from FY2021)*<br>7) Acquisition/maintenance*<br>8) Increase in the percentage of respondents agreeing with this statement<br><br>* FY2026 target | 1) Canceled because of COVID-19<br>2) ¥50,000 (17.97 hours)<br>3) 4.7%<br>4) 80.2%<br>5) 4.2%<br>6) 104.3% of eligible men employees; average leave taken: 14.8 days<br>7) Certification as a 2023 "Top 500 Company" for Outstanding Health and Productivity Management<br>8) a. 38% b. 50% |
|   | <b>S</b> : Human rights (Toyobo group)   |  <br>  | Takehiko Inada<br>Executive Officer<br>Controlling Supervisor of HR, Administration and Legal Division | 1) Implementation of human rights education and training<br>2) Employment ratio of people with disabilities   | 1) Once a year for 20% of non-consolidated* employees<br>2) 2.3%<br><br>* TOYOBO CO., LTD., TOYOBO STC CO., LTD., and TOYOBO INFORMATION SYSTEM CREATE CO., LTD.<br>* FY2026 target   | 1) 48.0%<br>2) 2.3%   |
| Area of environment and manufacturing                                 | <b>E, S, G</b> : Safety and disaster prevention  |    | Taichi Sakai<br>Managing Executive Officer<br>Head of Safety and Disaster Management Division          | 1) No. of major accidents*<br>2) Frequency rate of workplace accidents resulting in lost workdays<br>3) No. of fires or explosions<br>4) No. of spills<br><br>* Set internal standards based on definitions stipulated by the Ministry of Health, Labour and Welfare  | 1) 0 accidents per year<br>2) 0.25 or less<br>3) 0 accidents per year<br>4) 0 accidents per year<br><br>Tabulated by calendar year  | 1) 0 accidents<br>2) 0.55<br>3) 0 accidents<br>4) 0 accidents   |
|   | <b>S, G</b> : Quality  |    | Masakazu Iwasaki<br>Executive Officer<br>Head of Quality Assurance Division                            | 1) No. of incidents related to products*<br>2) Implementation of product safety and quality assurance training<br><br>* Set internal standards based on definitions stipulated by the Ministry of Economy, Trade and Industry   | 1) 0 accidents per year<br>2) 100%  | 1) 0 accidents<br>2) 100%   |
|   | <b>E</b> : A decarbonized and circular society (environmental impact reduction)  |    | Taichi Sakai<br>Managing Executive Officer<br>Head of Safety and Disaster Management Division          | 1) VOC emissions (total for operations in Japan)<br>2) Discharge of hazardous substances into water (total for operations in Japan)<br>3) Waste volume (consolidated)<br>4) Final disposal (landfill disposal) rate (total for operations in Japan)   | 1) 60% reduction from FY2015*<br>2) 80% reduction from FY2015*<br>3) 15% reduction from FY2016*<br>4) Less than 1% every year<br><br>* FY2031 target  | 1) 60% reduction<br>2) 71% reduction<br>3) 13% increase<br>4) 0.4%  |

\* In April 2023, the company merged with TOYOBO INFORMATION SYSTEM CREATE CO., LTD.

# Materiality

## Materiality KPIs

April 1, 2023

| Category                | Major items   | Related SDGs | Officer in charge  | KPIs: Timeframe for achievement set for each theme  |   |   |
|-------------------------|---|--------------|--|---|---|---|
|                         |   |              |  | Themes  | Targets (single fiscal year targets)  | FY2023 results  |
| Areas of business Bases | G: Governance   |              | Takehiko Inada<br>Executive Officer<br>Controlling Supervisor of HR, Administration and Legal Division   | 1) No. of meetings of the Board of Directors/committees<br>2) Attendance rate of officers at meetings in 1)<br>3) Effectiveness evaluation of the Board of Directors, content disclosure  | 1) Disclosure of results<br>2) Disclosure of results<br>3) Disclosure of details of effectiveness evaluation  | 1) 23 meetings<br>2) Attendance by directors and corporate auditors at meetings >p.71<br>3) Evaluation of the effectiveness of the Board of Directors >p.75   |
|                         | E, S: Innovation                                      |              | Katsuya Ito<br>Executive Officer<br>Controlling Supervisor of Innovation Division  | 1) Percentage of research themes that contribute to achievement of Sustainable Vision 2030<br>2) Direct investment in open innovation (commercialization PoC with invested companies, start of joint development, etc.)<br>3) No. of cases of intellectual property information analysis<br>4) No. of cases of business termination due to patent infringement<br>5) No. of intellectual property training sessions for employees (Toyobo and group companies)<br>6) Profit contribution through the securing of intellectual property rights (expansion of intangible assets)<br>7) No. of industry-academia-government comprehensive cooperative projects | 1) At least 90% in FY2026<br>2) 4 cases or more per year<br>3) 20 cases per year<br>4) 0 accidents per year<br>5) Toyobo: 13 times; group companies: 6 times<br>6) Under review<br>7) 2 cases   | 1) July 2023 evaluation<br>2) 2 cases<br>3) 17 cases (FY2023 target: 14 cases)<br>4) 0 accidents per year<br>5) Toyobo: 15 times; group companies: 7 times<br>6) —<br>7) 2 cases  |
|                         | E, S: Partnerships (supply chain)                     |              | Nobuya Fujiwara<br>Managing Executive Officer<br>Head of Corporate Sustainability Division<br>Controlling Supervisor of Procurement and Logistics Department | 1) Ratio of biennial CSR procurement surveys returned<br>2) Ratio of reduction in CO <sub>2</sub> emissions (basic unit) related to logistics (sales)   | 1) 90% or above<br>(In years when survey is not implemented, we carry out dialogue with business partners that had issues in past surveys)<br>2) Year on year reduction of 0.5%   | 1) Response and engagement following surveys<br>2) Year on year reduction of 5.3%   |
|                         | S, G: Partnerships (stakeholder engagement)           |              | Nobuya Fujiwara<br>Managing Executive Officer<br>Head of Corporate Sustainability Division<br>Controlling Supervisor of Procurement and Logistics Department | 1) No. of press releases<br>2) No. of interviews with investors<br>3) Frequency of meetings with employees and labor unions<br>4) Frequency of engagement with stakeholders   | 1) 75 per year<br>2) 150 per year*<br>3) At least 30 times per year<br>4) Twice a year<br><br>* 2) covers the period from August 2022 to July 2023  | 1) 103<br>2) 124<br>3) 77 times<br>4) 3 times   |
|                         | S, G: Partnerships (social contribution)              |              | Nobuya Fujiwara<br>Managing Executive Officer<br>Head of Corporate Sustainability Division<br>Controlling Supervisor of Procurement and Logistics Department | 1) Clean activities (outside company)   | 1) 70%<br>(Non-consolidated + domestic group companies, implementation rate at all sites)   | 1) FY2023: 93%  |
|                         | S, G: Digital transformation (data security, privacy) |              | Ichiro Takai<br>Senior Managing Executive Officer<br>Controlling Supervisor of Corporate Planning Division   | 1) No. of information security education sessions*<br>2) No. of incidents (information leaks, service outages, etc.)*<br>3) Implementation of information security measures**<br><br>* Scope is TOYOBO CO., LTD., TOYOBO STC CO., LTD., and TOYOBO INFORMATION SYSTEM CREATE CO., LTD.<br>** Scope is 63 directly or indirectly held group companies; Specific measures for target group companies:<br>• Roll-out of Information Security Policy<br>• Implementation of education and training<br>• Roll-out of IT reinforcement measures<br>• Development of incident structure  | 1) 15 times per year<br>2) 0 incidents per year<br>3) 100% completion (FY2023-2025)   | 1) 51 times<br>2) 0 incidents<br>3) Promotion of activities with the Cyber Security Committee in central role   |
|                         | S, G: Compliance                                      |              | Takehiko Inada<br>Executive Officer<br>Controlling Supervisor of HR, Administration and Legal Division   | 1) Increase in awareness of compliance<br>2) Awareness and use of Compliance Consultation Desks<br>3) No. of serious legal violations   | 1) Improvement in compliance questionnaire responses<br>a. Does the company emphasize compliance?<br>b. Awareness of case study reports, expansion of compliance study sessions and other training<br>c. Frequency of compliance study sessions (managers) and other training<br>2) Improvement in compliance questionnaire responses<br>a. Awareness of Compliance Consultation Desks<br>b. Ease of use of Compliance Consultation Desks<br>Disclosure of no. of cases handled<br>3) 0 cases | 1) a. I feel that it does, or by and large I feel that it does: 81%<br>b. I read every issue, or I sometimes read it, or I read those articles that are of interest to me: 78%<br>c. Compliance study sessions: 20 times + video streaming to all employees<br>Other training: 38 times<br>2) a. 90%<br>b. I would like to try using it, or I can't really say one way or the other: 92%<br>78 cases<br>3) 0 violations |
|                         | S, G: Compliance (R&D, intellectual property)         |              | Katsuya Ito<br>Executive Officer<br>Controlling Supervisor of Innovation Division  | 1) No. of product safety or quality assurance violations in the R&D QA system<br>2) No. of violations of ministerial guidelines or of funding bodies' rules<br>3) No. of violations of rules governing handling of research topics<br>4) No. of cease and desist orders received relating to display/items  | 1) 0 violations per year<br>2) 0 violations per year<br>3) 0 violations per year<br>4) 0 orders per year  | 1) 0 violations<br>2) 0 violations<br>3) 0 violations<br>4) 0 orders  |

\* In April 2023, the company merged with TOYOBO INFORMATION SYSTEM CREATE CO., LTD.

# Contribution through Our Business

↓ Overview by Solution Business

↓ Features in the past



## Contributing to Solving Social Issues through Business Operations



Through our business, we will contribute to solving the following four social areas.

- A healthy lifestyle and health care
- Smart communities and comfortable spaces
- A decarbonized and circular society
- Clean water areas, air and soil, and the preservation of biodiversity



## Major Business Growth Strategies



We launched the 2025 Medium-Term Management Plan in April 2022.

We designate three businesses of film, life science, and environment and functional materials as businesses focusing on expansion.

## Features in the past

### FY2023



Polymerization of 100% bio-based PET resin in the Integrated Report 2022 (193KB)





FY2021



The Future our R&D is Creating ( 542KB) 



The development of ImmunoArrow® SARS-CoV-2 ( 354KB) 



Integrating materials informatics ( 269KB) 

FY2020







TOYOBO's Way of Manufacturing ( 1.1MB) 

# Contributing to Solving Social Issues through Business Operations

[↓ Contributing through business operations](#)
[↓ CSV examples \(topics\)](#)
[↓ CSV examples \(products\)](#)

## Contributing through business operations

Through our business activities, we contribute to solving the following four social issues. The main goals for FY2031 are as follows.

|   | Four social issues   | The main goals for FY2031   |
|---|--|---|
| <b>People</b><br>Contributing to solutions for social issues in a humancentric way                |  <b>A healthy lifestyle and health care</b> <ul style="list-style-type: none"> <li>Contributing to the field of epidemiology</li> <li>Contributing to improve quality of life (QOL)</li> </ul>                                 | <ul style="list-style-type: none"> <li>Number of tests conducted by the provision of infectious disease diagnostics: <b>10 million</b> per year</li> <li>Number of dialysis patients provided with dialysis membranes: <b>250,000</b></li> <li>Number of patients provided with regenerative inducers: <b>100,000</b> per year</li> <li>Share in the market of raw materials for biochemical and other tests: <b>30%</b></li> <li>Proliferation and expanded sales of 3D network-structured fiber materials in the medical and nursing care fields</li> </ul> |
|   |  <b>Smart communities and comfortable spaces</b> <ul style="list-style-type: none"> <li>Contributing to the realization of a humancentric digital society</li> <li>Creating comfortable spaces</li> </ul>                     | <ul style="list-style-type: none"> <li>Sales volume of product groups supporting DX: <b>1.5-fold</b> increase over FY2021</li> <li>Total sales of car cabin air filters: <b>1.2 million units</b></li> <li>Creation of a comfortable space inside electric vehicles through sound and heat management</li> </ul>  |
| <b>Planet</b><br>Contributing to solutions for social issues in consideration of the entire Earth |  <b>A decarbonized society</b> <ul style="list-style-type: none"> <li>Contributing to carbon neutrality</li> <li>Establishing an ecosystem for circulating resources</li> </ul>   | <ul style="list-style-type: none"> <li>Cutting emissions in Scope 1 &amp; 2 by over <b>46%</b> in FY2031 vs FY2014</li> <li>Ratio of green films: <b>60%</b></li> <li>Entry into the market of osmotic power generation, wind power generation offshore cable, insulating resin, adhesive sheet for cells used in fuel cell vehicles, electrode materials for large storage batteries, hydrogen-related materials, etc.</li> <li>Join resource circulation ecosystem (R PLUS JAPAN)</li> </ul>  |
|   |  <b>Clean water areas, air and soil, and the preservation of biodiversity</b> <ul style="list-style-type: none"> <li>Improving the environment through solutions</li> <li>Food loss reduction and sustainable food</li> </ul> | <ul style="list-style-type: none"> <li>Air volume treated by the volatile organic compound recovery unit: <b>7 billion Nm<sup>3</sup></b> per year</li> <li>Desalination of sea water by membrane: equivalent to the volume of tap water for <b>10 million</b> people</li> <li>Sales volume of highly functional films that contribute to reducing food loss: <b>fourfold</b> increase over FY2021</li> <li>Entry into sustainable food field</li> </ul>  |

# CSV examples (topics)

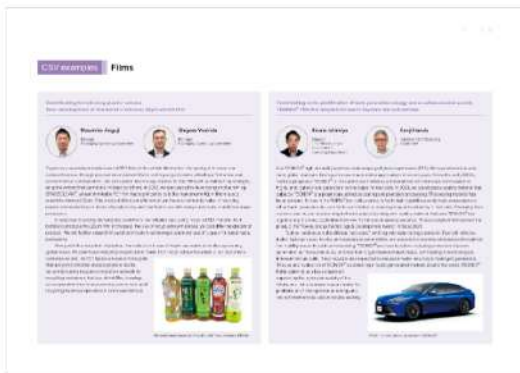
## Films



Contributing to reducing plastic volume  
New development of the world's thinnest 20µm shrink film



Contributing to the proliferation of next-generation energy and a carbon-neutral society  
TEONEX® PEN film adopted for use in Toyota's fuel cell vehicles



Product site (Packaging films) →

Product site (Industrial films) →

## Life Science



Contributing to measures against unknown infectious and other diseases that threaten humanity  
GENECUBE® fully automated gene analysis system for PCR testing, and specialized reagents



Contributing to both patients and the earth through high permeability  
Cellulose-derived artificial kidney hollow fiber membrane unique to Toyobo



Product site (Biotechnology operating) →

## Environmental and Functional Materials



Contributing to enhanced performance and safety in lithium-ion batteries  
HARDLEN® sustainable adhesive



Helping to bring on the 6G communication era  
HARDLEN® leverages the strength of low dielectric properties



Product site (VYLON®, HARDLEN®) ↗

## Functional Textiles and Trading



Contributing to the advancement of the domestic recycling market through our technology  
Taking on the upcycling of apparel



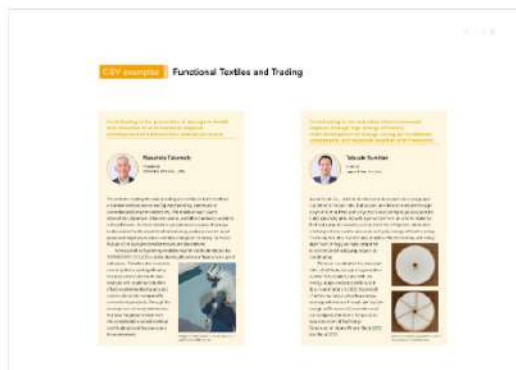
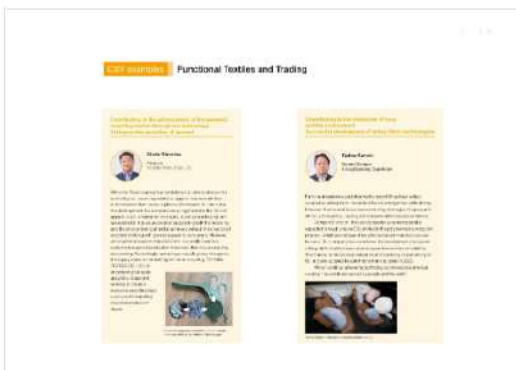
Contributing to the protection of lives and the environment  
Successful development of airbag fabric technologies



Contributing to the prevention of damage to health and reduction of environmental impacts  
Development of adhesive-free waterproof sheets



Contributing to the reduction of environmental impacts through high energy efficiency  
Joint development of energy-saving air conditioner components and materials together with Panasonic



TOYOBO TEXTILE CO. LTD.

Japan Exlan Co., Ltd.

## CSV examples (products)



Speeding up diagnostics



SARS-CoV-2 Detection Kit

[Product site](#)



Supporting the lives of dialysis patients



Artificial kidney hollow fiber membranes of stable and reliable quality



Shortening operation times and reducing the burden on patients



Nerve regeneration conduit Nerbridge<sup>®</sup>

[Product site](#)



Providing comfort and security



Three-dimensional cushion material BREATHAIR<sup>®</sup>, Electret air filter ELITOLON<sup>®</sup>

[Electret air filter Product site](#)

[BREATHAIR<sup>®</sup> Product site](#)



Improved LCD screen performance



LCD film with more natural color reproduction

[Product site](#)



Protecting lives in accidents



Airbag yarn and fabrics



Improving fuel and electricity consumption efficiency of automobiles



Engineering plastics

[Product site](#)



Creating future mobility



Manipularer<sup>®</sup> concept car



Recycling and resource conservation



Film of recycled PET resin CYCLE CLEAN<sup>®</sup>

[Product site](#)



Eliminating water shortages



RO membranes for seawater desalination

[Product site](#)



Balancing air pollution prevention and resource recovery



VOC recovery equipment



Food loss reduction



Transparent vapor-deposited film ECOSYAR<sup>®</sup>

[Product site](#)

**Contributing to reducing plastic volume**  
**New development of the world's thinnest 20µm shrink film**



**Masahito Jinguji**

Manager  
 Packaging Operating Department



**Shigeto Yoshida**

Manager  
 Packaging Operating Department

Toyobo is a specialty manufacturer of PET films in the shrink film market. Our policy is to boost our competitiveness through product development that is cutting-edge in terms of both performance and environmental consideration. Our production technology creates thinner films while maintaining strength, an achievement that cannot be imitated by others. In 2012, we succeeded in developing and launching SPACECLEAN®, a heat shrinkable PET film that significantly cuts the mainstream 40µm thickness to a world's-thinnest 20µm. This product offers benefits not only in the environmental value of reducing plastic volume but also in terms of productivity, and has found use with many customers, mainly beverage producers.

In response to strong demands by customers, we will also start using recycled PET material from bottles to produce this 20µm film. In the past, the use of recycled raw materials yielded differing grades of product. We will further expand this and contribute to achieving customers' specific goals for sustainable packaging.

Along with the reduction of plastics, the reduction in use of virgin raw materials is also a pressing global issue. We plan to actively propose products made from recycled raw materials to our customers overseas as well. As PET labels are easier to recycle than polyvinyl chloride and polystyrene labels, we aim to build a resource circulation network for recycling containers that use shrink film, drawing on cooperation from brand owners, converters, and recycling business operators in overseas markets.



PET bottle labels made with SPACECLEAN® heat-shrinkable PET film

**Contributing to the proliferation of next-generation energy and a carbon-neutral society**  
**TEONEX® PEN film adopted for use in Toyota's fuel cell vehicles**



**Hisato Ichimiya**

Manager  
 Films New Business  
 Development  
 Operating Department



**Kenji Handa**

Industrial Films Operating  
 Department

Our TEONEX® high-durability and heat-resistant polyethylene naphthalate (PEN) film is positioned as a de facto global standard, finding wide use in automotive applications in recent years. Since the early 2000s, we have proposed TEONEX® to the automotive market as a material that will contribute to innovation in highly anticipated, next-generation technologies for fuel cells. In 2020, we developed a sealing material that subjects TEONEX® to a proprietary adhesive coating and precision processing. This sealing material has been adopted for use in the "MIRAI" fuel cell automobile for its high durability even in high-temperature or other harsh environments, and for its contribution to ensuring long-term reliability in fuel cells. Changing from conventional vulcanized bonding to thermoplastic bonding with sealing material that uses TEONEX® has significantly improved cycle time from over 10 minutes to several seconds. This accomplishment earned the product the "Toyota Group Technology & Development Award" in fiscal 2021.

Fuel cell vehicles are the ultimate "eco-cars," emitting only water during operation. Fuel cell vehicles, including large buses, trucks, and passenger automobiles, are expected to become widespread throughout the mobility sector. In addition to bonding, TEONEX® provides functions including protection of power generation surfaces, insulation, and retention of gas intake/exhaust shape, contributing to technological innovation in fuel cells. The product is also expected to see use in water electrolytic hydrogen generators. The use and evaluation of TEONEX® is advancing in hydrogen-related markets around the world. TEONEX® holds potential as a key component supporting the hydrogen society of the future, and is indispensable as a material for proliferation of next-generation energy and the achievement of a carbon-neutral society.



"MIRAI" fuel cell vehicle, an adopter of TEONEX®

**Contributing to measures against unknown infectious and other diseases that threaten humanity**  
**GENECUBE® fully automated gene analysis system for PCR testing, and specialized reagents**



**Toshihiro Kuroita**

General Manager  
 Biotechnology Operating Department

Toyobo developed the GENECUBE® fully automated gene analysis system in 2011. The system's combination of fast-acting DNA amplification PCR enzyme KOD® DNA polymerase with a high-speed temperature control system is able to return results as quickly as 25 minutes from the start of measurement. As COVID-19 began running rampant across the globe in 2020, we leveraged our experience in the development of enzymes to accelerate development of PCR testing drugs for SARS-CoV-2 tests, receiving regulatory approval in July of that year. At present, over 300 GENECUBE® units have been adopted by medical institutions in Japan, where they contribute to society through use in daily testing.

About 70 years ago, Toyobo undertook the development of technology using microorganisms to treat effluent generated from the manufacturing of pulp used as a raw material for rayon. We also investigated the potential for industrial use of the enzymes created in the cells of microorganisms, and succeeded in applying the enzymes to diagnostic drugs. Expanding the types of enzymes, about 40 years ago we moved into the field of genetic research reagents, focusing on restriction enzymes for genetic engineering. Reagents using the KOD® DNA polymerase PCR enzyme developed by our company, collected from unique microorganisms inhabiting the undersea volcanic craters of Kodakara-jima Island in Kagoshima Prefecture, demonstrate a particularly fast DNA amplification rate and accurate replication. This has led to the reagents' use in genetic diagnosis and many other applications. Today, enzyme technologies have become core technologies in the life science business.

Unknown infectious diseases and other diseases that threaten humanity are expected to occur again in the future. By providing higher-performance products to clinical testing and other markets, we will contribute to the health of people around the world and to greater efficiency in treatment.



GENECUBE® fully automated gene analysis system

**Contributing to both patients and the earth through high permeability**  
**Cellulose-derived artificial kidney hollow fiber membrane unique to Toyobo**



**Kimihiro Mabuchi**

General Manager  
 Medical Materials Operating Department

The life science business's products are involved in the diagnosis and treatment of diseases, contributing to patients and society. Hollow fiber membranes are a core product of the business. Since the late 1970s, we have engaged in development of hollow fiber membranes for seawater desalination. We developed artificial kidney hollow fiber membranes as one of the applications and launched full-scale production in 1984. For four decades years since then, we have provided artificial kidney hollow fiber membranes for ever-increasing numbers of dialysis patients. The product features two main strengths. First, it boasts outstanding waste removal performance with little change over time during dialysis, thanks to our proprietary film-forming technology. Second, it features outstanding biocompatibility, with few cases of allergies. While general dialysis membranes are made from petroleum-derived materials, our cellulose triacetate (CTA) membrane uses natural cellulose from cotton as its starting material. This confers the advantage of very few patients experiencing allergic reactions during treatment due to conversion of hydroxy groups that affect patients to acetate. Our precise control of the membrane surface further prevents clogging and thus a lower likelihood of pressure fluctuations during dialysis, letting patients undergo treatment with confidence.

We are now working with NIPRO Corporation to build a new plant capable of integrated production that spans hollow fiber manufacturing to processing into dialyzers (filtration devices) and commercialization, with the start of operation scheduled for July 2024.

We have also extended our film-forming technology to other treatments and developed concentrated ascites reinfusion therapy (CART) membranes in 2020. These membranes see application in treatment that filters ascites accumulated due to conditions such as cancer and cirrhosis of the liver, then collects beneficial proteins with a concentrator and returns them to the patient's body. We are also advancing development of acute blood purification membranes for patients with conditions including sepsis, with delivery to patients planned for fiscal 2024.



Illustration of Dialyzer using Toyobo's CTA membrane



**Contributing to enhanced performance and safety in lithium-ion batteries  
HARDLEN® sustainable adhesive**



**Kenji Shiga**

Manager  
TOYOBO MC Corporation

The appearance of diverse electronic devices and the accelerated development of electric vehicles (EVs) are spurring ever greater demand for lithium-ion batteries (LiBs). The electrolytes in LiBs must be tightly sealed to prevent internal leaks. As the batteries themselves become hot, however, high heat resistance is also required for sealing materials and adhesives. Impurities must be thoroughly removed, as their presence in the materials used in LiBs can result in degradation of battery performance and in fires. The HARDLEN® adhesion promoter for polyolefin handled by TOYOBO MC Corporation is an adhesive that features excellent adhesion to polypropylene (PP) resin. With its heat resistance enhanced through the application of maleic anhydride modification technology, it has been adopted as an adhesive for LiB sealing materials. The company achieved supply to customers from an early stage of the growing demand for LiBs thanks to its one-of-a-kind technologies and manufacturing processes for removal of impurities, and boasts a high market share even now.

These technologies originate in the company's textile dyeing technologies. About 50 years ago, the resin known as PP faced a challenge in that while it was light and convenient, it did not dissolve in organic solvents and was thus difficult to process and dye. Toyo Kasei Kogyo Co., Ltd.\* developed a technology to chlorinate PP, dissolve it in solvent, and dye it. The company also introduced maleic anhydride modification technology that enables precise modification of the chlorinated PP, for free control over its physical properties. HARDLEN® which is able to freely bond PP to other polymers, has won strong approval in the marketplace and has grown its market share primarily in automotive coating applications. As a further application, the company developed the above-mentioned adhesive for LiB sealing materials and has been boosting production since 2017.

LiBs are indispensable not only for EVs but also for renewable energy storage batteries, robots, IoT devices, and more. The stable supply of HARDLEN® which aids battery performance and safety, will contribute to the evolution and advancement of electronic devices.



New HARDLEN® manufacturing facility at the Takasago Plant

\*Merged into TOYOBO CO., LTD. in 2010

**Helping to bring on the 6G communication era  
HARDLEN® leverages the strength of low dielectric properties**

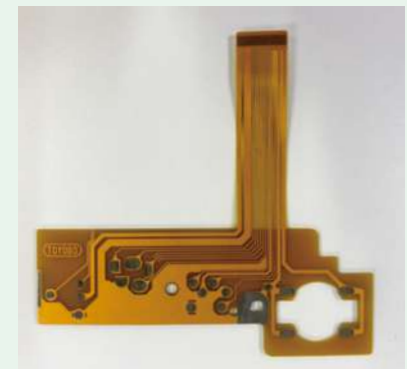


**Koichi Sakamoto**

TOYOBO MC Corporation

Toyobo's maleic anhydride modification technology and impurity removal production technology are both without rival. Making use of these technologies, HARDLEN® boasts a strong advantage in the marketplace. We are currently conducting research and development into new applications. The terms "5G" and "6G" are commonly heard in the context of next-generation communication systems as an era of ultra-high speed, ultra-low latency, and massively simultaneous connections rapidly approaches. Technical hurdles remain, however, including those of materials. As an example, 6G makes use of even higher frequency electromagnetic waves than 5G does, but signal attenuation and delay problems arise with the use of current materials. Prevention of these problems demands materials with lower dielectric constants for use in components such as antennas. The key to technological innovation in this area is our company's impurity removal production technology. Adhesives designed around HARDLEN® are able to achieve a low dielectric constant. We are already supplying our low dielectric adhesives to printed circuit board material manufacturers in the Asian region, and our development unit is rushing to develop ultra-low dielectric adhesives for 6G that leverage the strengths of HARDLEN®.

Multiple sensors and radar systems are also used in autonomous driving systems and factory automation systems, which are expected to proliferate in the future. As high speed, high-capacity, and stable communication infrastructure is indispensable for the safety of these systems, low dielectric properties are demanded of the adhesives used in this infrastructure. Under the belief that our business will see use in many industrial and lifestyle scenarios and that it can broadly contribute to the safety and security of society, we undertake our work with enthusiasm every day.



Circuit board using HARDLEN®

**Contributing to the advancement of the domestic recycling market through our technology  
Taking on the upcycling of apparel**



**Eiichi Shimizu**  
President  
TOYOBO TEXTILE CO., LTD.

While the Toyobo group has established a variety of recycling technologies, recycling related to apparel has been limited to the reuse of fiber scrap in plants. One reason for this is that the development of a domestic recycling market in the field of apparel is still a matter for the future. A considerable problem has existed in that value creation supporting both the economy and the environment cannot be achieved without the creation of recycled clothing with greater appeal to consumers. However, unlike general apparel manufacturers, our textile business performs integrated production that spans fiber to yarn making and sewing. Accordingly, operating a recycling loop throughout the supply chain will enable higher-value recycling. TOYOBO TEXTILE CO., LTD. is undertaking full-scale upcycling of apparel, seeking to create a market by providing high-quality and compelling recycled products in Japan.



Upcycled apparel products (hangers made from crushed and pelletized fiber scrap)

**Contributing to the protection of lives and the environment  
Successful development of airbag fabric technologies**



**Tadao Kuroki**  
General Manager  
Airbag Operating Department

For its heat resistance and other merits, nylon 66 has been widely adopted as airbag fabric that protect lives in emergencies while driving. However, the material faces issues including shortages of supply and difficulty in recycling, leading to increased calls for polyester fabrics.

Compared to nylon, the use of polyester as a raw material is expected to roughly halve CO<sub>2</sub> emitted in the polymer resin production process. A high percentage of recycled polyester materials can also be used. Our company has undertaken the development of polyester airbag fabric that features outstanding environmental compatibility. The material achieves heat resistance and storability on par with nylon 66, and was adopted by automobile manufacturers in 2022.

We will continue advancing technological innovations aimed at creating “the solutions needed by people and the earth.”



Varied types of airbags to secure greater safety

**Contributing to the prevention of damage to health and reduction of environmental impacts**  
**Development of adhesive-free waterproof sheets**



**Masahide Takemoto**  
 President  
 TOYOBO STC CO., LTD.

The urethane coating film waterproofing and ventilation buffer method, a standard method used in rooftop waterproofing, makes use of conventional chloroprene adhesives. This entails a major issue in atmospheric dispersion of toluene, xylene, and other chemicals contained in the adhesives. As these chemical substances are causes of damage to site workers' health and photochemical smog, posing a concern about global warming impacts due to chemical changes in the smog, it is hoped that use of the substances will be reduced or discontinued.

New asphalt self-adhering ventilation buffer sheets developed by TOYOBO STC CO., LTD. can be directly affixed to rooftops with no use of adhesives. This alleviates concerns over air pollution and significantly reduces construction work man-hours as well, enabling reduction of both environmental impacts and construction costs compared to conventional products. Through the development of industrial materials that take the global environment into consideration, we will continue contributing to both business and the environment.



Applying waterproof material coating to ventilation buffer sheets

**Contributing to the reduction of environmental impacts through high energy efficiency**  
**Joint development of energy-saving air conditioner components and materials together with Panasonic**



**Tatsuaki Sumitani**  
 Director  
 Japan Exlan Co., Ltd.

Japan Exlan Co., Ltd. has developed a desiccant rotor using paper coated with fine particles that absorb and desorb moisture through acrylic material. Heat pump-type air conditioning is typically used in buildings and plants. Absorbing moisture from air prior to intake by the heat pump, followed by contact with the refrigerant, eliminates discharge of drain water and enables highly energy-efficient cooling. Providing humidity in winter also enables efficient heating, achieving significant energy savings compared to conventional heat pump-based air conditioning.

Panasonic evaluated the desiccant rotor, which features quick regeneration at lower temperatures and with low energy usage and adopted for use in its air conditioners in 2022. As a result of achieving industry-leading energy-saving performance through joint system design by Panasonic Corporation and our company, Panasonic Corporation was a recipient of the Energy Conservation Grand Prize in fiscal 2022 and fiscal 2023.



Desiccant rotors adopted for use in Panasonic air conditioners

# Major Business Growth Strategies

- ↓ Overview by business
- ↓ Mitsubishi Corporation and Toyobo top management discuss the new joint venture


## Overview by business

Please see the PDF for the overview by business(Films, Life Science, Environmental and Functional Materials, Functional Textiles and Trading), and TOYOBO MC Corporation Vice-President dialogue.



Overview by business 




Overview by business: Films 



Overview by business: Life Science 



Overview by business:  
Environmental and Functional  
Materials 



Feature: Launch of TOYOBO MC  
Corporation 



Overview by business: Functional  
Textiles and Trading 

# Mitsubishi Corporation and Toyobo top management discuss the new joint venture

Mitsubishi Corporation and Toyobo are joining forces with a new company aimed at capturing the global market growth. Kotaro Tsukamoto, Mitsubishi Corporation Group CEO and head of the Industrial Materials Group, and Toyobo CEO Ikuo Takeuchi talked about the process leading to the partnership and their vision of the new company's future.



Top management discuss the new joint venture in the Integrate Report 2022 (504KB)


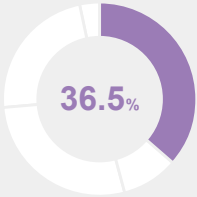


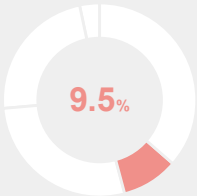
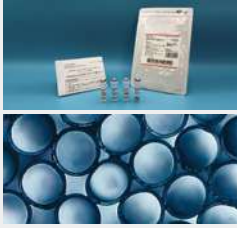

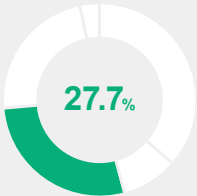


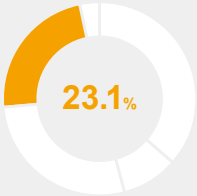



• [CSV examples \(topics\)](#)

• [Sustainable Vision 2030](#)

• [Medium-Term Management Plan](#)

# Overview by business

|  |   | Consolidated net sales composition ratio   | Net sales and operating profit (¥billion)                                | Main applications  | Examples of products  |
|--|---|--|--|--|---|
| <b>Films</b><br>                                    | <p>This consists of two fields: The industrial film business and the packaging film business. Industrial films include films for liquid crystal polarizers, displays, synthetic paper, labels, ceramic capacitors, etc. Packaging films include multifunctional films centered on food packaging, for which we maintain a leading share in Japan.</p>   |  <p>36.5%</p>   | <p>Net sales<br/><b>146.1</b></p> <p>Operating profit<br/><b>1.6</b></p> | <ul style="list-style-type: none"> <li>Industrial films</li> <li>Packaging films</li> </ul>  |    |
| <b>Life Science</b><br>                             | <p>This consists of three fields: The bio business, medical materials business, and pharmaceutical contracting business. The bio business includes material enzymes related to clinical testing, diagnostic reagents and drugs, and diagnostic systems. The medical materials business includes materials related to treatment, such as dialysis membranes. The pharmaceutical contracting business involves contract manufacturing of drugs.</p> <p>Our high-value-added products, made possible through our proprietary technology, include artificial kidney hollow fiber and diagnostic systems that halve the time required to obtain PCR testing results.</p> |  <p>9.5%</p>    | <p>Net sales<br/><b>38.1</b></p> <p>Operating profit<br/><b>9.2</b></p>  | <ul style="list-style-type: none"> <li>Bio-related products</li> <li>Cosmetics ingredients</li> <li>Medical separation membranes and modules</li> <li>Medical equipment</li> <li>Pharmaceutical-related products</li> </ul>  |    |
| <b>Environmental and Functional Materials</b><br> | <p>TOYOBO MC Corporation launched in April 2023 as a joint venture with Mitsubishi Corporation. Its businesses consist of the resin and chemical business and the environment and fiber business. Businesses that have migrated to the new company include VYLON<sup>®</sup>, HARDLEN<sup>®</sup>, photo functional materials, fine chemicals, engineering plastics, aqua membranes, VOC recovery equipment, functional filters, spunbond, lifestyle materials, and super fibers.</p>   |  <p>27.7%</p>  | <p>Net sales<br/><b>110.8</b></p> <p>Operating profit<br/><b>4</b></p>   | <ul style="list-style-type: none"> <li>Adhesion and coating agents</li> <li>Engineering plastics</li> <li>Elastomers</li> <li>Seawater desalination membranes and modules</li> <li>Environmental solution equipment and filters</li> <li>High-performance fibers</li> <li>Lifestyle materials</li> </ul> |   |
| <b>Functional Textiles and Trading</b><br>        | <p>This consists of the airbag business, functional textile business, apparel textile business, and trading company functions (TOYOBO STC CO., LTD.). For overseas expansion, the airbag business operates under a tripolar structure in Thailand, China, and the U.S. The textile business is advancing globally, including in Southeast Asia, China, and India.</p>   |  <p>23.1%</p> | <p>Net sales<br/><b>92.4</b></p> <p>Operating profit<br/><b>-2.5</b></p> | <ul style="list-style-type: none"> <li>Airbag fabrics and yarn</li> <li>Sports, inner wear, uniforms, and other apparel</li> </ul>   |  |

# Films

We will contribute to sustainability  
for people and the earth  
through our technologies  
for high-performance films



**Muneo Hirooka**  
Managing Executive Officer  
Head of Films Division

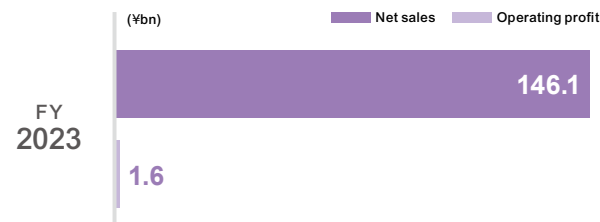
## The strengths of Toyobo

- Films for packaging (a leading share in food packaging)
- Industrial films (mold releasing films for MLCC, polarizer protective films for LCDs, etc.)

## Opportunities and risks

| Opportunities  | Risks  |
|--|--|
| <ul style="list-style-type: none"> <li>• Expansion of demand for green films aimed at a circular society and carbon neutrality</li> <li>• Expansion of need for reduction of plastics (increase in the value of technologies for thinner materials)</li> <li>• Expansion of demand for high-performance films as digital society advances</li> </ul> | <ul style="list-style-type: none"> <li>• Rise of political instabilities around the world and subsequent impacts on markets</li> <li>• Soaring costs of raw materials and fuels and increase in procurement risks</li> </ul> |

## Net sales and operating profit (¥billion)

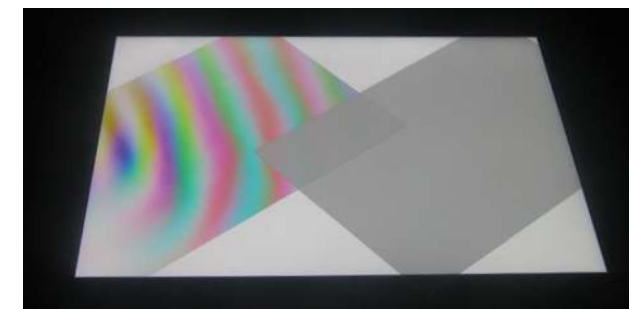


## Business overview in fiscal 2023

In fiscal 2022, customers in many industries resumed production activities, resulting in special demand. Consequently, a backlash occurred in fiscal 2023, and the market overall remained sluggish under multiple factors including an inventory adjustment phase. Industrial films in particular were greatly affected by slumping automotive production and let-up in demand for mold releasing films for MLCC. In the area of earnings, prices of raw materials and fuels continued their sharp rise. Turmoil also occurred in procurement, due to factors including withdrawal from business by domestic and overseas manufacturers of crude raw materials and other materials. In packaging films, our revisions of product prices were unable to keep up with increases in raw material and fuel prices, leading to a significant decrease in overall profit from the previous year.

Amid sluggishness in the overall market, environmentally considerate films made with recycled resins, bioresins, and other materials are exhibiting growth beyond expectations, with demand expected to continue growing. High-retardation LCD polarizer protective film, an area in which Toyobo enjoys a technological advantage, remained solid.

As a result of the above, net sales in the segment were ¥146.1 billion and operating profit was ¥1.6 billion (results for new segment).



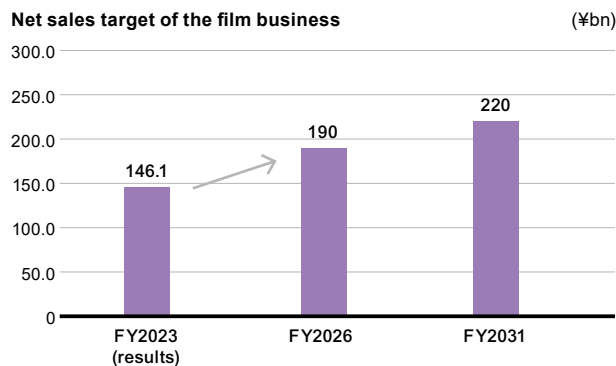
COSMOSHINE SRF<sup>®</sup> LCD polarizer protective film

## Films

### Growth strategy

We are advancing our growth strategy atop the two pillars of “progress of digital society” and “a decarbonized and circular society.” Our main strength lies in the polyester-based releasing film used in the ceramic capacitor manufacturing process. Our film is highly regarded for its functionality, and our capabilities for integrated production and processing of film give us an advantageous position in the market. We intend to undertake new product development for this film as well as establish technology for its recycling. We will also advance the development of new products and applications for LCD polarizer protective film and high-durability and heat-resistant polyethylene naphthalate (PEN) film for use as fuel cell sealing material.

In the area of reducing plastic waste, films stand at the forefront of environmental issues. We will reduce the thickness of films and advance adoption of biomass-based raw materials to help achieve a decarbonized society. Our new machinery for biaxially-oriented polypropylene (OPP) films let us maintain strength even in significantly thinner OPP films, contributing to a circular society through a shift to mono-materials. Films are indispensable materials in distribution and in people’s lives. We are making efforts in individual products to increase our environmentally considerate product lineup.



### Capital investment and R&D investment

We plan to invest ¥80 billion under our 2025 Medium-Term Management Plan (2025 MTP, FY2023 to FY2026), of which about 80% is earmarked toward growth investments. We will first continue increasing production and expanding sales in line with market recovery in high-performance films. Production capacity for mold releasing film for ceramic capacitors will increase about 2.5-fold through the combination of our new first and second coating machinery units, and production volume of COSMOSHINE SRF<sup>®</sup> LCD polarizer protective film will increase about 1.2-fold. We will also make active investments in the development of the high-rigidity films noted earlier, in 100% bioresin films, and in films made with recycled raw materials, as well as in the creation of mechanisms for recycling processed films inside and outside of our company.



New manufacturing facilities at the Utsunomiya Plant (mold releasing film for ceramic capacitors)

### Future initiatives

In fiscal 2024, we will first work to reset our pillars of earnings and recover profitability. We will further undertake price revisions for packaging films, a major issue remaining from fiscal 2023, and will quickly undertake full-scale launches of new products and an OPP film production line. Keeping a constant eye on the state of recovery in markets, we will meet customers’ expanded production structures with our mold releasing film for MLCC and will proceed with construction of a new production line. In LCD polarizer

protective film, too, we will meet customers’ expanded production structures while also carrying out price revisions.

Under the 2025 MTP, the film business is focusing its sight on three of the five social issues of Sustainable Vision 2030. The first of these is “employee well-being and human rights in the supply chain.” With seven manufacturing sites in Japan and overseas, the business considers the safety of employees, the fostering of motivation, and the achievement of disaster prevention and zero disasters at worksites to be the most important issues for its business bases. The next issue of focus is “a decarbonized and circular society.” Here the business seeks to achieve Scope 1 and 2 carbon neutrality and to widely supply society with films that contribute to the environment and resource recycling-oriented films. Finally, with regard to the issue of “clean water areas, air and soil, and the preservation of biodiversity,” the business will contribute to the reduction of food loss and waste through high-performance packaging films that maintain food freshness. In this business, we will set individual targets for these issues, make them known throughout the company, and tackle them together.

On the theme of resource recycling, initiatives at the level of the company or this business face limits in increasing the efficiency and efficacy of recycling. Accordingly, we are actively taking part in resource circulation initiatives that span industries, including the creation of mechanisms for the recycling of films for ceramic capacitors with the involvement of electrical and electronic products manufacturer customers, as well as a recycling project for label paper (KAMISHINE<sup>®</sup> mold releasing film) in cooperation with medical manufacturer and printing industry customers. We hope to expand our recycling technologies not only within Japan but also into initiatives that cross national borders.



# Life Science

Through our proprietary technologies, we are aiming for the top of our global niche and will contribute to healthy living and health care for people worldwide



**Takahito Sagara**  
Managing Executive Officer  
Head of Life Science Division

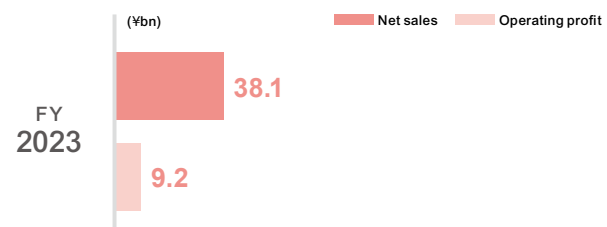
## The strengths of Toyobo

- Integrated development and manufacturing that spans raw materials to end products in the diagnostic reagent and drug domain; securing of dominance in quality
- Film forming technology for hollow separation membranes (development began in the 1970s)
- Exclusive position in the global market for CTA membranes for dialysis applications

## Opportunities and risks

- |               |   |
|---------------|---|
| Opportunities | <ul style="list-style-type: none"> <li>• Expansion of demand for genetic testing (PCR) amid the spread of infectious diseases</li> <li>• Acquisition of national policy-based development support and subsidies for antibody drugs and testing systems</li> </ul> |
| Risks         | <ul style="list-style-type: none"> <li>• Sharp exchange rate fluctuations</li> <li>• Soaring oil and coal prices due to shift away from fossil fuels</li> <li>• Shortages of supplies of goods procured overseas</li> </ul>                                       |

## Net sales and operating profit (¥billion)



## Business overview in fiscal 2023

In the bio business, sales of PCR test reagents decreased as cases of COVID-19 infections fell significantly in the 4th quarter, but sales of raw material enzymes for diagnostic drugs and genetic testing reagents in overseas markets remained strong. To expand the infection diagnosis solution business, in fiscal 2023 we introduced new products including in vitro diagnostics and reagents for simultaneous detection of whooping cough bacteria + para whooping cough bacteria, SARS-CoV-2 + respiratory syncytial virus, and SARS-CoV-2 + influenza virus.

In the medical materials business, sales of artificial kidney hollow fibers remained strong but were affected by soaring prices of raw materials and fuels. In policy measures, the business made preparations for the implementation of market evaluations ahead of the market launch of continuous renal replacement treatment (CRRT) in the next fiscal year.

The contract manufacturing business of pharmaceuticals ran up expenses related to dealings with the U.S. Food and Drug Administration (FDA), but sales recovered as production and shipment of over-the-counter formulations resumed in turn.

As a result, net sales in the segment were ¥38.1 billion and operating profit was ¥9.2 billion (results for new segment).



Reagents for the GENECUBE<sup>®</sup> fully automated gene analysis system SARS coronavirus nucleic acid kit

## Life Science

### Capital investment and R&D investment

In the bio business, we have invested about ¥6.5 billion in the Tsuruga Biochemicals Plant to create new manufacturing facilities, and are undertaking development of raw materials for PCR test reagents and genetic diagnostic drugs along with strengthening of our production system. A third cultivation and purification building will be built in first-stage construction, going into operation in April 2024. A research reagent building and genetic testing building will be built in second-stage construction, with completion and operation expected during fiscal 2025. We plan to further continue investments with the aim of tripling development and production capacity.

In the medical materials business, we have invested about ¥5 billion in the launch of an integrated production plant for dialysis equipment together with NIPRO Corporation. As this business's hollow fiber membrane manufacturing site is located in Yamaguchi Prefecture with assembly performed at a customer's plant in Akita Prefecture, issues have occurred in dealing with customers and the risks of long-distance transport. With the new investment, we are constructing and readying manufacturing facilities in an integrated production plant that connects our hollow fiber membranes and NIPRO's Odate Plant assembly lines, with the building structure and other components already completed.

Full-scale shipment of products is scheduled for July 2024.

We have also been tackling the development of CRRT with the aim of entering the field of acute blood purification therapy for conditions such as sepsis. In May 2023, we were granted approval by the Pharmaceuticals and Medical Devices Agency (PMDA). We will continue investing in a manufacturing and sales structure to achieve market launch in the near future.

### Growth strategy

The Life Science Division is tackling innovation by generating new chemical reactions, combining the cutting-edge technologies that Toyobo has built up in the medical treatment, medicine, and pharmaceutical fields. As technologies and products related to medicine cannot be supplied without production structures that

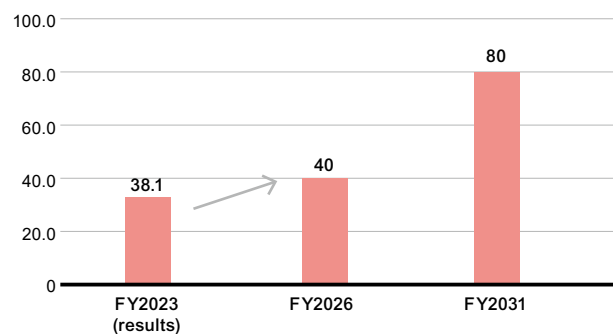
meet strict standards, we are constructing a leading world-class quality management system (QMS) along with structures for drug manufacturing management and quality control standards (GMP). To deliver peace of mind and smiles to people worldwide, we have put forth a business policy of seeking to maximize future value.

Nearly all of the main products of the bio business are used in clinical testing, but its product groups are largely unrelated to each

other. Accordingly, we are working to concentrate resources in the field of epidemiology, establish the Toyobo brand in the infectious disease testing market, and provide value through one-stop solutions for infectious disease.

In the medical materials business, we are focused on the development of applications other than membranes for dialysis, including acute blood purification membranes and process separation membranes that take our strengths in hollow fiber membrane manufacturing technology as their starting point. In the field of process separation membranes in particular, we have begun supplying products to major overseas vendors and are engaged in sales promotions toward major manufacturers in every market. We will also focus on our Bonarc® bone regeneration-inducing materials in the dental area, constructing a stable supply structure to contribute to new dental treatments.

### Net sales target of the life science business (¥bn)



Integrated production plant for dialyzers

### Realizing sustainable growth

This division is active in the areas of diagnosis and treatment in the patient journey. While these areas largely go unseen by the general public, they make great contributions to health and treatment for people around the world. As one of the social issues in Sustainable Vision 2030, we are focusing on “a healthy lifestyle and health care.” Our people involved in this business work with great pride.

To make a greater contribution to society by providing higher-performance products to the clinical testing market in the diagnostic area, we are tackling two targets in the bio business: A yearly 10 million tests that contribute through the provision of diagnostic drugs for infectious diseases, and a 30% market share in raw materials for biochemical tests, etc.

In the medical materials business, we will take advantage of our world-class hollow fiber development and manufacturing technologies, as well as our materials development capabilities, to expand into the area of treatment, thereby contributing to society through products that medical professionals and patients can use with confidence.

# Environmental and Functional Materials

## Contributing to solving the world's issues through highly functional materials



### Chikao Morishige

Representative Director & Co-CEO  
 Head of Environmental and Functional Materials Division  
 President & Representative Director  
 CEO  
 TOYOBO MC Corporation

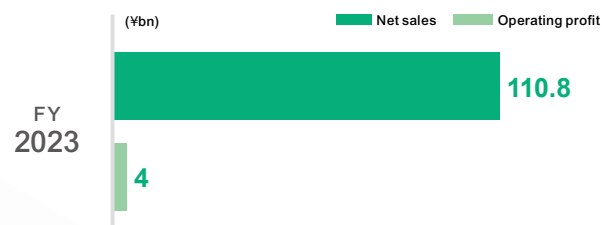
### The strengths of Toyobo

- A new corporate body created through a functional materials manufacturer and a general trading company
- Uniqueness of technology, development capabilities, responsiveness, and ability to comprehend needs
- Global expandability leveraging our network of overseas sites and wide-ranging points of customer contact

### Opportunities and risks

- |               |   |
|---------------|---|
| Opportunities | <ul style="list-style-type: none"> <li>• The global trend toward a circular society and carbon neutrality (holding of many technologies)</li> <li>• Overseas expansion through co-management with a general trading company</li> </ul>  |
| Risks         | <ul style="list-style-type: none"> <li>• Soaring costs of raw materials and fuels and increase in procurement risks</li> <li>• Alliances between textile and chemical manufacturers</li> <li>• Intensification of market competition due to significant changes in business conditions</li> </ul> |

### Net sales and operating profit (¥billion)



### Business overview in fiscal 2023

In fiscal 2023, the final year of financial results under the previous segment categories of Toyobo group, soaring prices of raw materials and fuels and other significant changes in business conditions yielded severe results.

In the environmental solution business, sales of VOC recovery equipment for lithium-ion battery (LiB) separator plants and replacement elements were strong under growing demand for LiBs amid global adoption of electric vehicles (EVs). Non-woven materials struggled as revisions of product prices were unable to keep up with increases in prices of raw materials and fuels. In particular, the business was unable to effect price pass-through in products for civil engineering and construction while quantities did not recover in automotive-related products, resulting in an operating loss. We plan to advance reforms including a review of production capacity. Sales remained strong for high-performance ZYLON® fiber, primarily for architectural reinforcement and bicycle tire applications. Sales of IZANAS® remained strong, primarily for fishing line applications.

As a result, net sales in this segment were ¥110.8 billion and operating profit was ¥4 billion (results for new segment).

### Start of a new company

TOYOBO MC Corporation began operation in April 2023 as a joint venture between our company and Mitsubishi Corporation. Our aim is to grow the environmental and functional materials businesses shouldered by the new company as a third pillar of the Toyobo group, alongside the film business and life science business.

The businesses cover many functional, cutting-edge products based on Toyobo's proprietary technologies, including functional resins and environmental solution systems. Looking back, however, net sales of these have been sluggish in terms of growth, with overseas expansion in particular presenting challenges. In response, we made the decision to create a new "manufacturer + general trading company" framework, in order to grow the business through Toyobo's commitment to technology combined with the overseas expansion and marketing capabilities of Mitsubishi Corporation.

From the day the business launched, we began efforts to

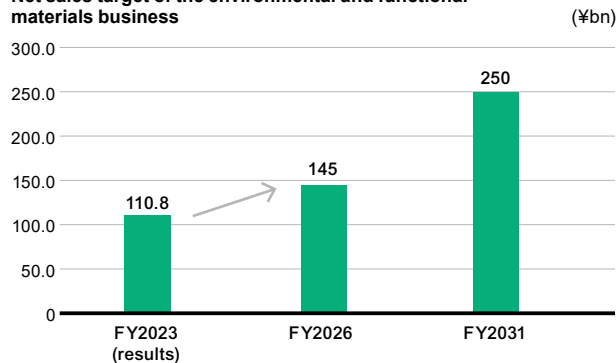
## Environmental and Functional Materials

enhance the solidarity of the employees. The initiatives have included briefings on the Medium-Term Management Plan (MTP); training camps for managers; Medium-Term Management Plan caravans (dialogues with top management) for three divisions, domestic and overseas workplaces, and affiliated companies; and dialogues with vice presidents.

### Growth strategy

To achieve target sales of ¥600 billion for the Toyobo group in fiscal 2031 as set out in Sustainable Vision 2030, we believe that the achievements of the Environmental and Functional Materials Division will be instrumental. In this business, we are aiming for net sales of ¥250 billion in fiscal 2031, with ¥145 billion in fiscal 2026, the final year of the Medium-Term Management Plan. To achieve this high target, we will strategically roll out initiatives that take a bird's-eye view of the materials value chain and the industry overall. Specifically, we are tackling individual businesses divided into "growth," "revenue enhancement," and "business reform" categories, and, through fiscal 2026, are making efforts aimed at expanding applications in existing businesses while leveraging the information

Net sales target of the environmental and functional materials business



network of Mitsubishi Corporation. From fiscal 2026 onward, we will broaden our development of new technologies to meet new needs and speed the cycle overall, while advancing M&A and corporate alliances.

This growth strategy represents a major challenge for Toyobo group. We are committed to achieving significant business transformation in terms of three points: Global penetration and expansion of our customer base which has been centered on Japanese companies in Japan and overseas, acceleration of our development cycle, and enhancement of production efficiency. Positive evaluation from our customers will be indispensable in achieving this. We intend to grow TOYOBO MC Corporation into a company that customers can trust to create things in response to requests.



VOC recovery equipment

### Future initiatives

Among the five social issues named in Sustainable Vision 2030, we recognize that "a decarbonized and circular society" and "clean water areas, air, and soil, and the preservation of biodiversity" in particular involve aspects to be shouldered by this business.

Within its Vision of "solving the world's issues through highly functional materials," TOYOBO MC Corporation has put forth three matters to address as its Mission: (1) Ceaselessly transforming itself, (2) Connecting material technologies to future needs, and (3) Engaging in co-creation to solve social issues. On this foundation, the company will make every effort to enhance its corporate value by solving social issues.

Materials that achieve lighter weight and greater functionality in the field of mobility, along with components and materials required for flexible printed circuits (FPCs) and for the LiBs vital to the shift to EVs, are the core products of TOYOBO MC Corporation. In the environmental field, the company will be able to ably leverage aqua membrane technologies and effluent treatment technologies in LiB manufacturing, contributing to the effective use of water and other resources and to the reduction of environmental impacts. Osmotic power generation using aqua membranes, now at the stage of practical application in Denmark, is considered highly promising for deploying high-performance fiber in offshore wind power generation. These are technologies that will contribute greatly to carbon neutrality. The business's products bring together elements that can make general contributions to the environment despite their differing scopes. We believe that we will be able to expand the business on the back of worldwide megatrends.

## Feature

### Launch of TOYOBO MC Corporation

TOYOBO MC Corporation (TMC), established by Toyobo and Mitsubishi Corporation as a new joint venture to plan, develop, manufacture, and sell functional materials, began operations on April 1, 2023. We spoke about TMC's growth strategy with vice presidents from both parent companies, who have been involved in the new company's launch from the preparation stage onward.

#### The road to the launch of a new company

The fusion of the two companies will create a stronger, more interesting company

**Fujii** I was involved in preparations for the company for about two years from the start of the project. From 2022, I served as the officer in charge of establishing a new company. During the process, I had many discussions with Mitsubishi Corporation. What I think connected the two companies, in a word, is fate.

Toyobo's environmental and functional materials business, which the new company is succeeding, is an area that enjoys cutting-edge technology, yet has not been able to grow significantly. I sensed a risk that growth could become even more problematic for the business during a phase of rising management costs for reasons such as environmental response. I wondered whether insufficient marketing capabilities in Toyobo, especially in terms of overseas marketing and deployment, might underlie the inability to significantly expand the businesses. If it were a



matter of just one business, working with manufacturers could yield greater synergy. However, transferring 12 businesses and growing them significantly definitely requires comprehensive strengths. The partner who offered those strengths was Mitsubishi Corporation.

**Baba** I think there are two main things expected of Mitsubishi Corporation.

One is marketing, a traditional strength of trading companies. Mitsubishi Corporation has enormous contact area in regions and industries around the world, which we will leverage to increase opportunities for entry into customer bases, regions, and markets that have eluded Toyobo so far.

Another expectation is for the knowledge and experience gained from sending management teams to about 1,700 companies in which Mitsubishi Corporation has invested. Incorporating the good parts of the company's problem-solving know-how, including technical support, overseas regulatory compliance, and governance measures, into TMC should enable a stronger, more interesting company.

**Fujii** Mitsubishi Corporation has very compelling functions and assets, including a 110-site network, global information capabilities, the intelligence functions to analyze that information, and planning capabilities. Mitsubishi Corporation has also been investing heavily in carbon neutrality, and is developing a lot of clean energy with a focus on wind power generation. I believe that this will make considerable contributions to expanded use of Toyobo's energy-related materials, as well as to the advance of energy conversion at production sites.

Trough our discussions, I've felt a difference between two companies in terms of sense of speed and persistence, a weak point for Toyobo. This sort of cross-cultural integration itself is a

major factor in growth. I have expectations that growth opportunities for human resources, including experience at overseas sites, will broaden.

#### The strengths of TOYOBO MC Corporation

Meeting the needs of society with technology, information, and planning capabilities

**Baba** TMC has already announced its medium- to long-term management targets. Approaching those high targets will require growing existing customers while also cutting into new customers and markets not yet reached. Decarbonization has become a large movement over the past few years, and we've arrived at an era that demands a change from the passive environmental response of the past to an aggressive environmental response. Toyobo has many materials that are needed now, not only in Japan but across the world. These include engineering plastic materials that contribute to weight reduction in electric vehicles (EVs) and low dielectric adhesive raw materials that are required for the advance of digitalization. In talks with several companies before the establishment of TMC, I heard many times that Toyobo is a company that has the creation capabilities to properly meet customers' detailed demands.

**Fujii** We had discussions with Mitsubishi Corporation about how we want to make TMC a company with technology at its core. Although the company's materials all contribute in different forms, they all hold the potential to be environmentally conscious. In the coming era of providing solutions rather than materials themselves, it will be important to use materials and

technologies to solve the problems customers face. I think that if we can also uncover and suggest issues that customers are not aware of, we can make even greater contributions. I believe that we'll be able to achieve this by combining the strong technical capabilities of

#### Dialogue

Juro Baba

Executive Vice-president & Representative Director, COO Controlling Supervisor of Portfolio Management TOYOBO MC Corporation

Naoki Fujii

Director, Vice President, Executive Officer, Assistant to the President, Special Mission Officer, CCO TOYOBO MC Corporation

Toyobo with the high-level information and planning capabilities of Mitsubishi Corporation.

**Baba** Mitsubishi Corporation has continued to think about where the world's needs lie, and what we can connect, and how, in order to address those. As long as we can learn where the needs are that call for TMC, we can consider what to make and then execute on that, which is Toyobo's area of expertise. This fusion is our greatest strength.

As an example, even as a circular society advances, there are still many plastics that are thrown away without recycling. To recycle these, their materials must be recyclable to begin with. It is also important to create mechanisms for the recycling of these materials. If we can participate in the creation of regulations and rules for countries and industries to create such social mechanisms, and propose materials to customers, I think that would be really interesting.

## Reviewing organizational design

### Going beyond the conventional boundaries of materials manufacturers

**Fujii** In the organizational design of TMC, I thought it would be good to review our organizations so far. In Toyobo, the growth potential of individual businesses reached limits because of silos created in organizations under the vertical divisions of the business division structure. I thought that we should first change these vertical divisions.

**Baba** Right. I think that the business division structure, with businesses subdivided and with sales, production, and development integrated, functioned extremely efficiently in terms of quickly responding to customers'

needs. Since the 1990s in particular, with no large new products appearing and sales stagnant, the company overcame difficult times through solid earning in small units.

However, looking at what's important in a phase where the company aims for further growth, I think there are two things. The first is bold allocation of management resources. When vertical division is strong, maximizing its own return becomes the goal for an individual organization, which leads to the encircling of human resources and funds. Taking down such walls and creating a functional division structure at TMC, capable of making concentrated shifts of people and funds, was a major decision.

The other important thing is the achievement of co-creation that goes beyond businesses and products. Until now, cooperation among business departments has been weak, and we've been unable to make multifaceted responses even when potential arises to provide varied products and solutions. As the needs of the world become increasingly complex, solving problems through a single product will likely become difficult. A mindset of proposing solutions that combine several businesses or different products, or of going horizontal and introducing other business divisions depending on the issue, will be important.

As information sharing is the key to functional organizations, to address adverse effects such as increased difficulty in communicating, we established strategic planning departments at three functional divisions to facilitate information sharing and operations. These departments shoulder a big role in achieving cooperation among divisions.

**Fujii** There is no correct answer to the question of what form organizations should take. The answer naturally changes according to goals and strategy. With the new company, I expect that a lot of

things will come to light through the change to function-specific organizations.

## A wonderful fusion

### A shiny new company with a one-of-a-kind corporate culture

**Baba** I was surprised that the two companies, which both have long histories, share a common corporate philosophy of viewing contribution to a prosperous society as the purpose of their business activities, going back to our "Jun-Ri-Soku-Yu" and Mitsubishi Corporation's "The Three Corporate Principles," corporate philosophies set by our companies' respective founders in the Meiji era. I feel that, flowing beneath, there was something very common to both companies. In terms of work, however, there's a difference akin to that of hunting people versus agricultural people. There's a stark contrast between Toyobo, which advances matters carefully and accurately to avoid any mistake, and Mitsubishi Corporation, which tends to first take action and think on the run. With those completely different corporate cultures coming together, I want to see the good parts of each merge, to create a company with a new culture not seen before.

**Fujii** Yes. I think it's a fusion of dissimilar things. One goal of TMC is enhancing the mobility of people. This may be a brash thought, but I want to implement human resource development that takes a step forward to let employees grow through diverse experiences, by means such as creation of opportunities for inter-company learning that includes Mitsubishi Corporation too, rather than interaction within TMC alone. Creating a shiny, new company with a wonderful corporate culture is what I see as my biggest mission as a vice president.



### Juro Baba

April 1990  
September 2001  
April 2013  
April 2022  
July 2022

Joined Mitsubishi Corporation  
Mitsubishi Corporation (Americas)  
Corporate Planning Department  
Appointed Executive Officer  
Senior Vice President  
Special Appointments  
General Manager to Industrial Materials  
Group CEO

### Naoki Fujii

April 1987  
November 2007  
June 2011  
April 2015  
April 2018  
April 2021

Joined TOYOBO CO., LTD.  
General Manager, Procurement Department  
General Manager, Planning and Management Functional Materials  
Manager, Iwakuni Production Center  
Manager, Corporate Planning Department  
Appointed Executive Officer



# Functional Textiles and Trading

## Executing business portfolio reform to arrive at what our business should be

### Shigeo Nishiyama

Senior Managing Executive Officer  
Head of Functional Textiles and Trading Division

### The strengths of Toyobo

- Know-how for deployment of biodegradable fibers, developed as a synthetic fiber manufacturer, to airbags
- A product lineup friendly to people and the earth
- Polymerization and modification technology developed as Japan's first acrylic fiber manufacturer

### Opportunities and risks

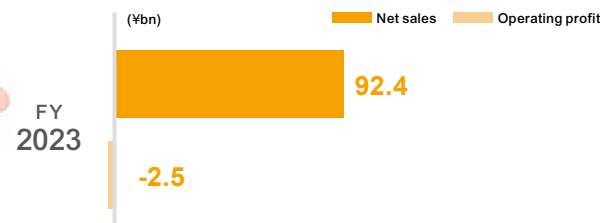
#### Opportunities

- Expansion of business opportunities through replacement with environmental materials (biodegradation and recycling)
- Restructuring of the environmental materials industry, strengthening of corporate constitution through alliances, and expansion of opportunities

#### Risks

- Soaring prices due to monopolization and discontinuation of production of biodegradable, recyclable, and other small-lot raw materials
- Risk of acceleration of business closures by domestic subcontractors in the apparel industry, and risk in securing labor in plants

### Net sales and operating profit (¥billion)



### Business overview in fiscal 2023

In this business, we are making efforts to carry out a business reform master plan for arriving at what our business portfolio should be, based on the 2025 Medium-Term Management Plan.

In fiscal 2023, businesses were significantly affected by soaring prices of raw materials and fuels, with exchange rate factors caused by sharp depreciation of the yen also having a negative impact. Amid this, sales and profit were led by thobe, traditional Middle Eastern apparel. We were able to pass along nearly all of the increase in raw material prices but struggled significantly in passing along fuel prices, with the result that performance declined other than in TOYOBO STC CO., LTD.

As a result, net sales in this segment were ¥92.4 billion and operating profit was - ¥2.5 billion (results for new segment).

With the exception of cost increase factors, progress was made according to schedule in addressing issues in each business. We expect that exchange rate impacts will be mitigated through new contracts.



Thobe, traditional Middle Eastern apparel

## Functional Textiles and Trading

### Business strategy

Under its vision of creating small comfortable changes in living through textile technologies, the business is working to develop and commercialize distinctive technologies that find use in varied lifestyle scenarios. The division's business is diverse, covering many products related to everyday living. To solve users' concerns and issues, we intend to leverage our technical and development capabilities and use trading company functions to bring together wide-ranging knowledge and skills, then commercialize and globally deploy these. We will abandon the idea of continuing through our own efforts, and will enhance our strategies through alliances with other companies and other industries, including industry restructuring. With regard to the social issues noted in Sustainable Vision 2030, we are strengthening our initiatives related to "employee well-being and human rights in the supply chain" and "a decarbonized and circular society" in particular.

Based on our master plan, we are working to achieve early profitability, prioritizing "withdrawal from unprofitable businesses and products," "optimization of production scale and personnel," "pass-through pricing to address cost increases," and other items in order to earn an appropriate marginal profit rate in each business.

We entered the airbag business through non-coated fabrics. We also manufacture silicone coated fabrics at present, but in the recycling society of the future, non-coated fabrics that do not require removal of silicone will grow in importance. Our know-how in the utilization and manufacturing of biodegradable fibers is also a strength. We are steadily carrying out our roadmap for achieving profitability and are moving forward with negotiations on base price revision, integration of product numbering, proper allocation, and review of shared expenses. Toyobo Indorama Advanced Fibers Co., Ltd. (TIAF), a joint venture with Indorama Polyester Industries PCL (IPI) to manufacture airbag yarn, began operation in October 2022. We are working to achieve stable operation as quickly as possible.

The functional textile business is carrying out improvements to its human capital structure, with the start of a new structure scheduled for March 2024. Together with this, we are also undertaking transfer of production technology to Toyobo Textile

(Malaysia) SDN.BHD.

In the textile business, our founding industry in which we have accumulated over 140 years of technologies, we have carried out integration and reorganization of group companies with the goal of enhanced profitability and asset efficiency, and launched TOYOBO TEXTILE CO., LTD. in April 2022. Through the consolidation of three plants and a return to profit through integrated business operations at overseas sites, we aim to establish a foundation for profitability. The greatest advantage of woolen menswear company Miyukikeori Co., Ltd. is its status as a luxury brand capable of integrated production that spans yarn, weaving, processing, and sewing. The company is also developing the world's finest, lightest class of fabrics using ultra-strong yarn (Manerd<sup>®</sup> wool technical hybrid yarn). While achieving stable management through enhanced efficiency in the textile business, we are engaging in selection and concentration of business partners (moving away from department stores and toward high value-added apparel).

Responding to a sharp rise in construction steel materials and construction-related costs, acrylic fiber company Japan Exlan Co., Ltd. conducted a review of its original revitalization plan, and has undertaken a new start. The company will shift to OEM for acrylic raw cotton, improve the efficiency of its production processes, and carry out sales strategies and sales expansion measures that include external collaboration.

The trading company TOYOBO STC CO., LTD. will focus on the expansion of new commercial flows with Toyobo group companies and on expansion of proprietary technical products.



Completion of a nylon yarn production plant for TIAF's airbags on the grounds of IPI



# Communication with Stakeholders



Dialogue with Stakeholders →

As a member of society, we meet the expectations of our stakeholders and contribute to the sustainable development of the community through collaboration with our partners to solve social issues and cooperation in the areas where we operate.



Dialogue with ESG Investors →

We engage in active communication with our stakeholders to enhance our corporate value.



External Evaluation (ESG Factors) →

The indexes in which we are included as well as evaluations from ESG rating agencies are as follows.

# Dialogue with Stakeholders

| Materiality                         |   |
|-------------------------------------|---|
| Related ESG : <b>S G</b>            |  |
| Partnership: Stakeholder engagement |   |

↓ Policy and approach    ↓ Dialogue with stakeholders and investors

## Policy and approach

Based on its corporate philosophy *Jun-Ri-Soku-Yu* (adhering to reason leads to prosperity), the TOYOBOKU Group Charter of Corporate Behavior states “Communication with stakeholders: We will carry out fair and appropriate information disclosure and enhance corporate value through communication with our stakeholders.” In accordance with this basic approach, Toyobo group actively disseminates information and engages in communication activities. The content of activities are also regularly reported to the management team. The group strives to disseminate information in a timely, appropriate, and accurate manner to society as a whole, including our stakeholders such as customers, suppliers, shareholders and investors, employees, and local communities.

In our communication activities, we aim to promote an accurate understanding of Toyobo group and continuously enhance the Toyobo brand and corporate value while building relationships of trust by striving for two-way communication with stakeholders and the wider society as a whole.

## Basic approach to information disclosure

Toyobo group endeavors to provide timely and appropriate information disclosure with consideration given to fairness and impartiality in order to continue to be a trusted company. The group also communicates actively with stakeholders, including shareholders and investors, to enhance its corporate value. These activities are based on the following approaches.

- a. Information disclosure as a social responsibility (accountability)
- b. Communication to enhance corporate value
- c. Communication to prevent damage to corporate value

### < Targets >

As a member of society, Toyobo group will meet the expectations of stakeholders and contribute to the sustainable development of communities through collaboration with partners and cooperation in the regions where the group operates with the aim of solving social issues.

## < KPIs and results >

| Initiatives   | KPIs   | Targets (FY2023)           | Results (FY2023) |
|---|--|----------------------------|------------------|
| <ul style="list-style-type: none"><li>● Active dissemination of information, strengthening of disclosure</li><li>● Dialogue with shareholders and investors</li><li>● Dialogue with employees</li><li>● Collaboration and dialogue with industry, government, and academia</li><li>● Coexistence with local communities</li></ul> | 1. No. of press releases                                 | 75 per year                | 103              |
|   | 2. No. of interviews with investors                      | 150 per year*              | 124              |
|   | 3. Frequency of meetings with employees and labor unions | At least 30 times per year | 77               |
|   | 4. Frequency of engagement with stakeholders             | Twice a year               | 3                |

\* Target covers the period from August 2022 to July 2023

## Dialogue with stakeholders and investors

### Financial results

Every fiscal year, our company holds financial results briefings for financial institutions, including for institutional investors and analysts. The President personally provides briefings for full-year and second quarter financial results, explaining the details of the results and future management policy.

For first quarter and third quarter results, the Executive Officer controlling IR operations conducts online briefings of results.

### IR information

Toyobo is enhancing and expediting information disclosure in Japanese and English on the company's investor relations website.

Toyobo also provides its "Business Result Presentation", "Annual Securities Report", "Flash Report", "Integrated Report", "Fact Book", "Investors Guide" on its investor relations website together with archives. Timely disclosure materials (financial results, etc.) are posted on the investor relations website at the same time as public announcements are made.

In addition, Toyobo provides on-demand streaming of presentation videos for a certain period after the date of the financial results presentations. In FY2021, we began disclosing briefing scripts in addition to the Q&A summaries. In FY2021, we extended the posting period of on-demand distribution, Q&A summaries, and briefing scripts from three months to one year, to promote fair information disclosure.

Going forward, Toyobo will endeavor to enhance the materials and functions it provides to facilitate ease-of-use for all shareholders and investors.

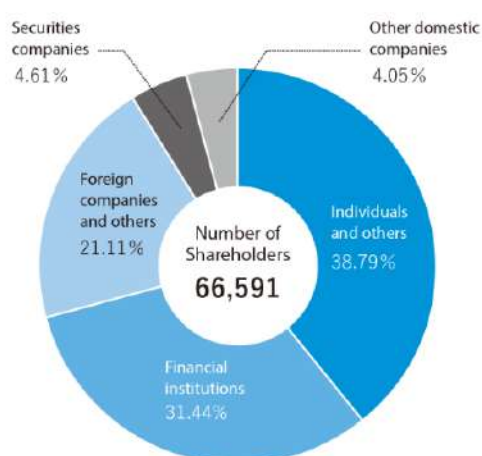
## Annual general meetings of shareholders

The Annual General Meeting of Shareholders is held each year in late June at Toyobo's Head Office in Osaka.

### Number of shares and shareholders (As of March 31, 2023)

|                                       |   |
|---------------------------------------|---|
| Number of shares authorized for issue | 200,000,000                                       |
| Shares issued to date                 | 89,048,792<br>(Including 723,040 treasury shares) |
| Number of shareholders                | 66,591  |

### Composition of shareholders (Based on number of shares held) (As of March 31, 2023)



## Employees

Toyobo group communicates with employees by introducing the company's management policies and activities through various media such as the group newsletter in the booklet, the intranet, and the company-wide bulletin board.

The group has started an "organizational culture and job satisfaction survey" for all employees from 2021.

• [Human Resource Management > Employee engagement](#)

### ● Dialogue between management and labor

Meetings of the Central Management Council, attended by representatives of the labor union headquarters and of company management, are held once a year, and meetings of the Branch Management Councils are held once a year at each of the nine branches in Japan.

The labor union is represented at meetings of the Central Management Council by staff from the union headquarters, and is represented at Branch Management Council meetings by staff from the relevant union branch, while the company is represented by the President at meetings of the Central Management Council, and by the business site manager or plant manager at Branch Management Council meetings.

### ● KAERU activities

In April 2018, with the support of a majority of its employees, Toyobo group started the KAERU activities (kaeru means "to change") throughout the company with the participation of all officers and employees. Within this activity, we hold presentations, talk sessions, dialogue, and exchange workshops to deepen communication between officers and employees.

- Presentations and talk sessions: FY2023: Conducted 3 times (total number of times conducted since FY2019: 25, with 1,470 participants)

\* Number of participants is not noted for FY2023 due to video streaming.

- Dialogue and exchange workshops: FY2023: Conducted 142 times, with 2,439 participants (total number of times conducted since FY2019: 284, with 4,561 participants)

## ● Evening Learning

Lunchtime Learning, a program initiated in June 2022, was renewed as Evening Learning from FY2024, a program for employees of our group held every month during after-work hours.

Changing the time of the program from lunch breaks to after work has enabled participation by a wider range of persons in the group.

It is intended to provide an opportunity for employees to communicate with each other while learning about what kind of work is being done at the group company. In addition to participation at the venue, we also offer webcasts, which are attended by teleworkers and employees outside the head office. The events have been great successes, with many participants each time.

In FY2023, we conducted sessions 10 times, with attendance by 1,100 persons (including online sessions).



First "Evening Learning" session

## ● In-house dissemination and awareness-raising activities related to sustainability

As a means of enhancing employees' awareness of sustainability and putting sustainability into practice, our company regularly publishes "Sustainability News" to share up-to-date information on internal and external initiatives and other news concerning sustainability.

Every year in January and February, we hold a "Sustainability Week" to raise awareness among employees through events, distribution of educational content, and more.

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## Overseas business sites

In response to the globalization of its business activities, Toyobo group engages in communication with overseas business sites.

Each year, local staff of overseas business sites visit Japan for training. The curriculum is available in English and Japanese and has the three following objectives.

- a. Deepening understanding of Toyobo;
- b. Deepening interaction with Japanese employees;
- c. Applying what learned in the home countries of trainees.

Toyobo also has an overseas business training system for selected young employees to spend six months out of a one-year program at an overseas business site learning the basics of language, culture, and overseas business while interacting with local staff.

As cross-border mobility had been sharply restricted by the COVID-19 pandemic through the previous year, we took care to shorten the distance between ourselves and contacts overseas as much as possible using web conferencing and other digital technologies. This year, the pandemic is finally subsiding, and travel restrictions have been eased. We have resumed on-site visits, and, using these in conjunction with web conferencing, are making efforts to communicate more closely than ever with our overseas sites.

Our President is also resuming overseas site visits, with plans to visit several group companies each year to directly encourage local staff and staff stationed overseas.

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## Stakeholders

Toyobo carried out six cases of communication in FY2023 - FY2021 ( Position at that time ) :

- In October 2020, " ESG as a demand of the times "  
Mr. Megumi Sakuramoto, Chief ESG Analyst, Investment Div. Responsible Investment Group, Asset Management One Co., Ltd.
- In January 2021, " Corporate sustainability initiatives at Mitsubishi Corporation "  
Mr. Takehiro Fujimura, General Manager, Corporate Sustainability & CSR Department, Mitsubishi Corporation
- In December 2021, "Mitsui Chemicals Group's approach to ESG promotion"  
Mr. Ken Migita, General Manager, Corporate Sustainability Division, Mitsui Chemicals, Inc.
- In June 2022, "Business and human rights — Human rights initiatives in the Corporate Sector"  
Ms. Akiko Sato, Business and Human Rights Liaison Officer, United Nations Development Programme
- In September 2022, "BASF initiatives to accelerate sustainability management"  
Mr. Hiroki Ishida, Representative Director and President, BASF Japan Ltd.
- In February 2023, "Practice of sustainability and information disclosure - Initiatives based on the ISSB disclosure draft-"  
Mr. Katsuya Kikuchi, Head of Responsible Investment Department, Tokio Marine Asset Management Co.,Ltd.



Mr. Megumi Sakuramoto  
Chief ESG Analyst, Investment Div.  
Responsible Investment Group, Asset  
Management One Co., Ltd.



Mr. Takehiro Fujimura  
General Manager, Corporate  
Sustainability & CSR Department,  
Mitsubishi Corporation



Mr. Ken Migita  
General Manager, Corporate  
Sustainability Division, Mitsui  
Chemicals, Inc.



Ms. Akiko Sato  
Liaison Officer, UNDP



Mr. Hiroki Ishida  
Representative Director and President,  
BASF Japan Ltd.



Mr. Katsuya Kikuchi  
Head of Responsible Investment  
Department, Tokio Marine Asset  
Management Co.,Ltd.

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## Local communities

Please see the Social Contribution page for more details.

- [Social Contribution](#)

# Dialogue with ESG Investors

We are engaging in active communication with our stakeholders to enhance our corporate value. Please see below for the contents of the dialogues.



Toyobo President Ikuo Takeuchi sat down with Mr. Megumi Sakuramoto, Executive ESG Analyst at Asset Management One Co., Ltd. to discuss the sustainable growth of the Toyobo group on May, 2022.

Dialogue with ESG Investors in the Integrate Report 2022 (223KB)



Toyobo President (At the time) Seiji Narahara sat down with Mr. Ken Shibusawa, founder of Commons Asset Management and the great-great-grandson of Toyobo founder, Eiichi Shibusawa, to talk about sustainability within the Toyobo group on May, 2020.

Dialogue with ESG Investors in the Integrate Report 2020 (699KB)



# External Evaluation (ESG Factors)

↓ Inclusion in ESG Indexes    ↓ Other evaluations

## Inclusion in ESG indexes

Toyobo is listed on the following ESG Indexes, as of June 2023.

It has been selected as a constituent stock in all ESG indices of Japanese stocks adopted by the Government Pension Investment Fund (GPIF).

- FTSE Blossom Japan Index
- FTSE Blossom Japan Sector Relative Index
- MSCI Japan ESG Select Leaders Index
- MSCI Japan Empowering Women Index (WIN)
- Morningstar Japan ex-REIT Gender Diversity Tilt Index
- S&P/PX Carbon Efficient Index



**FTSE Blossom  
Japan**

The FTSE Blossom Japan Index is designed to measure the performance of Japanese companies that enjoy high reputations in the area of ESG.

**2022 CONSTITUENT MSCIジャパン  
ESGセレクト・リーダーズ指数**

The MSCI Japan ESG Select Leaders Index is an index of companies that are among Japan's top 700 firms by market value and that enjoy relatively outstanding ESG evaluations in their industries, comprehensively taking into account the ESG-related risks in those industries.



**FTSE Blossom  
Japan Sector  
Relative Index**

The FTSE Blossom Japan Sector Relative Index is designed to be sector-neutral, reflecting the performance of Japanese companies that exhibit relatively outstanding ESG actions in their sectors.

**2022 CONSTITUENT MSCI日本株  
女性活躍指数 (WIN)**

THE INCLUSION OF TOYOCO CO., LTD. IN ANY MSCI INDEX AND THE USE OF MSCI LOGO, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT OR PROMOTION OF TOYOCO CO., LTD. BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI LOGOS ARE THE EXCLUSIVE PROPERTY OF MSCI, AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

The MSCI Japan Empowering Women Index (WIN) is constructed on the basis of disclosed information concerning gender diversity. Companies that promote high-level gender diversity in the workplace are considered more capable of adapting to the risk of talent shortages in a future shrinking workforce, and thereby better able to yield sustainable earnings over the long term.



## Other evaluations

Toyobo has received the following evaluations.



The Certified Health & Productivity Management Outstanding Organizations Recognition Program is operated jointly by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi. This program recognizes companies of varied size that practice particularly outstanding health and productivity management, based on initiatives rooted in community health issues and health promotion initiatives advanced by Nippon Kenko Kaigi.

Our company was awarded "Top 500" certification in the 2023 Certified Health & Productivity Management Outstanding Organizations Recognition Program, a designation given to top corporations.



The Platinum Kurumin certification is awarded to companies that have achieved a higher level of initiative, such as the introduction and use of systems to support a balance between childcare and work, selected from among those that have received Kurumin certification as companies that support the childcare of their employees in accordance with the Act on Advancement of Measures to Support Raising Next-Generation Children.

In July 2023, we were certified as a Platinum Kurumin in evaluation of our various initiatives.



The Eruboshi Certification is awarded to companies that demonstrate outstanding implementation of initiatives related to participation and advancement by women in the company under the Act on Promotion of Women's Participation and Advancement in the Workplace.

Our company was recognized for achieving prescribed standards for items including "Employment", "Continued Length of Employment", "Working Hours and Work Styles", and "Diverse Career Paths", receiving two out of a maximum of three stars.



Our company was selected as the highest-rated Supplier Engagement Leader in the CDP Supplier Engagement Ratings.

The Supplier Engagement Ratings are based on responses to questions in the four areas of "Governance", "Targets", "Scope 3 emissions", and "Supply chain engagement" in a corporate survey on climate change conducted by CDP. This evaluates climate change initiatives throughout companies' entire supply chains.

- [Health and Productivity Management](#)
- [Promotion of Women's Participation and Advancement](#)
- [Climate Change](#)

# [Activity Report]

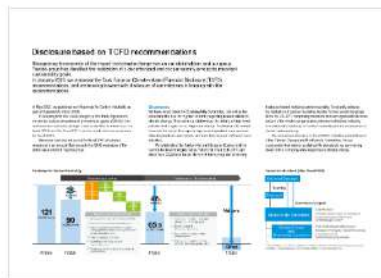
## Environment

These sections introduce our group's environmental policy, environmental management structure, and related initiatives.



## A decarbonized and circular society

Toyobo group recognizes climate change as a very significant social issue that will have a significant impact on our business. We support the "Glasgow Climate Pact" and aim to achieve carbon neutrality by the fiscal year 2051, which is consistent with the global 1.5°C target.



Disclosure based on TCFD Recommendations in the Integrated Report 2023 (310KB)

### Targets for FY2031

Sustainable Vision 2030 →



Cutting emissions in Scope 1 & 2 by **over 46%** in FY2031 vs FY2014, **Net zero** in FY2051

Increasing consumption of natural resources and energy, and increasing generation of waste, are becoming serious problems throughout the world. As a result, there is a global trend to realize a transition away from conventional uni-directional resource usage toward the circular economy, in which resources are used in a sustainable manner.

Toyobo group is aiming to help realize the circular economy through its business activities by implementing initiatives to achieve the greenification (i.e., utilization of biomass and recycled raw materials, and volume reduction) of plastic in the value chain, reduce waste, and conserve water resources.



Plastic Resource Circulation →



Waste Reduction →



Water Resources →



Polymerization of 100% bio-based PET resin in the Integrated Report 2022 (193KB)



## Clean water areas, air and soil, and preservation of biodiversity

Our daily lives and our economy are supported by the benefits that we receive from a wide range of living creatures and ecosystems, or in other words, from biodiversity.

Toyobo group handles a wide range of chemical products, and produces items such as textile products, containers and packaging, and raw materials for pharmaceutical products. To minimize the negative impact that our operations have on the global environment and on ecosystems, we are working to conserve biodiversity, by implementing thorough management of chemical substances, as well as striving to reduce our impact on the environment, including the atmosphere and on water area.



Chemical Substance Management and Reducing Environmental Impact →



Biodiversity →

ESG Performance Data →

# Management Approach

↓ Policy and approach   ↓ Structure   ↓ Environmental management system

## Policy and approach

In 1992, we established our Global Environmental Charter and Action Guidelines, and in 1997, compiled our Environmental Philosophy, Environmental Activity Policy, and Code of Conduct into the "TOYOBO Group Fundamental Policy on the Global Environment" and launched a company-wide global environmental conservation initiative.

In addition to reducing the environmental impact of our business activities, we will contribute to society through people- and planet-friendly technologies.

### TOYOBO Group Fundamental Policy on the Global Environment

#### 1. Environmental philosophy

We are striving to contribute to society through technologies friendly to both people and the environment, protect the global environment, and to leave a better planet and a more prosperous society to future generations.

#### 2. Environmental activity policy

##### (1) Development of technologies

By devoting all of our efforts, the Toyobo group is developing technologies (products and manufacturing processes) that are friendly to both people and the environment, and we are promoting environmental measures.

##### (2) Environmental protection

At every stage, from product development through to design, manufacture, sale, disposal, and collection, we are forecasting, evaluating, and reducing their impact on the environment, working towards its protection.

##### (3) Contribute to society

With the aim of bringing about a better global environment, as well as using our business activities, as a good corporate citizen we will actively support and participate in environmental protection and biodiversity conservation activities throughout society and in local regions.

#### 3. Code of conduct

##### (1) Think : Technical development and evaluation

In development and design, strive to develop environmental technology and evaluate environmental protections.

##### (2) Value: Environmental protection and reuse

Strive to develop, improve, and reuse environmental technologies in the production, sales, distribution, and disposal phases.

##### (3) Participate: Disclose technologies and share information

Strive to disclose developed environmental technologies and provide environmental information.

##### (4) Protect: Environmental compliance and auditing

Strive to set and maintain environmental regulations and self-management standards set by national and local governments, etc., and carry out audits.

##### (5) Train: Internal and external systems

Strive to enhance our internal environment-related systems, and carry out education and awareness-raising activities.

## Structure

Our environmental conservation activities (climate change, waste, water resources, biodiversity, etc.) are promoted by the Climate Change and Biodiversity Committee under the Sustainability Committee. We also establish the Global environment Committee to promote specific initiatives at our business sites and plants.

The Sustainability Committee deliberates on top-level policies and targets for overall sustainability activities, including climate change response. Receiving the report on a regular basis, the Board of Directors approves top-level policies, targets, and other key matters, and supervises the progress of its activities. In fiscal 2022, the Sustainability Committee met four times, and in response, the Board of Directors were reported on five occasions, including regular and extraordinary reports. In fiscal 2023, Sustainability Committee is scheduled to meet six times and report to the Board of Directors at least once every six months.

The committee also manages activities aimed at achieving "a decarbonized and circular society", which are one of the "five social issues" set forth in our "Sustainable Vision 2030".

The Global Environmental Committee is responsible for formulating and proposing policies and measures for global environment conservation activities to Safety and Disaster Management Division manager and for managing the progress of these measures. The committee is chaired by the General Manager of environment Administration Department and is composed of General Manager and Executive Officer from all business divisions and divisions. In principle, the committee meets once a year.

The Global Environmental Promotion Committee meets four times a year to discuss decisions and implements specific promotion items based on the policy, and exchange information on global environment issues, and decide and implement measures to deal with issues when problems occur. The committee is chaired by the General Manager of environment Administration Department and is consists of members selected by Executive Officer of business units and divisions. They also visit each of our offices, production sites, and group companies to conduct "safety and environment assessment" activities, including supervision of compliance with local environmental laws and regulations.

### Organizational Chart



\*President, Vice-president, Heads of Division, Executive Officers in supervisory positions, Chairmen and Corporate Auditors may state their opinions.

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## Environmental management system

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### Basic approach

In order to maintain and improve our environmental conservation efforts, we have established an environmental management system that conforms to the ISO 14001 international standard and other environmental management systems at each of our production sites and laboratories.

In addition, to improve the environmental level of the group, we are continuously conducting "safety and environment assessment" and environmental education for both management and employees.

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### Certification status of Environmental Management System

As of March 31, 2023, 19 business sites (56% of all group production sites: 19 out of 34 production sites) have acquired external certification for environmental management system standards.

#### Business Sites Acquiring ISO 14001 Certification

| TOYOBO CO., LTD. Business Sites                         | Date of Certification |
|---|-----------------------|
| Research Center (Otsu, Shiga)                           | Dec. 1996             |
| Tsuruga Research and Production Center (Tsuruga, Fukui) | Dec. 1996             |
| Inuyama Plant (Inuyama, Aichi)                          | Mar. 1998             |
| Utsunomiya Plant (Utsunomiya, Tochigi)                  | Feb. 1999             |
| Toyama Production Center, Shogawa Mill (Imizu, Toyama)  | Jul. 2001             |
| Iwakuni Production Center (Iwakuni, Yamaguchi)          | Nov. 2002             |

| Group Companies (consolidated subsidiaries)                           | Date of Certification |
|---|-----------------------|
| TOYOBO MC Corporation, Takasago Plant (Takasago, Hyogo)               | Mar. 1999             |
| Toyo Cloth Co., Ltd., Tarui Plant (Sennan, Osaka)                     | Dec. 1999             |
| Japan Exlan Co., Ltd., Saidaiji Plant (Okayama, Okayama)              | Jun. 2001             |
| PT. INDONESIA TOYOBO FILM SOLUTIONS (Indonesia)                       | Jun. 2001             |
| Miyukikeori Co., Ltd., Yokkaichi Plant (Yokkaichi, Mie)               | Apr. 2002             |
| Cosmo Electronics Co., Ltd., (Yokkaichi, Mie)                         | Jan. 2004             |
| Kureha Limited (Ritto, Shiga)   | Jun. 2005             |
| Toyo Cloth Co., Ltd., Iwakuni Plant (Iwakuni, Yamaguchi)              | Oct. 2005             |
| Toyobo Photo Chemicals Co., Ltd., Saidaiji Factory (Okayama, Okayama) | Oct. 2017             |
| Toyobo Saha Safety Weave Co., Ltd. (Thailand)                         | May. 2019             |
| Toyobo Kankyo Techno Co., Ltd. (Osaka, Osaka)                         | Jun. 2019             |

| Group Companies (Equity Method Affiliate)                 | Date of Certification |
|---|-----------------------|
| Cast Film Japan Co., Ltd., Tsuruga Plant (Tsuruga, Fukui) | Dec. 2000             |

### Business Sites Acquiring “Eco Action 21”\*

| Group Companies (consolidated subsidiaries)                                       | Date of Certification |
|---|-----------------------|
| Mitsumoto Chemicals Co., Ltd. (Nabari, Mie)                                       | Nov. 2011             |
| Japan Exlan Co., Ltd., Environment Engineering-analysis Center (Okayama, Okayama) | May 2007              |

\*“Eco Action 21” is one of environmental management systems and was developed by Japanese government.

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## Safety and environment assessment

To improve the safety and environmental level of the group, the Safety and Disaster Management Promotion Committee and the Global Environmental Promotion Committee conduct "safety and environment assessments" as an internal audit of all production sites, including group companies, in accordance with our company's rules. The assessment includes confirmation of the status of various environmental laws and regulations, environmental pollution risk management, and promotion of environmental conservation activities such as energy-saving initiatives.

In addition to annual self-assessments using a checklist, each site undergoes an on-site audit once every three years and takes corrective action if any issues are pointed out. In this way, we are working to maintain and improve the level of management.

### Items to be checked in the safety and environment assessment (partial)

- Implementing identification and compliance of legal requirements, meeting regulation values and notification, for factory operation
- Managing the risk of environmental pollution (risk identification, risk assessment, and implementation of preventive measures)
- Promoting environmental conservation activities (energy conservation, waste reduction, green purchasing, etc.)
- Acquiring third-party certification for its environmental management system
- Implementing appropriate management of chemical substances

In fiscal 2022, we carried out the audits at two business sites and three group companies. The audit results showed that all of these sites and companies performed well in terms of safety and environmental management.

### Locations at which Audits Have Been Performed in the Last Three Years

| FY   | TOYOBO CO., LTD. | Group Companies | Audit results      |
|------|------------------|-----------------|--------------------|
| 2021 | 1 business site  | 3 companies     | All performed well |
| 2022 | 2 business sites | 3 companies     | All performed well |
| 2023 | 3 business sites | 7 companies     | All performed well |

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## Environmental compliance

In addition to complying with applicable laws and regulations, such as the Air Pollution Control Act and the Water Pollution Prevention Act in Japan, the Toyobo group is committed to reducing emissions by not only complying with legal and regulatory standards, but by also making continuous improvements in the prevention of air and water pollution. We will continue to further reduce our environmental impact.

For fiscal 2021 to 2023, there were no environmental-related fines or penalties.

- [ESG Performance Data for the number of violations in fiscal 2021-2023 \(305KB\)](#) 



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## Environmental education

The Toyobo group promotes a variety of educational and awareness activities in order to improve the environmental awareness of the employees and corporate officers, including the management level.

During Environment Month, we hold an annual environmental seminar with outside lecturers invited, in which many employees and corporate officers, including the management level participate. In addition, at each business site, we hold environmental exhibitions featuring panels that introduce our group's environmental activities as well as exhibitions of eco-conscious products, and these introduce the Toyobo group's environmental activities to our employees and the local community.

In addition, we are promoting environmental education through a unique curriculum tailored for new employees.

## Environmental seminars

In fiscal 2024, the Toyobo group held a seminar on the topic of biodiversity conservation and introduction of environment DNA methods. Both face-to-face and online seminars were held, with a total of approximately 200 participants.



FY2024 Environmental seminar



FY2023 Environmental seminar



FY2022 Environmental seminar



FY2021 Environmental seminar

## Past Seminar Themes

- FY 2023: Domestic and overseas Initiatives for biodiversity and natural capital-conscious management  
Biodiversity and human world (What is required of us?)
- FY 2022: Policy Trends Toward Carbon Neutrality by 2050
- FY 2021: From CSR as Ethics to ESG as Strategy New Normal in the Age of SDGs
- FY 2020: Achieving the SDGs and corporate initiatives
- FY 2019: A Changing World with the Sustainable Development Goals (SDGs)
- FY 2018: CSR and Corporate Environmental Activities

## Environmental exhibition

Since 1996, the Toyobo group has held an annual environmental exhibition on employee to deepen employees' understanding of the group's efforts to conserve the global environment (since fiscal 2022, the exhibition has also been held via the Internet). In fiscal 2024, the exhibition took up a special feature entitled "Efforts by Business Sites and Plants for Preservation of the Global environment and Coexistence with Local Communities" and introduced the activities being carried out at business sites and plants throughout Japan to preserve and improve the environment and coexist with local communities.

### Past Seminar Themes

FY 2023: Action for "biodiversity conservation"

## Environmental education on joining the company

Education upon joining the company is provided not only to fresh hires, but also to mid-career employees at all locations, including at group companies. In addition to explaining plans and achievements regarding the global environmental conservation system and initiatives, the training helps participants understand why environmental protection is important by linking it with the Toyobo Group Charter of Corporate Behavior, and explains what is expected of employees of the Toyobo group.

## Session for management

Twice in January and February 2023, we invited an outside lecturer to have sessions on the topic of the "Practice of Sustainability and Disclosure of Information" for Executive Officer. In particular, we deepened our knowledge of new climate-related disclosure standards.

### Past Seminar Themes

FY 2023: Carbon neutrality

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## Other Initiatives

### Environmental Accounting

As an initiative to quantitatively evaluate our environmental protection activities, we conduct environmental accounting based on the Environmental Accounting Guidelines 2005 issued by the Ministry of the Environment of Japan. In fiscal 2023, capital investment for environmental protection was ¥4 billion, and the amount spent for protection and maintenance was ¥2.9 billion. This primarily includes the cost of statutory environmental impact measurements, industrial waste disposal, various inspection, and associated personnel costs.

### Green purchasing

For general purchases such as office supplies, the Toyobo group promotes green purchasing by specifying target items and utilizing "environmental labels."

In fiscal 2022, we purchased 11 out of 12 targeted items\*, of which nine had a green purchasing rate of 100%. The other two items also accounted for more than 95%. We will continue to expand the range of items covered by the scheme, keeping an eye on the green purchasing rate and trends in the world.

\* Copy paper, toilet paper, files, tape for label printers, computers, copy machines, printers, fax machines, lighting equipment, fire extinguishers, air conditioners (for home use), work clothes and uniforms

# Eco-Conscious Products

↓ [Basic approach](#)   ↓ [Structure](#)   ↓ [Targets and results](#)   ↓ [Initiatives related to eco-conscious products](#)

↓ [Initiatives related to LCA calculations](#)

## Basic approach

Under the "TOYOBO Group Fundamental Policy on the Global Environment," the Toyobo group promotes to reduce and improve the impact on environment by developing new technologies. At every stage, from product development through to design, manufacture, sale, disposal, and collection, we are forecasting, evaluating, and reducing their impact on the environment, and working towards its protection.

- [TOYOBO Group Fundamental Policy on the Global Environment](#)

## Structure

### Mechanism for certification of eco-conscious products

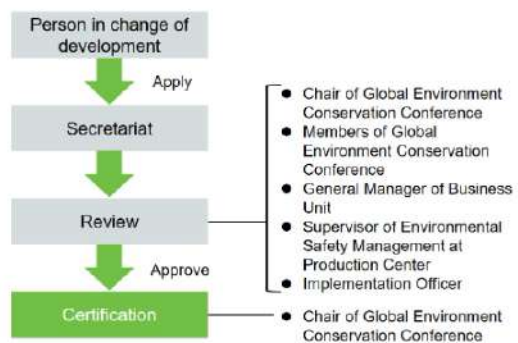
Since 1998, the Toyobo group has operated the "Eco-Review System" as a system for evaluating the environmental impact of our products.

This system evaluates and analyzes the following aspects at every stage in the product life cycle: preventing climate change, reduction of chemical substance use, resource conservation, waste reduction, and Biodiversity Other. Products that meet these standards are certified as ECO-PARTNER SYSTEM<sup>®</sup> products. Since the Eco-Review is carried out at every product life cycle — from R&D to commercialization — issues that require improvement from an environmental protection perspective are identified and improved at an early R&D stage prior to the subsequent review. As products and technologies are developed, they are improved to reduce their environmental impact and contribute to the environment.

#### Eco-Review Evaluation Items

|                                       |  |
|---------------------------------------|--|
| Design and development                | <ul style="list-style-type: none"> <li>• Designing eco-conscious products</li> </ul>   |
| Raw materials                         | <ul style="list-style-type: none"> <li>• Using recycled materials and alternative raw materials to petroleum-based raw materials</li> <li>• Considering biodiversity</li> </ul>      |
| Production                            | <ul style="list-style-type: none"> <li>• Using energy-saving and clean energy</li> <li>• Reducing water use and effectively using raw materials</li> <li>• Reducing waste</li> </ul> |
| Distribution and packaging            | <ul style="list-style-type: none"> <li>• Reducing transportation energy</li> <li>• Reducing packaging waste</li> </ul>   |
| Use and consumption                   | <ul style="list-style-type: none"> <li>• Reducing resource consumption</li> <li>• Increasing lifespan</li> </ul>   |
| Recycling, disposal, and incineration | <ul style="list-style-type: none"> <li>• Reducing hazardous chemical emissions</li> <li>• Biodegradability and recyclability</li> </ul>  |

#### Review and Certification Process



## ECO-PARTNER SYSTEM®

Products that meet or exceed certain standards in the Eco-Review System are designated as "ECO-PARTNER SYSTEM®" products that contribute to reducing the burden on environment.

Evaluation standards for the ECO-PARTNER SYSTEM® comprise five categories, including items such as "resource conservation."

The life cycle of products are divided into six stages from raw materials through to disposal, and the environmental impact at each stage is evaluated and certified.



## Targets and results

We aim to increase the ratio of sales of ECO-PARTNER SYSTEM® products to 40% of total sales by fiscal 2030 and 60% by fiscal 2050.

In fiscal 2023, sales of ECO-PARTNER SYSTEM® products accounted for 35.2% of the company's total sales. Going forward, we will continue to create eco-conscious products.

In addition, we are considering expanding the scope of application of the certification system to include group companies, and have begun to identify issues in order to calculate the sales ratio held by ECO-PARTNER SYSTEM® products for the entire group.

| Initiatives  | Targets (FY2031) | Results (FY2022) |
|--|------------------|------------------|
| Sales ratio held by ECO-PARTNER SYSTEM® products (TOYOBO CO., LTD. only) | 40%              | 35.2%            |

## Sales by Evaluation Standard of ECO-PARTNER SYSTEM® Products



Note: Net sales in the figure include duplicates because they are determined based on multiple criteria.

## Initiative

### ECO-PARTNER SYSTEM® Products

Here are some of the products that have been certified as "ECO-PARTNER SYSTEM®".

#### Major ECO-PARTNER SYSTEM® Products

| Corresponding field/market                           | Usage   | Materials used  |
|--|---|-----------------|
| Climate change measures                              | Film of recycled PET resin                                  | RESHINE®        |
|  | Three-dimensional cushion material                          | BREATHAIR®      |
| Antipollution measures                               | Liquid water-holding agent                                  | ESPECK®         |
|  | Solvent recovery equipment                                  | K-FILTER®       |
|  | Bag filters for thermal power plants                        | PROCON®         |
|  | Photosensitive water-wash nylon resin relief printing plate | Printight®      |
|  | Transparent vapor-deposited film                            | ECOSYAR®        |
| Solving water resource problems                      | Reverse osmosis membranes for seawater desalination         | HOLLOSEP®       |
|  | Water purification UF membrane modules                      | DURASEP®        |
| Recycling systems (recycling and resource reduction) | Modifier for recycled PET                                   | YLON® RF series |
|  | Recycled nylon resin for airbag scraps                      | ECOKURELEAF®    |
|  | Recycled PET textile products                               | ECHORCLUB®      |
|  | PET-based synthetic paper                                   | Crisper®        |
|  | Spun yarn using unused cotton                               | ECOT®           |
|  | Recycled nonwoven fabrics                                   | e-VOLANS®       |
| Other (environmentally friendly products)            | Ultra-high-strength polyethylene fiber                      | IZANAS®         |

## LCA Calculation Initiatives

We calculate LCA as appropriate by introducing MILCA, a software for computing LCA.

### Avoided emissions calculation

Beginning in fiscal 2022, we began calculating the contribution to CO<sub>2</sub> savings (avoided emissions) by comparing baseline products with cLCA(carbon-Life Cycle Analysis of our products) and replacing them with our products. First, we calculated avoided emissions of reverse osmosis membranes (RO membranes) and VOC (volatile organic compounds) recovery equipment as typical techniques of our group. We will continue to expand the number of products covered in the calculation.

We will reduce CO<sub>2</sub> emissions generated when customers use our group's products and contribute to mitigating climate change throughout the supply chain.

#### Case ① VOC recovery equipment

Toyobo's VOC recovery equipment is used around the world to control emissions of volatile organic compounds (VOC), which are feared to affect the atmosphere and human health. Our VOC recovery equipment incorporates "K-FILTER<sup>®</sup>", an unique activated carbon fiber, and it is used in various industries to recover dichloromethane used in the lithium battery separator manufacturing process and to control emissions and recover ethyl acetate (which is used in dry lamination and adhesive processes), toluene, and IPA etc.

Assuming that the steam desorption VOC recovery equipment sold by our group in fiscal 2023 operates for 15 years, the amount of VOC (methylene chloride, etc.) recovered will be approximately 6 million tons\*. In addition, "K Filter<sup>®</sup>" makes it possible to recover high-quality solvents and save energy because it is a high-performance adsorbent that has a faster adsorption rate than granular activated carbon and contains fewer impurities. Our VOC recovery equipment can reduce carbon dioxide emissions by approximately 50 to 70% compared to conventional VOC combustion equipment when treating combustible VOC such as ethyl acetate and toluene (according to research by Toyobo).

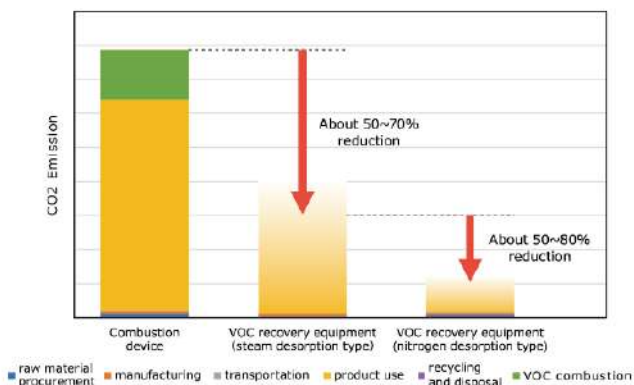
Furthermore, our group also sells the nitrogen desorption type "K Filter<sup>®</sup>" VOC recovery equipment, which is even more energy-saving. Since nitrogen is purified and reused using a unique circulation method, it can be processed at low running costs, and it is also possible to recover and reuse water-soluble solvents and significantly reduce wastewater. Compared to conventional steam desorption methods, CO<sub>2</sub> emissions during treatment are expected to be reduced by approximately 50 to 80%\*.

Going forward, to contribute toward the realization of the decarbonized society, we will expand applications of our VOC recovery equipment and sales promotion of our nitrogen desorption type VOC recovery equipment, which is more energy efficient.

\* Our group calculations

- [VOC recovery apparatus \(steam desorption type\) K-FILTER<sup>®</sup>](#)
- [VOC recovery apparatus \(nitrogen desorption type\) K-FILTER<sup>®</sup>](#)

#### VOC treatment equipment's CO<sub>2</sub> emissions compare (e.g.)



VOC recovery equipment

\* (Calculation Conditions: VOC Processing Capacity is calculated by setting the same conditions for the combustion device and the recovery device (our group-wide calculation).)

## Case ② RO Membrane for seawater desalination

Globally, water shortages are becoming an increasingly serious problem. We provide hollow fiber reverse osmosis (RO) membrane, which enables desalination with low energy consumption, to countries throughout the world, especially in regions where there is inadequate access to fresh water. By comparison with the conventional multi-stage flash (MSF) method, Toyobo's method using RO membrane makes it possible to achieve a substantial reduction in CO<sub>2</sub> emissions.

Toyobo's RO membrane is made mainly from biomass material, and it has a number of unique features, including long product lifespan of eight years or more, and being able to produce high-purity fresh water. Additionally, the superior chlorine resistance of the membrane material keeps maintenance costs down.

Assuming that the RO membrane elements sold by our group is used for eight years, freshwater production would be approximately 900million m<sup>3</sup>, and avoided emissions (reducing CO<sub>2</sub> emissions) will be approximately 9 million tons (our group estimate).

Going forward, we will be expanding production of RO membrane so that it can be used to meet the daily water needs of around 10 million people through seawater desalination (this is the target for Sustainable Vision 2030).



Seawater desalination plants



Biomass Mark™ for our hollow fiber membrane in HOLLOSEP®

\* The Biomass Mark is allowed to be labeled on products and materials containing a certain percentage of biomass after the composition, proportion, quality, and safety of the raw biomass is verified by a third-party organization composed of academic experts.

# Climate Change

| Materiality                         |   |
|-------------------------------------|---|
| Related ESG : <b>E</b>              |    |
| A decarbonized and circular society |   |

- ↓ [Basic approach](#)
- ↓ [Structure](#)
- ↓ [Targets](#)
- ↓ [Results](#)
- ↓ [Initiatives related to our manufacturing business](#)
- ↓ [Initiatives related to the entire value chain](#)
- ↓ [Strengthening climate change measures](#)
- ↓ [Collaboration with Stakeholders](#)

## Basic approach

The Glasgow Climate Pact was adopted at the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26) in 2021, with the aim of addressing the global issue of climate change. The Pact incorporates a commitment to strive to keep the rise in average global temperatures within 1.5°C, which would have a less severe impact than the earlier target of 2°C, by utilizing the latest scientific know-how, and it thus set a de facto goal for the world to work toward. The Pact confirmed that the next 10 years will be vitally important for realizing this, and that it is important to reduce overall global CO<sub>2</sub> emissions by 45% by 2030 compared to 2010, and to cut emissions to net zero by 2050.

Toyobo group recognizes climate change as a very significant social issue that will have a critical impact on our business. We support the "Paris Agreement"\* and "Glasgow Climate Pact" and aim to achieve carbon neutrality by the fiscal year 2051, consistent with the global 1.5°C target.

We also believe that it is important to collaborate with our customers, business partners, industries, local communities, the national government, and society as a whole in order to resolve climate change issues. Our group engages in discussions and dialogue with various stakeholders and works collaboratively to realize the net zero emissions and the goals of the Paris Agreements.

\* The Paris Agreement is a global framework adopted in COP21 in 2015 to reduce greenhouse gas emissions after 2020. For the first time in history, it is a fair agreement involving all countries and including the goal of keeping temperature rise below 2 degrees Celsius, and preferably 1.5 degrees Celsius.

## Structure

President & Representative Director, CEO & Co-CEO has the highest responsibility for climate change-related issues. The Board of Directors receives regular reports on climate change policies and significant matters discussed by the Sustainability Committee and provides supervision and guidance. The Sustainability Committee, chaired by the President & Representative Director, CEO & Co-CEO, handles company-wide issues and risks, including climate change issues. In fiscal 2023, the Sustainability Committee met four times, and in response, the Board of Directors was reported five times, including regular reports and extraordinary reports. Following a resolution at the Board of Directors, we announced Sustainable Vision2030 in May 2022, and in April 2023, we officially joined the GX League, which was established by the government of Japan.

- [Structure on corporate environmental issue](#)

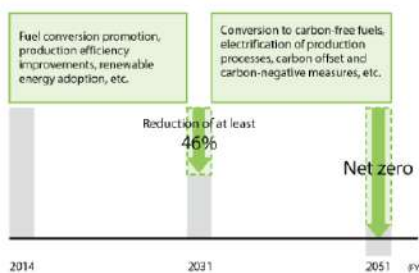


## Targets

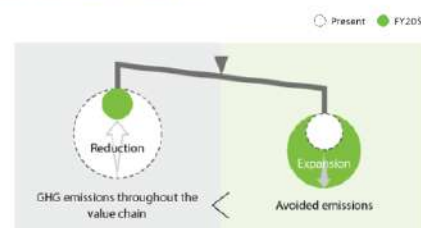
With regard to Scope 1 and 2<sup>\*1</sup> greenhouse gas (GHG) emissions associated with our business activities, we have set ourselves the target of realizing net zero emissions by fiscal 2051. In response to the growing momentum toward the realization of a decarbonized society, the Board of Directors passed a resolution to raise our intermediate-term target for fiscal 2031 to a target of reducing emissions by at least 46% compared to fiscal 2014 in May 2022.

In order to contribute toward realizing the decarbonized society, we are proceeding with efforts to reduce GHG emissions from the entire value chain deriving from activities that are related to our own business, while also working to expand the contribution that we make toward reducing GHG emissions through our products and services.

### Targets for Scope 1 and 2 Emissions Reductions from Business Activities



### Targets for the Entire Value Chain (including contribution through products and solutions for the target year FY2051)



## Approved by SBTi

In December 2022, the Toyobo group's targets of reducing GHG emissions by fiscal 2031 have been validated by the Science Based Targets (SBT<sup>®2</sup>) initiative.



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

The targets approved by SBTi are as follows.

| Category             | Target   | Progress (Results in FY2023)      |
|----------------------|--|-----------------------------------|
| Scope1, 2            | 27.0% reduction in GHG emissions by FY2031 over FY2021 | 0.9% reduction from FY2021 level  |
| Scope3 <sup>*3</sup> | 12.5% reduction in GHG emissions by FY2031 over FY2021 | 107.2% increase from FY2021 level |

The target for Scope 1 and 2 corresponds to a reduction of GHG emissions by at least 46% by fiscal 2031 compared with fiscal 2014.

\*1 Scope1: Direct emissions from owned or controlled sources

## Results

### Scope 1 and 2

The three site (Tsuruga, Iwakuni and Inuyama) account for approximately 70% of GHG emissions from our business activities (Scope1 2).

As regards the results in fiscal 2023, total Scope 1 and 2 GHG emissions came to 894 thousand tonnes CO<sub>2</sub>, 26.4% reduction from FY2014. While sales increased by 6.4%, GHG emissions remained at roughly the same level as in fiscal 2022 because we were implementing energy-saving activities and measures to enhance production efficiency.

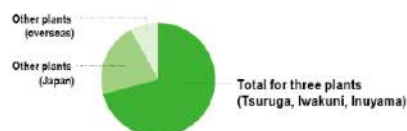
| Initiatives                                | Targets (FY2031)                                    | Results (FY2023)                                       |
|--|---|--|
| Scope 1 and 2 GHG emissions (consolidated) | Reduction of at least 46% (compared to fiscal 2014) | 26.4% reduction (894 thousand tonnes CO <sub>2</sub> ) |

Consolidated: TOYOBO CO., LTD. and consolidated subsidiaries

### GHG Emissions



### Scope 1 and 2 ratios by business site



### The highest rank in “Business Operator Classification Evaluation System”

The “Business Operator Classification Evaluation System” is an initiative led by the Ministry of Economy in Japan. It divides all business operators, which submit regular reports under the Act on Rationalizing Energy Use, into four stages: S (energy saving is excellent), A (general), B (stagnation), and C (requires attention).

Under the system, four companies, including TOYOBO CO., LTD, TOYOSHINA FILM CO., LTD., TOYO CLOTH CO., LTD., and JAPAN EXLAN COMPANY, LIMITED achieved energy-saving targets through the introduction of energy-saving equipment and received S-class evaluations.

|                              |  |
|------------------------------|--|
| TOYOBO CO., LTD              | : For four years in a row since FY2020 |
| TOYOSHINA FILM CO., LTD.     | : For four years in a row since FY2020 |
| TOYO CLOTH CO., LTD.         | : For five years in a row since FY2019 |
| JAPAN EXLAN COMPANY, LIMITED | : FY2023                               |

## Scope3

As regards the results in fiscal 2023, total Scope 3 GHG emissions came to 5,290 thousand tonnes CO<sub>2</sub>, an increase of approximately 55% compared to the previous year. The main reason for the rise is a leap in the category 1 and 11 emissions. The category 1 emissions increased compared to fiscal 2022 due to the impact of soaring raw material cost and raw fuel prices. The increment in category 11 was mainly caused by a big leap in emissions from VOC treatment equipment which TOYOBO group provided worldwide. Sales of the equipment for Lithium-Ion Battery (LIB) separator plants were strong due to increased demand for LIB because of the global shift to EV. Accordingly, the emission of the category 11 was increased.

| Category  | GHG emission Thousand tonnes-CO <sub>2</sub>  |
|---|---|
| 1. Purchased goods and services   | 2,055   |
| 2. Capital goods  | 55  |
| 3. Fuel- and energy-related activities (not included in Scope 1 or Scope 2) | 113   |
| 4. Upstream transportation and distribution                                 | 50  |
| 5. Waste generated in operations  | 53  |
| 6. Business travel  | 7   |
| 7. Employee commuting   | 6   |
| 8. Upstream leased assets   | Not applicable to the company   |
| 9. Downstream transportation and distribution                               | GHG emissions of transportation to the shipping destination includes in the category 4. |
| 10. Processing of sold products   | —   |
| 11. Use of sold products  | 2,745   |
| 12. End-of-life treatment of sold products                                  | 207   |
| 13. Downstream leased assets  | Not applicable to the company   |
| 14. Franchises  | Not applicable to the company   |
| 15. Investments   | Very low emissions  |
| <b>Total</b>  | <b>5,290</b>  |

## Independent Verification by third party

To increase reliability of our information, we have obtained independent verification from KPMG AZSA Sustainability Co., Ltd., that covers our Scope1,2, a portion of Scope3, and data on energy-consumption for fiscal 2023.

• [Top > Sustainability > External Assurance](#)

## Initiatives related to our manufacturing business

### Reduction of Scope 1 and 2 emissions

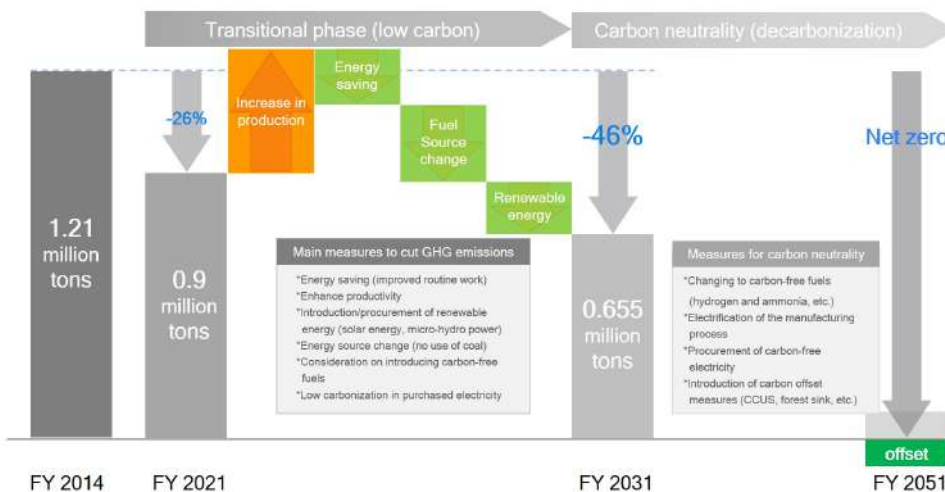
#### Formulating roadmap for Carbon Neutrality

We have formulated a decarbonization strategy with a roadmap for Scope 1 and 2 emissions reduction aimed at realizing carbon neutrality. Based on the strategy, we have raised our intermediate-term target for fiscal 2031 to a target of reducing emissions by at least 46% compared to fiscal 2014, and we are proceeding with emissions reduction activities. As we expand our business toward fiscal 2031, our production volume will increase, and GHG emissions may increase in the future under a business-as-usual (BAU\*) scenario. With the roadmap, we are targeting reductions in Scope 1 and 2 in fiscal 2031 by at least 46% compared to fiscal 2014 through energy optimization measures that involve energy conservation (including increased production efficiency), fuel conversion(away from coal), and adoption of renewable energy.

| Key elements  | Contribution      |
|---|-------------------|
| Fuel conversion   | Approximately 40% |
| The others<br><ul style="list-style-type: none"> <li>energy conservation (including increased production efficiency)</li> <li>Introduction of renewable energy</li> </ul> | Approximately 60% |

\* An acronym for "Business as Usual," indicating a case in which no particular GHG emission reduction measures are taken.

### Roadmap for Carbon Neutrality



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## Energy efficiency and conservation

TOYOBO CO., LTD. has set a shared goal of improving energy-efficiency\* by 1.0% or more annually. In fiscal 2023, TOYOBO CO., LTD. achieved the target through various energy-saving efforts. Specifically, this was due to the addition of waste heat recovery systems at in-house power plants and production lines, and the introduction of energy-saving equipment. Besides, the three sites (Tsuruga, Iwakuni, and Inuyama), which emit particularly large amounts of GHG in TOYOBO group, have set even higher targets and are actively working to reduce their use of energy.

In addition, TOYOBO group hold monthly meetings of the Energy Use Efficiency Committee. The committee consists of members from our main business sites and plants. They monitor the energy conservation activities of individual site and provides training on energy conservation (sharing knowhow, etc.). Additionally, each committee member conducts simple audits ("Energy-saving patrols") at each factory site as appropriate to maintain and improve the level of activity.

\* Energy consumption per sales and production volume in accordance with Japan's act on rationalizing energy use

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## Fuel conversion (away from coal)

We are also implementing a transition toward low-carbon energy use, by switching to fuels with lower carbon contents for our in-house electricity generating equipment and installing additional gas co-generation system\* equipment. We will begin by renewing our in-house thermal power generation plant at the Iwakuni Production Center, converting the fuel from coal to liquefied natural gas and RPF.\*<sup>2</sup> Major reductions in GHG emissions, approximately 80 thousand tonnes CO<sub>2</sub>, are expected from the operation, scheduled for fiscal 2024. We also added a gas co-generation system at Inuyama Plant and started operation in August 2023. It has improved the energy-efficiency of Inuyama Plant as a whole. We are carrying out GHG reduction measures including fuel conversion at other business sites as well.

\* Gas co-generation systems are systems that use natural gas to generate electricity, with the waste heat being harnessed to produce steam and hot water that are used in manufacturing processes, for supplying hot water, for air conditioning, etc.

\* An acronym for "Refuse-derived Paper & Plastics Densified Fuel," solid fuel made mainly from used paper and waste plastic

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## Introduction of renewable energy

We are proceeding with the installation of photovoltaic power generation at each of our business sites, making use of roof spaces and unused land. In March 2023, Inuyama Plant began operating a photovoltaic power generation facility, which generated approximately 50MWh amounts of electricity in fiscal 2023. Utsunomiya Plant is also scheduled to begin operations of solar power generation facilities and other plants and offices are also considering the introduction of the system.

### Solar power generation equipment installation at the Inuyama Plant

Inuyama Plant has proclaimed the slogan "Aiming for a Sustainable Plant" and is striving to improve energy efficiency, adopt energy-conserving facilities, and put renewable energy to use. In March 2023, the plant used a power purchase agreement (PPA\*) arrangement to install a new solar power generation facility of approximately 500 kW. The factory also working to raise awareness of our employee by installing monitors in our offices that allow us to check power use and generation in real time. In the future, the plant is planning to implement other GHG reduction measures such as fuel conversion, and will continue to consider and introduce various initiatives to realizing to be a sustainable plant.

※Businesses borrow roofs and idle land for facilities owned by enterprises, etc., and install power generation facilities free of charge. Electricity generated by enterprises, etc., is used in facilities, thereby reducing electricity rates and CO<sub>2</sub> emissions.

#### Voice of the person in charge

This was the first time our company had tried a PPA, so we got the cooperation of a range of people, and the manufacturer of the solar power generation facilities, our company headquarters and the manufacturing division within the plant all worked together. It was a particular struggle connecting these facilities while giving consideration to the effect it would have on our existing electrical system. When it started generating electricity without a hitch, our hard work was paying off even more as it leads to reduced electric charges which continue to soar.



1,608 solar panels (power output approximately 500kW) installed on the rooftop of Inuyama Plant

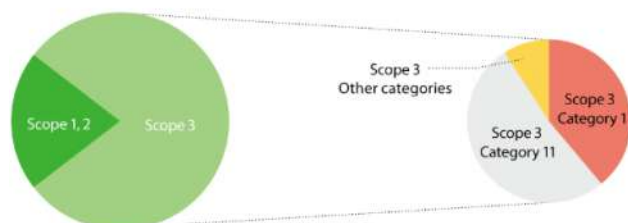
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## Initiatives related to the entire value chain

### Reduction of Scope 3 emissions

TOYOBO group aims to reduce Scope3 and is implementing reduction measures mainly for Category 1\*<sup>1</sup> and Category 11\*<sup>2</sup> emissions, which account for a particularly large share of Toyobo group's Scope 3 emissions.

In Category 11, we have introduced new technologies and energy-saving technologies to VOC recovery equipment\*<sup>3</sup> to reduce the use of utilities (steam, electricity, etc.), thereby reducing GHG emissions and, at the same time, reducing the burden on environment.



- [Scope 3 emission \(305KB\)](#)

\*1 Emissions from activities (such as manufacturing) relating to purchased goods and services

\*2 Emissions from use of sold products

\*3 Equipment that removes VOC, Volatile Organic Compounds, by an adsorptive method, an absorptive method, or a chilling method, and recovers VOC as a liquid organic solvent. CO<sub>2</sub> emission from VOC decomposition is zero. Moreover, the recovered organic solvent can be reused. VOC is a generic term for volatile organic compounds such as toluene, ethyl acetate, and dichloromethane. It causes atmospheric pollution / air pollution and is responsible for asthmatic and other health-related problems.

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### Expanding our avoided emissions

Most of the Toyobo group's products are materials or intermediate goods and many of these products contribute toward reducing GHG emissions. Typical examples of them include reverse-osmosis membranes (RO membranes) used in seawater desalination, and VOC treatment equipment, which controls emissions of VOC (volatile organic compounds) that are feared to have an adverse effect on atmospheric pollution / air pollution and the human body. We are making calculations to quantitatively understand GHG avoided emissions\* of these products throughout their life cycles.

In fiscal 2023, in order to unify the internal calculation rules and expand the range of products subject to calculation, we developed our own guidelines that summarize methods for calculating GHG avoided emissions, etc. We have formulated the guidelines in accordance with the "Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions" of the Institute of Life Cycle Assessment, Japan, and calculate avoided emissions according to the guidelines. We also refer to the "Guidelines for Quantifying GHG emission reductions of goods or services through Global Value Chain" issued by the Ministry of Economy, Trade and Industry in Japan.

We will expand our contribution to reducing GHG emissions by increasing sales of these products help to reduce GHG emissions. For more information on avoided emissions calculation, please refer to the following sections.

- [Eco-Conscious Products > LCA Calculation Initiatives](#)

\* GHG emissions that can be reduced by our customers' use of our products compared with conventional technologies.

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### Energy-saving initiatives in logistics

Our annual goal is a 0.5% year-on-year reduction in CO<sub>2</sub> emissions per unit of transportation in relation to logistics.

In the Logistics Department, we launched the Green Logistics Promotion Project in 2006, and as well as working to improve quality and cost rationality, we are also continuously working on environmental conservation such as energy saving, resource saving, and prevention of global warming. Up until now, we have implemented a variety of measures in order to reduce the environmental impact of logistics. These measures include shortening transportation distances by using the nearest port to our production sites, and using efficient stacking and bulk transport of cargo in order to reduce the number of vehicles used. We are also actively promoting the usage of ship and rail transportation which have lower specific energy consumption than truck transportation, together with lower CO<sub>2</sub> emissions.

We have been introducing a logistics system since 2019. Based on dispatch simulations, we worked to further improve loading efficiency by optimizing the allocation of vehicles and we were able to reduce CO<sub>2</sub> emissions.

As a result of these efforts, we were able to reduce CO<sub>2</sub> emissions per unit of transportation by approximately 5% in fiscal 2023 compared to the previous year.

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## Strengthening climate change measures

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### Structure to achieve carbon neutrality

In April 2021, Toyobo established the Carbon Neutral Strategies Council and the Carbon Neutral Strategies Cross-Functional Team (CN-CFT) to formulate and promote strategies to achieve carbon neutrality.

In order to make steady progress towards the realization of carbon neutrality, we also established working groups (WGs), with members from different units across the entire company, within the CN-CFT.

In fiscal 2023, the structure was reviewed, and a new Climate Change and Biodiversity Committee was established. We will promote companywide climate change responses with a view to internationally applicable sustainability standards.

#### WGs' main initiatives

- Promotion of obtaining SBT certification
- Formulation of the roadmap for Carbon Neutrality for Scope 1 and 2 emissions reduction (covering the period through to fiscal 2051)
- Introduction of internal carbon pricing system

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### Introduction of internal carbon pricing system

On April 1, 2022, we introduced an internal carbon pricing (ICP) system in which the company use its own standards to set a theoretical price on each tonne of GHG emissions for reference in making capital investment. By using the ICP system as a yardstick for evaluating investment decisions, we will accelerate making investments not only in low or net-zero emission facilities and energy-saving technologies, but also in relevant equipment and facilities for research and development.

#### Outline of Toyobo's ICP system

|                                   |   |
|-----------------------------------|---|
| Internal carbon pricing fee (tax) | 10,000 yen for each tonnes of CO <sub>2</sub>   |
| Targets of investment             | Capital investment in facilities with fluctuating CO <sub>2</sub> emissions   |
| How to use it                     | Based on the internal carbon pricing fee, calculating CO <sub>2</sub> fluctuation by the proposed facilities (including facilities for research and development) as costs. The calculations will be made in accordance with capital investment plans. |

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### Disclosure based on TCFD

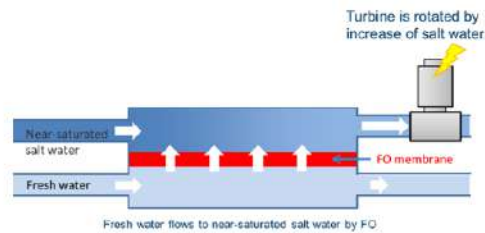
Recognizing the scale of the impact of climate change on our group and stakeholders, we have identified “a decarbonized and circular society” as one of our materialities. In January 2020, we announced our support for the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD), and have been working on initiatives and disclosures that follow them.

In fiscal 2023, we expanded the scope of our scenario analysis to all our businesses. Based on the below 2°C scenario (decarbonization scenario) and the 4°C scenario (warming progression scenario), we extracted the risks/opportunities of our group specializing in climate change. We have estimated the financial impact of risks and opportunities that we recognize as particularly important. For details, please refer to the integrated report.

[Disclosure based on TCFD Recommendations in the Integrated Report 2023 \(310KB\)](#) 

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## Development of technologies that contribute to the realization of a decarbonized society



Osmotic power generation using high-salinity geothermal water, a source of renewable energy, has been receiving public attention. Toyobo has developed a forward osmosis (FO) membrane for the power plant core used in this method, and it has been used in osmotic power generation plants of Danish venture firm SaltPower.

In April 2023, it was installed at Nobians saltworks in Denmark and is now in operation.

Geothermal water osmosis power generation uses the high osmotic pressure of geothermal water with high salt concentrations pumped from underground. Compared with solar and wind power, the weather and time of day does not affect geothermal power generation. In addition, it does not emit harmful substances such as nitrogen oxides and sulfur oxides normally emitted during combustion.

Find more information about the other technologies here.

- [Toyobo's hollow-fiber FO membrane used at osmotic power plant](#)

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## Collaboration with Stakeholders

Toyobo group believes that it is important to collaborate with our customers, business partners, industries, local communities, the national government, and society as a whole in order to resolve climate change issues. Our group engages in discussions and dialogue with various stakeholders and works collaboratively to realize the net zero emissions and the goals of the Paris Agreements.

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## Communication and Collaboration with business partners

Our group has established CSR Procurement Guidelines and asks our suppliers to cooperate in initiatives that support the development of a sustainable society throughout the supply chain. At the guidelines, we ask our suppliers to maintain and strengthen their environment activities, including initiatives aimed at solving the following climate change issues.

- To strive to reduce greenhouse gas (CO<sub>2</sub> and other gases) emissions, and mitigate climate change
- To strive for effective use of resources and energy savings such as improving the efficiency of water and energy use

In addition, our procurement department conducts CSR procurement survey based on the guidelines to monitor the status of efforts to reduce GHG emissions and other initiatives. As a result of the survey, we ask suppliers to make improvements if they have any problems. For the latest survey results and countermeasures (corrective measures), please refer to the following sections.

- [Supply Chain Management > CSR procurement survey](#)
- [CSR Procurement Guidelines](#)



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## Involvement in organizations dedicated specifically to climate-related issues

### **GX League**

We endorse the Japanese government's "GX League Basic Concept." GX refers to the transformation of the entire socioeconomic system toward achieving carbon neutrality by 2050 and Japan's target of reducing greenhouse gas emissions by 2030.

In fiscal 2023, we participated in a forum for dialogue and rule-making organized by the Japanese government (Ministry of Economy, Trade and Industry), where we exchanged opinions with the policy makers. As a result, the Board of Directors has decided to participate in GX League, which will begin full-scale operation in April 2023. We will accelerate our internal efforts and work together with companies that actively engage in GX, as well as government agencies, universities, financial institutions, and other entities, with the aim of transforming the entire economic and social system.

### **Green x Digital Consortium**

We participate in the "Green x Digital Consortium", which aims to create a new society and market using digital technology to achieve carbon neutrality in society as a whole.

### **Keidanren Carbon Neutrality Action Plan**

As a member of the Japan Chemical Industry Association (JCIA), our group participates in the "Carbon Neutrality Action Plan" of the Japan Business Federation (Keidanren). Through the initiative, we confirm the Japanese government's climate change policy and reflect it in our group-wide policy. We are working with the association on a variety of engagement activities related to climate change measures, including the submission of comments on government policies, and are working to realize a decarbonized society.

### **Keidanren "Challenge Zero" initiative**

In support of the "Challenge Zero" managed by the Japan Business Federation (Keidanren) in cooperation with the Japanese government, we have announced specific initiatives for challenge innovation to create a decarbonized society.

# Plastic Resource Circulation

| Materiality   |   |
|---|---|
| Related ESG : <b>E</b>                                |    |
| Decarbonized society and a recycling-oriented society |   |

- ↓ [Basic approach](#)
- ↓ [Targets and results](#)
- ↓ [Initiatives](#)
- ↓ [Strengthening resource recycling measures](#)
- ↓ [Acquire ISCC PLUS certification \(Internationally Sustainable Carbon Certification\)](#)
- ↓ [Participating in initiatives](#)

## Basic approach

Plastic is an indispensable material for modern society, but it is also associated with issues such as the problem of waste, depletion of natural resources, and its impact on climate change. Against this backdrop, in 2019 Resource Circulation Strategy for Plastics was formulated in Japan. The basic principles of 3R+Renewable<sup>\*1</sup> and ambitious milestones up to 2030<sup>\*2</sup> were set out as directions to be taken. In order to accelerate these efforts, the Act on Promotion of Resource Circulation for Plastics was enacted in April 2022.

TOYOBO group handles a large number of plastic products, including films, which are our mainstay products. We recognize that the transition to a resource circulation society can be a major opportunity at the same time as business risks. In 2022, we clarified that our group can contribute to a recycling-oriented society under the Sustainable Vision 2030 and set targets for 2030. We will begin by promoting the use of green materials (biomass, recycled raw materials, volume reduction, and material conversion) from film-based<sup>\*3</sup>.

Having adopted the slogan "Catalyzing Circular Economy," Toyobo group is contributing toward the realization of the circular economy through a wide range of initiatives, and by fulfilling our responsibility to future generations, we are aiming to realize sustainable growth.

- \* 1 Streamlining (Reduce·Reuse) the use of avoidable plastics. The essential use is switched to recycled materials and renewable resources (Renewable) and through recycling (Recycle).
- \* 2 Numerical targets from the perspectives of "Reduce," "Reuse·Recycle," and "Recyclable Use·Bioplastics." "Effective use of used plastics by 100% reuse by 2035, through recycling, etc." etc.
- \* 3 This excludes some products where safety or lifespan is an issue.

## Targets and results

In May 2022, Toyobo group announced its Sustainable Vision 2030, which outlines its aspirations for the year 2030. In this vision, we set a target of ratio of green materials in main business operation for 60% in 2030. Through this greening, we will contribute to reducing the use of petroleum-derived resources and making them alternative.

In fiscal 2022, we studied the calculation method of the green ratio and calculated the actual results.

| Item                                   | FY2030 Targets | Fiscal 2022 Results |
|--|----------------|---------------------|
| Percentage of green films <sup>*</sup> | 60%            | 11%                 |

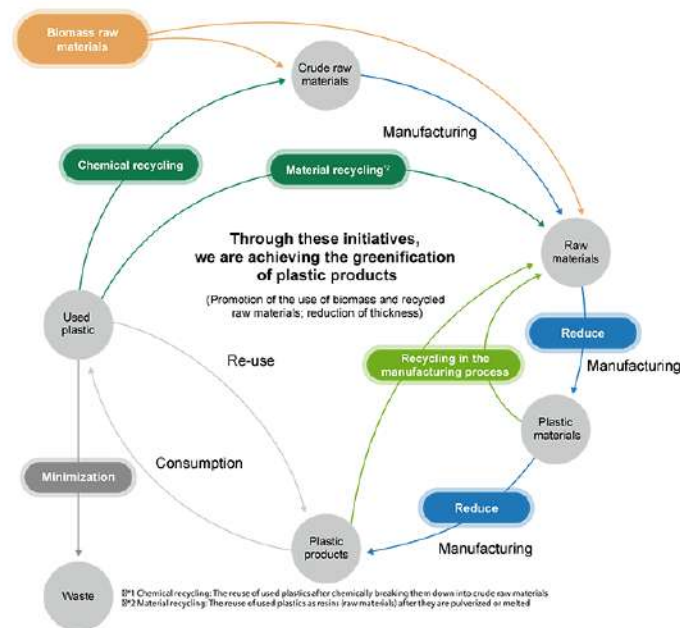
\* Quantity ratio

## Initiatives

Since the 1990s, our group has been engaged in recycling and the use of biomass raw materials, and has accumulated a variety of technologies and know-how. Since 1996, we have been developing a wide range of products and materials, including ECHORCLUB<sup>®</sup>, a PET bottle recycled textile product. Going forward, we will aim to realize circular economy from 3R+Renewable perspective. The following is an overview of initiatives from each viewpoint.

The goal of "green" is to replace products that incorporate the following perspectives.

### Our Group-wide Efforts for the Life Cycle of Plastics and resource circulation / resource recycling



## Reduce

### Development of thin, lightweight materials

We reduce the amount of raw material used by reducing thickness while retaining strength and functionality. When these kinds of materials are used by customers, packaging can be simplified and the amount of packaging materials used in the final product can be reduced.

#### Related technologies and products

- HARDEN<sup>®</sup>DN036
- SPACECLEAN<sup>®</sup>

### Development of mono-materialization technologies and products

We are reducing the amount of raw materials used while increasing recyclability by replacing previous products consisting of several different materials with those using a single material while maintaining strength and functionality.

#### Related technologies and products

- ECOSYAR<sup>®</sup> VP Series
- PYLEN EXTOP<sup>®</sup>

## Reuse - Recycle

### Recycling in the manufacturing process

We collect scrap materials generated in the manufacturing process (originating from airbags and film products) and reuse them as materials for products in the same and other categories. In doing so, we reduce waste generated in the production process. In addition to the manufacturing processes of our group, we also implement initiatives to advance recycling in the manufacturing processes of our customers.

#### Related technologies and products

- ECKURELEAF®
- ECOVLOPET®
- COSMOSHINE SRF®

#### Collaborations and initiatives

- Resource Recycling Project (KAMISHINE® mold releasing film)

### Development of technology and products for material recycling\*

We proactively develop and market products made of used plastics as raw materials. We have also developed and are marketing TOYOBO GS Catalyst®, a polymerization catalyst for PET resin designed to make resin recyclable after polymerization reactions. Through efforts centering on the PET material to which this technology is applied, we are advancing the expansion of material recycling technologies and materials in the global market.

\* Material recycling: The reuse of used plastics as resins (raw materials) after they are pulverized or melted

#### Related technologies and products

- ECHORCLUB®
- Crisper®
- TOYOBO GS Catalyst®

#### Collaborations and initiatives

- Licensing of technology to Indorama Ventures Public Company Limited

### Chemical recycling\* technology development

In developing and practically applying chemical recycling technologies, we seek out technologies from around the world and collaborate proactively with external organizations and companies. For example, we participate in the R Plus Japan project, actively pursuing development of chemical recycling technologies for converting recycled plastic into raw material for the production of high-quality recycled plastic.

\* Chemical recycling: The reuse of used plastics after chemically breaking them down into crude raw materials

#### Collaborations and initiatives

- R PLUS JAPAN
- Anellotech, Inc.
- Japan Chemical Industry Association

## Renewable

### Product development using biomass raw materials

By reducing CO2 emissions and reliance on petroleum-derived resources, biomass raw material is expected to serve as a climate change mitigation measure.

Our group is working for the conversion and expanded use of biomass raw materials, and for the practical application of biomass plastics that remain highly functional.

#### Related technologies and products

- BIOPRANA®
- VYLOAMIDE®
- HOLLOSEP®
- Polyethylene furanoate (PEF) resin (under development)

#### Collaborations and initiatives

- PEF Resin Partnership (Avantium)
- Partnership for PET resin made using 100% plant-derived raw materials (Suntory group and Anellotech)
- Japan BioPlastics Association
- THE JAPAN PLASTICS INDUSTRY FEDERATION

## Other Initiatives

### Waste reduction

#### Marine plastic and microplastic response

To help reduce marine plastic waste, we participate in the Clean Ocean Material Alliance (CLOMA) established in Japan, as well as other initiatives in our efforts to develop and advance alternative materials.

#### Collaborations and initiatives

- CLOMA

#### Waste reduction

- [Waste reduction](#)

## Examples of initiatives

### Reduce

Reduce

#### Contributing to the reduction of plastic use in packaging by making thinner and using a single material

In line with Japanese policies such as the "Plastics resource circulation / resource recycling Strategy," demand is increasing for film-based products that contribute to reducing the use of plastics in packaging materials and making them suitable for recycling. However, packaging materials such as foods that require a variety of performance, such as heat resistance and processing suitability, are generally designed by laminating several materials that have distinct characteristics. As a result, the number of raw materials used increased, and it was difficult to separate them separately. As a result, recycling was difficult.

Our film-forming and other techniques have been cultivated over many years to enhance the rigidity and functionality of biaxially oriented  $\times 1$  polypropylene (hereinafter referred to as "OPP") film, which is a single material, making the film 20%  $\times 2$  thinner than conventional composites.

In addition, the unique vapor deposition processing has enabled us to achieve both high-heat resistance and high-barrier properties, which have been considered difficult with OPP films.

We are working to reduce the volume of packaging materials by replacing them with new OPP films, and to contribute to the realization of a recycling-oriented society by promoting the use of materials.

- [To develop a new ECOSYAR<sup>®</sup> VP001 of transparent deposition OPP films, here.](#)

\* 1 Extending the film in two axial directions (vertical and horizontal) during film formation

\* 2 For the PYLEN EXTOP<sup>®</sup> series of ultra-high-rigidity OPP films

### Reuse - Recycle

Material recycling

#### Material recycling of label boards

In KAMISHINE<sup>®</sup> series of polyester-based synthetic papers made from recycled plastic bottles, we have developed a new recycling technique for KAMISHINE NEO<sup>™</sup> release film, which is used in label mount (release film/separator) applications.

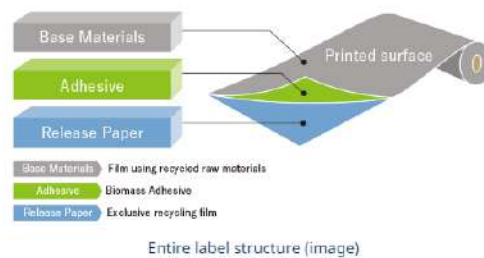
Until now, the label base paper is often made of paper coated with resin or the like on the surface, and it has been difficult to recycle the material because it is a composite material of resin and paper. In the process of attaching labels to products, the label backing after the surface substrate (seal) was peeled off was generally discarded incinerated.

In 2022, we developed a new technology to produce the "KAMISHINE<sup>®</sup>" series. This technique uses the label backing paper (KAMISHINE NEO<sup>™</sup> release film) after use as part of the raw material to produce the same performance as conventional products.

Resource Recycling Project was launched under the initiative of NEION Film Coatings Corp. a comprehensive manufacturer of adhesive film - coating technology, in order to implement resource circulation initiatives using this product and technology.



KAMISHINE NEO<sup>™</sup> Release Film for Label Backing Paper

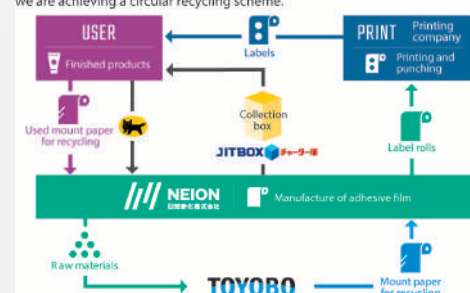


### Resource Recycling Project

Replace the label backing with film (KAMISHINE NEO<sup>™</sup> release film) and collect used label backing from customers. Efforts began in 2022 to recycle the collected used label backing as a raw material for film and recycle it as a resource. Since resource recycling initiatives are limited in the case of companies on a non-consolidated basis, they are being promoted through collaboration among companies in different industries with the expertise of their respective field.

For more information about the Resource Recycling Project, please click [here](#).

By establishing arterial industry functions and venous industry functions, we are achieving a circular recycling scheme.



## Development of the catalyst that can increase the recyclability of PET

### Material recycling

TOYOBO GS Catalyst<sup>®</sup>, a polymerization catalyst developed by Toyobo, is the world's first aluminum catalyst that does not contain any heavy metals. PET degrades during repeated melting processes in recycling, but the PET obtained using this catalyst does not deteriorate when melted, making it well suited to recycling.

In December 2022, we received the 71st Chemical Technology Award in fiscal 2023 from the Japan Chemical Association, the largest chemical society in Japan, for developing and industrializing this polymerization catalytic converter. This award is awarded to those who have achieved particularly remarkable achievements in Japan's chemical industry.

Toyobo has already licensed the technology to Thailand's Indorama Ventures Public Company Ltd., the world's largest PET resin manufacturer. Toyobo also participated in The Packaging Conference 2022, an international conference which held in America, and held exhibition and presentation. With the excellent recyclability of the produced PET resin, we will contribute to realize the circular economy in cooperation with Indorama.

- [Toyobo promotes global use of its aluminum catalyst technology through polymerization technology licensing contract with world's largest PET producer, Indorama Ventures Pcl](#)
- [Toyobo wins Chemical Society of Japan Award for Technical Development for 2022; helping realize a circular economy with an eco-friendly aluminum catalyst for polyester polymerization](#)



TOYOBO GS Catalyst<sup>®</sup> (front) enables synthesis of resins with higher transparency than other catalysts



PET bottles synthesized using TOYOBO GS Catalyst<sup>®</sup>

## Recycling of used plastics beyond the industry

### Chemical recycling

In June 2020 the joint venture company R Plus Japan, Ltd. was established by a group of 12 companies operating in Japan's plastics value chain, which includes Toyobo. As of August 2023, this number has grown to 40 companies, and together with Anellotech it is continuing with the development of new technologies.

### Anellotech's recycling techniques

Anellotech's new technology is a chemical recycling technology that uses used plastics as raw materials to produce crude raw materials for common plastics. It is characterized by the ability to produce a variety of crude raw materials from the mixed state of multiple types of plastics, and by the low loss in the process. Because it can be processed by fewer processes than the conventional method, it is expected to reduce CO<sub>2</sub> emissions and energy-consumption. If this technology is established, it is possible to return used plastics, which have been used in heat, to raw materials, and it is possible to add more value to used plastics.

So that we can contribute to solving the common worldwide problem of plastics, we aim to have this technology in practical use by 2030. To do this, we are collaborating with companies in a range of industries, including those in sorting and processing of collected plastics, distribution, and production of monomers, polymers, packaging and containers, and beverages.

- [R Plus Japan Ltd.](#)

## Renewable

Biomass feedstock

### 100% biomass plastic in film

Our focus is on furandicarboxylic acid (FDCA) as a biomass raw material. FDCA is polymerized using our proprietary technology to produce polyethylene furanoate (PEF), a high-performance polyester. PEF is a 100% biomass plastic with excellent gas barrier properties, and when formed into a film can help extend the shelf life of food contents, and thus reduce food losses. The world's first FDCA production plant is scheduled to be opened by Avantium in 2024. We plan to use this FDCA to produce PEF film.

### Polymerization of 100% bio-based PET resin

Biomass feedstock

In December 2021, Suntory Group and Anellotech, Inc. jointly developed a prototype PET bottle made from 100% plant-derived raw materials. Toyobo contributed to the development through its polymerization technology.



Polymerization of 100% bio-based PET resin in the Integrated Report 2022 (193KB)



## Waste reduction Initiatives

Minimizing waste

Our manufacturing sites are working under TOYOBO Group Fundamental Policy on the Global Environment to reduce, reuse, and recycle waste. We strive to minimize the amount of landfill waste by reducing the amount of waste generated by reusing non-standard products and scrap materials, and by making the most effective use of waste generated.

- [Waste reduction](#)

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## Strengthening resource recycling measures

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### Renewable-resource business development

In April 2020, we established Renewable Resources Business Development Department in order to further accelerate our efforts related to plastic resource circulation and contribute to a sustainable society.

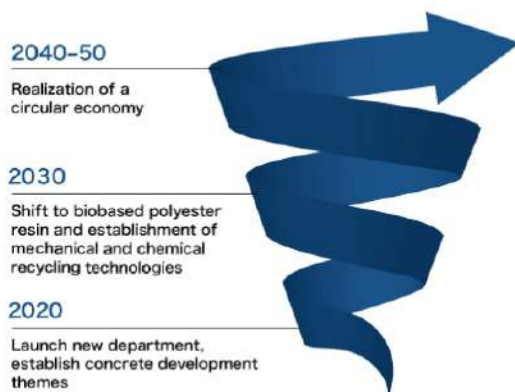
Renewable Resources Business Development Department is searching for technologies and collaborating with other companies to promote the conversion to biomass raw materials and the use of recycled raw materials.

We have drawn up a roadmap to 2030 — while also looking towards 2050 — based on government policies in Japan and overseas, as well as industry targets for the environment. In collaboration with our partners worldwide, we aim to shift to biobased products focused on polyester resin, and to establish technologies related to mechanical and chemical recycling. Working closely with each Solutions Division, we will also adapt flexibly to changes in the business environment.

#### Mission



#### Long-term outlook



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## Acquire ISCC PLUS certification (internationally sustainable carbon certification)

Toyobo Co., Ltd. and Toyoshina Film K.K., a Toyobo Group company, have received ISCC (International Sustainability and Carbon Certification) Plus certification, an international certification designed to confirm the sustainable content of products. Toyobo is scheduled to start selling a bio-based, biaxially-oriented polypropylene (OPP) film as an ISCC Plus-certified product in autumn 2023. The properties of bio-based raw materials in the OPP film to be manufactured by Toyoshina Film will be assigned to a portion of the product based on the mass balance approach\*.

ISCC Plus certification, which is part of the ISCC certification system, is aimed at confirming that mainly bio-based feedstocks and recyclables are properly managed in the process of turning raw materials into final products in the entire supply chain using the mass balance approach.

- [Toyobo obtains ISCC Plus certification; ready to sell bio-based, biaxially oriented polypropylene films based on mass balance approach](#)

\* A method in which during the process of turning raw materials into final products and the distribution process, raw materials with certain properties (e.g., bio-based raw materials) are mixed with raw materials that do not have the properties (e.g., petroleum-based raw materials); the properties are thus assigned to a portion of the product according to the input of the raw materials having those properties. (Source: Ministry of Environment, "Roadmap for Bioplastics Introduction.")



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## Participating in initiatives

The Toyobo group is working closely with a variety of companies and organizations, and is active in a number of initiatives aimed at contributing to the construction of a plastics value chain that is appropriate to the era of the circular economy.

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### Japan BioPlastics Association

This group was established in 1989 with the aim of promoting the use of bioplastics,\* and establishing a testing and evaluation system. An executive from Toyobo serves as the Vice Chairman, and we are active in the association's activities including participation in executive meetings and various committees.



\* Collective term for biodegradable and biomass plastics

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### CLOMA (Clean Ocean Material Alliance)

CLOMA is an organization established in Japan with the aim of increasing the effective use of marine plastic waste through reductions and recycling. Its members include more than 350 companies throughout the supply chain involved in the manufacturing, processing, and use of packaging and other materials. Toyobo has been a member of the alliance since it was established in 2019.

Through collaboration with other CLOMA members, which includes manufacturers, processors and users of packaging and other materials, we will work to develop and promote the use of alternative materials.



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### J4CE (Recycling Economic Partnership)

This partnership was founded for the purpose of strengthening public and private partnerships, with the aim of further fostering understanding of the circular economy among a wide range of stakeholders, including domestic companies, and promoting initiatives in response to the accelerating global trend toward a circular economy. We participated in J4CE in September 2022.



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### APR(The Association of Plastic Recyclers)

This is an international industry organization that represents the recycling industry for plastics. We are supporting circular economy through unique certification programs to ensure high-quality recycled plastics, testing methods to evaluate recyclability, and educational activities. We joined in March 2023.



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### CEFLEX (Circular Economy for Flexible Packaging)

In August 2019, Toyobo group joined the European consortium Circular Economy for Flexible Packaging (CEFLEX). Established in 2017, CEFLEX is a consortium that promotes the realization of a circular economy through the use of flexible packaging. This includes more than 130 companies and organizations involved in the flexible packaging value chain, including leading materials manufacturers and recycling companies. Its goals include establishing by 2025 a Europe-wide collection, sorting, and reprocessing infrastructure for used flexible packaging. While understanding the latest information and trends regarding recovery systems and regulations, we will focus on developing and supplying eco-friendly technologies and products to contribute to the realization of a circular economy.



Feature

## Contributing to the Development of Prototype PET Bottles Made from 100% Plant-Derived Raw Materials

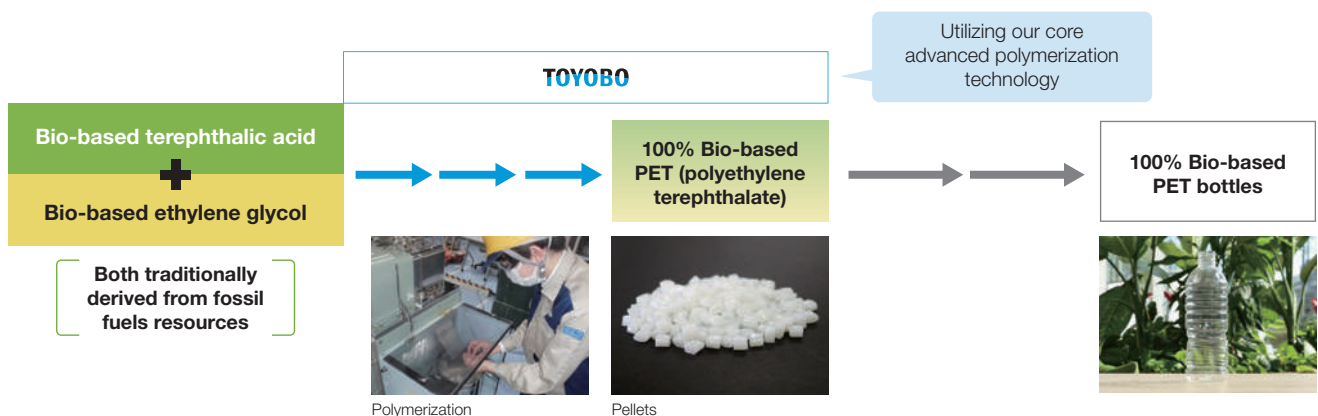
Toyobo group is actively promoting the switch to biomass raw materials and the utilization of recycled raw materials, with its goal to increase the ratio of green film products<sup>1</sup> to 60% by 2030. We have used our core technologies to develop a variety of eco-conscious products.

In December 2021, Suntory Group and Anellotech, Inc. jointly developed a prototype PET bottle made from 100% plant-derived raw materials (100% bio-based PET bottles) using one of our core technologies, polymerization.<sup>2</sup> Generally, PET resin is produced by the

polymerization of terephthalic acid and ethylene glycol, which are both derived from fossil fuel resources. Anellotech's technology enabled to produce terephthalic acid efficiently from plant-derived raw materials. The group's success in polymerizing 100% bio-based PET resin from bio-based terephthalic acid and bio-based ethylene glycol contributed significantly to the development of 100% bio-based PET bottles.

<sup>1</sup> Promotion of the use of biomass and recycled raw materials, and volume reduction  
<sup>2</sup> Chemical reactions to produce desired polymers

### Manufacturing Flow of 100% Bio-Based PET Bottles



### Polymerization of 100% bio-based PET resin

#### Key to success is a thorough preliminary examination leveraging cultivated knowledge and technical capabilities



**Yuichiro Matsuura**  
Polymers Development Center,  
Tsuruga Research and  
Production Center

Creating bio-based terephthalic acid has been considered difficult. While it was successfully generated using Anellotech's technology, it resulted in only a few dozen kilograms as a polymerization sample, which was much smaller quantity than anticipated. When implementing polymerization, we normally expect some failures, but with such a small amount, not even a single failure is acceptable. For this reason, after thoroughly analyzing and preparing the raw materials and equipment, respectively, the team determined the polymerization conditions after numerous discussions. The actual polymerization was repeated more than a dozen times in small quantities in order to disperse the risk and produce as much 100% bio-based PET resin as possible. However, the increased frequency requires an awareness of variations in quality. Each operation to adjust the temperature or pressure was performed carefully step by step to avoid such variations, and then fine-tuned according to differences among lots of raw materials and in the daily temperature and humidity. I remember

always watching for any abnormalities in each and every process. As a result, we were able to obtain the same quality. It was a true relief when all of the polymerization was completed.

I believe that the skills I cultivated since joining the company and the abundant PET-related data and expertise that was accumulated over many experiences were key to this success. In working on polymerization, I learned many things from my managers and those in my department. I believe that it was this warm support that enabled us to succeed even while being pressured not to fail.

I would like to continue engaging in various projects to further increase confidence in Toyobo's technological capabilities, and contribute to the development of products that positively contribute to society.



Team members of 100% bio-based PET resin project

## Creating an organization that can pass on skills

### Fostering a culture of nurturing young engineers throughout Functional Materials Production and Technology Operating Department



#### Gaku Maruyama

General Manager of Tsuruga Polymers Plant and Manager of Polymers Development Center, Tsuruga Research and Production Center

I am very happy to have contributed to the development of a 100% bio-based PET bottles prototype with Toyobo's technology, and I am proud of the members who accomplished this.

Toyobo's facilities enable consistent technological development, from basic studies like those in university laboratories to condition studies for commercial production in plants. Our strength lies in our extensive facilities and wealth of data and know-how based on many years of experience. We have earned the confidence of customers in our polymerization technology, and they often entrust us with various polymerizations.

In such a privileged environment, our department actively assigns large projects to young engineers in the second and third year of their careers in order to encourage them to grow as professionals. We know that there is a lot of pressure and anxiety associated with "can't-fail" projects such as these, and we do our best to support them.

Throughout the projects, engineers deal with advanced technology in addition to the polymerization work itself. As a result, I feel that the young engineers have learned and adapted the technologies that were inherited from predecessors at Toyobo.

I feel rewarded when I hear feedback such as, "I am glad I had this experience even though I made some mistakes," or when I see young participants in this project using their knowledge to help engineers who are less experienced.

The Functional Materials Production and Technology Operating Department as a whole has this kind of "culture of nurturing young engineers." I would like to continue to develop human resources and contribute to the company's growth by giving younger engineers work they are responsible for, and providing them with the support to do so.

# Waste Reduction

| Materiality                         |   |   |   |
|-------------------------------------|---|---|---|
| Related ESG : <b>E</b>              |  |  |  |
| A decarbonized and circular society |   |   |   |

- ↓ [Basic approach](#)   ↓ [Targets and results](#)   ↓ [Environmental compliance](#)   ↓ [Initiatives](#)

## Basic approach

In line with the TOYOBO Group Fundamental Policy on the Global Environment, each of Toyobo group's production sites is implementing initiatives to reduce, reuse, and recycle waste. By reducing the amount of waste through measures such as recycling non-conforming products and offcuts, and by finding ways to effectively utilize, as far as possible, the waste that we do generate, we are striving to minimize the amount of waste sent to landfill.

## Targets and results

We have set ourselves the goal of reducing waste by 15% (compared to fiscal 2016), and we will keep the final disposal (landfill disposal) rate down to less than 1% while proceeding with waste reduction.

| Initiatives                 | Targets (FY2031)                   | Results (FY2023) |
|-----------------------------|------------------------------------|------------------|
| Waste volume (consolidated) | 15% reduction (compared to FY2016) | 13% increase     |

Consolidated: TOYOBO CO., LTD. and consolidated subsidiaries

In fiscal 2023, the amount of waste increased by 13% compared to fiscal 2016. This was due to a limited increase in waste generated when cleaning tanks for treating process wastewater. On the other hand, we achieved a consolidated final disposal rate of 0.5%, continuing to successfully meet our target in this regard.

## Environmental compliance

Three years from fiscal 2021 to fiscal 2023, there were no regulatory violations related waste permits, standards and regulations.

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## Initiatives

To reduce the amount of waste, we are collecting offcuts produced during manufacturing processes and reusing them as material for producing either the same type of product or different products. We are also making effective use of items such as used plastic packaging materials by recycling them in the form of pallets. Furthermore, when outsourcing the disposal of industrial waste, we select outsourcing providers that are capable of implementing recycling.

With regard to polychlorinated biphenyl (PCB) waste, we are proceeding with appropriate disposal in a systematic manner. We are proceeding with systematic renewal of electric facilities containing low-concentration PCBs that are currently still in use.

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### Achievement of Zero Landfill of Plastic Waste (Efforts of Mitsumoto Chemicals Co., Ltd.)

In response to the enforcement of the Plastic Resource Circulation Act in 2022, Mitsumoto Chemicals Co., Ltd. made efforts to improve the recycling rate of waste (mainly products mixed with plastics and different materials) and achieved zero landfill.

Specifically, the following measures were taken.

- (1) Separating materials until they can be recycled
- (2) Developing new recycling contractors
- (3) Continuing waste separation by raising awareness of employee through in-house training

In the future, we will expand this initiative within the group to promote recycling.

Plastic Resource Circulation →

# Water Resources

| Materiality                                |   |
|--|---|
| Related ESG : <b>E</b>                     |    |
| <b>A decarbonized and circular society</b> |   |

↓ [Basic approach](#)   ↓ [Structure](#)   ↓ [Identifying risks](#)   ↓ [Results](#)   ↓ [Environmental compliance](#)

↓ [Initiatives related to risk reduction](#)   ↓ [Initiatives related to identifying opportunities](#)   ↓ [Initiatives related to expansion of opportunities](#)

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## Basic approach

Water is a precious resource that keeps us alive and supports our lifestyles, and conserving water resources is an important global issue.

The Toyobo group has committed in the TOYOBO Group Charter of Corporate Behavior to reduce and reuse resources used, including water resources, and to take measures to address environmental risks. In the area of business activities, we are working to minimize the use of water resources and conserve them by promoting water recycling.

Meanwhile, aiming to be a group that "continue to create the solutions needed by people and the earth with materials and science", our group will contribute to the conservation of water resources in Japan and abroad through our seawater desalination business and other activities.

- [TOYOBO Group Charter of Corporate Behavior](#)

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## Structure

Global Environment Conservation Conference is responsible for formulating and monitoring policies and measures to conserve water resources.

The content of deliberations at Global Environment Conservation Conference will be reported and shared as appropriate by Sustainability Committee through Safety and Disaster Management Division Director.

Board of Directors receives regular reports on the content of discussions at Sustainability Committee, approves key issues such as senior policies and targets, and oversees the progress of activities.

- [Structure on corporate environmental issue](#)

## Identifying risks

To identify water risks (water stress, drought, flooding, water quality, etc.) in the operations of our business sites around the world, we use the AQUEDUCT Water Risk Atlas published by the World Resources Institute (WRI) to conduct our annual periodic assessment. In addition, if there is a change in the planned construction of a plant, an extraordinary assessment is conducted at that time to confirm the risks prior to the construction of a new site.

As a result, our two business sites in Thailand and Saudi Arabia were assessed as having high risk in terms of the amount of water available (existence of risk of drought occurrence and variation in the amount of water available from year to year).

Based on these results, we discussed with the relevant departments and confirmed the following for the two sites concerned.

- Located in an industrial park that is properly managed under the regulations of the country where the site is located, and measures are in place to minimize risk to an extent feasible (e.g., water supply backup system, etc.).
- Water consumption is less than 0.1% of the Toyobo's total water intake.

The group therefore does not currently consider itself to be exposed to any water risks that could have a significant financial or strategic impact.

## Results

The following table shows the water intake by region for fiscal 2023.

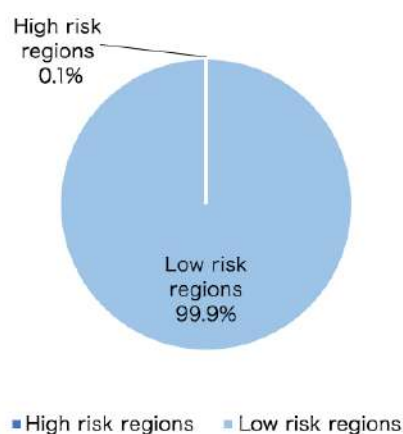
Despite a more than 6% increase in sales in fiscal 2023 compared to the previous year, the group's water intake was kept at a slight increase of about 0.3% over last year, as a result of ongoing water conservation efforts at each site to reduce the amount of water intake.

• [Water intake by source and discharge by destination \(305KB\)](#) 

### Draw water volume by Region

|                     | FY2021 | FY2022 | (thousand m <sup>3</sup> )<br>FY2023 |
|---------------------|--------|--------|--------------------------------------|
| High risk regions*1 | 78     | 94     | 86                                   |
| Low risk regions*2  | 84,394 | 85,830 | 86,111                               |
| Total               | 84,472 | 85,924 | 86,197                               |

### Draw Water Volume by Region for FY2023



\*1: High-risk regions: Regions rated as high risk in terms of the amount of water available in the AQUEDUCT Water Risk Atlas.

\*2: Low-risk regions: Regions other than high-risk areas.

## Environmental compliance

Three years from fiscal 2021 to fiscal 2023, there were no regulatory violations related water quantity permits, standards and regulations.

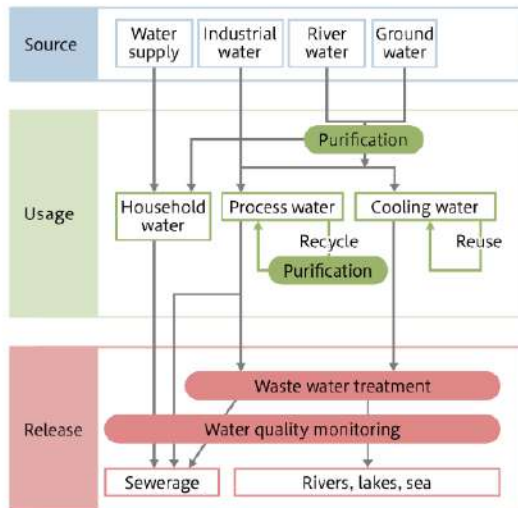
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## Initiatives

### Risk reduction

#### Water resource management

Our group promotes appropriate management of water resources through improvements in manufacturing processes, water conservation activities, and the use of recycled water.



#### Water reusing and recycling system

Our group's manufacturing facilities process includes the cooling process for plastic resin products. Water used as cooling water is repeatedly used without being discharged.

#### Collaboration with local community

The Tsuruga Research and Production Center of our group participates in the "Tsuruga City Water Environment Improvement Roundtable," which consists of local government officials, academics, residents, companies, and NGOs that have come together for the purpose of groundwater management. The report provides information on measures to achieve the reduction targets promised to the local government and citizens, as well as the results of activities and future plans.

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## Identifying opportunities

#### Contributing to the elimination of water shortage through business operations

Almost all of the water covering the globe is seawater, with limited quantities of the fresh water that we use. As a result, regions where fresh water is difficult to use are facing water shortages. The Middle East and the Gulf region in particular are seeing ongoing, remarkable economic development, with improved living standards and increased populations. As a result, securing water for both industrial and domestic use has become problematic, and the introduction of desalination plants\* is underway. The Toyobo group supplies the membranes used in seawater desalination facilities, thereby helping to eliminate water shortages in these regions.

\* Seawater desalination facilities: These removes the various salts present in seawater in order to produce fresh water, providing water for drinking and industrial use.



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Expansion of opportunities.

### **HOLLOSEP® hollow fiber reverse osmosis membranes**

The Toyobo group's hollow fiber type reverse-osmosis (RO) membrane element HOLLOSEP® is a membrane that contributes to desalination of seawater. It boasts high water recovery rate, offers superior chlorine tolerance, and can inhibit the proliferation of microorganisms through chlorine sterilization. We produce high quality drinking water in the Middle East and Gulf countries that have high-temperature, highly saline seawater, harsh conditions for reverse osmosis membranes. With over 30 years' usage, these are highly acclaimed and hold a high market share. These are also used domestically, in Japan's largest seawater desalination plant.

# Chemical Substance Management and Reducing Environmental Impact


## Chemical Substance Management

↓ [Basic approach](#) ↓ [Structure](#) ↓ [Initiatives](#)

## Reducing Environmental Impact

↓ [Basic approach](#) ↓ [Targets and results](#) ↓ [Environmental compliance](#) ↓ [Initiatives](#)

## Chemical Substance Management

| Materiality   |  |
|---|--|
| Related ESG : <b>E</b>  |  |
| Clean water areas, air and soil, and preservation of biodiversity |    |

## Basic approach

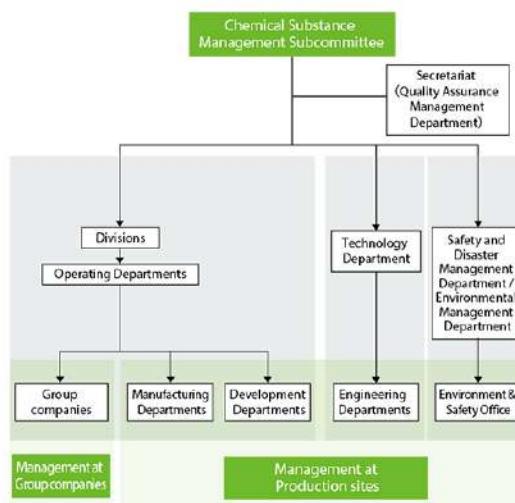
In line with the TOYOBO Group Fundamental Policy on the Global Environment, Toyobo group endeavors to manage chemical substances appropriately throughout the product lifecycle (research, development, design, manufacturing, sales, use, and disposal), in order to help conserve the global environment, support disaster prevention, ensure workers' health and safety, guarantee product safety, and ensure conformity with each country's chemical substance regulations.

## Structure

In order to promote appropriate management of chemical substances, Toyobo group has established a management structure at each production site. Each Solutions Division supervises the activities of the production sites and group companies under their jurisdiction.

In addition, we have created the TOYOBO Chemical Substance Management Classification in compliance with relevant laws and regulations—both international and domestic—as well as client requests. This classifies the chemical substances we handle into five levels, and the management procedures are specified for each level or “rank.” Use of substances in rank A and B is permitted only when the risks are thoroughly assessed, mitigation measures are taken, and the risk is deemed tolerable. We are continuously making efforts to reduce the overall usage volume of rank A and B substances by optimizing and replacing these substances.

## Chemical Substance Management Structure



## TOYOBO Chemical Substance Management Classification

| Rank | Management Category                                      | Notes (laws and regulations, etc.)  |
|------|--|---|
| A    | Substances requiring particularly strict management      | Chemical Substances Control Law <sup>*1</sup> , Industrial Safety and Health Act, Poisonous and Deleterious Substances Control Act, Act on the Protection of the Ozone Layer through the Control of Specified Substances, etc. and Other Measure, Act on the Prohibition of Chemical Weapons and Control, of Specific Chemicals, POPs <sup>*2</sup> , PIC <sup>*3</sup> , RoHS <sup>*4</sup> , REACH <sup>*5</sup> , etc. |
| B    | Substances requiring strict management                   | Chemical Substances Control Law, PRTR <sup>*6</sup> , Industrial Safety and Health Act, Poisonous and Deleterious Substances Control Act, REACH, etc.   |
| C    | Substances requiring strict exposure prevention measures | Chemical Substances Control Act, PRTR, Industrial Safety and Health Law, Poisonous and Deleterious Substances Control Act, Fire Service Act, etc.   |
| D    | Substances requiring exposure prevention measures        | PRTR, Industrial Safety and Health Act, etc.  |
| E    | Others   | Other than A-D  |

\*1 Chemical Substances Control Law: Act on the Regulation of Manufacture and Evaluation of Chemical Substances

\*2 POPs (treaty): Stockholm Convention on Persistent Organic Pollutants

\*3 PIC (treaty): Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

\*4 RoHS: Restriction of the use of certain Hazardous Substances in electrical and electronic equipment

\*5 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

\*6 PRTR: Pollutant Release and Transfer Register

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## Initiatives

Recent years have seen new requirements to manage chemical substances within the supply chain. In addition to the European RoHS Directive and REACH regulations, such requirements also apply in Japan, following the coming into effect of the Act on the Regulation of Manufacture and Evaluation of Chemical Substances (Chemical Substances Control Law), as well as other regulations relating to chemical substance management. Additionally, the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) has been adopted by the United Nations.

In view of this situation, Toyobo has introduced a chemical substance management system (TCAS<sup>\*1</sup>) covering every stage from procurement through to manufacturing and sales. We revise the content of chemical substance surveys for our suppliers as necessary in accordance with the laws and regulations of each country and revisions to the Japanese "chemSHERPA<sup>BH</sup><sup>\*2</sup>" and other regulations. This is to realize green procurement while providing accurate and prompt support to our customers. We employ this system to investigate the use of regulated substances and carry out surveys regarding content in products.

\*1 Toyobo Chemical Administration System

\*2 A scheme that facilitates sharing information on chemical substances in products led by the Ministry of Economy, Trade and Industry

## Green procurement

We prioritize procurement of raw materials with a low environmental impact, and work with business partners who take a proactive approach to protecting the environment. To this purpose, we have established our group-wide Green Procurement Standards (selection standards for suppliers and selection standards for materials) in Green Procurement Guidelines, which are made known to our suppliers and widely available on our website.

In particular, with regard to chemical substances management, we have established the following criteria for selecting materials, and we comply with various chemical substances management regulations, including the European RoHS Directive and REACH regulations.

- (1) Not containing any of our prohibited substances, Rank A and B in TOYOBO Chemical Substance Management Classification.
- (2) Identifying the content of the hazardous substances specified by our company, Rank A, B, C, and D in TOYOBO Chemical Substance Management Classification.

• [Green Procurement Guidelines](#)

## Supplier monitoring

Our group has established "CSR Procurement Guidelines", and we ask our business partners to cooperate in initiatives that support the development of a sustainable society throughout the supply chain. "CSR Procurement Guidelines" also includes the above-mentioned promotion of green procurement.

Our group conducts "CSR procurement survey" based on "CSR Procurement Guidelines" and monitors the status of CSR initiatives. As a result of the questionnaire survey, we are asking our suppliers to make improvements. For the results of the latest questionnaire and the countermeasures (corrective measures), please refer to the following items.

- [Supply Chain Management > CSR Procurement Survey](#)
- [CSR Procurement Guidelines](#)

## Participating in initiatives

We also participate in Joint Article Management Promotion-consortium (JAMP) for the smooth disclosure and transmission of information on chemical substances contained in products in supply chain.

## Reducing Environmental Impact

| Materiality  |   |
|--|---|
| Related ESG: <b>E</b>  |    |
| <b>Clean water areas, air and soil, and preservation of biodiversity</b> |   |

### Basic approach

In line with the TOYOBO Group Fundamental Policy on the Global Environment, with regard to chemical substances that are emitted into the atmosphere or into water areas, Toyobo group has set self-management standards stricter than the statutory requirements and reduction targets. Based on these, we implement rigorous management and are working to reduce emissions.

### Targets and results

We have set ourselves the targets of reducing emissions into the atmosphere of substances that have an impact on the environment by 60%, and of reducing such emissions into water area by 80%, compared to fiscal 2015, by fiscal 2031.

| Category   | Initiatives  | Targets (FY2031)                   | Results (FY2023) |
|------------|--|------------------------------------|------------------|
| Atmosphere | VOC emissions (Japan total)                                | 60% reduction (compared to FY2015) | 60% reduction    |
| Water      | Discharge of hazardous substances into water (Japan total) | 80% reduction (compared to FY2015) | 71% reduction    |

Japan Total: TOYOBO CO., LTD. and domestic consolidated subsidiaries

In fiscal 2022, we succeeded in reducing emissions into the atmosphere by 60%, compared to fiscal 2015. This was due to an operation of VOC recovery equipment at several plants.

Emissions of environment pollutants into water also reduced by 71% compared to fiscal 2015.

### Environmental compliance

There were no incidents of non-compliance with air pollution or water quality permits, standards and regulations for the three years from fiscal 2020 to 2022.

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## Initiatives

### **Compliance with the Pollutant Release and Transfer Register Act (PRTR Law)**

Toyobo group estimates and reports the amount of emissions and amount transferred for chemical substances that are subject to PRTR Law. Based on the overall results that are announced each year, we strive to utilize this information effectively in reducing the amount of emissions and the amount transferred.

We are proceeding with the improvement and replacement of production equipment and installations, the improvement of operating conditions, the installing of equipment for removing relevant substances, and the adoption of substitute raw materials and auxiliary materials, in order to reduce emissions.

### **Initiatives for preventing air and water pollution**

Toyobo group complies with environmental regulations set by national and local government authorities and rules set by environmental conservation agreements. In addition, we implement management for air emission and water discharge from our production sites, by setting self-management standards more rigorous than the statutory requirements in some cases.

We have installed monitoring systems within our production process, and remove harmful chemical substances from gases and water emitted at our production site by utilizing a variety of environmental protection technologies, including in-house developed VOC treatment equipment. We also strive to improve our manufacturing processes so as to minimize the amount of these substances that is used and emitted.

# Biodiversity

| Materiality   |   |
|---|---|
| Related ESG : <b>E</b>  |  |
| Clean water areas, air and soil, and preservation of biodiversity |   |

↓ [Policy and approach](#)   ↓ [Identifying risks](#)   ↓ [Initiatives](#)

## Policy and approach

Toyobo Group Fundamental Policy on the Global Environment calls for the group to actively support and participate in environmental protection and biodiversity conservation activities throughout society and in local regions, as a good corporate citizen. In doing this, we strive to minimize the impact of our business activities on ecosystems and aim to realize a nature positive through conservation and maintenance activities in cooperation with local communities. To strengthen the efforts for biodiversity conservation, we formulated the "Action Guidelines for Biodiversity Conservation" in November 2021 and endorsed the "Initiative based on the Declaration of Biodiversity by Keidanren" in January 2022. We participated in 30by30 Alliance for biodiversity in November of the same year. We are promoting activities based on the following guidelines with respecting "Declaration of Biodiversity, Guide to Action Policy" issued by Keidanren (Japan Business Federation), and "Guidelines for Private Sector Engagement in Biodiversity" formulated by the Ministry of the Environment.



### Action Guidelines for Biodiversity Conservation

We recognize that biodiversity is an essential part of a sustainable society. As a group which continues to create the solutions needed by people and the earth, understanding the impact of our business activities on conservation of biodiversity, we will endeavor to conserve the three types of biodiversity (species, genetic, and ecosystem diversity) through various activities.

- We will work to understand how the group's business activities depend on and affect biodiversity, and endeavor to avoid or minimize negative impacts.
- We will strive to give consideration to biodiversity conservation throughout the entire value chain.
- We will contribute to the conservation by promoting development of Biodiversity-conscious products and technology.
- We will support and promote conservation activities through the employee's participation, and cooperation and collaboration with various stakeholders including local communities and NGOs.
- We will comply with domestic and overseas agreements on biodiversity.

- [TOYOBO Group Fundamental Policy on the Global Environment](#)

## Identifying risks

### Toyobo group's business activities and its involvement in biodiversity

At all domestic and overseas production sites of our group, by using IBAT,<sup>\*1</sup> we will conduct surveys to determine whether there are any rare species or natural environments such as the World Natural Heritage sites, IUCN<sup>\*2</sup> Protected Area Management Categories I-VI, and the Ramsar Convention<sup>\*3</sup> that should be conserved within 1 km around the site, and we have picked up the following sites.

In addition, we will set up initiatives in accordance with each local situation at our sites as Biodiversity Action Plan (BAP). We confirm their progress at a company-wide meeting (Global Environment Conservation Conference) starting in fiscal 2024, along with the promotion of biodiversity conservation.

<sup>\*1</sup> The abbreviation of "Integrated Biodiversity Assessment Tool" refers to a database of the world's protected areas in which the United Nations Environment Programme (UNEP) and other organizations participate.

<sup>\*2</sup> The abbreviation of "International Union for Conservation of Nature" refers to an international nature conservation network consisting of national, governmental and non-governmental agencies.

<sup>\*3</sup> Official name is "Convention on Wetlands of International Importance Especially as Waterfowl Habitat". It aims to conserve wetlands, which are an important habitat for a variety of organisms and a valuable resource for human life, through international cooperation and promote the wise use.

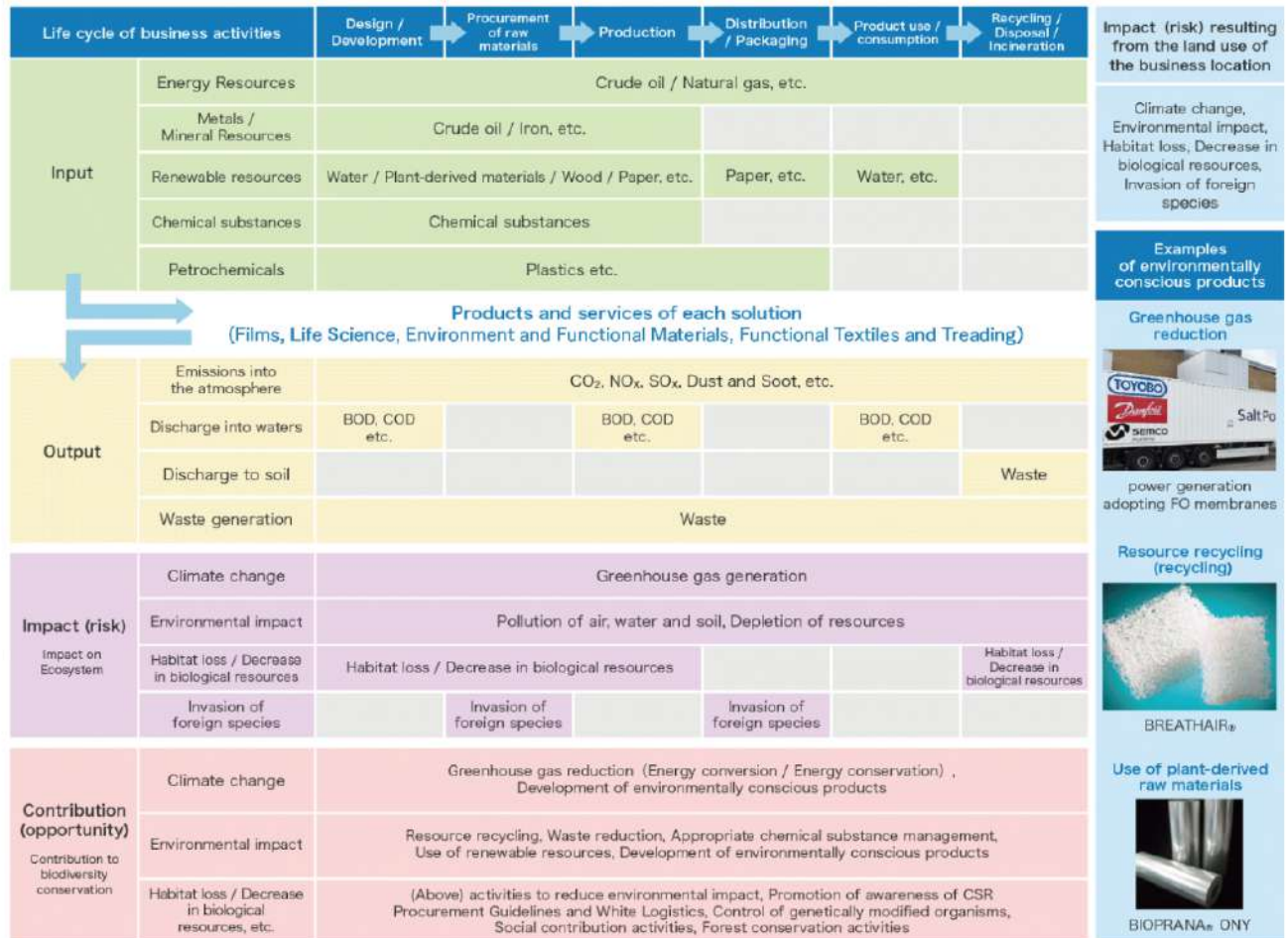
### Sites with a Natural Environment to be Conserved

| Site name   | IBAT assessment result                                   | Explanation  |
|---|--|--|
| Toyobo Iwakuni Production Center<br>TOYO CLOTH CO., LTD Iwakuni Plant<br>(Iwakuni, Yamaguchi) | Protected landscape areas<br>Resource conservation areas | Part of a national park or quasi-national park<br>Areas to be protected for the sustainable use of natural resources |
| Toyobo Research Center<br>(Otsu, Shiga)   | Species and habitat<br>management areas                  | Natural Habitat Conservation Areas, National<br>Wildlife Protection Areas  |
| TOYO CLOTH CO., LTD Tarui Plant (Sennan,<br>Osaka)  | Resource conservation areas                              | Areas to be protected for the sustainable use of<br>natural resources  |
| JAPAN EXLAN COMPANY., Ltd.<br>TOYOBO PHOTO CHEMICALS CO., LTD.<br>(Okayama, Okayama)          | Resource conservation areas                              | Areas to be protected for the sustainable use of<br>natural resources  |
| Toyobo Tsuruga Research and Production Center<br>(Tsuruga, Fukui)                             | Species and habitat<br>management areas                  | Natural Habitat Conservation Areas, National<br>Wildlife Protection Areas  |
| Toyobo MC Takasago Plant (Takasago, Hyogo)  | Resource conservation areas                              | Areas to be protected for the sustainable use of<br>natural resources  |

\* Toyobo Tsuruga Research and Production Center, and Toyobo MC Takasago plant: Areas to be protected are located more than 1 km (but less than 2 km) from the site, but are included in the scope of this activity



## Relationship between Business Activities and Biodiversity



Made with reference to the "Map of Relationships between Corporations and Biodiversity" published by the Japan Business Initiative for Biodiversity.

## Initiatives

### Risk reduction and increasing opportunities (risk control)

To minimize the negative impact on biodiversity, we are proceeding following activities.

#### Reduction of environmentally hazardous substances emitted from production sites and plants

Under TOYOBO Group Fundamental Policy on the Global Environment, we have established voluntary standards and reduction targets for chemical substances discharged into the atmosphere and water that are stricter than those required by law, and we are working to thoroughly manage these substances and reduce their emissions.

For example, we utilize our in-house VOC treatment equipment and other environment conservation technologies to reduce the amount of hazardous chemicals in wastewater and exhaust gas from our plants and plants. To prevent accidental spillage of hazardous chemical substances, we have installed monitoring devices in the manufacturing process and are working to improve the manufacturing process to minimize the use and discharge of these chemical substances.

Please see reduce impact on the environment section for targets and achievements for fiscal 2031.

- [Chemical Substance Management](#)

## Environment impact assessment (Eco-Review System) at development

Since 1998, we have been using the Eco-Review System to evaluate the impact of our products on environment from the viewpoint of environment conservation. Under this system, we evaluate our products/technologies from the viewpoints of "preventing climate change," "reducing chemical substances," "resource conservation," "waste reduction," "environment contributing," and "biodiversity" at every stage from raw materials to disposal. Since this system is implemented at each stage from R&D to commercialization, the themes that are deemed necessary to be improved at the R&D stage will be improved by the time of the next Eco-Review. As a result, while developing products and technologies, we are working to reduce the burden on environment and improve products that contribute to biodiversity conservation and other.

- [Eco-Conscious Products](#)

## Contributing through business processes and products

We are also contributing to reduce impact on the environment of our customers through the markets of waste fluids, drain, and exhaust gas treatment equipment, as well as water treatment membranes.

## Forest conservation activities at "Toyobo Future Forest" in Wakayama prefecture

Forest has multifaceted functions such as conservation of biodiversity and the global environment. We have worked on Forest Conservation Activities of "Toyobo Future Forest" in a mountain forest in central Wakayama prefecture. Since its inception in 2006, in cooperation with the local Hidaka town and the forest association of Kichuu (or central Wakayama prefecture), we have been working on tree planting and weeding, etc. In November 2021, we supplementally planted broadleaf trees such as wild cherry, sawtooth oak, and maple.

Wild deers live in this area of the forest and sometimes eat the seedlings of the trees. For the coexistence of deers and trees, the area around the "Future Forest" is enclosed with nets which use our material, IZANAS® to prevent animals from entering.

Through forest conservation activities in Wakayama prefecture, we will contribute to issues such as biodiversity and climate change.



Putting covers preventing feeding damage by deers on saplings (November 2021)

## Participation in cleanup activities to preserve the biodiversity of the Seto Inland Sea

The Seto Inland Sea is one of the most important areas for biodiversity conservation. Our business sites and group companies (Iwakuni Production Center, Toyobo MC Takasago Plant, TOYO CLOTH CO., LTD., JAPAN EXLAN COMPANY, LIMITED, TOYOBO PHOTO CHEMICALS CO., LTD.) are located in this surrounding area. These business sites, and companies conduct cleanup activities at least once a year to pick up litter along the coast and in rivers flowing into the Seto Inland Sea.



Cleanup activities at YUHO CO., LTD.



Cleanup activities at JAPAN EXLAN COMPANY, LIMITED



Cleanup activities at TOYOBO PHOTO CHEMICALS CO., LTD.

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## Engagement with governments, non-profit organizations and local community

At the environmental seminar held every year as part of the group's environmental education, a study session was held in fiscal 2023 under the theme of "biodiversity conservation" with lecturers invited from the Ministry of the Environment (Office for Mainstreaming Biodiversity) and an NPO (The Citizens Environmental Foundation).

A total of over 500 people from company-wide participated in each seminar, including online participants, who deepened their knowledge of biodiversity conservation by asking questions to the lecturers.

In June 2023, as part of biodiversity conservation activities of Toyobo Research Center, (Otsu City, Shiga Prefecture) we invited a professor from Biodiversity Science Research Centre, Ryukoku University (Otsu City) to give a lecture on biodiversity conservation and its significance: environment DNA analysis as an observation technology.

A total of about 200 participants studied cutting-edge science studies on biodiversity conservation, with Toyobo Research Center as their primary venue and company-wide online.



Scenes of Environmental Seminars in FY2024

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## Collaboration with local community

### Cooperative management of groundwater

Tsuruga Research and Production Center of our group participates in the "Tsuruga City Water Environment Improvement Roundtable", which consists of local government officials, academics, residents, companies, and NGOs that have come together for the purpose of groundwater management. The report provides information on measures to achieve the reduction targets promised to the local government and citizens, as well as the results of activities and future plans.

The Toyobo group will continue to work with local communities to properly manage groundwater use in order to conserve biodiversity.

### Lake Biwa day event: 100 sites eDNA survey

The Toyobo group has supported "Lake Biwa Challenge: 100 sites eDNA survey," a project to research living organisms in Lake Biwa, Japan's largest lake in Shiga Prefecture. The survey, conducted by Ryukoku University's Center for Biodiversity Science, is a sub-project of "Ryukoku Lecture with Shiga Prefecture related to Lake Biwa Day," an open lecture of Ryukoku University.

"Lake Biwa Challenge: 100 sites eDNA survey," started in 2021, involves collecting water samples annually at 100 locations along the entire lake by local citizens, organizations, and companies. The samples will be analyzed for environmental DNA<sup>\*</sup> at the university's center, to obtain data essential for conserving biodiversity, such as the habitat distribution, and proliferation of invasive species.

The Research Center, a Toyobo research hub also located in Shiga Prefecture, has participated in local environmental activities and launched its own campaigns to clean up the lake with the aim of conserving the lake's biodiversity. As part of its support for the latest project, Toyobo will regularly take its own water samples at a company site on the lakeside to obtain data over time in addition to participating in the annual lake water sampling. Toyobo will also consider conducting joint projects with the university center that use technology to analyze environmental DNA.

\* DNA expelled by living organisms, such as those originating in their body fluids and feces.

- [Toyobo supports "Lake Biwa Challenge: 100 sites eDNA survey" to accelerate efforts for biodiversity conservation](#)

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## Realizing nature positive

30by30 has attracted attention as a global target for biodiversity, including an agreement reached in COP27 of 2022, with the goal of protecting at least 30% of its land and sea areas by 2030.

We have purchased forests since the 1950s to ensure domestic self-sufficiency of chemical fiber raw materials. Since then, we have been able to sell forests because of a change in the composition of chemical fiber business and other factors, and we are now holding only some forests for the purpose of producing lumber.

In recent years, we have been reviewing our company-owned forests in response to rising concerns about environment issue. We believe that properly managing forests contributes to the relaxation of climate change and the conservation of biodiversity.

As a control objective of our company-owned forests, we will promote forestry activities while maintaining its function as a water source conservation forest. We will also promote sustainable forest management with the aim of coexistence between people and nature by placing emphasis on continuity with the abundant forests surrounding us. We will strive for activities that take into consideration limited resources and biodiversity.

The amount of CO2 absorbed in the Company-owned forests currently owned is estimated to be approximately 6000 tons/year of 1,500ha's forest area absorbed in one year.

### 30by30 alliance

In November 2022, TOYOBO and Toyobo Real Estate Co., Ltd. joined 30by30 alliance for biodiversity to promote activities aimed at halting and restoring biodiversity losses. (nature positive).



In this alliance, the Ministry of the Environment has begun to certify areas where biodiversity conservation is being promoted through private sector initiatives, etc., as an initiative to establish areas that contribute to the conservation other than protected areas (OECM: Other Effective area-based Conservation Measures). Our company-owned forest in Aya town, Miyazaki Prefecture has been certified as a site for coexistence with nature.

- [Toyobo joins 30by30 Alliance for Biodiversity](#)

### Conducting biological surveys

In fiscal 2023, we began a monitoring survey of company-owned forests located in Aya Town, Miyazaki Prefecture.

Through surveys, it was confirmed that rare organisms (e.g., domestic rare wild fauna and flora species, Ministry of the Environment Red List 2020: endangered IB species, and Miyazaki Prefectural Red List 2022: endangered I species) exist, and that deer and other food hazards are caused by deer.

Regarding animal pollution, we have already implemented measures such as installing a deer fence in the afforestation area, but this is the first time we have conducted a survey of the entire forest.

In the future, we will continue monitoring surveys and consider new activities in collaboration with local communities and recovery from animal damage (nature positive).

### Collaboration with local community

In June 2023, we concluded a comprehensive collaboration agreement with Aya town, Miyazaki Prefecture, where one of our group-owned forests is located.

Aya town has one of the largest laurel forests in Japan, and has been registered as a UNESCO Eco Park by UNESCO (United Nations Educational, Science and Cultural Organization) in 2012, receiving high praise worldwide for its efforts to create a community that coexists with nature.

In the future, we will work together to revitalize the Aya town area using our company-owned forests and to coexist with our sustainable manufacturing and conservation of the natural environment.

- [Toyobo signs a comprehensive partnership agreement with the town of Aya, Miyazaki Prefecture](#)

# Social



## Employee well-being and human rights in the supply chain

We are working to create workplaces ("People Fast") where employees feel safe secure and comfortable, and pride and rewarded, to ensure the safety and health of employees (health and productivity management), to enhance reskilling and recurrent education, and to respect human rights throughout the supply chain.



Respect for Human Rights



Safety, Disaster Prevention



Quality



Supply Chain Management



Human Resource Management



Diversity & Inclusion



Health and Productivity Management



Social Contribution





**Zero industrial accidents** in workplaces



**Respect** for human rights across the entire supply chain



**Employee** engagement score: **over 70%**



**Expanding and improving educational and training systems for employees** reskilling and recurrent education, etc.

[ESG Performance Data](#) →

# Respect for Human Rights

| Materiality                      |   |
|----------------------------------|---|
| Related ESG: <b>S</b>            |     |
| Human rights in the supply chain |   |

↓ Management approach   ↓ Initiatives

## Management approach

### Policy and approach

Respecting human rights is essential for Toyobo group to fulfill its responsibilities as a member of society and continue as a trusted company. In this regard, respecting the rights of employees and trading partners, who are important stakeholders for the group, is crucial to enabling them to demonstrate their abilities, and to work with vigor and energy. In recognition of this, we have included "4. Respect for Human Rights" and "6. Active Employee Participation" within the 10 principles of the Toyobo Group Charter of Corporate Behavior. We also support and respect other international agreements relating to human rights, such as the International Bill of Human Rights, the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, the Children's Rights and Business Principles, and the UN Guiding Principles on Business and Human Rights.

#### < TOYOBO Group Human Rights Policy >

Over a history of almost 140 years, Toyobo group has developed business that addresses the needs and challenges of the times through technology, based on the spirit of *Jun-Ri-Soku-Yu* (adhering to reason leads to prosperity), which is the cornerstone of the PVV's corporate philosophy system.

At present, under our vision of "we will continue to create the solutions needed by people and the earth with materials and science," we are working to evolve into a company that can "help society flourish and our company grow" by actively contributing to solving social issues and continuously creating value for society.

We believe that respecting human rights is crucial to achieving the group's vision, and in the TOYOBO Group Charter of Corporate Behavior ("Charter") and the TOYOBO Group Employee Conduct Standards ("Code") we have stated that we respect human rights and maximize the value that can be generated from diversity under the slogan "respect for human rights and diversity."

The TOYOBO Group Human Rights Policy ("this policy") outlines our policy for handling human rights based on the Charter and Code and it applies to all of the group's directors, corporate auditors, executive officers, and employees.

Also, as a good corporate citizen, the group recognizes the importance of respecting human rights and will strive to respect the basic human rights of all stakeholders, including officers and employees.

### **1. Compliance with laws, regulations, and norms concerning respect for human rights**

Toyobo group supports and respects international norms concerning human rights including the International Bill of Human Rights, which stipulates the basic human rights that should be enjoyed by everyone in the world, and the ILO Declaration on Fundamental Principles and Rights at Work by the International Labour Organization (ILO) which stipulates the fundamental rights regarding labor (freedom of association and collective bargaining rights, the elimination of forced or compulsory labor, the abolition of child labor, and the elimination of discrimination in respect of employment and occupation).

Also, this policy was formulated in accordance with the UN's Guiding Principles on Business and Human Rights.

The group complies with the laws and regulations in every country and region in which it does business. Furthermore, in cases where internationally recognized human rights and the laws and regulations of a country or region are in conflict, we will pursue a course of action that has maximum respect for international human rights principles.

### **2. Duty to respect human rights in all business activities**

Toyobo group will not infringe on the human rights of another individual, will minimize the adverse effects on human rights that might occur through its business activities, and will actively expand the practice of respect for human rights in its business activities.

### **3. Practicing human rights due diligence**

Toyobo group recognizes the importance of practicing human rights due diligence to minimize any adverse effects of our business activities on human rights. Based on this recognition, we will build a human rights due diligence framework. Additionally, while this framework has yet to be designed, it will include identifying, preventing, and reducing actual and potential adverse effects on human rights in our business activities and value chains, integrating internal processes for measures related to the above, and publicizing our efforts.

### **4. Correction and relief**

In cases where it is revealed that Toyobo group has had an adverse effect on human rights or furthered such an adverse effect, it will take appropriate steps to correct this and provide relief. Also, even in cases where the group has not directly furthered an adverse effect on human rights, if a business partner of the group or other related party has a direct connection to an adverse effect on human rights through their business, we will strive to cooperate with stakeholders to make improvements, and ensure that human rights are respected and not infringed upon.

### **5. Cooperation and dialogue with stakeholders**

Toyobo group promotes respect for human rights through actions stipulated in its Charter, Code, and other policies and guidelines. Furthermore, we will respond to any actualized or potential adverse effects on human rights through dialogue and cooperation with the relevant stakeholders.

### **6. Education for officers and employees**

Toyobo group will reflect this policy in the procedures required to ensure it is applied in all business activities and will provide appropriate education and training for officers and employees to ensure implementation based on a correct understanding of this policy.

### **7. Information disclosure**

Toyobo group will report on various initiatives concerning respect for human rights based on this policy in a timely manner through its website and various reports.

### **8. Selection of priority human rights issues**

As changes in society and other situations can change the specific human rights issues that should be addressed, Toyobo group will revise its priority issues through dialogue and cooperation with stakeholders and external experts.

Seiji Narahara  
Representative Director, President and CEO, Co-CEO  
TOYOBO CO., LTD.  
October 26, 2020

## **Related Policies**

- [TOYOBO Group Charter of Corporate Behavior: 4. Respect for human rights, 6. Active employee participation](#)



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## Structure

The persons in charge of the group's employees are assigned to the Human Resources Department, and those in charge of the supply chain are assigned to the Procurement and Logistics Department, with the aim of emphasizing respect for human rights in Toyobo group in a proactive, systematic manner. We are deepening our understanding of international human rights related issues that companies need to be aware of, and preparing for initiatives on human rights due diligence.

The Managing Executive Officer who is the Controlling supervisor of the Corporate Sustainability Division, Procurement and Logistics Department has overall responsibility for matters relating to human rights.

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## Targets and KPIs

### < Targets >

- Toyobo group will carry out initiatives to ensure respect for basic human rights and diversity throughout the entire group, including providing training to foster such respect among employees.
- Through these initiatives, we will aim to be a fair company that is trusted by society.

### < KPIs and results >

| Initiatives  | KPI   | Target (FY2026)                                    | Result (FY2023) |
|--|---|--|-----------------|
| <ul style="list-style-type: none"><li>● Avoid human rights violations</li><li>● Eliminate forced and child labor</li><li>● Respond to human rights laws and regulations (Modern Slavery Act, etc.)</li><li>● Ensure equality in recruitment and treatment of employees</li></ul> | 1. Implementation status of human rights education and training | Once a year for 20% of non-consolidated employees* | 48.0%           |

\* Subject company: TOYOBO CO., LTD., TOYOBO STC CO., LTD., and TOYOBO INFORMATION SYSTEM CREATE CO., LTD.

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## Initiatives

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### Respect for human rights from a global perspective

In the countries and regions, where Toyobo group has business sites, there are various human rights related issues that reflect the specific political, economic and social circumstances. Such issues may include discrimination in regard to employment and work roles, unfair labor practices, forced labor and child labor, infringement of the human rights of foreign workers, and involvement in corruption. For each Toyobo group business site, it is vitally important to give due consideration to these human rights related issues.

In order to identify the issues that Toyobo group needs to take into consideration, we are participating in the relevant sub committees of Global Compact Network Japan, alongside other participant companies. We are aiming to deepen our understanding of human rights by gathering information on international human rights issues and other issues that corporations need to pay attention to. Going forward, we will continue to identify human rights related issues that we need to consider at each of Toyobo group's business sites.

| Theme                      | Details of initiatives  |
|----------------------------|---|
| Prevention of child labor  | We prohibit the employment of persons under the age of 15 years, or the age for completing compulsory education, or the minimum age for employment in the country or region, whichever is the highest in our business activities.   |
| Prevention of forced labor | Our recruitment of talent is always premised on applications from persons responding to calls for applicants. We notify successful applicants after one or more recruitment screenings. We present information on working conditions when an applicant joins the company, and begin employment with the consent of the applicant. |
| Support for living wages   | We pay wages in compliance with laws and ordinances that stipulate minimum wages in the countries and regions in which we operate.  |

## Labor and human rights survey

At our domestic (non-consolidated) business sites in FY2023, we conducted a Labor and Human Rights survey addressing matters including child labor, employment equality, and occupational safety and health. Through the survey, we were able to confirm the absence of any violations of human rights laws and ordinances.

For technical intern trainees from overseas, we surveyed implementation and management of technical internships and compliance with labor-related laws and ordinances at relevant business sites. Through the survey, we confirmed implementation and compliance in all cases.

## Enhancing diversity and equal opportunities

Toyobo group believes that personal and organizational growth is achieved through a process of mutual respect among our employees, with their differing work styles, careers, gender, nationality, race, and beliefs, and through cooperation to achieve our shared objectives. We respect different opinions and a wide range of values, and cooperate to achieve ambitious goals together.

- [Diversity & Inclusion](#)

## Respecting workers' rights

### Respecting freedom of association and collective bargaining rights

Toyobo group respects freedom of association and collective bargaining rights.

We have set shared targets for labor and management to realize TOYOBO PVVs and we strive to build constructive and stable relationships between management and workers. Labor union activity at Toyobo is based on the union shop system,\* and all employees that are eligible to join a labor union under the labor-management agreement reached between labor and management join the labor union. Our unions represent all their members and the results of negotiations between management and labor are applied to all members without conditions. Additionally, based on an agreement between management and labor, employees at management level or above are not eligible to join, and 85.1% of all employees are union members (as of FY2023).

\* The union shop system is a system whereby all workers employed at a particular workplace are required to join the labor union for that workplace.

## Dialogue between management and labor

We arrange repeated opportunities for frank discussion between labor and management aimed at realizing the TOYOBO PWs, and we promote the building of the foundations needed for every single employee to be able to work with energy and enthusiasm.

Meetings of the Central Management Council, attended by representatives of the labor union headquarters and of company management, are held once a year, and meetings of the Branch Management Councils are held once a year at each of the nine branches in Japan.

The labor union is represented at meetings of the Central Management Council by staff from the union headquarters, and is represented at Branch Management Council meetings by staff from the relevant union branch, while the company is represented by the President at meetings of the Central Management Council, and by the business site manager or plant manager at Branch Management Council meetings. Topics addressed during discussions between labor and management include the operational status of the company, changes in the amount of pay rises, and the working environment.

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## Reducing excessive working hours

We are engaged in workstyle reform, so that our employees can work with renewed efficiency and achieve a good balance between work and personal life. We aim to ensure that our employees will take at least one day off every seven days in the future.

- [Work-life balance](#)

### Handling of non-compliance with labor standards

|  | Unit      | Scope          | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 |
|--|-----------|----------------|--------|--------|--------|--------|--------|
| Major violations of laws, regulations, or rules                    | Incidents | Global         | 0      | 0      | 0      | 0      | 0      |
| Serious non-compliance with labor standards                        | Incidents | Total in Japan | 0      | 0      | 0      | 0      | 0      |
| Number of incidents of serious human rights violations             | Incidents | Total in Japan | 0      | 0      | 0      | 0      | 0      |
| Compliance-related incidents that resulted in a criminal complaint | Incidents | Total in Japan | 0      | 0      | 0      | 0      | 0      |

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## Establishment of complaint handling and internal reporting systems

The Complaint Handling Committee and the Compliance Consultation Centers within the internal reporting system provide consultations and handle reports regarding human rights. At each business site, members representing both the company and labor are elected to the Complaint Handling Committee that handles requests for consultation from employees concerning issues related to the Equal Employment Opportunity Law.

In order to ensure that employees can use these systems without concern, the name and other details of employees making reports or receiving consultations are kept private and we guarantee that these individuals will not be negatively affected by their action. We also strive to detect and solve human rights issues at an early stage through compliance surveys.

- [Compliance consultation desks](#)
- [Initiatives to prevent harassment](#)

## Internal education initiatives

### Internal communication of our Code of Conduct and Compliance Manual

Toyobo group has created English and Chinese versions of the TOYOBO Group Charter of Corporate Behavior in order to implement internal education that enables employees around the world to share the same vision.

We use our TOYOBO Group Compliance Manual to familiarize employees with rules and case studies concerning respect for human rights, prohibition of discrimination, prohibition of child labor and forced labor, and protection of personal information.

We also familiarize and educate hiring recruiters on human rights-related cautions to be observed in interviews.

### Human rights-related training

We are making efforts to raise awareness of human rights among our employees through training that includes the communication and understanding of our Human Rights Policy. In FY2020, we conducted education and awareness-raising for group company employees concerning the human rights of foreign workers, and affirmed our intent to request that business partners take action as well. In fiscal 2023, as in the previous fiscal year, in each business site, we implemented training for new hires, grade-specific education, lectures, and training sessions for personnel appointed as promoters of human rights, with a total of 515 personnel participating in such activities.

In FY2024, the following seminars on the topic of "business and human rights " were held for officers and employees.

#### Business and human rights study session in FY2024

| Months               | Instructor  | Participant  |
|----------------------|---|--|
| Oct. 2023            | Ms. Mikiko Morimoto, Representative Director, karna ltd.  | Persons in charge of labor affairs at the business sites |
| Dec. 2023            | Ms. Emi Sugawara, Professor, Osaka University of Economics and Law  | Officers   |
| Scheduled Feb. 2024. | Persons in charge of the human resources and labor affairs, procurement and logistics, and sustainability | Officers and employees                                   |



Study session for persons in charge of labor affairs at the business sites in Oct. 2023



Study session for officers in Dec. 2023

In October 2023, we began distributing 14 videos on "business and human rights" to all officers and employees including those of three major group companies, making them available to view on demand.

We have added "business and human rights" to the theme of our compliance study sessions for managers since FY2024, and have held a total of 14 sessions. We plan to hold these sessions at 12 group companies, which hold them by the end of the fiscal year.

### Participation in the Global Compact Network Japan Subcommittee

In order to identify the issues that Toyobo group needs to take into consideration from among the human rights related issues existing in each region, we are participating in the relevant sub committees of Global Compact Network Japan, alongside human rights NGOs and other participant companies. We are aiming to deepen our understanding of human rights by gathering information on international human rights issues and other issues that corporations need to pay attention to and apply it to our awareness-raising activities.

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## Respecting human rights in the supply chain

### Revision and communication of the CSR Procurement Guidelines

To achieve the SDGs throughout our supply chain, in September 2022 we conducted a review with strengthened consideration of respect for human rights and the environment, and revised our CSR Procurement Guidelines.

We clearly state in the guidelines that we take matters involving human rights (including the prohibition of child labor, forced labor, and discrimination against people of any attributes, including LGBTQ) into account in our selection of business partners, and we communicate these guidelines to them.

### Human rights risk assessment based on the CSR procurement survey

Our company also conducts a CSR procurement survey based on our CSR Procurement Guidelines, directed at our major business partners. From the human rights items in the survey, we evaluate partners' initiatives aimed at human rights. Using the results of the questionnaire, we conduct evaluations that take into consideration country and region, industry, personnel composition, and other factors, and perform appropriate follow-up through interviews and other means to address business partners that are judged to be at high risk.

### Dealing with new and existing business partners

We ask new business partners to cooperate with our questionnaires when commencing new dealings with these, and periodically make the same request to existing business partners.

- [Supply Chain Management](#)
- [CSR Procurement Guidelines](#)

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## Engagement with stakeholders

### Engagement with local communities

To protect the human rights of stakeholders in local areas, in cooperation with government bodies we engage with issues that affect human rights in communities through information exchanges with neighboring residents, community associations, cooperatives, and other parties, as well as steadfast public relations activities. The results of this engagement are of aid in measures to combat noise, odors, wastewater, and other issues.

As an example, our Tsuruga Research and Production Center conducts information exchanges with local community associations and cooperatives once a year. We also provide neighboring areas with advance notice when performing periodic inspections.

### Engagement with overseas technical intern trainees

In our engagement with overseas technical intern trainees, the support we provide at relevant business sites includes the preparation of materials in trainees' native languages, support for official procedures, and accompaniment on hospital visits. We have also set up venues for listening to trainees' everyday troubles related to differences in lifestyles, addressing these as needed.

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## Participation in initiatives

We participate in the labor subcommittee meetings of the industry associations, Spinners' Association of Japan and Chemical Fibers Association of Japan. The subcommittee discusses work-related issues (working hours, leave systems, personnel systems, retirement benefits, etc.), including labor standards, and labor issues (e.g., measures against COVID-19, teleworking and other work styles).

In September 2023, we participated in the declaration for Responsible Bbusiness Conduct for the Textile and Clothing industry of Japan by the Japan Textile Federation. This declaration indicates that the company understands the purpose of the Guideline for Responsible Business Conduct for the Textile and Clothing Industry of Japan released by the Federation in 2022, and agrees to promote respect for human rights in accordance with the Guidelines (As of November 2023, 731 companies have declared).

In November 2023, the Chemical Fibers Association of Japan established the "Human Rights DD Response Committee" consisting of the regular members of the association, in which we are also participating. The committee members share information and exchange opinions on human rights issues in the supply chain, including trends of government policy and the Japan Textile Federation, as well as the status of responses at each company, and hold seminars and other events.

# Safety, Disaster Prevention

| Materiality                               |  |
|---|--|
| Related ESG: <b>E S G</b>                 |      |
| Safety and industrial accident prevention |  |

↓ Management approach   ↓ Initiatives   ↓ Fire prevention measures (FY2023)

## Management approach

### Policy and approach

Toyobo group recognizes that ensuring health and safety is a precondition for successful corporate activities. We have formulated the Toyobo Group Basic Policy on Health & Safety, which applies not only to our employees but also to the personnel of partner companies (contractors), and we are striving to build a safe workplace environment. Our safety declaration for fiscal 2023 is "We will thoroughly implement 'putting safety first,' and we will emphasize labor safety, environmental safety, product safety, and equipment safety." Under our slogan of "Protect yourself, protect your colleagues, and speak up when noticing something,"

Toyobo group designates September as "Disaster Preparedness Month" and September 6 as "Toyobo Group Disaster Preparedness Day," and conducts awareness-raising activities related to preparedness for fires and other disasters.

We do so out of a powerful determination to never forget the fatal fires that occurred at the Tsuruga Research and Production Center (No. 2 Plant) on September 6, 2018 and the Inuyama Plant on September 27, 2020, and to never allow the lessons learned from these to fade away.

We are working to build workplaces and personnel that prevent fires, and to build disaster-resistant production sites that will let us regain the trust of the society.

#### < TOYOBO Group Basic Policy on Health & Safety >

##### 1. Health & safety principle

Based on the concept that ensuring safety and sanitation is a major premise for business activities, we will actively work to ensure the safety of employees, enhance the cleanliness of working environments, and improve health under the spirit of respect between people with the aim of creating cheerful, happy workplaces and a prosperous society.

##### 2. Policy for health & safety activities

###### (1) Ensuring workplace safety

Toyobo group works to enhance the safety and security of environments at its workplaces with the aim of achieving zero accidents.

###### (2) Enhancing environmental sanitation and improving health

Toyobo group is enhancing the sanitation of environments at its workplaces and working to improve the health of its employees with the aim of realizing happy workplaces.

###### (3) Compliance with social norms

Toyobo group complies with social rules and works to realize a prosperous society and communities with which the company can coexist.

## Structure

In order to achieve steady progress in initiatives relating to safety and disaster prevention, which are the most important management issues, we have established the Safety and Disaster Management Division, which is a body reporting directly to the President, with a high degree of decision-making authority.

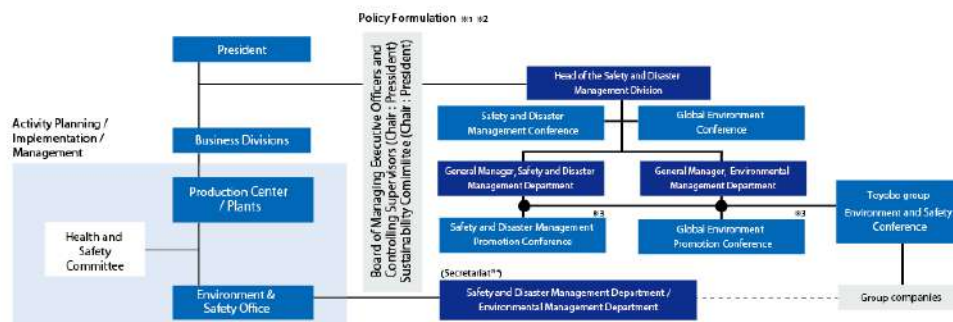
The Head of the Safety and Disaster Management Division (S&DM), who is Director and Managing Executive Officer, hosts the Safety and Disaster Management Conference, which consists of experts in varied fields as its members. In this conference, the members evaluate the effectiveness of safety and disaster management activities and draft and formulate company-wide policies, which are finally determined by the Sustainability Committee. The conference reports on progress to the Board of Directors as appropriate.

Under the SD&M, the Safety and Disaster Management Department plans and advances safety and disaster management activities. It also hosts the Safety and Disaster Management Promotion Conference, made up of representatives from each department. This conference manages discussions, decision-making, and progress related to specific matters based on policy. It also organizes teams of members and a chairperson to visit the company's business sites, factories, and group companies to conduct safety and environmental assessments and to inspect local activities. To address fire and explosion risks in particular, we perform periodic inspections of on-site management through third-party experts.

Furthermore, each production center, plant, and research center has its own Health and Safety Committee, which is composed of employee representatives, managers and experts, and which investigates and deliberates on matters relating to employee safety, disaster prevention and health, including risk assessment status, at each workplace.

Labor union representatives also participate in the discussions of the Safety and Disaster Management Promotion Conference and the Health and Safety Committee.

### Toyobo group structure for safety, disaster prevention, and the environment



- 1 Deliberates and decides policy on safety and disaster prevention
- 2 Deliberates and decides policy on the global environment
- 3 Deliberates and decides specific matters, and manages progress
- 4 Supports activities, provides information, and conducts interdepartmental coordination

## Targets and KPIs

### < Targets >

- We will strive to prevent disasters and accidents by clarifying and thoroughly complying with basic safety throughout the entire Toyobo group.

## < KPIs and results >

| Initiatives  | KPIs  | Targets              | Results (2022) |
|--|---|----------------------|----------------|
| <ul style="list-style-type: none"> <li>• Build a culture of safety</li> <li>• Prevent workplace accidents (make human-operated equipment safer, promote security and disaster prevention)</li> </ul> | 1. Number of major accidents*                                       | 0 accidents per year | 0 accidents    |
|  | 2. Frequency rate of workplace accidents resulting in lost workdays | 0.25 or less         | 0.55           |
|  | 3. Number of fires or explosions                                    | 0 accidents per year | 0 accidents    |
|  | 4. Number of spill accidents  | 0 accidents per year | 0 accidents    |

\* Major accidents: Defined according to internal standards based on the definition stipulated by the Ministry of Health, Labour and Welfare

## Initiatives

### Safety initiatives

Under the TOYOBO Group Basic Policy on Health & Safety, we are implementing the following occupational safety initiatives.

#### Making people, equipment, and processes safer

We identify sources of serious hazards and enact measures to prevent major accidents. Specifically, we use risk assessments and work research to assess on-site risks, then make improvements to equipment and work processes. We are also making efforts to prevent accidents by incorporating those improvements in procedure manuals and by educating employees. When an accident occurs at other companies or workplaces, we review the incident as a case study to prevent the occurrence of similar accidents, while checking for and addressing similar risks in our own workplaces.

We issue "Safety and Disaster Prevention News." Using the lessons from accidents and disasters that have actually occurred in the past, it helps to spread awareness by providing easy-to-understand explanations, supported by illustrations, regarding key points to note to conduct operations safely, and how to respond in the event of an accident. These are becoming widely used as tools for dialogue at workplace safety meetings, and back issues of the documents are available on our company intranet for viewing at any time.

In production centers where the foreign technical training system (overseas trainees) is in operation, we have assigned instructors to provide Japanese language education and support for daily life to ensure the safety and livelihood (communication) of the trainees.

As an example, for trainees to work safely, we devise ways to make it easier for them to understand, such as translating the standard operating procedure (SOP) and using hiragana to write the reading kana.

#### Promotion of disaster prevention

In order to learn from the fire that occurred at our plants and empower employees to protect their own workplaces in the event of a fire, we revised the content of our fire drills to make them more practical and enabled participation in drills by all employees, including those of cooperating companies, at least once a year. For group companies inside and outside of our business sites, we advance these activities under our group policy and are gradually expanding the number of targeted companies.

Together with people at workplaces, we promote steady actions to strengthen disaster prevention, with the aim of creating worksites that prevent fires from occurring and that, in the event a fire does occur, prevent personal harm and minimize other damage. Toward that end, we have established guidelines for fire prevention equipment and standards for disaster prevention management to reduce the risk of fires. To address fire and explosion risks, we perform periodic inspections of on-site management through third-party experts.

With regard to natural disasters, we will continue to implement disaster mitigation measures by reinforcing buildings against earthquakes, improving office and plant infrastructure, and conducting emergency response drills.



### 3S activities and training

We undertake 3S (sort, sweep, and standardize) activities, which are the foundation for safety and disaster prevention activities, on a company-wide basis. We have put in place a safety and disaster prevention training system that is shared throughout the company, and we provide the safety and disaster prevention training that is needed at each level.

In addition, with the aim of realizing effective safety and disaster prevention knowledge training, we have installed Disaster Prevention Training Workshops—training spaces in which panel exhibition plays a central role—in all production centers, and we have established Disaster Prevention Experience Training Facilities at key sites.

#### Establishment of a disaster prevention training center at the Iwakuni Production Center

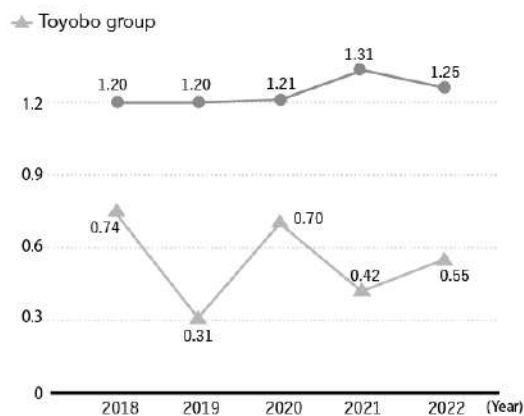
With the aim of looking back on and learning from accidents that have occurred in the past, and preventing the lessons from being forgotten, in August 2021 a new Disaster Prevention Training Center was opened at the Iwakuni Production Center, where personnel can experience the terrifying nature of accidents and make use of simulation equipment.

This is a training center, where, for example, besides being able to experience the awfulness of fires and explosions, such as dust explosions and fires caused by static electricity, it is also possible to experience the horror of accidents that involve being pulled into machinery. The center also shares case studies of accidents that have occurred in Toyobo group in the past.

To provide additional opportunities for personnel to enhance their knowledge of and awareness of fires and smoke, and to pay more attention to safety and disaster prevention, we have started internal training and are promoting internal education. Training at this center is offered on an application basis, and is also open to employees of group companies.



#### Frequency rate of lost workday injuries (Japan)



Toyobo group is striving to achieve zero accidents in accordance with the TOYOBO Group Basic Policy on Health & Safety. We place importance on the frequency rate of workplace accidents resulting in lost workdays<sup>\*1</sup>. This was 0.55 in 2022, including affiliated businesses at the same business site.

We have set a goal of zero major incidents<sup>\*2</sup> as a KPI, we achieved zero major accidents.

\*1: Frequency rate of workplace accidents resulting in lost workdays refers to the rate of accidents resulting in lost workday injuries per one million hours worked

\*2: Major accidents: Defined according to internal standards based on the definition stipulated by the Ministry of Health, Labour and Welfare

#### • [Health and Productivity Management Efforts](#)

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## Acquisition of occupational safety and health management system certification (ISO45001)

We are working toward ISO45001 certification of conformance with requirements for an occupational safety and health management system, to reduce risks in our working environments. As of the end of March 2023, we have obtained certification at two sites, the Iwakuni Production Center and the Utsunomiya Plant. We plan to continue obtaining certifications at other production centers and plants.

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## Fire prevention measures (FY2023)

In the wake of the September 2018 fire accident at the Tsuruga Research and Production Center (No. 2Plant) and the September 2020 fire accident at Inuyama Plant, Toyobo group is taking two main approaches to improving safety prevention. We are fostering a culture of safety by clearly establishing safety as the highest priority and revising our education structure. We are also fortifying our safety infrastructure by formulating a plan to enhance our safety and disaster prevention equipment and management and by developing specific PDCA cycles.

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### Fostering a culture of safety

We had always stated that worksite "safety is the highest priority," but we now recognized that the problem was that management involvement was insufficient. To foster a deeply imbedded culture of safety, in April 2022 we announced the New Safety Declaration. The Safety Declaration clarifies for all employee our management stance of placing the highest priority on safety related to occupational labor and conditions, our products, and our equipment. Measures to change our awareness of safety issues include revamping the position-based safety education system and introducing safety workshops and education programs for management level employees led by external organizations. A safety workshop for management-level employees was held in December 2021, with all of the participating company executives having the opportunity to study safety conditions at various companies. We held safety workshops for newly appointed officers and group company presidents in FY2023, and plan to continue doing so.

In November 2022, we conducted a survey of safety awareness among top management, Toyobo employees, and employees of cooperating companies involved in production to confirm the level of safety awareness in their respective organizations. The survey targeted 7,525 persons, with a response rate of 93%. The strengths and weaknesses of every element of organizational structure, business operations, and leadership with respect to safety were turned into visual data. Drawing on the results of the survey, we will advance activities to overcome weaknesses (issues) in organizations and thereby raise the level of the organizations' safety culture.

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### Fortifying for safety infrastructure

We are also creating a foundation for implementing the PDCA cycle in safety and disaster prevention. In FY2021, we established the Safety and Disaster Management Division, which is under the direct supervision of the President and which encompasses the Security and Disaster Department and the Occupational Safety Department. To achieve more efficient operation, in April 2022 we reorganized the Division into the Safety and Disaster Management Division, with the Safety and Disaster Management Department and Environmental Management Department placed under it.

In FY2022, we launched the Disaster Management Project under which we are advancing the creation of mechanisms for disaster prevention management. Specifically, we drew on the knowledge of experts to formulate disaster prevention management standards for fire prevention that will apply across the group. In formulating the standards, we have taken into consideration the aligning of disaster prevention management standards with actual conditions so that self-inspections can be conducted on-site. We have also built a system by which specialists perform periodic checks of operational status at workplaces.

To address postponement of measures and funding necessary for safety and disaster prevention against an overemphasis on short-term budgets in business operations, in FY2022 we formulated the Medium-Term Management Plan for Safety and Disaster Prevention. Working with external specialists, we created detailed risk maps for 29 sites including group companies and evaluated the natural disaster risks at each. We are incorporating this information in future workplace concepts while advancing disaster countermeasures. We further conducted reviews of disaster prevention functions at all business sites and identified those that require containment measures to mitigate the risk of fires spreading. As a result, we intend to invest an additional ¥18.6 billion across the group, with measures scheduled for completion in FY2026.

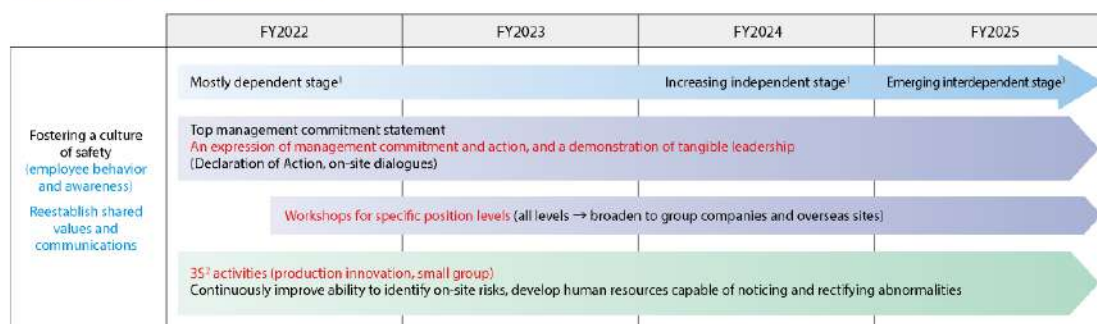
We are also moving ahead with the installation of disaster prevention training spaces at the group's primary production sites in Japan. At the disaster prevention training space created in the Iwakuni Production Center in August 2021, we have begun training aimed at raising awareness of disaster prevention and safety, through simulated experiences and reviews of past accidents. We also plan to set up a disaster prevention and safety training center in the Inuyama Plant in September 2023. We will continue advancing the establishment and active use of these training centers.

## Key issues in FY2024

In FY2024, we will advance initiatives with the following set as key issues:

- Deployment of safety and disaster prevention activities with participation by all employees
- Enhancement of hierarchy-specific training
- Reduction of fire and explosion risks



### Steps to enhance our culture of safety



\*1: This expression is a quote from the dss+ Bradley curve of the stages of safety culture development.

\*2: 3S:Sort, straighten, sweep

# Quality

| Materiality              |   |
|--------------------------|---|
| Related ESG : <b>S G</b> |   |
| Quality                  |   |

↓ Management approach   ↓ Initiatives   ↓ Response to the quality-related misconduct incidents

## Management approach

### Policy and approach

Toyobo group is striving to ensure customer satisfaction and win customers' trust, not only through the safety of our products and services, demonstrating concern for the environment, and maintaining compliance with relevant laws and regulations, but also through high quality standards. In order to achieve this, we have formulated the TOYOBO Group Basic Policy on Quality Assurance and the TOYOBO Group Basic Policy on Product Safety. To safeguard the quality and safety of the products and services that we provide, we have established an appropriate management system, we perform quality inspections using suitable procedures, and we also strive to ensure that data is properly handled.

#### < TOYOBO Group Basic Policy on Quality Assurance >

##### 1. Quality assurance principle

We will gain the trust and ensure the satisfaction of consumers and customers by always taking our customer's standpoint and ensuring each individual employee prioritizes quality as we develop and supply products and services that are safe, environmentally friendly, take into account the protection of information, and benefit society.

##### 2. Policy for quality assurance activities

- (1) Toyobo group anticipates the changing needs of customers and society to realize manufacturing that offers quality and safety that enables us to share our joy with customers
- (2) Toyobo group complies with relevant laws, regulations, and standards concerning products and we voluntarily set our own standards and conform to these.
- (3) Toyobo Quality practices quality assurance throughout a product's lifecycle and throughout our supply chain

## < TOYOBO Group Basic Policy on Product Safety >

### 1. Safe product principle

We will make an even greater contribution to society by supplying even safer products using technologies that are considerate of people and the environment with the aim of creating a prosperous society for the 21st century.

### 2. Policy for product safety activities

- (1) Toyobo group provides highly safe and reliable products and services that meet the changing needs and expectations of society, customers, and consumers.
- (2) In order to ensure product safety, Toyobo group naturally complies with all relevant laws, regulations, and standards. We also voluntarily set safety standards that are higher than required and conform to these.
- (3) Toyobo group plans safety that naturally takes into account the future application of a product and a degree of mistaken use that can be rationally predicted.
- (4) Toyobo group plans the safety of a product throughout its entire lifecycle, from development, design, manufacturing, sale, and usage through to disposal.
- (5) Toyobo group works to enhance the awareness of product safety of all its employees and participates in information provision, education, and awareness raising activities for stakeholders.

## Structure

Our group has established a Quality Assurance Division Conference to oversee product liability (PL) and quality assurance (QA). In this conference, executives overseeing quality, the Quality Assurance Department General Manager in charge of business divisions, and members of the Quality Assurance Management Department meet every month. We also plan to convene the PL/QA Promotion Committee, composed of members at the business division General Manager level, six times a year, and did so in FY2023.

We have established the Quality Assurance Division as one of the measures to prevent recurrence of inappropriate conduct. Under the division, we have placed the Quality Assurance Management Department, and also the Quality Assurance Departments which are in charge of the division. By establishing the independence of the quality assurance related departments, a function which was previously implemented in each business division, we have strengthened its control over the business divisions. In addition, the Quality Assurance Management Department has been given the authority to guide and suspend the development, production, and sales of the company and group companies regarding product safety (PS) and QA of Toyobo group, and we are working to construct an appropriate quality management system and strengthen governance.

### QA structure (As of April 2023)



## Targets and KPIs

### < Targets >

- We will increase customer satisfaction by practicing quality management throughout our entire supply chain, including upstream areas, and ensuring quality that can be trusted.

## < KPIs and results >

| Initiatives   | KPIs  | Targets              | Results (FY2023) |
|---|---|----------------------|------------------|
| <ul style="list-style-type: none"> <li>Realize stable supply, contribute to solutions for customer issues, fulfill customer needs</li> <li>Ensure product safety and quality</li> </ul> | 1. No. of incidents related to products*                                | 0 incidents per year | 0 incidents      |
|   | 2. Implemented status of products safety and quality assurance training | 100%                 | 100%             |

\* Incidents related to products: Defined according to internal standards based on the definition stipulated by the Ministry of Economy, Trade and Industry

## Initiatives

### QA activities

Employees have shared access to the Quality Assurance Manual, which describes the basic approach and code of conduct for all employees when implementing Toyobo group's development, production and sales activities, and use it as the basic philosophy for Toyobo group manufacturing.

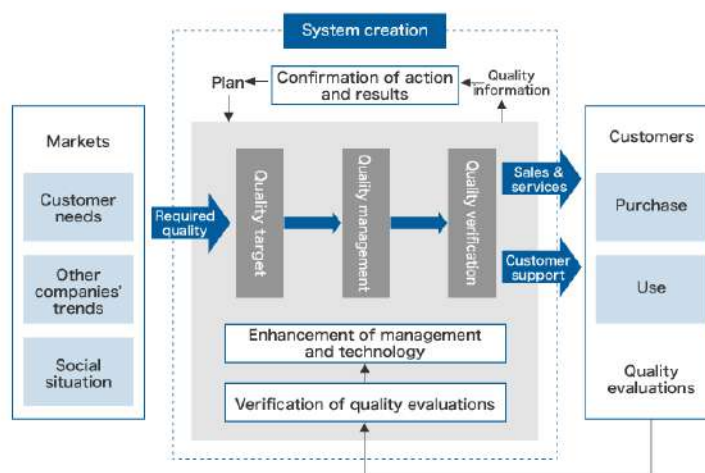
We make use of our Quality Assurance Manual globally, translated into the local languages of countries where we have sites. We also hold study sessions using the digest version to deepen understanding of manufacturing in our group.

We have further set out Quality Assurance Guidelines and are taking action to build systems that can guarantee quality. From FY2023, we have conducted quality assurance reviews by the head of each division concerning business divisions' quality assurance initiatives, with the aim of strengthening quality assurance systems and quality governance.

We improved QA systems by product and service to ensure quality and product safety at every stage of these. In addition, our Quality Assurance Guidelines undergo repeated checks by business managers, concerned parties inside and outside the company, and specialists, sparing no effort to prevent accidents or disruption in markets.

As a part of quality assurance with participation by all employees, we designate November of every year as Quality Month. During this month in FY2023, we post quality assurance-related messages from the president and the heads of each division, along with Quality Month posters and digital signage at all sites. At individual workplaces, we also held PL/QA seminars and conducted reviews of quality-related misconduct as described in the Compliance Manual.

### Overview of QA activities

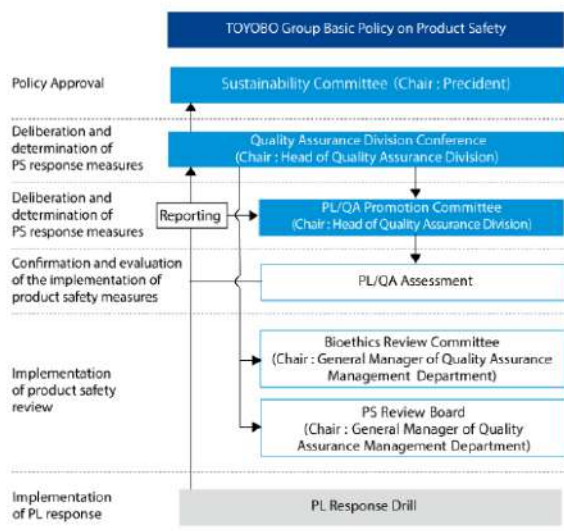


## Product safety promotion activities

For each department and group company, we conduct PL/QA assessments carried out by the Quality Assurance Division, which has been made independent of the business divisions, or by QA personnel from different departments, to verify and improve PS activities. Moreover, we have established criteria for assessing PL and PS risk, and based on these criteria, we carry out inspections at each stage, from product development to sales, striving to reduce risk.

All possible measures are taken to ensure PS, and training drills are also conducted on a regular basis at all business divisions based on PL incident scenarios. PS remains a crucial theme throughout the whole of the group, and we will continue to mitigate risk as much as possible and strive to fulfill our social responsibility.

### PL response system



## Product safety and quality assurance training

We implement PS and QA training not only for new employees and new managers, but also for other employees at each level.

| Name of seminar   | Number of times held   | Target / purpose  | Notes                           |
|---|--|---|---------------------------------|
| Seminar on basics of quality assurance                    | 4 times per year   | Education for new employees and department-specific education   | Packaged into e-learning format |
| Qace seminar <sup>※</sup>                                 | 4 times each in the first half and the second half of the year | Development of core human resources for quality control and quality assurance, and construction of an in-house human resource network for quality | Launched in FY2023              |
| Training in case studies involving quality irregularities | 10 times per year  | Training involving quality irregularities   | Launched in FY2023              |

\* "Qace" is an acronym formed from "Qa\_assurance," "Qc\_control," and "Qe\_ensurance."

| Name of seminar                       | Month held | Target / purpose  | Theme in FY2023  |
|---------------------------------------|------------|---|--|
| PL/QA seminar                         | November   | Held as a component of quality assurance in which all employees participate | Basics of TQM and its supporting statistical methods                 |
| Quality management seminar            | January    | Held as an opportunity for top management to consider quality management    | Quality-centered management and prevention of quality irregularities |
| Chemical substance management seminar | February   | Held as a component of professional education                               | Latest movements in chemical regulations in China and Taiwan         |

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## ISO 9001 Certification Status

- [ISO9001 Certification Status](#)

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## Response to the quality-related misconduct incidents

Toyobo group is responding to the quality-related misconduct incidents discovered related to the PLANAC® and other engineering plastics in 2020 by firmly establishing “manufacturing that fulfills our promise to provide safety and security from the customer’s perspective” and by fortifying the inspection and quality confirmation mechanisms in the group’s risk management system.

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## Status of the engineering plastics department

Following the quality-related misconduct incidents to PLANAC® and other products, we have been in contact with our customers individually and reacquired certification from Underwriters Laboratories (UL) for some of our products.

We also proceeded to investigate the status of all of our product through questionnaires and other methods. Any quality-related matters in the Engineering Plastics Department that were considered serious issues, such as violations of our agreements with customers, were considered priority issues and reported individually to all associated customers.

As the result of our investigations as well as customers’ cooperation with checks, we did not confirm any serious defects in product safety or in basic functions. By rebuilding proper quality control systems and enhancing governance, we are making every effort to restore trust in our company.



## Strengthening the quality risk management system

The company responded to the quality-related misconduct incidents by adopting a “three lines of defense” structure at the start of fiscal 2022. The multi-layered structure for detecting and preventing quality-related misconduct positions the business divisions as the first line of defense and the Quality Assurance Division and Internal Audit Department as the second and third lines of defense.

The Quality Assurance Division, which is the second line of defense, identified improper inspections and other items as significant quality-related risks, and led and assisted risk assessments at each business unit. The division formulated measures to reduce risk and has begun assisting in the application of the measures.

The Internal Audit Department, the third line of defense, created a Risk Management Audit Team to perform quality audits for the first and second lines of defense. The department collects information on the operation status and current issues of the Quality Assurance Division and the business divisions, and examines the best approach to coordinating audits.

In the second half of fiscal 2022, the Internal Audit Department began a first line audit with the Quality Assurance Division. The department also audited the Quality Assurance Division and had a frank dialogue with the division about expectations for its supervision of each business division.

We also implemented data integrity (DI) measures related to quality, including automating the inspection report processes of each business division's Quality Assurance Departments to reduce human error, among other initiatives.

### The three lines model for quality control



# Supply Chain Management

| Materiality                |  |
|----------------------------|--|
| Related ESG : <b>E S</b>   |      |
| Partnership : Supply chain |      |

↓ Management approach   ↓ Initiatives

## Management approach

### Policy and approach

In the recent context of rapid globalization and the expansion of social issues to be solved, there is an even stronger demand for CSR activities and risk management, as "contribution to the building and development of a sustainable society" is a corporate social responsibility.

In this environment, it is imperative for us to promote procurement activities that place greater emphasis than ever before on CSR factors such as the natural environment and labor environment, and human rights, in addition to the conventional quality, performance, price, and delivery conditions, when procuring products, materials, raw materials, and other items.

Toyobo group is contributing to achieve the SDGs, which support the development of a sustainable society, throughout our entire supply chain by establishing an appropriate trading policy and conducting procurement and logistics responsibly.

Based on the principle of "2. Fair business practices" in the TOYOBO Group Charter of Corporate Behavior, we practice fair competition and dealings, responsible procurements & logistics and, maintain sound relationships with society and stakeholders, including customers and business partners.

We have formulated CSR Procurement Guidelines that deal with matters such as legal compliance, fair trade, consideration for the environment, and respect for human rights (including the prohibition of child labor or forced labor and discrimination based on gender identity including LGBTQ), and Green Procurement Guidelines that are considerate of the environment. In September 2022, we revised the CSR Procurement Guidelines based on various recent global issues.

#### < Basic Policy on Transactions in Procurement and Logistics >

##### 1. Compliance

We comply with the laws and regulations of the countries and regions in which we operate, respect corporate ethics and social norms, and behave conscientiously.

##### 2. Securing fairness, equality and transparency

We open the door wide to all companies and make fair and impartial judgments to ensure that business transactions are conducted in a highly transparent manner.

### 3. Partnership

We make efforts to build sustainable partnerships with our business associates so that we can all grow by deepening mutual understanding through active dialogue.

### 4. Promotion of CSR-based procurement

We promote business practices that meet our standard of corporate social responsibility, such as respect for human rights, environmental protection, product safety, quality assurance, and industrial safety and health.

- Promote CSR and actively work toward social contribution
- Maintain and strengthen legal and other compliance, fair business transactions, and corporate ethics
- Maintain and strengthen environmental activities
- Assure quality and safety in our supply of products
- Respect human rights
- Disclose information to stakeholders and engage in dialogue in a timely and appropriate manner, and maintain and strengthen information security measures

## CSR procurement

We have formulated our CSR Procurement Guidelines and Green Procurement Guidelines with the aim of fulfilling our social responsibilities, such as ensuring legal compliance, product quality and safety and respect for human rights, and enhancing value throughout our entire supply chain through initiatives such as contributing to regional communities and environmental conservation. In addition to sharing these guidelines through our website, we carry out CSR procurement surveys for business partners requesting their understanding and cooperation in actively advancing initiatives.

- [CSR Procurement Guidelines](#)
- [Green Procurement Guidelines](#)

## Targets and KPIs

### < Targets >

- Throughout its supply chain, Toyobo group aims to realize procurement and logistics that involve fair and sincere transactions, respect human rights, are environmentally friendly, and consider impact on both society and the environment.
- We will reduce CO<sub>2</sub> emissions by promoting green logistics, such as implementing a modal shift to rail and sea transportation and improving loading efficiency.

### < KPIs and results >

| Initiatives   | KPIs  | Targets  | Results (FY2023)   |
|---|---|--|--|
| <ul style="list-style-type: none"><li>• Realize sustainable, responsible procurement and logistics</li><li>• Carry out transactions that are fair and respect human rights</li><li>• Build a low-carbon society</li></ul> | 1. Ratio of CSR procurement surveys returned  | 90% or above<br>(In years when a survey is not implemented, we carry out dialogue with business partners that past surveys have shown have issues) | 93% (FY2022)<br>In FY2023, we implemented corrective measures and a review of our CSR Procurement Guidelines based on the findings of the questionnaire. |
|   | 2. Ratio of reduction in CO <sub>2</sub> emissions per unit of transportation* in relation to logistics | Year on year reduction of 0.5%   | Year on year reduction of 5.3%   |

\* CO<sub>2</sub> emissions per unit of transportation (in g-CO<sub>2</sub>/t-km) represents the number of grams (g) of CO<sub>2</sub> emitted per tonne of goods transported over one kilometer.

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## Initiatives

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### Fairness and transparency in trade

We take a rigorous approach to ensuring fairness and transparency, based on sound trading. We do not give or accept gifts or entertainment in order to secure unjust profit or preferential treatment from our business partners, and we have established a prior consent system to strengthen our checking system to ensure that actions that go beyond what is deemed socially acceptable do not occur.

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### Toyobo group CSR procurement seminar

In October 2023, we distributed a movie of the CSR procurement briefing to our approximately 500 major suppliers worldwide.

At the seminar, we explained the sustainability initiatives of Toyobo group, including carbon neutrality, respect for human rights, and CSR procurement, and requested compliance with the Toyobo Group CSR Procurement Guidelines. We also expressed our commitment to cooperate with our suppliers and contribute to the development of a sustainable society throughout the supply chain.

#### \* Theme for FY2024

- Message from the officer in charge
  - Toyobo group's sustainability initiatives
  - Toyobo group's CSR Procurement Policy and whistleblower protection system
  - Request for responses to CSR procurement questionnaire
- 

### CSR procurement survey

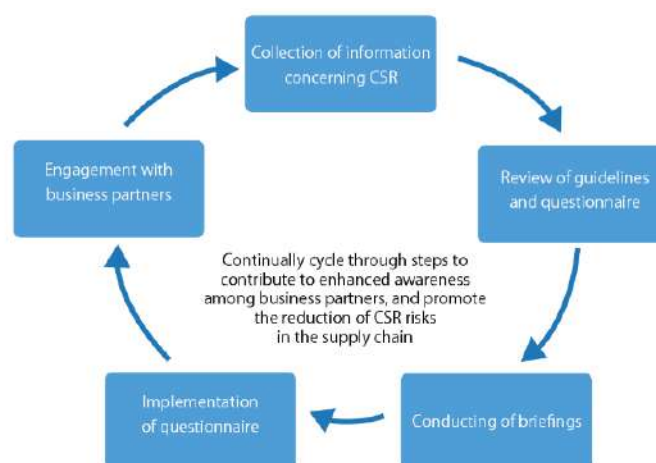
#### Implementation of the CSR procurement survey and risk assessments

Our company communicates our CSR Procurement Guidelines to major business partners worldwide and conducts risk assessments concerning information security and social issues such as the environment and safety, human rights, labor, and compliance (including the prevention of graft, bribery, fraud, money laundering, and other corruption). In these risk assessments, we conduct questionnaire surveys aimed at major business partners worldwide, based on our CSR Procurement Guidelines. From the self-assessments returned in the questionnaire, we connect improvement activities to the consideration of impacts on society and the environment and the reduction of risks. In concert with both suppliers and buyers, we work to promote CSR procurement that enhances the sustainability of society.

We conduct the questionnaire every other year, with the most recent conducted in FY2022. In FY2023, we enacted corrective measures based on the results of the questionnaire, and revised our CSR Procurement Guidelines.

#### Engagement with new and existing business partners

We ask new business partners to cooperate with our questionnaires when we commence business with these, and periodically make the same request to existing business partners. We then perform risk assessments. We confirm that new business partners have acknowledged our CSR Procurement Guidelines at the start of business with us.



## Results obtained in CSR procurement surveys in FY2022

CSR procurement surveys covers social issues such as the environment, safety, human rights, labor, and compliance (including prevention of bribery, embezzlement, and other forms of corruption), as well as information security. Through these surveys, we are able to evaluate suppliers' risk in relation to social issues. We collaborate with suppliers to address the issues identified through risk assessment, and we strive to enhance the overall level of CSR activities throughout the supply chain. When we begin doing business with a new supplier, we ask them to assist us by responding to a survey, and we also ask existing suppliers to collaborate on surveys. If issues are identified through a CSR procurement survey, we take corrective measures.

### 1. Survey overview

- Aggregation scope and no. of suppliers covered 185 suppliers representing 90% of overall transaction volume
- Breakdown of Suppliers

| Raw materials suppliers | Equipment and machinery suppliers | Logistics providers | Outsourced manufactures, etc. |
|-------------------------|-----------------------------------|---------------------|-------------------------------|
| 60%                     | 15%                               | 6%                  | 19%                           |

- Survey content

The survey was drawn up based on the Toyobo group's CSR Procurement Guidelines. The CSR Procurement Guidelines were compiled with reference to SDGs, the UN Global Compact, and the Charter of Corporate Behavior promoted by the Japan Business Federation (Keidanren).

- Survey items

Compliance and ethics / Supply chain management / Stakeholders / Risk management / Environmental activities / Human rights and working conditions / Promotion structure / Product safety

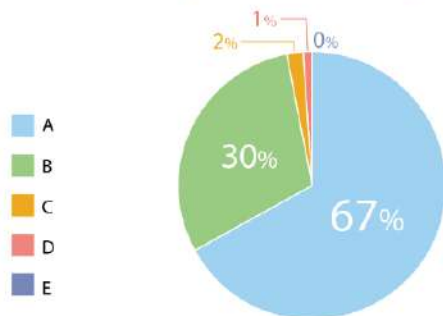
### 2. Aggregated results

The survey completion and return rate for tier-one suppliers was 93% (172 out of 185 companies).

| Risk assessment rank | Points band         | No. of companies | Share of total | Content and response  |
|----------------------|---------------------|------------------|----------------|---|
| A                    | 96 points or higher | 116              | 67%            | CSR measures implemented are excellent → Feedback on survey results     |
| B                    | 80-95 points        | 51               | 30%            | CSR measures implemented are adequate → Feedback on survey results      |
| C                    | 60-79 points        | 4                | 2%             | Response: engage in dialogue with the supplier                          |
| D                    | 40-59 points        | 1                | 1%             | Response: engage in dialogue with the supplier and request improvements |

|   |                     |   |    |   |
|---|---------------------|---|----|---|
| E | Less than 40 points | 0 | 0% | Response: engage in dialogue with the supplier and request improvements, and consider whether to continue doing business with that supplier |
|---|---------------------|---|----|---|

### Evaluation results of CSR procurement survey



### Evaluation scores of CSR procurement survey



### 3. Evaluation results

The survey results showed no compliance violations relating to matters such as the environment or product quality. With regard to supply chain management, an area where evaluation performance tended to be quite low overall, we asked each company to promote measures in this area, emphasizing its importance.

With respect to the five companies that were deemed to have relatively high risk (i.e., those companies ranked as C or D) based on the evaluation results, we undertook verification by engaging in dialogue with these companies. Through this process, we confirmed that two of the companies in question were actually implementing CSR measures without any significant problems. The remaining three companies had been unable to implement CSR measures properly because they did not have a CSR promotion structure in place. We provided them with support and guidance by introducing case studies of measures that we had taken, and we asked them to put in place the necessary systems and promote CSR.

Secondary suppliers (115 suppliers) were also surveyed, and no suppliers were identified as being at high risk.

## Green procurement

In order to contribute to the creation of a sustainable society, we carry out procurement from suppliers who actively work to conserve the environment and procure materials that have low environmental impact on a priority basis. Additionally, we have formulated Green Procurement Guidelines with the aim of promoting environmentally friendly procurement. We ask our business partners to understand our green procurement approach and provide the following information regarding chemical content.

- (1) That the material does not contain any of the prohibited substances specified by Toyobo.
- (2) That the content of hazardous substances specified by Toyobo has been identified.

In fiscal 2022, we revised our "Chemical Content Information Sheet" based on the information sharing scheme "chemSHERPA<sup>®</sup>", developed by Japan's Ministry of Economy, and the 'Information Sheet on Chemical Substance Content' has been revised in accordance with amendments to laws and regulations, and the survey has been carried out among suppliers. For general purchased goods, we are promoting green purchasing with the use of environmental labels.

\* "chemSHERPA<sup>®</sup>" is a registered trademark of the Japan Environmental Management Association for Industry (JEMAI).

- [Green Procurement Guidelines](#)

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## Educational activities for sustainable procurement

As training, we have all personnel (100%) with responsibilities for procurement and logistics read through the TOYOB0 Group Compliance Manual -including the CSR Procurement Guidelines—together on an annual basis. During these training activities, each Procurement and Logistics Department group manager ensures that relevant personnel are familiar with the CSR Procurement Guidelines.

We also guide and foster our procurement and logistics staff by setting "contribution to sustainable procurement (stable procurement)" as a target in their personnel performance evaluation and managing their progress.

We also incorporate goals related to contribution to sustainable procurement (stable procurement) into personnel evaluations of procurement and logistics staff, and conduct guidance and training on topics including management of progress toward the goals.

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## Addressing conflict minerals

In our CSR Procurement Guidelines, our group calls for the promotion of responsible procurement with respect to regulations on conflict minerals.

Using Specified Chemical Substances Data Sheets, we investigate whether conflict minerals are used in the raw materials behind all of our company's products.

In FY2023, we also investigated products that contain tin, tantalum, tungsten, and gold among their raw materials. We also prepared an internal survey and response system that lets us provide prompt and proper responses to survey requests from customers regarding conflict minerals.

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## Resolving social issues in logistics

To resolve social issues in logistics, we are pushing forward with initiatives to reduce the environmental impact and reform the work style in logistics. To reduce our environmental impacts, we are working to shorten transport distances by utilizing the ports closest to our business sites, to make modal shifts to ships and railroads, and to enhance loading efficiency through vehicle allocation simulations using logistics systems. We are also sharing logistics and storage with other companies (including joint shipment, making use of returning trucks, securing joint storage space), and are encouraging the introduction of systems that enable visualization of the logistics situation.

Additionally, we formulated a voluntary action declaration in support of the "White Logistics Movement"\* advocated by Japan's Ministry of Land, Infrastructure, Transport and Tourism, Ministry of Economy, Trade and Industry and Ministry of Agriculture, Forestry and Fisheries. We disclose our various initiatives, including "Logistics improvement proposals and cooperation," "Utilization of pallets, etc.," "Modal shift to sea and rail transport," "Consideration of compliance with applicable legislation when selecting logistics operators," and "Safety measures for freight handling."

\* A movement in which all the parties involved in logistics cooperate to propose and implement mutually beneficial improvements

### Toyobo's voluntary action declaration in support of the "White Logistics Movement"

| Action  | Details  |
|---|--|
| Cooperation and proposed improvements regarding logistics | We will deal sincerely with requests from business and logistics partners concerning cooperation and proposed improvements regarding logistics.                    |
| Use of pallets, etc.                                      | We will use pallets to transport some of our products, reducing the amount of work hours required for transportation.  |
| Modal shift to sea and rail transport                     | For long-distance transportation, we will shift from truck transport to ferry or rail. Additionally, we will encourage the use of the ports closest to our plants. |
| Consideration of compliance when choosing contractors     | When selecting logistics contractors, we will consider their record of compliance with relevant laws and regulations.  |
| Safety measures during cargo handling                     | We will implement measures to prevent accidents during cargo handling work, such as clearly demonstrating safe work procedures.                                    |

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## Response to natural disasters, etc.

In recent years, various areas have experienced significant damage from earthquakes, typhoons, and sudden localized rainstorms. We have gained knowledge in the process of responding to these events, and aim to realize even more stable procurement and logistics.

As part of our Business Continuity Plan (BCP), we strive to identify and manage risks throughout the supply chain. For procurement, we are looking to procure raw materials from multiple regions, and for logistics, we are establishing alternative transportation means and routes in collaboration with logistics operators.

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## Participation in initiatives

In January 2020, we joined the "Global Compact Network Japan", and since FY2022, through participation in its supply chain subcommittee, we have been gathering information and applying it to our daily activities.

### Declaration of partnership building

In October 2020, we agreed with the aims of the Council on Promoting Partnership Building for Cultivating the Future promoted by the Cabinet Office and the Small and Medium Enterprise Agency, and announced our "Declaration of Partnership Building".

In this declaration, We expressed our commitment to contribute to solving social and environmental issues throughout our supply chain. Based on the declaration, we will endeavor to add value with our entire supply chain.

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## Response to whistleblower protection system

We have established a consultation and contact point for business partners on our website.

It receives reports and inquiries for violations or suspected violations of laws and regulations, and corporate ethics. In compliance with the Privacy Policy, we have established a system to prevent any disadvantage to the persons consulting with us as a result of consultation or reporting.

### Main items for consultation

1. Violations or suspected violations of laws and regulations, and corporate ethics, etc.
  2. Acts violating respect for human rights
  3. Acts violating our CSR Procurement Guidelines
- [Receiving reports from business partners \(Japanese only\)](#)



# Human Resource Management

| Materiality           |   |
|-----------------------|---|
| Related ESG: <b>S</b> |    |
| Human capital         |   |

↓ Management approach   ↓ Initiatives

## Management approach

### Policy and approach

Toyobo group aims to realize its corporate philosophy framework, "TOYOBO PVVs," and to become an organization that continues to transform itself to create new value.

We put into operation the new human resource system in July 2022. implements specific policies such as promoting and supporting capacity building, treating and evaluating in accordance with job responsibilities, enhancing management skills, and encouraging the active participation of diverse professional human resources, so that each of our employees can feel growth, pride, and satisfaction.

### Structure

The Executive Officer in charge of the HR Division is responsible for the group's human resources management. Our operating departments responsible for human resources and labor affairs create regular opportunities for discussion and information sharing with the departments responsible for human resources at each business site and affiliated company, which leads to the formulation and execution of human resources management plans. Regarding key issues in the annual management plan, reports are made to the relevant executive officer each quarter and the issues are also deliberated on by the Sustainability Committee. Important measures are also discussed by the Board of Corporate Executive Officers and Controlling Supervisors and Board of Directors.

### Targets and KPIs

#### < Targets >

Toyobo group will build an organizational structure for the entire group that enables employees to work easily and feel satisfaction with their work, that ensures fairness and integrity, and that is considerate of diversity and human rights.

## < KPIs and results >

| Initiatives  | KPIs   | Targets   | Results (FY2023)  |
|--|--|---|---|
| <ul style="list-style-type: none"> <li>● Nurture human resources (build careers, develop capabilities)</li> <li>● Promote work-life balance</li> <li>● Ensure equality in recruitment and treatment of employees</li> <li>● Maintain people-friendly work environments (promote health)</li> </ul> | 1. Training core overseas personnel in Japan   | 15 employees per year*                          | Canceled because of COVID-19  |
|  | 2. Training investment per employee (Time spent on education)  | ¥50,000 per year*, 21hrs                        | ¥50,000, 17.97hrs   |
|  | 3. Ratio of annual paid leave taken  | 75%*  | 80.2%   |
|  | 4. Reduction of overtime work hours (No. of people over 360 hours per year / No.of target persons)   | 2.0% or less (20% reduction compared to FY2020) | 4.2%  |
|  | 5. Positive response ratio on employee's "degree of affirmation for work style" based on engagement surveys<br>(1) "no difficulty in daily work"<br>(2) "respect the diverse views and ideas of each person" | Increase of positive response ratio             | (1) 38%<br>(2) 50%<br>(from the previous survey)<br>(1) Improved by 5 points,<br>(2) Improved by 8 points |

\* Targets for FY2026

## Initiatives

### Human resources development

#### Systems, education, and training for human resources development

Toyobo group considers human resources to be our most important asset. We support the growth of each and every one of our employees, while respecting their diversity. We believe that the continuation and development of the group as a whole can be achieved by building an environment in which our employees can flourish both inside and outside the company and realize their own potential.

Toyobo carries out human resource development based on a training program categorized by job level, type and objective, from the newly employed to top management. Over our long history, we have fostered an approach of valuing "people"—our most important asset—and this is shared throughout the group.

Based on this idea, under the Executive Officer in charge of the HR Division and is responsible for the execution of human resources management we have established a group specializing in human resource development and actively support training for employee skill development.

## Education & training system

As of April 2023

| Job Level            | Standard Training         |  |   |  |   |  | Job Category-Specific Training   |                                     |  |                                    | Training held at each plant     | Self-education                 |
|----------------------|---------------------------|--|---|--|---|--|--|-------------------------------------|--|------------------------------------|---------------------------------|--------------------------------|
|                      | Career Design             | Training by Level  | OJT   | Selectable Seminars                            | Next Generation Leader Development  | Training for each position to acquire the role                 | Global Response Training   | Sales                               | Technical/Research   | Payment: Employees                 |                                 |                                |
| Manager (M Position) |                           | Training for all managers  |   |  | External seminars for selected employees<br>Practical Business Management Technical Improvement Program |  |  |                                     |  |                                    |                                 |                                |
| S1 / S2              | Mid-career Design Seminar | M Position Advancement Training (examination)<br>Quality Assurance Training                                |   | Management Skills Seminars (MSS)               |   | Line Manager Training<br>Training for new employee instructors | English Improvement Measures<br>Short-term Overseas Operational Training |                                     | Production Technology Innovation Course for Section Chiefs I |                                    |                                 | Distance Learning / E-learning |
| S3                   |                           | Intermediate Business Training   | New Career Employee Training<br>OJT for Work Issues | Open Seminar<br>Business Skills Seminars (BSS) |   | OJT Leadership Training  | Overseas Study   | Intermediate Sales Training         | Basic PSE Seminar  | Practical Engineering Seminar (ES) | On-site Leadership Training     | Training held at each plant    |
| S4                   |                           | Basic Business Training<br>Career Design Seminar<br>New employee training (first semester/second semester) |   |  |   |  |  | Basic Sales Training                |  | Basic Engineering Seminar (ES)     | Supervising Department Training |                                |
| S5                   |                           | S4 Advancement Training  |   | First Skills Seminars (FSS)                    |   |  |  | Sales and accounting manual program |  |                                    |                                 |                                |
| S6                   |                           |  |   |  |   |  |  |                                     |  |                                    |                                 |                                |

Required training
Advancement-related
Selection required

## Education & training-related results

|  | Results (FY2023) |
|--|------------------|
| Training hours per employee                            | 17.97hrs         |
| Training investment per employee                       | ¥50,000          |
| Total training attendees                               | 2,330            |
| Total training hours                                   | 39,816hrs        |
| Implementation status of training in career and skills | 47%              |



## Main personnel systems

|  |  |
|--|--|
| <p><b>Personnel appraisal system</b><sup>*1</sup></p>          | <p>We perform personnel appraisals for all employees, with evaluations annually in October and interim checks in April. Employees and their supervisors together review the state of achievement toward goals, actions, and capacity development, then connect this to medium- to long-term growth and capacity development for individual employees.</p>  |
| <p><b>Self-reporting system (Career Development Sheet)</b></p> | <p>This is a system by which individuals use the Career Development Sheet during personnel appraisals to express their career path-related wishes to the company. Individuals report to superiors their thoughts concerning their job category, location of work, and career. The supervisors then consider placement and personal development methods that will allow the employees to further grow and play active roles in the company.</p> |
| <p><b>Career challenge system (in-house recruitment)</b></p>   | <p>This system is implemented as a component of human resources development to encourage employees to independently expand their careers and take on the challenge of new work.</p>  |
| <p><b>Mirai Jinzai Juku</b></p>                                | <p>This in-house program for human resource development makes use of crowdfunding to promote the launch of new businesses. Employees gain practical experience in processes spanning product planning and development to sales.</p>  |

\*1 Addresses all employees, including managers.

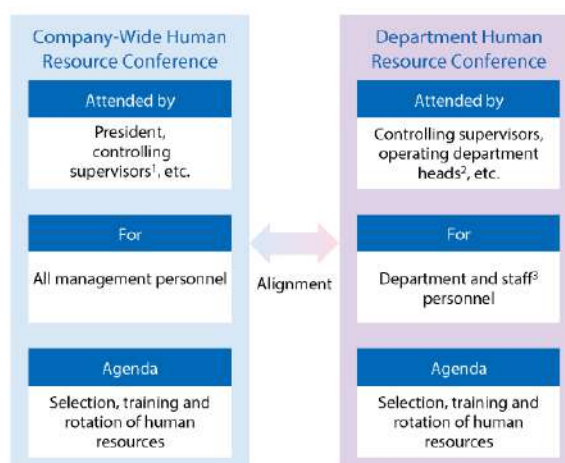
## Nurturing the next generation of management

For Toyobo group's initiative to train the next generation of management, the group plans to provide chosen personnel with internal and external management executive development training. In order to further broaden their experience, we will also give them the opportunity to undertake business operation and management duties to hone their management skills, which will help us achieve our succession plan.

In response, from FY2022, the group has operated a Human Resources Conference to discuss measures for the development of next-generation management human resources. We divide this into a Company-Wide Human Resources Conference that mainly discusses successors for management posts and a Departmental Human Resources Conference that mainly discusses successors for highly specialized positions, and implement actions including policy support for the development of successor candidates as well as selection and rotation of human resources. By linking these two conference bodies, we will uncover and develop human resources and increase their effectiveness.

At the same time, we are promoting diversity and inclusion in order to increase our medium to long term capabilities. Besides promoting the participation and advancement of women, we are actively taking on mid-career hires and staff from overseas so that we can bring in more knowledge and experience.

Under our TOYOBO PVVs corporate philosophy framework, we conduct company-wide training for all management positions to ensure awareness of security and disaster preparedness, occupational safety, quality, and compliance, and to advance organizational initiatives.



- <sup>1</sup> Oversees each division and management and administration division  
<sup>2</sup> Oversees specific fields across multiple business divisions  
<sup>3</sup> "Corporate divisions" including corporate planning, management and administration, and human resources

## Developing global human resources

Toyobo implements "Short-term Overseas Business Training" in which around 10 employees in two separate groups from Japan are sent overseas for training each year (first and second half of the year). This motivates younger and mid-career employees to participate in Toyobo's global business, and also represents a major opportunity for them to further their careers.

In addition, local candidates for management from overseas offices are selected to undergo training in Japan twice each year. This aims to enhance their understanding of Toyobo and deepen interaction with employees who work in Japan.

Both programs were suspended due to the COVID-19 pandemic, but the "Short-term Overseas Business Training" will resumed in the second half of FY2023, and the training for local candidates for management from overseas offices is scheduled to resume in FY2024.

## Initiatives for preventing harassment

Toyobo group strives to maintain harassment-free workplace environments and we are focusing on anti-harassment measures based on an approach that providing work incentives and raising job satisfaction leads to the securement and cultivation of excellent human resources. As a preventative measure, we are implementing management training to deepen understanding within the organization, and as a response measure, we carry out thorough internal reporting through the compliance consultation centers and the Complaint Handling Committee, which includes labor union representatives, so that we can detect and solve issues at an early stage.

- [Efforts for establishment of complaint handling and internal reporting systems](#)
- [Compliance consultation desks](#)

## Employee engagement

Under a relationship of equality between the company and individual employees, it is necessary that we align the vectors of organizational goal achievement and personal growth. Toward this end, in 2021 we launched a survey on organizational climate and job satisfaction, targeting all officers and employees.

These surveys will keep us periodically appraised of employee engagement, and create an environment in which they can proactively work with a sense of pride and fulfillment.

## Engagement survey results

We conducted the second Engagement Survey in September 2022. In addition to communicating an overview of the survey results to employees, we offer feedback on the survey results at the workplace level and are advancing dialogue and action plans within workplaces.

| Increase in employee work satisfaction based on engagement survey                               | (Year) |      |
|---|--------|------|
|   | 2021   | 2022 |
| (1) Percentage of positive responses to "No difficulty in performing daily work"                | 33%    | 38%  |
| (2) Percentage of positive responses to "Respects each individual's diverse opinions and ideas" | 42%    | 50%  |

## Work-life balance

### Measures for the reform of working style

Toyobo group is engaged in work style reform so that our employees can work with renewed efficiency and achieve a good balance between work and personal life. We also provide support such as the Childcare Shortened Work Hour Program, nursing care and flextime system, and telecommuting. Building an environment that enables more flexible work styles tailored to each employee's life stage provides an opportunity to enhance creativity. Letting each individual do their best with confidence, pride, peace of mind, and a forward-looking mindset helps to build a stronger foundation for the company.

The TOYOBBO Group Charter of Corporate Behavior declares, "We will respect employee diversity and support work practices that allow employees to demonstrate their individual skills. Moreover, we will provide workplaces that are conducive to productive work while taking health and safety into consideration."

## Development of systems

Toyobo has introduced schemes that go above and beyond the legal requirements, including the Childcare Shortened Work Hour Program and nursing care leave, and we also provide a flextime system. Since fiscal 2020, five days of paid leave has been offered as Childcare Leave. In conjunction with this change in the system, we are encouraging men to take childcare leave. Men employees who have a child are notified of the system individually and are recommended to take this leave by their immediate supervisor. We will continue these promotion efforts until it becomes normal for men employees to take childcare leave.

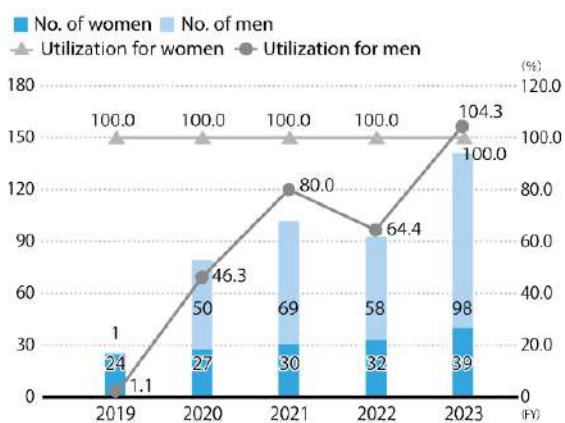
We introduced a 15-Minute Shortened Work Hour Program at head and branch offices in FY2018, and at the Research Center in FY2019.

We are also increasing the number of days of leave at other offices and we are creating opportunities for employees to spend quality personal time together with family and friends, such as holding a No Overtime Day at least once a month. In fiscal 2020, we introduced a Teleworking scheme at head and branch offices, and have expanded to also include other offices in fiscal 2021.

## Scheme usage

|  | 2019 | 2020 | 2021  | 2022  | 2023  |
|--|------|------|-------|-------|-------|
| Women taking childcare leave                           | 24   | 27   | 30    | 32    | 39    |
| Ratio of women taking childcare leave (%)              | 100  | 100  | 100   | 100   | 100   |
| Men taking childcare leave                             | 1    | 50   | 69    | 58    | 98    |
| Ratio of men taking childcare leave (%)                | 1    | 46   | 80    | 64    | 104.3 |
| Employees taking childcare shortened work hour program | 75   | 64   | 70    | 67    | 83    |
| Annual paid leave utilization ratio (%)                | 68   | 73   | 64    | 72    | 80    |
| Taking telecommuting systems                           | —    | 206  | 2,045 | 2,413 | 2,520 |

## Childcare leave utilization



## Main support systems

|   | Main system                              | Details   |
|---|--|---|
| <b>Systems supporting diverse work styles</b> | Teleworking scheme                       | Employees can work outside the office, in principle at their home. Can be used in conjunction with Half-Day Annual Leave, Childcare and Nursing Care Shortened Work Hour Programs, and the Flextime system.   |
|   | Flextime system                          | Managed in one-month installments with core time set from 11:00 to 14:00. Introduced in 1990.   |
|   | Half-day annual leave                    | Annual paid leave can be taken in half-day installments. Introduced in 1990.  |
|   | Volunteer leave                          | Applies to employees participating in the Japan Overseas Cooperation Volunteers initiative. In principle, leave can be up to two years and four months.   |
| <b>Systems supporting work-life balance</b>   | Childcare leave                          | Can be taken up to the day the child turns two.<br>* Salary is paid from the first day for a period of up to five consecutive days  |
|   | Childcare shortened work hour program    | One workday can be shortened in 15-minute installments up to two hours. However, the period from 10:00 to 16:00 has to be worked (including designated breaks).<br>(Can be used up to the child finishes the third grade of elementary school)  |
|   | Nursing care leave                       | Can be taken up to three times per case (same illness of the same family member) for a maximum of 366 days (which can be taken in installments).  |
|   | Nursing care shortened work hour program | Designated work hours for a single day can be shortened by up to two hours for up to two times per case (same illness of the same family member).   |
|   | No overtime day                          | Once a month, employees are able to spend quality personal time together with family and friends as an opportunity to improve motivation and enhance creativity.  |
|   | Childcare facilities                     | In April 2018, a nursery was established inside the Research Center.  |
|   | Babysitters                              | When an employee is on a business trip, the company will pay the cost of a babysitter (but only in cases where another appropriate care provider is not available). In principle, to be taken in three-hour installments for children in the sixth grade of elementary school or below. |

# Diversity & Inclusion

| Materiality                                  |   |
|--|---|
| Related ESG : <b>S</b>                       |   |
| Employee well-being: Diversity and inclusion |   |

[↓ Management approach](#)
[↓ Initiatives](#)

## Management approach

### Policy and approach

Toyobo group believes that personal and organizational growth is achieved through a process of mutual respect among our employees, with their differing work styles, careers, gender, nationality, race, and beliefs, and through cooperation to achieve our shared objectives.

We respect different opinions and a wide range of values, and cooperate to achieve ambitious goals together.

The TOYOBO Group Charter of Corporate Behavior also contains the following declaration.

#### 6. Active employee participation

We will respect employee diversity and support work practices that allow employees to demonstrate their individual skills. Also, we will provide workplaces that are conducive to productive work while taking health and safety into consideration.

- 6-1. We will work toward developing workplace environments that facilitate active participation among a diverse range of human talent.
- 6-2. We will prevent various types of harassment and other forms of mistreatment in our workplaces, and accordingly we will not engage in discriminatory practices neither in regard to hiring nor terms of employment.
- 6-3. We will strive to create workplaces that are safe, hygienic and rewarding, and will work to prevent excessive workloads and reduce overtime work.

## Targets and KPIs

### < KPIs and results >

| Initiatives                     | KPIs   | Targets (FY2026)  | Results (FY2023)   |
|---------------------------------|--|---|--|
| Realize diversity and inclusion | 1. Women manager ratio                           | 5.0% or above   | 4.7%   |
|                                 | 2. Ratio of men employees taking childcare leave | Over 80% of eligible persons take absence leave, averaging 14 or more days (20% increase from FY2021) | 104.3% of those eligible for absence leave, 14.8 days absence leave taken on average |
|                                 | 3. Employment ratio of people with disabilities  | 2.5%  | 2.3%   |



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## Initiatives

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### Participation of women in the workforce

Toyobo group established the Diversity & Inclusion Group within the Labor Affairs Department, and the group has been engaged in activities to promote the empowerment of women. We hold events such as presentations, seminars for managers, women leader development seminars, and Women Empowerment Promotion Project on a continuous basis, in order to realize a change of mentality among our employees.

We have also opened a nursery school within in the Research Center in Otsu, Shiga Prefecture, as a means of support for childcare. This enables early return to work from childcare leave and planned return to work, and supports the development of an environment in which employees can approach childbirth with peace of mind.



Toyobo Nursery School at the Research Center

- [Promotion of Women's Participation and Advancement](#)

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### External evaluation

#### Certified as an Eruboshi (second level) company based on the Law for Promotion of Women's Activities

Toyobo received the second level Eruboshi certification from the Minister of Health, Labour and Welfare as a company that actively promotes the advancement of women on December 14, 2021.

The "Eruboshi" certification is given to companies that have made excellent efforts to promote the activities of women in accordance with the "Act on Advancement of Women in Employment" (Women's Activity Promotion Act).

In 2015, we established a dedicated organization, the Women Empowerment Promotion Group (the Diversity & Inclusion Group, in April 2023), which has been active in creating an environment and organizational climate where women can play an active role.

Since then, we have hold seminars for managers and women employees and introduced a mentoring system. In 2018, we opened a nursery within the company at the Research Center (Otsu City, Shiga Prefecture). We made revisions to the childcare leave system to encourage men employees to take paternity leave, including setting five days of paid paternity leave. The rate of men employees taking paternity leave exceeded 80% in FY2021 and has remained high since.

We are certified as a "2-star" company, the second of three levels, based on the evaluation that the items of "recruitment," "continued employment," "work styles such as working hours," and "various career courses" have reached the specified levels.



## Acquisition of Platinum Kurumin certification

The Platinum Kurumin certification is awarded to companies that have achieved a higher level of initiative, such as the introduction and use of systems to support a balance between childcare and work, selected from among those that have received Kurumin certification as companies that support the childcare of their employees in accordance with the Act on Advancement of Measures to Support Raising Next-Generation Children.

In July 2023, we were certified as a Platinum Kurumin in evaluation of our various initiatives.



## Active participation of diverse human resources

In addition to activities to promote the participation and advancement of women, we are also working to ensure that the assessment and treatment of employees focuses on ability and is not influenced by differences such as gender and nationality, and we are aiming to cultivate a corporate culture in which diverse employees can participate actively and find job satisfaction.

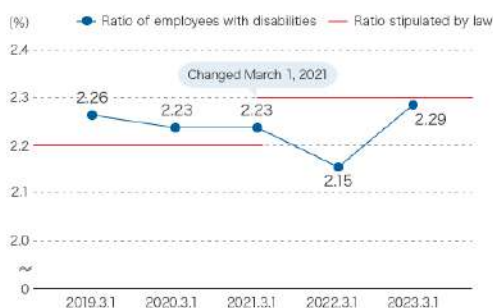
## Promotion of employment of persons with disabilities

In regard to raising the ratio of employees with disabilities, because it is crucial that initiatives are carried out at a company-wide level, we share information and actively encourage the recruitment of people with disabilities at meetings of the managers of General Administration Departments at each business site held four times a year.

As part of efforts to improve working environments, the Tsuruga Research and Production Center and the Inuyama Plant have been made with a universal design and others are sequentially being upgraded.

In anticipation of future increases in the legally mandated employment rate, we are actively conducting recruitment, requesting the understanding of workplaces as we prepare jobs.

### Ratio of employees with disabilities



## Promotion of employment of senior employees

We have introduced a senior employee system to promote employment by rehiring employees who have retired at the retirement age of 60 and who wish to continue working and are considered capable of working normally. The rehired senior employees actively help to train younger employees and pass on skills.

## Support system for employees on leave

To enable the smooth return to work by employees who have taken childcare leave, family care leave, or mental health leave, we provide the following support.

| Targets  | Details   |
|--|---|
| Persons taking childcare or long-term care leave | <ul style="list-style-type: none"><li>• Hold interviews with supervisors when returning to work, and carry out support for a smooth return to work (Interviews are also obligatory before returning to work after childcare leave)</li><li>• Hold lunch meetings before returning to work (suspended due to the COVID-19 pandemic)</li><li>• Send group newsletters during the leave period</li></ul> |
| Persons taking mental health leave               | <ul style="list-style-type: none"><li>• Conduct follow-up after a leave through the "acclimatization work system" to enable a staged return to work</li><li>• Send group newsletters during the leave period</li></ul>  |

To support employees raising children, we have introduced the following systems.

| System   | Details   |
|--|---|
| Establishment of a nursery school in the company | Opened in Research Center (Otsu, Shiga Prefecture)  |
| Baby-sitter support program                      | The company covers all baby-sitter expenses during travel for business (through the 6th grade of elementary school) |

# Promotion of Women's Participation and Advancement

↓ Progress so far, and the key issues   ↓ Targets and action plans   ↓ Message from manager

## Progress so far, and the key issues

### **Promoting women's participation and advancement from the three perspectives of recruitment, cultivation, and support for employment continuation**

At the time of 2015, our company was men-centric and was not providing adequate opportunities for women's participation and advancement.

Our group's activities to promote women's participation and advancement in the workplace started in earnest with the launch of the Women Empowerment Promotion Group in 2015.

In our Phase one action plan that spanned FY2017 to FY2021, we set targets of doubling the number of women in managerial positions from the FY2016 level and raising the ratio of women in career track positions\*<sup>1</sup> to 15%. We have advanced a number of initiatives focused on the three aspects of recruitment, development, and support for continued employment. As a result, by the end of FY2021, we had tripled the number of women in managerial positions to 13 and raised the ratio of women in career track positions to 17.1%, achieving our targets.

For our Phase two action plan from April 2021 to the end of March 2026, we announced a plan to raise the ratio of women in managerial positions to at least 5% and the ratio of women in career track positions to at least 22%, as well as to raise the number of men employees taking paternity leave to at least 80% and increase the number of days of leave taken by 20% from the level in FY2021. These numbers are steadily improving at present as well.

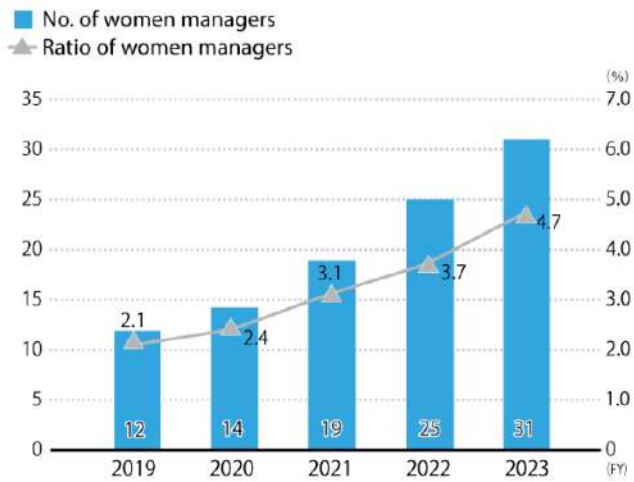
A factor that contributed greatly towards the achievement of these goals was our setting a 40% ratio of women among recent graduate hires on the global career track\*<sup>2</sup> as one of our recruitment policies. In parallel with this, we have also worked to expand the range of work roles open to women and have substantially increased the number of women assigned to the sales and manufacturing divisions, to which women in career track positions had not been assigned in the past. The actions have made the issue of women's advancement more directly relevant for many managers and have led to a change in attitudes and a transformation in the culture of the organization overall.

In addition to the continuation of these measures, the ongoing issue that we face is that of making the granting of equal opportunities and responsibilities without gender discrimination the norm, thereby doing away with the need for affirmative action. We believe that achieving our Phase two action plan is a requisite for making this happen, and that raising the sensitivity of employees with respect to diversity issues is important.

\*1 Defined as all employees on the managerial career track, including those who have only just joined the company.

\*2 Including all women employees with the rank of section chief or higher.

## Ratio of women Managers



## Main measures implemented

- Women leader development seminars
- Seminars for managers on managing women employees
- Career development support program
- Women Empowerment Promotion Project: Activities implemented continuously over a six-year period, with changing participants
- Mentoring system (for women up to the second year after new graduate hiring or mid-career hiring)
- Promotion of notification to superiors and leave-takers, and interviews before and after leave, to increase the rate of men employees taking paternity leave
- Holding "cross-industry exchange meetings" with other companies to broaden the working perspectives of young employees and women
- Babysitter support system, childcare costs incurred while away on business trips entirely covered by the company
- Establishment of a nursery within the company (at the Research Center) enrollment capacity: 10 children

## Targets and action plans

In April 2021, we started our Phase two action plan for promoting participation and advancement by women. We set numerical targets to be achieved by FY2026 including at least 5% ratio of women managers<sup>\*3</sup>. To meet these targets, we are advancing an initiative to increase the ratio of women among recent graduate hires on the global career track to 40%. In FY2023, our ratio of women managers was 4.7% and the ratio of women among recent graduates hires on the global career track was 35%.

In addition, we introduced a new Career Development Support Program for women employees who are currently on the regional career track<sup>\*4</sup>. Participants meet with their supervisor over a period of three years to discuss a career development cultivation plan that incorporates a formal schedule for the acquisition of specialist technical know-how and other knowledge, for example through on-the-job training, as well as self-development, etc., with an implementation cycle that includes an annual progress report and refresher training.

We will present career development paths for women on the area career track, which had been unclear in the past, and will support the subsequent demonstration of capabilities by women employees.

Toyobo also has a policy of participating actively in external initiatives. The company has already expressed its support for 30% by 2030 Challenge<sup>\*5</sup> goal announced by the Japan Business Federation (Keidanren) to raise the ratio of women executives to 30% by 2030, and for the Women's Empowerment Principles<sup>\*6</sup>, which outline a code of conduct for actively promoting women empowerment; Toyobo has signed a statement committing itself to act in accordance with the WEPEs.

Through these activities, we received the second level Eruboshi<sup>\*7</sup> certification from the Minister of Health, Labour and Welfare in December 2021.



## Targets and Initiative Content

[Target No.1] Raise the share of managers who are women to at least 5% by the end of fiscal 2026

|                         |  |
|-------------------------|--|
| April 2021 onwards:     | Implement women leader cultivation training for women managers and women candidates for managerial positions<br>(continued implementation since August 2017)             |
| April 2021 onwards:     | Implement women leader cultivation training for women section chiefs and women candidates for section chief positions<br>(continued implementation since September 2019) |
| April 2021 onwards:     | Implement mid-career hiring of women managers  |
| September 2021 onwards: | Establish and implement women empowerment promotion action plans at the unit level   |

**[Target No.2] Raise the share of women on the career track to at least 22% by the end of fiscal 2026**

|                     |  |
|---------------------|--|
| April 2021 onwards: | Maintain women's share of new graduate recruitment at a level of at least 40%                  |
| April 2021 onwards: | Actively promote mid-career hiring of women employees  |
| April 2021 onwards: | Implement follow-up interviews for women employees (continued implementation since April 2015) |
| April 2021 onwards: | Establishment and operation of a three-year career development support program                 |

**[Target No.3] Raise the percentage of eligible men employees taking childcare leave to at least 80%, and increase the number of days of childcare leave taken by at least 20% by the end of fiscal 2026**

|                       |   |
|-----------------------|---|
| April 2021 onwards:   | Make eligible employees aware of the childcare leave system (continued implementation since April 2019)   |
| April 2021 onwards:   | Send eligible employees' supervisors details of the encouragement that should be provided to subordinates to encourage them to take childcare leave (continued implementation since September 2019) |
| October 2022 onwards: | To support trouble-free acquisition of leave and return to work, interviews between superiors and leave-takers before and after taking childcare leave are mandatory                                |

\*3 Career track for employees who are expected to be active throughout the entire company.

\*4 Career track for employees whose career is expected to be confined to one specific business site.

\*5 This is one of the targets for promoting D&I to realize sustainable growth in line with "The NEW Growth Strategy" announced by the Keidanren in November, 2020.

\*6 The Women's Empowerment Principles were formulated jointly by UNGC and UN Women in 2010.

\*7 Eruboshi (2-star) criteria: Must meet 3-4 of the specified criteria, and must demonstrate continued improvement for a period of at least two consecutive years.

## Message from manager

Our group's activities to promote women's participation and advancement in the workplace started in earnest with the launch of the Women Empowerment Promotion Group in 2015.

In April 2023, the department name was changed to Diversity & Inclusion Group. In addition to the existing women empowerment promotion, we have broadened the scope to include human rights issues and employment of people with disabilities, and we have started to address the foreign employees and LGBTQs.

Achieving innovation and growing the company sustainably require that we remain a company that is able to acquire and utilize the skills and knowledge of diverse human resources. For participation and advancement by women, it is important that every woman is aware of her own capabilities and works where she can demonstrate those capabilities. For superiors, the maturity to provide opportunities and responsibilities fairly and without gender discrimination is vital.

The purpose of achieving diversity is adding value to people and making them strengths of the company.

Although we will continue affirmative action toward women due to its importance, we will go beyond that to also emphasize the importance of superiors realizing that attitudes and values have changed significantly among young people, and taking a stance of addressing people as individuals and providing opportunities fairly. We believe that workplaces where opportunities and responsibilities are provided regardless of personal attributes and where employees are able to grow will result in companies that are able to attract employees who have abundant knowledge and play active roles. Based on this conviction, we will retain affirmative action for women in the future and provide support for women, while taking steps to build workplaces where women can participate and advance without gender consciousness.



Diversity & Inclusion Group Manager,  
Labor Affairs Department  
Masako Tezuka

# Health and Productivity Management

| Materiality  |   |
|--|---|
| Related ESG : <b>S</b>   |  |
| <b>Employee well-being: Health and productivity management</b> |   |

↓ Management approach   ↓ Initiatives

## Management approach

### Policy and approach

Our group believes that investing in the health of employees and vibrant workplaces where employees can work with motivation will lead to long-term growth for the company.

To create workplaces that are comfortable places to work and that take employees' health into account, we are advancing initiatives for the occupational safety and health underlying such workplaces. From FY2020, we have undertaken health and productivity management that strategically implements health management considered from a managerial perspective.

Until now, the company and the health insurance association have cooperated in supporting health. To continue those activities and to positively and systematically undertake even more health and productivity management, we built a system for its promotion and formulated the TOYOBO Health & Productivity Management Declaration that was announced by the President in March 2020.

- [Initiatives for occupational safety and health](#)

#### < TOYOBO Health & Productivity Management Declaration >

Under the group's corporate philosophy, *Jun-Ri-Soku-Yu* (adhering to reason leads to prosperity), we aim to become a company which achieves sustainable growth.

We believe that in order to ensure strong, sustainable growth, we need the capabilities, effort, and energy of every employee, and that the growth of the group is linked to the job satisfaction of our employees and the feeling that they and their families are being enriched.

Health is the source of our employees' energy and effort, and as a group we recognize that actively working to maintain and improve employee health is an important management issue. At the same time, we believe that this initiative will contribute to realizing a sustainable society.

It is also important that employees themselves realize the importance of their health.

Therefore, we declare that we will actively engage in health and productivity management.

Ikuo Takeuchi  
Representative Director, President, and CEO  
April, 2021



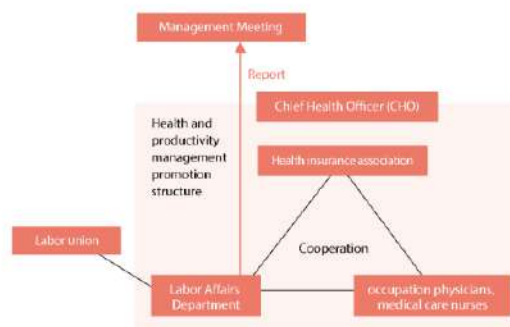
## Key measures under the TOYOBO Health & Productivity Management Declaration

1. Initiatives for raising employees' health awareness: education and training
2. Initiatives for improving employees' lifestyle habits: exercise, diet, support for quitting smoking, etc.
3. Initiatives for strengthening mental health, including improvement measures for high-stress employees and workplaces

## Structure

### Health management system

Aiming to positively and systematically address health and productivity management, Toyobo group is working on the above priority measures in cooperation with the Labor Affairs Department, occupation physicians/medical care nurses, and health insurance union under the Executive Officer supervising the HR Department, who serves as Chief Health Officer (CHO), while also hearing opinions from labor union.



### Health management strategy (strategy map)

We have positioned health and productivity management as one of our management strategies. Under our "Sustainable Vision 2030" announced in May 2022, we will work to solve issues, especially those related to "employee wellbeing" through the health and productivity management and contribute to the creation of a "company with pride and fulfillment" where employees are healthy, can play an active role with peace of mind, and can grow. Specifically, as an indicator, we aim to achieve an engagement score of 70% or higher (target for FY2031). To achieve this overall health and productivity management indicator target, we are organizing the linkage of "management issues to be solved", "expected effects", and "specific initiatives" through monthly meeting bodies for the promotion of health and productivity management under the above structure.

## Targets and KPIs

### < KPI and result >

| Initiative  | KPI  | Target(FY2026)    | Result(FY2023)  |
|---|--|-------------------|---|
| Maintain people-friendly work environments (Promote health) | 1. Certified as a top 500 for Outstanding Health and Productivity Management | Obtain / Maintain | Certified as a top 500 for Outstanding Health and Productivity Management |

We set targets and check our performance over time for various indicators related to health management. By analyzing quantitative data, we are able to understand our health issues and use the information to solve them.

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## Initiatives

In the area of health and productivity management initiatives, we organize and analyze issues from multiple angles, including health check-up results and the use of scoring reports and index data over time in cooperation with insurers, to put measures into practice.

We respond every year to the survey of health and productivity management by the Ministry of Economy, Trade and Industry, and use the feedback we obtain from it to conduct annual reviews of our initiatives, which we then connect to our activities in the following fiscal year. Through this continuous effort, issues calling for priority treatment have come to light. We will resolve these issues through health and productivity management and be a company where people feel pride and motivation, which will ultimately contribute to the enhancement of corporate value and productivity.

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## Measures undertaken

In addition to the initiatives we have undertaken since beginning health and productivity management, we are implementing the following as initiatives to improve employees' lifestyle habits.

### First Certified as a top tier company for Outstanding Health and Productivity Management

Toyobo was certified as a top tier company for Outstanding Health and Productivity Management, which is given to the top-ranking corporations in the "Certified Health & Productivity Management Outstanding Organizations Recognition Program" jointly conducted by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi jointly.

Toyobo group established the "Health and Productivity Management Declaration" in March 2020 to promote health and productivity management. Under the Chief Health Officer (CHO), the Executive Officer controlling supervisor of the HR Division, the Labor Affairs Department, the occupational physicians and nursing professionals and the health insurance association work in close coordination to enhance healthcare consciousness of employees, improve their lifestyle habits and strengthen mental health-care measures as part of priority programs. As a result, the company has been certified as a Health & Productivity Management Outstanding Organization since FY2020.

In FY2023, we enhanced our employee awareness activities, including a smoking cessation seminar to explain passive smoking and nicotine dependence, an online smoking cessation clinic, and seminars to promote understanding of health issues unique to women. In addition, information on the implementation of health management was disseminated through the publication of health indicators and indices such as the smoking rate and percentage of habitual exercisers over time on the company website.

We will continue aiming for "Top 500" certification, and will further enhance our corporate value through greater strengthening and promotion of health and productivity management by means such as actively working to maintain and improve employee health.



### Activities to raise awareness among employees

It is important for all employees to review their lifestyle habits with an awareness of protecting and building their own health, and to continuously put initiatives for better living into practice.

Toward this end, we hold seminars to encourage employees to give thought to their own health and undertake health promotion from their individual standpoints.

From 2022, we have set the first Thursday of every month as Health Day and distribute health seminar videos once a month.

## Implementation in FY2023

|                   | Number of times | Theme  |
|-------------------|-----------------|--|
| Seminars          | 3               | <ul style="list-style-type: none"> <li>• Seminars on non-smoking</li> <li>• Seminars on women's issues</li> <li>• Seminars by occupational physicians on lifestyle-related diseases</li> </ul> |
| Streamed seminars | 3               | <ul style="list-style-type: none"> <li>• Prevention of infectious diseases</li> <li>• Exercise and diet</li> <li>• Women's health issues</li> </ul>  |

## Improvement of employees' lifestyle

As the new coronavirus outbreak has revolutionized working styles and lifestyles, forcing various restrictions, we consider mental and physical care to be a top priority. We will improve lifestyle habits while implementing measures for exercise habits, smoking cessation, and providing educational opportunities (e.g., holding seminars) to improve literacy.

In FY2022, we created and deployed our own proprietary application, "Tsunagaru Kenko TOYOBO Zukan," which can be operated with a smartphone. This application was created by the members of a subcommittee of the "KAERU Project," an internal organizational climate reform project, while incorporating a wide range of opinions. The first installment of the "Flower Series" is an application that allows employees to freely interact with each other by taking pictures of flowers they see on their walks and posting them with comments.

We hope that this application will help employees make exercise a habit and connect with other employees, creating a positive chain of events.

In FY2023, in conjunction with seminars on passive smoking and nicotine addiction, we provided information on online outpatient clinics for smoking cessation and implemented measures to partially subsidize the cost of outpatient smoking cessation treatment for those who successfully quit.



## Support for employees' health maintenance and promotion through health checkups

Toyobo aims to have a (actual) 100% rate of health checkups by industrial health staff at each business site.

Our health checkups for lifestyle-related diseases, cancer, and other ailments are more comprehensive than required by law. In cooperation with the health insurance association, we conduct cancer screenings for any staff (employees and their dependents) who want them, and we are working to ensure early detection and treatment of diseases including in family members.

Our occupation physicians check the results of health checkups for all employees, and in the event of any abnormal findings, meet with and provide health guidance in cooperation with nursing professionals. If necessary, they also provide examinations and treatment at clinics, and referrals to specialized medical institutions. We also support the maintenance and improvement of employee health by providing health consultation structures and environments. Furthermore, the health insurance association actively provides specific health guidance on approaches to reduce risks faced by high-risk patients.

We improve structures and environments for health examinations and consultations, to support the maintenance and improvement of employee health.

## Improvement of implementation rate of specified health guidance

As an example of improvements made with respect to a specific issue, by undertaking a variety of measures and cooperating with insurers on strengthening the implementation rate for specific health guidance to raise awareness concerning exercise and eating habits, we achieved a decline in the number of persons targeted for specific health guidance by approximately 2% between FY2021 and 2022.

## Restricting long working hours

To curb long working hours, in management meetings we examine measures to prevent recurrence when employees (including managerial staff) anywhere in the company exceed certain working hour standards for three consecutive months\*. Management and employees at each business site have set a specific cutoff point, and keep tabs on work that leads to excessive hours in order to promote their reduction. We have also set the number of employees doing overtime as a KPI, and have set a reduction of 20% as a target.

Management and employees at each business site have designated a no overtime day, and we encourage employees to go home on time so they can enjoy personal and family time.

Furthermore, in order to prevent mental health issues caused by long working hours, we have put in place stricter standards than legally mandated, and we hold interviews with occupation physicians.

\* Over 80 hours overtime in two consecutive months + over 45 hours in the third month

## Mental healthcare initiatives

Toyobo provides annual mental health lectures to managers in order to increase their awareness and understanding of mental healthcare. Individual consultations are also given by industrial health staff (one to five) at each business site. We also provide personalized support to employees suffering from high levels of stress, based on the results of a stress checkup. We are undertaking actions such as providing feedback to managerial staff on the results of FY2023 group analysis.

With regard to mental healthcare when telecommuting, we have addressed the importance of self-care and so-called "line care," care provided by managers for the wellbeing of the employees and measures to improve the workplace, issuing information so as to maintain and support our employees' physical and mental wellbeing.

## Health care support for expatriates

The number of group employees posted overseas is growing year by year in line with our accelerating global business expansion. For employees and their families preparing for overseas assignments, we provide medical checkups, vaccinations recommended by the Ministry of Health, Labour and Welfare (hepatitis AB, measles/rubella, tetanus, etc.), local medical system support in cooperation with medical assistance services, information on travel destinations, and more. We recognize the importance of the world's three major infectious diseases (tuberculosis, malaria, and HIV/AIDS), and will enact necessary measures against these as our business expands.

We provide follow-up medical checkups after traveling to the destination and support them in maintaining their health status while engaged in their work. We have a system in place to support the health management of expatriates and their families through collaboration among various internal organizations.

## Countermeasures against COVID-19

As countermeasures against COVID-19, we are encouraging working from home and staggered working hours, ensuring employees maintain social distancing when working in the office, and providing information about infection prevention, among other measures.

- [Safety, Disaster Prevention](#)

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## To our business partners

At our company, the labor department, health insurance union, and nursing staff play a central role in promoting health management in cooperation with each other.

We may be able to help you with our efforts. We would like to support our business partners in their promotion of health management as well.

If you are interested in our efforts, please contact us at the following address for information exchange, and so on.

For inquiries, please contact us at:  
Human Resources Department  
Health Management Secretariat  
kento\_miyazaki@toyobo.jp

# Social Contribution

| Materiality                      |   |
|----------------------------------|---|
| Related ESG : <b>E S</b>         |  |
| Partnership: Social contribution |   |

↓ Management approach   ↓ Initiatives

## Management approach

### Policy and approach

The TOYOBO Group Charter of Corporate Behavior declares that "we will actively participate in society and contribute to its development as a good corporate citizen." It is our belief that fulfilling our responsibilities as a good corporate citizen and making investments for the future is one way for us to put our corporate principle of "*Jun-Ri-Soku-Yu* (Adhering to reason leads to prosperity)" into practice.

To build and support a better society as a member of that society, we will engage in the promotion of science and technology, environmental conservation, and communication with local communities, and will incorporate what we gain from these activities into our corporate activities.

Through our website and other means, we will communicate information that allows people to learn about our group's thinking and its businesses.

#### Related policies:

- [TOYOBO Group Charter of Corporate Behavior: 8. Social contribution](#)
- [TOYOBO Group Basic Policy on Health & Safety](#)
- [TOYOBO Group Fundamental Policy on the Global Environment](#)

### Structure

Based on the policies above, each business location works to communicate with its surrounding area.

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## Initiatives

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### Cultivating future generations

In order for our society to continue developing into the future, it is vital that we foster the human resources who will lead that future. Toward that end, our group is undertaking promotion of science and technology through research grants and other support via the Toyobo Biotechnology Foundation. We also offer internships to let students gain an image of work through actual workplace experiences.

### Supporting science and technology

Toyobo group is contributing to the development of science and technology by supporting young researchers through our foundation. We are also contributing to the development of technology, industry, and society by participating in industry-academic-government collaboration.

#### **A foundation that contributes to the biotechnology field by supporting young researchers**

Advancing science and technology is important for Japan to develop socially and economically into the future. Toyobo group began to focus on the life science such as biotechnology fields when these fields were still new to Japan. In order to encourage scientific research in the biotechnology field and to contribute to society through the results of this research, in May 1982 we celebrated the 100th anniversary of the company by establishing the Toyobo Biotechnology Foundation (hereafter “the Foundation”) and since then, we have been holding study groups and symposiums, and providing research subsidies. Since the establishment of the Foundation to the present day, its efforts have been supported by academics working on the front lines of this field, many of whom have served as directors and advisors. In recent years, the biotechnology field has grown compared to the time when the Foundation was established. We are concentrating activities on research subsidies for those studying abroad, as support for young researchers who will shoulder the future of the field.

One feature of the Foundation's research grants is no restrictions on the use of the funds.

This is because we want to provide comprehensive support for young researchers who are venturing overseas for the first time. From the reports provided by the researchers we sponsor, we can see that they are vigorously engaging in their research activities.

In FY2023, six young researchers were granted long-term research subsidies totaling 33 million yen, with a presentation ceremony held on December 13, 2023. With the current fiscal year included, a total of 220 researchers have received long-term research subsidies. Recipients are active on the front lines of the biotechnology and education fields and some of them want to contribute to the cultivation of the next generation of researchers by serving as directors and advisors of the Foundation.



Recipients of FY2023 long-term research subsidies and other people connected to the Foundation

## 58th L-GRANT Research "Toyobo Polymer Science Award" selected

On February 22, 2023, the Toyobo Polymer Science Award ceremony was held at the Research Center.

Using the mechanism of the Leave a Nest Research Fund operated by Leave a Nest Co., Ltd.<sup>\*1</sup>, this award was established as an open research grant system in FY2022 to support the research fields and personnel sought by Toyobo group. The current fiscal year marked the second year of the awards.

Based on our desire to change the world with people who passionately advance steady materials research rather than just the applied development that is often required by competitive research funds in recent years, we set basic and general-purpose research on polymer materials as the target field. There were over 40 entries, surpassing the 30 received in the previous fiscal year, and two were selected for the Toyobo Polymer Science Award and one for the Encouragement Award.

The three award winners were invited to the Research Center lecture room for presentations on the award-winning themes and a Q&A session with the many Center members in attendance, along with the awarding of letters and plaques of commendation. A tour of the Center and a reception party further deepened the exchanges.



Award winners and our company's concerned personnel

## Support for initiatives such as the Shiga Tech Planter R&D startup support program and the Shiga Junior Research Grant next generation cultivation project through the Shiga-based Growth Business Identification and Cultivation Consortium

The Shiga-based Growth Business Identification and Cultivation Consortium (hereafter "the Consortium") is an industry-academic-government collaborative organization that aims to encourage industry in Shiga and revitalize the region by creating a framework for generating a succession of industries that leverage the prefecture's strengths and help them grow. As Toyobo group has a Research Center and the Otsu Pharmaceuticals Plant in Shiga prefecture, we support the aims of the consortium and we have been a partner company of Shiga Tech Planter, an R&D startup support program for cultivating the next generation of researchers, engineers, and entrepreneurs, and the Shiga Tech Plan Grand Prix, a business plan contest run by the program, since the start. We have been a partner of the consortium leading the "Shiga Junior Research Grant" since its inception, which aims to support the research activities of junior and senior high school students in Shiga Prefecture. The Consortium supports the Grant aiming to develop human resources who will be leaders in the creation of next-generation industry.

## The Toyobo Prize for "DAC PLA" at the 8th Shiga Tech Plan Grand Prix

On 29 July 2023, the "8th Shiga Tech Plan Grand Prix" was held at the Otsu Prince Hotel in Otsu City, Shiga Prefecture, as an event of 8th SHIGA TECH PLANTER.

This time, the Toyobo Prize was awarded to Behomal Co., Ltd. for the development of CO<sub>2</sub> adsorption/desorption plastic "DAC\* PLA". Biomass-derived CO<sub>2</sub> adsorption/desorption materials are kneaded into plastics and used in tableware and interior decorations to absorb CO<sub>2</sub> from the atmosphere. Ideas such as releasing the absorbed CO<sub>2</sub> during washing and drying and using the recovered CO<sub>2</sub> to promote the growth of planter plants were presented.

The Toyobo Prize was awarded in recognition of the fact that CO<sub>2</sub> emissions reduction is a major issue for our company and that the proposed solutions to social issues based on the fusion of biomass materials and plastic molding and processing technology are aligned with our company policy.

\* DAC (Direct Air Capturing): A technology to reduce CO<sub>2</sub> concentration by directly capturing CO<sub>2</sub> in the atmosphere. Large-scale demonstration facilities have already begun operating in countries around the world.



Participants



Toyobo Prize was awarded.

### The "5th Shiga Junior Research Grant, Results Presentation" was held

On February 11, 2023, the 5th Shiga Junior Research Grant Results Presentation, hosted by the Consortium for Discovery and Development of Growth Industries from Shiga, was held at Collabo Shiga 21 in Otsu, Shiga Prefecture. A member of our Corporate Research Center who is also a third-term student of the Mirai Jinzai Juku, participated as a judge.

Although research was suspended amid the COVID-19 pandemic, the schools' students delivered exciting presentations based on painstaking research, seeking answers to "why" questions inspired by the activities of their seniors. A poster session was also held, with junior high and high school students holding wonderful discussions in front of the posters.

The Toyobo Prize was awarded to Moriyama Municipal Moriyama Junior High School for "Proving the effectiveness of waterweed as a fertiliser using hydroponics".



Award winners and our company's concerned personnel

### Internships

We provide an internship program that lets students deepen their understanding of work, companies, and society through on-site working experience.

Our one-day course for office work-related positions is a program that lets interns gain an image of work through experiences such as sales staff work and round-table discussions with our employees. Our 3- to 4-day course for engineering-related positions lets interns interact with engineering-related employees at our business sites and laboratories and experience design and R&D work involving production equipment.



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## Contribution to local communities

As a manufacturer of materials, Toyobo group provides a variety of information for the peace of mind of local communities and engages in educational and awareness-raising activities for residents. We undertake activities that support the creation of flourishing towns and cities, advancing together with communities as a good corporate citizen.

Toward that end, all of our business sites actively participate in cultural events to contribute to the vitalization of communities and hold open house activities that let residents and employees' families learn about our group. Our business sites also work to employ local human resources for the vitalization of regions where we operate.

### Visiting lecture for elementary school students to learn in a fun atmosphere (Toyobo Packaging Operating Department)

On September 13, 2023, we conducted a visiting lecture entitled "How plastic films work" at the private Teikyo University Elementary School in Tokyo, Japan.

We introduced our business to 23 first grade elementary school students and explained in an easy-to-understand manner the types and features of plastic films, especially the functions that only plastic films can perform. The students experienced the difference between straight-cut and regular films by cutting with their hands.

After receiving an explanation of "why it is better to cut straight," the students made their own original bags using straight-cut film. They enjoyed learning about plastic film, with comments such as, "I want to make the same thing at home," and "It was so much fun, and I want to take the lesson again."

(A similar lecture was held at Kougai Elementary School in Tokyo in October.)

Now in its fourth year, this program focuses on teaching classes to lower elementary school students. The classes provide children with an opportunity to learn about the functions and roles of plastic films in a fun atmosphere through hands-on experience and workshops.



Visiting lecture at Teikyo University Elementary School

### Introducing our company history to High School at Komaba, University of Tsukuba, second-year students researching the spinning industry of the Meiji period (Toyobo General Administration Department)

On May 16, 2023, five second-year students from High School at Komaba, University of Tsukuba, visited our main office to interview General Manager of the General Administration Department.

Students in the high school's Comprehensive Exploration Time class set their own topics and conduct small-group research in the Kansai area. Choosing the spinning industry in the Meiji period as their topic, the five visitors had an interest in our company, the predecessor of which was the spinning company Osaka Boseki.

General Manager explained the ideas of Eiichi Shibusawa, the founder of Osaka Boseki and our company. The students asked questions including why Osaka Boseki had an advantage over other spinning companies, why Japan's spinning industry was able to develop rapidly, and what Toyobo intended as it branched out from spinning into related fields.



On the following day, May 17, students were taken to Mengyo Kaikan, a cotton industry hall in Chuo-ku, Osaka.

### "Machi-Zemi" organized by the Tsuruga Chamber of Commerce and Industry: site tours conducted (Toyobo Tsuruga Research and Production Center)

On March 3, 2023, we conducted a plant tour under the Tsuruga Machi Seminar\* program of the Tsuruga Chamber of Commerce and Industry.

This year, 13 general residents of the city of Tsuruga took part. After receiving an overview of the worksite, participants toured the N Room (exhibition room) and the Tsuruga Film Plant, walking through the premises.

Many participants, who seemed to hold strong images of Toyobo as a company that makes textiles, reported being surprised to learn how items made at the Tsuruga Research and Production Center are in common use around them.

\* Machi Seminar is a small-group free course in which store owners and companies in the city act as instructors to convey specialized knowledge and information to participants. The project is held nationwide with the aim of building relationships of trust between business operators and local residents through communication in the course.



### Company tour by first-year students at Tsuruga High School (Toyobo Tsuruga Research and Production Center)

On November 1, 2022, we held a company tour for 29 first-year students from the Department of Information Accounting at Tsuruga High School. The students' purpose in the tour was to learn about the facility's environment- and energy-related initiatives. In addition to an overview of the site, they listened to a lecture on the site's in-house power generation and on energy use around the world. The students showed great interest, asking questions such as why the site requires in-house power generation.



### Company tour by the Kotobuki Class at Nishi Kominkan civic hall (Toyobo Tsuruga Research and Production Center)

On October 11, 2022, the Tsuruga Research and Production Center received a visit by 51 members of the Kotobuki Class, a program of courses and classrooms held for elderly residents in the Nishi district of the city.

The visitors toured the exhibition room "N Room" and on-site buses, and learned about the products and the scale of the site. Even long-term residents of Tsuruga commented that they hadn't had a good idea of what was being made at the site, and were finally able to find out.



**“Career Passport” visiting lecture for elementary school students to learn in a fun environment (Toyobo Packaging Operating Department)**

On September 14, 2022, we conducted a visiting lecture entitled "The Role of Plastic Films and Environmental Responses" was held at the private Teikyo University Elementary School in Tokyo, Japan, as one of the "Career Passport" \* programs.

We introduced our business to 24 second grade elementary school students and explained in an easy-to-understand manner the types and features of plastic films, especially the functions that only plastic films can perform. In addition, the students experienced peeling off the multi-layered films and conducted an odor leakage experiment using different materials, and at the end of the session, we called for "recycling instead of littering after use."

During the peeling experience, although the students struggled to peel off the film, they were able to experience how multiple layers of film are combined to form a single bag. The students said, "I want to try this with other bags for snacks," and "I will teach this to my mother back home," and enjoyed learning about plastic films.

(A similar lecture was held at Kougai Elementary School in Tokyo in October.)

\* The "Career Passport" is a portfolio designed to enable students to self-evaluate their own transformation and growth by reviewing and reflecting on their own learning status and career development through various career education-related activities from elementary school to high school, with a focus on classroom and homeroom activities of special activities and back and forth with each subject.



Visiting lecture at Teikyo University Elementary School



Students experienced smell differences in an odor leakage experiment.

**Visiting lecture on technology related to semipermeable membranes, and science careers (Toyobo Corporate Sustainability Department, Environmental Solutions Operating Department, Iwakuni Membrane Plant)**

On September 3, 2022, we conducted a visiting lecture for 23 students of Kobe Ryukoku Senior High School's Advanced Global Science Course on technology related to semipermeable membranes and science careers.

In the lecture titled "Osmosis Phenomenon with Semipermeable Membranes," the lecturers explained the phenomenon of osmosis and the function of semipermeable membranes using experimental equipment and introduced a seawater desalination plant and the semipermeable membrane manufacturing process in operation in an area where water is scarce. The students experienced how water is extracted from seawater using semipermeable membranes by using our "Aqua Hum Hum" reverse osmosis experience machine. In the latter half of the lecture, as part of their career education, the lecturers introduced how they became interested in the field of science, their student life, work at the company, and experiences overseas.

In a cordial atmosphere, students listened to the lecturers' explanations with an enthusiastic gaze and asked questions to them during breaks and after lecture. It was very impressive to see the students pedaling the "Aqua Humumu" pedals with great effort and laughing happily.

Students who took the lecture commented, "I had been looking forward to the lecture and was 'excited' the whole time". "It gave me a chance to imagine what kind of company I would like to work for in the future." "I thought Toyobo is a wonderful company that contributes to the environment and the world."

It was also a very good opportunity for our company members who participated in the visiting lecture. We will continue to create learning opportunities with the students who will lead the next generation.



### **Held "Summer Vacation Junior Science Class" (Toyobo Iwakuni Production Center)**

On August 5, 2022, we held "Summer Vacation Junior Science Class" jointly with Yamaguchi Industrial Promotion Foundation, inviting elementary and junior high school students from Yamaguchi Prefecture.

Yamaguchi prefecture holds "Summer Vacation Junior Science Classes" at various locations in the prefecture, asking universities and companies in the prefecture to hold these classes for the purpose of encouraging the development of human resources in the science field. Iwakuni Production Center also agreed with this program and held this class.

There were many more applicants than the maximum number. On the day of the event, 19 elementary and junior high school students and their parents participated in the class. During the experimental experience of osmosis using a semipermeable membrane, the children seemed relaxed thanks to the gentle and approachable talk of our employees who participated as instructors. Instructors, children, and parents cooperated with each other as they conducted the experiments, bringing the venue together. After the science class, we received many pleasant comments from the participants, such as "it was fun," and "I am glad I could make more friends."



[Click here to investigate our past activities regarding contribution to local communities.](#)

- [Activities in the past](#)

# Governance



Corporate Governance



Compliance



Risk Management



Tax Affairs Policy



ESG Performance Data



# Corporate Governance

| Materiality            |   |
|------------------------|---|
| Related ESG : <b>G</b> |  |
| Governance             |   |

- ↓ [Management approach](#)
- ↓ [Structure](#)
- ↓ [Overview of boards and committees](#)
- ↓ [Targets and KPIs](#)
- ↓ [Progress in system enhancement](#)
- ↓ [Officer compensation system](#)
- ↓ [Evaluating the effectiveness of the board of Directors](#)
- ↓ [Outside Director message](#)
- ↓ [Cross-shareholding](#)

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## Management approach

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### Policy and approach

Based on the corporate philosophy “Jun-Ri-Soku-Yu,” the company believes that its purpose is to contribute to solving social issues through its proprietary technologies after ascertaining these issues from a long-term perspective.

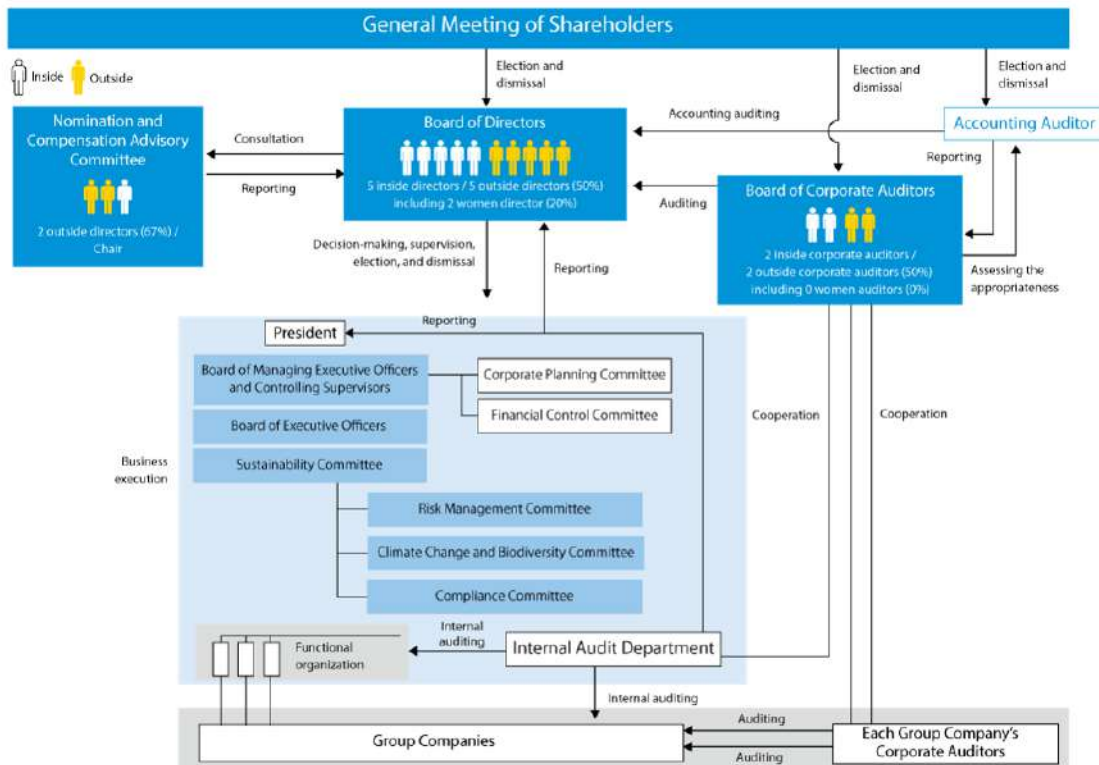
The company, to respond to the changing times and enhance sustainable corporate value in the future as well, has established the policies of (1) ensuring timeliness and accuracy in decision-making, (2) ensuring transparency in management, and (3) emphasizing fairness, and will work to appropriately collaborate with all stakeholders, such as shareholders. Furthermore, by carrying out its fiduciary responsibility and accountability to shareholders, the company will ensure the effectiveness of corporate governance and continually work on its improvement.

- [Corporate Governance Report](#)

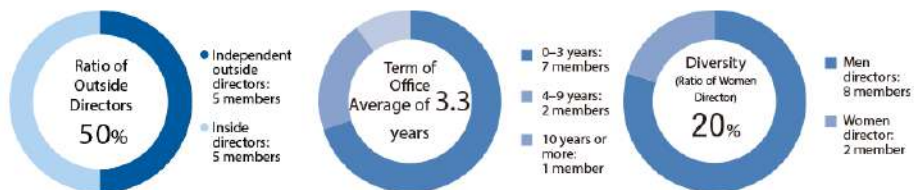
## Structure

Toyobo is a company with Board of Corporate Auditors and, under this governance system, has adopted the executive officer system. In the executive officer system, which is defined in our Articles of Incorporation, the Board of Directors oversees the business execution of executive officers. Under Toyobo's governance framework, a clear separation is made between the role of the Board of Directors—which oversees decision-making and performs management oversight—and the executive officers who are in charge of business execution. This system enables rapid decision-making and efficient business execution.

### Corporate governance structure (as of June 2023)



### Composition of the Board of Directors



## Overview of boards and committees

\* As of June 2023

|   | Members* and roles |   | Main issues (FY2023)   |
|---|--------------------|---|--|
| <b>Board of Directors</b><br>Number of meetings held in FY2023: 18                            | Members            | 10 members. The Board of Directors is composed of five independent outside directors, a director who is also an executive officer, and the company Chair, who serves as the chair of the Board of Directors. The number of directors on the Board of Directors is set to 14 or fewer.   | <ul style="list-style-type: none"> <li>- Sustainable Vision 2030</li> <li>- 2025 medium-term management plan</li> <li>- Business strategy and management issues</li> <li>- Safety, disaster prevention, and quality initiatives</li> <li>- Important investment projects</li> <li>- Human resource development</li> <li>- Matters related to establishment of joint ventures</li> <li>- Matters related to cross-shareholdings</li> <li>- Matters related to R&amp;D</li> </ul>                          |
|   | Role               | The Board of Directors receives reports on the progress of medium- and long-term themes, including from the perspective of sustainability, and the status of business execution in each business, and conduct appropriate supervision.<br>In addition, by taking our fiduciary responsibility and accountability to shareholders into account, it works to build a corporate governance structure that will enable us to sustainably enhance corporate value.   |  |
| <b>Board of Corporate Auditors</b><br>Number of meetings held in FY2023: 15                   | Members            | 4 members, including 2 independent outside corporate auditors.  | <ul style="list-style-type: none"> <li>- Determination of auditing policy and auditing plans</li> <li>- Sharing the results of operational and accounting audits, and visiting audit to affiliate companies</li> <li>- Confirmation of the content of proceedings at Board of Directors meetings and other important meetings</li> <li>- Sharing details of discussions with board</li> <li>- Confirming important documents</li> <li>- Confirmation of matters related to accounting auditor</li> </ul> |
|   | Role               | The Board of Corporate Auditors attends the Board of Directors meetings and other important meetings, states opinions when necessary, and audits the execution performance by directors through audits of each department's operation. KPMG AZSA LLC has been appointed to conduct accounting audits required under Japan's Companies Act. The Board of Corporate Auditors receive reports on auditing plans and auditing results from the accounting auditor, and meet with them to periodically exchange information. Information is also exchanged with the Internal Audit Department, which monitors the effectiveness of internal control. |  |
| <b>Nomination and Compensation Advisory Committee</b><br>Number of meetings held in FY2023: 5 | Members            | 3 members, including 2 independent outside directors and the Chair. The Nomination and Compensation Advisory Committee is led by an outside director. 1 outside corporate auditor also participates as an observer.   | <ul style="list-style-type: none"> <li>- Setting of company-wide performance targets for the next fiscal year</li> <li>- Progress of the CEO and next-generation managerial human resources development plan</li> <li>- Recommendation of candidates for Directors and Corporate Auditors; appointment of management team</li> </ul>   |
|   | Role               | Based on proposals from the President, the Nomination and Compensation Advisory Committee deliberates basic policies and criteria on the nomination of officers and succession planning, and reports to the Board of Directors.   |  |



|  |                |  |  |
|--|----------------|--|--|
| <b>Board of Managing Executive Officers and Controlling Supervisors</b><br>Number of meetings held in FY2023: 32 | <b>Members</b> | 12 members, including those also serving as directors. The Chair and 2 inside corporate auditors may also participate and state their opinions.  | Same issues as the Board of Directors  |
|  | <b>Role</b>    | The Board of Managing Executive Officers and Controlling Supervisors deliberates in advance on matters to be resolved by the Board of Directors, and determines matters related to business execution entrusted by the Board of Directors. The Corporate Planning Committee and the Financial Control Committee have been established under the Board of Managing Executive Officers and Controlling Supervisors to manage risks related to management.  |  |
| <b>Sustainability Committee</b><br>Number of meetings held in FY2023: 4  | <b>Members</b> | 13 members. The Sustainability Committee consists of the Chair and the members of the Board of Managing Executive Officers and Controlling Supervisors, and the President serves as chair. 2 inside corporate auditors may also participate and state their opinions.  | <ul style="list-style-type: none"> <li>- Progress report on materiality and KPIs</li> <li>- GHG emission reduction targets</li> <li>- Nature-positive</li> <li>- Geopolitical risk</li> <li>- Committee structure based on ISSB and other requirements</li> </ul>  |
|  | <b>Role</b>    | The Sustainability Committee reviews the progress of company-wide sustainability activities each quarter, and discuss new issues to be addressed and company-wide risks. The content of the Committee's discussions is reported to the Board of Directors on a regular basis.  |  |
| <b>Corporate Planning Committee</b><br>Number of meetings held in FY2023: 8                                      | <b>Members</b> | 19 members. The Corporate Planning Committee members are selected from each specialized field and business departments. The Director in charge of planning serves as chair.  | <ul style="list-style-type: none"> <li>- Significant capital investment projects</li> <li>- Matters regarding new businesses</li> <li>- Matters regarding the establishment of new companies</li> <li>- Other important matters (investments, technology introductions, business alliances, acquisitions, etc.)</li> <li>- Review of major Corporate Planning Committee matters</li> </ul> |
|  | <b>Role</b>    | The Corporate Planning Committee provides opinions and deliberates from a professional and managerial perspective on strategic matters, including important capital investments, new businesses, new company establishment, technology introduction, and business alliances, based on the entrustment of the Board of Managing Executive Officers and Controlling Supervisors. This is to improve the efficiency of deliberations and resolutions by the Board of Managing Executive Officers and Controlling Supervisors and to ensure the proper approval process, including matters concerning affiliate companies. |  |

|   |                |   |  |
|---|----------------|---|--|
| <b>Financial Control Committee</b><br>Number of meetings held in FY2023: 17 | <b>Members</b> | 1 Chairperson, and 4 standing committee members.  | The following matters of individual importance:<br><br>- Investments and lending<br>- Guarantees and reservations of guarantees (including management awareness letters)<br>- Collateral provision for third parties |
|   | <b>Role</b>    | The Financial Control Committee pursues improving the efficiency of deliberations and resolutions at the Board of Managing Executive Officers and Controlling Supervisors, and the appropriateness of the approval process by expressing opinions and deliberating from a professional and managerial perspective on important individual investments, loans, guarantees, and other matters. In addition, it seeks to streamline the deliberation or resolution of matters not subject to deliberation or resolution at the meetings, as required by various rules and regulations. |  |

## Targets and KPIs

### < Targets >

Toyobo group is building a fair and highly transparent governance structure through compliance with the Corporate Governance Code and proactive information disclosure.

### < KPIs and results >

| Initiatives  | KPIs  | Targets   | Results (FY2023)                                |
|--|---|---|---|
| <ul style="list-style-type: none"> <li>● Strengthen corporate governance</li> <li>● Strengthen information disclosure</li> </ul> | 1. No. of meeting of the Board of Directors / committees <sup>*</sup>       | 1. Disclose results                             | 1. 23   |
|  | 2. Attendance rate of officers at meetings in 1.                            | 2. Disclose results                             | 2. <a href="#">Share on the company website</a> |
|  | 3. Disclosure of details of evaluation of Board of Directors' effectiveness | 3. Disclose details of effectiveness evaluation | 3. <a href="#">Share on the company website</a> |

\* Nomination and Compensation Advisory Committee

## Progress in system enhancement

Toyobo group has worked continuously to strengthen corporate governance.

### Initiatives to strengthen corporate governance

| Year | Initiative & objective   |
|------|--|
| 1998 | <ul style="list-style-type: none"> <li>- Established the Ethics Committee (the current Compliance Committee)<br/>To promote company-wide compliance activities as a key element of management</li> </ul>   |
| 2004 | <ul style="list-style-type: none"> <li>- Appointed one outside director, shortened the term of office for directors to one year<br/>To clarify management accountability by strengthening the supervisory function and shortening the term of office</li> <li>- Established an Advisory Board on Officer Provisions, etc. (the current Nomination and Compensation Advisory Committee)<br/>To ensure transparency and fairness in procedures for determining officer compensation</li> </ul>   |
| 2005 | <ul style="list-style-type: none"> <li>- Introduced a corporate officer system and reduced the number of directors<br/>To split the decision-making/supervisory and executive functions</li> </ul>   |
| 2015 | <ul style="list-style-type: none"> <li>- Increased number of outside directors to two<br/>To strengthen the supervisory function by multiple appointments</li> <li>- Established an outside officer liaison meeting<br/>Held regular opportunities for sharing of understanding and exchange of information by outside officers only</li> <li>- Established the Nomination Committee (the current Nomination and Compensation Advisory Committee)<br/>To ensure transparency and fairness in procedures for nominating/dismissing directors</li> </ul> |
| 2016 | <ul style="list-style-type: none"> <li>- Made an analysis/evaluation of the overall effectiveness of the Board of Directors<br/>Will annually identify issues and make improvements</li> </ul>   |
| 2018 | <ul style="list-style-type: none"> <li>- Increased number of outside directors to three, raising their ratio to one third of all directors<br/>To ensure diversity among members of the Board of Directors, as well as strengthen governance</li> </ul>  |
| 2019 | <ul style="list-style-type: none"> <li>- Increased number of outside directors to four (adding a female director)<br/>To further promote diversity among members of the Board of Directors</li> <li>- Revised the officer compensation system (introduced compensation in the form of restricted stock units)<br/>To offer longer term incentives and realize greater sharing of value with shareholders</li> </ul>  |
| 2021 | <ul style="list-style-type: none"> <li>- Established the Nomination and Compensation Advisory Committee<br/>Integrated advisory and compensation advisory bodies, and improved their functionality</li> </ul>  |
| 2022 | <ul style="list-style-type: none"> <li>- Increased number outside directors to five</li> <li>- Review of the executive compensation system (changes in the composition ratio of compensation and KPIs)</li> </ul>  |
| 2023 | <ul style="list-style-type: none"> <li>- Increase in the number of female directors to two</li> </ul>  |

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# Election and dismissal of top management and nomination of candidates for directors and corporate auditors

## Policy

The election and dismissal of top management members (executive officers who also serve as directors) and the nomination of candidates for directors and corporate auditors are based on whether they are outstanding individuals who have the appropriate insight for their respective posts, while also taking into consideration the criteria for nominating directors and corporate auditors, and are decided by the Board of Directors after deliberation by the Nomination and Compensation Advisory Committee.

### (1) Stance on composition of the Board of Directors and Board of Corporate Auditors

#### a) Board of Directors

The Board of Directors is comprised of the Chair of the Board, outside directors, and directors who also serve as executive officers, in order to have a balanced structure with the expertise and skills necessary to appropriately provide strategic direction and made decisions on important business operations, and the independence necessary to strengthen supervision of management, while also ensuring diversity in terms of professional background, gender, age, etc. Based on the concepts of (1) ensuring timeliness and accuracy in decision-making, (2) ensuring transparency in management, and (3) emphasizing fairness, the Articles of Incorporation stipulate that the Board of Directors must have no more than 14 members, and that the ratio of outside directors be at least one-third of members.

#### b) Board of Corporate Auditors

The Board of Corporate Auditors comprises human resources with expertise and skills in finance and accounting as well as knowledge of the group's business, from the perspective of ensuring the effectiveness of auditing.

### (2) Summary of criteria for nomination, etc.

#### a) Candidates for directors (excluding candidates for outside directors)

Candidates for directors should have knowledge, achievements, experience, and skills as a manager, as well as a company-wide perspective

#### b) Candidates for outside directors

- Candidates for outside directors are expected to contribute to the enhancement of corporate value and the strengthening of supervision, such as providing business suggestions and management support
- Candidates for outside directors must meet separately specified independence criteria for outside directors

#### c) Candidates for corporate auditors

- Candidates for outside corporate auditors are expected to have ability to make appropriate judgments from an independent and objective standpoint in the auditing of the performance of duties, etc.
- Candidates for outside corporate auditors must meet the independence criteria

## [Reference] Independence standards for outside officers

The company has deemed that if none of the attributes in the following items apply, the outside Director or outside Corporate Auditor (or the candidate for outside Director or outside Corporate Auditor) has a high degree of independence from the company, and there are no concerns of conflicts of interest with general shareholders.

- (1) A major shareholder in the company (refers to a shareholder with a voting rights ownership ratio of 10% or more; the same applies below) or an individual who executes business for the shareholder
- (2) An individual who executes business for a company of which the company is a major shareholder
- (3) A business partner of the company for which the company is a major partner (refers to a party that provides products or services to the company for which the average annual transaction amount for the past three fiscal years is over 2% of that business partner's annual gross sales) or an individual who executes business for that company
- (4) A major business partner of the company (refers to a party that the company provides products or services to for which the average annual transaction amount for the past three fiscal years is over 2% of the company's annual gross sales) or an individual who executes business for that company
- (5) An individual who executes business as an employee of a financial institution that is a major lender to the company (refers to a lender for which the loan balance amount is equivalent to over 2% of the company's total assets)
- (6) An individual who obtains over ¥10 million per year in cash or other assets in profit from the company as a specialist, such as a consultant, accountant, or attorney at law, other than officers' compensation (or an individual who belongs to a corporation, etc., that obtains over ¥100 million per year in this matter)
- (7) An individual for which any item in (1) to (6) above has applied within the past three years
- (8) A relation within the second degree of an individual for which any item in (1) to (7) above applies

Note: Even if none of the attributes above apply, in some cases it may be deemed that there is no independence in consideration of matters such as transaction volumes at a group company of the company or a group company of a business partner.

## Procedures for nominations, etc.

The Nomination and Compensation Advisory Committee, comprising a majority of outside directors, has been established as an advisory body to the Board of Directors to ensure fairness and transparency, and is chaired by an outside director.

The Committee deliberates and reports to the Board of Directors on basic policies and criteria for nominating officers and succession planning, etc., based on proposals from the President.

## Dismissal policy and procedures

In the event of an act of misconduct, impropriety, or actions suggesting a breach of trust, or of other reasons that make the member unsuitable to serve as an officer, after deliberation by the Nomination and Compensation Advisory Committee, a decision will be made by the Board of Directors on their dismissal.

## Attendance record at board of Directors and Corporate Auditors, skill matrix

Attendance Record at Board of Directors and Corporate Auditors, Skills (As of June 2023)

| Name                                  | Gender | Age | Gender | Nomination and Compensation Advisory Committee | Chair of Audit Committee                                      | Attendance record (Attendance percentage) (%) |                             |  | Of the experience and background reported by the company, skills that are particularly beneficial |                                |                 |                    |                   |                        |        |  |  |  | Term of office | Reason for Appointment  |
|---------------------------------------|--------|-----|--------|--|---|---|-----------------------------|--|---|--------------------------------|-----------------|--------------------|-------------------|------------------------|--------|--|--|--|----------------|---|
|                                       |        |     |        |  |   | Board of Directors                            | Board of Corporate Auditors | Nomination and Compensation Advisory Committee | Company Management  | Product/Technology Development | Marketing/Sales | Finance/Accounting | Business Activity | Business/HR Management | Others |  |  |  |                |   |
| Saï Haruhiko                          |        | 65  | Male   |  | Board of Directors  | 10/10 (100%)                                  |                             | 5/5 (100%)                                     |   |                                |                 |                    |                   |                        |        |  |  |  | 13 years       | Based on his deep knowledge of finance, accounting and other areas, Mr. Haruhiko has supported the long-term reform of the company's business portfolio, and, acting as President and Representative Director from April 2014, has led the management of the group, including the reorganization of our corporate governance structure and the expansion of the business. He has made an effort to contribute to the enhancement of corporate value. He has acted the role of Chair of the Board of Directors from 2021, and as the Chairman of the board, plays an important role in decision-making on key matters within the oversight of execution. |
| Kito Shirotsugu                       |        | 40  | Male   |  | Board of Managing Executive Officers and Controlling Officers | 10/10 (100%)                                  |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 3 years        | After serving in key positions in corporate planning and overseas business sites of the company, Mr. Takeda was appointed as Head of the External Relations and Engagement Division, a position from which he will continue to lead growth of the business.   |
| Uchida Masahiro                       |        | 43  | Male   |  |   | 10/10 (100%)                                  |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 2 years        | Mr. Masahiro has held key positions in the fields of R&D and production technologies in the company's core Fibers Division, and has contributed to the improvement of the Division's performance. He assumed the post of Representative Director in June 2021 and has played a central role in management as assigned to the President.   |
| Mitsuki Osamu                         |        | 42  | Male   |  |   | 10/10 (100%)                                  |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 2 years        | Mr. Osamu has led key activities in the company's corporate departments, including in finance and accounting, corporate planning, and corporate communication. Since June 2020, he has contributed to the strengthening of the group's financial base and corporate governance in the role of Director.   |
| Tsuda Satoru<br>(Newly appointed)     |        | 40  | Male   |  |   |   |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 6 years        | Mr. Satoru has held key positions in the company's Production Technology Division and core manufacturing sites and drawing on his abundant experience and expertise in the field of production technology, contributes to initiatives aimed at technological innovation.  |
| Takahashi Junji                       |        | 34  | Male   |  |   | 10/10 (100%)                                  |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 5 years        | Leveraging specialized knowledge and wide-ranging insights gained as an academic expert on topics in the field of quality control, Mr. Junji has proactively contributed to our independent oversight structure of the Board of Directors. He appropriately fulfills his role as assigned to him by the company, including those of supervising management through internal decision-making and providing counsel to management, business making and providing counsel to management, including management in areas including technology and R&D.   |
| Sano Takahiro                         |        | 64  | Female |  |   | 10/10 (100%)                                  |                             | 5/5 (100%)                                     |   |                                |                 |                    |                   |                        |        |  |  |  | 4 years        | Leveraging her abundant experience and wide-ranging insights in fields including corporate ethics, compliance, and sustainability, Ms. Sano has made proactive contributions from an independent standpoint at meetings of the Board of Directors. She appropriately fulfills her role as assigned to her by the company, including those of supervising management through internal decision-making and providing counsel to management, including management through the Nomination and Compensation Advisory Committee.  |
| Masuda Haruka                         |        | 31  | Male   |  |   | 10/10 (100%)                                  |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 3 years        | Leveraging specialized knowledge and wide-ranging insights gained as an attorney, Mr. Masuda makes proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills his role as assigned to him by the company, including those of supervising management through internal decision-making and providing counsel to management, including management with the aim of strengthening risk management and governance.  |
| Furuya Takashi                        |        | 45  | Male   |  |   | 10/10 (100%)                                  |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 1 year         | Leveraging operational knowledge and wide-ranging insights gained as a business manager, Mr. Furuya made proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills his role as assigned to him by the company, including those of supervising management through internal decision-making and providing counsel to management, including management in areas including technology and R&D.   |
| Ogino Takao<br>(Newly appointed)      |        | 38  | Female |  |   |   |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 6 years        | In addition to extensive experience and wide-ranging insights as a business manager, Ms. Takao possesses rich-level expertise in the IT and digital fields. The company expects that she will appropriately fulfill her role including those of supervising management through internal decision-making and providing counsel to management.  |
| Tateishi Tadao                        |        | 42  | Male   |  |   | 10/10 (100%)                                  |                             | 75/75 (100%)                                   |   |                                |                 |                    |                   |                        |        |  |  |  | 2 years        | Mr. Tadao has a long involvement in the Accounting and Control Department of the company, possesses considerable knowledge of finance and accounting, and has a deep understanding of the management, business operations of the group.   |
| Yoshida Osamu<br>(Newly appointed)    |        | 41  | Male   |  |   |   |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 6 years        | Mr. Osamu has a long involvement in the field of research and development and, after serving as head of the Research Center for fibers, has contributed to the business activities and to corporate planning, contributing to new business development and global expansion. He possesses abundant experience and a record of performance as a manager in charge of various departments, and has a deep understanding of the management and business operations of the group.   |
| Akiyama Hiroe                         |        | 66  | Male   |  |   | 10/10 (100%)                                  |                             | 75/75 (100%)                                   |   |                                |                 |                    |                   |                        |        |  |  |  | 2 years        | Mr. Hiroe possesses abundant experience in auditing and has served as a corporate auditor at listed companies.  |
| Wakayama Shiroko<br>(Newly appointed) |        | 44  | Male   |  |   |   |                             |  |   |                                |                 |                    |                   |                        |        |  |  |  | 6 years        | Mr. Shiroko possesses abundant experience in auditing as a certified public accountant.   |

\* Click to enlarge the diagram

## Training programs for officers

For our newly appointed directors and corporate auditors, we provide orientation concerning their roles and duties, as they undergo an external training program upon their appointment, in order to acquire the necessary knowledge.

In addition, newly appointed outside directors and outside corporate auditors also attend orientations regarding the company's operations, finances and organization, and more.

They are also encouraged to continue participating in external training programs and lectures to continuously build on their managerial literacy.

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## Officer compensation system

### Basic policy

Toyobo's system of officer compensation is designed as follows, in line with basic policy, within the monetary amount resolved at the Annual General Meeting of Shareholders.

- 1) Provide incentives that lead to Toyobo group's sustained growth and enhance corporate value over the longer term
- 2) Secure highly talented management personnel
- 3) Set determination procedures that are objective and highly transparent

Compensation structure and levels are reviewed based upon the company's business environment, levels of employee salaries, and other companies' levels based upon surveys conducted by specialized external organizations.

### Monetary compensation (including performance-based amounts)

#### (1) Composition of monetary compensation

Monetary compensation for directors (excluding outside directors) is a fixed monthly compensation, comprising the following two components:

- 1) Basic compensation
- 2) Short-term incentive compensation

#### (2) Short-term incentive compensation

- 1) Short-term incentive compensation reflects evaluations of company-wide performance and the performance of department under charge, in accordance with position.
  - Representative Director and Executive Director: company-wide performance only
  - Director: company-wide performance 2; performance of department under charge 1
  - Executive Officer (full-time): company-wide performance 1; performance of department under charge 2
- 2) Individual compensation reflecting company-wide performance and the performance of the department under charge is calculated and is determined by the Board of Directors.
- 3) The major management indicator EBITDA is used as a KPI for company-wide performance. It varies between 0% and 200%, according to the degree of achievement with respect to the target value.
- 4) With regard to specific target values, the Nomination and Compensation Advisory Committee is consulted. Based on its report, the Board of Directors makes decisions.
- 5) Performance of the department under charge is evaluated on a 5-point scale that takes into account the degree of operating income achieved, ROA, EBITDA, and other factors in the department under charge. It varies between 50% and 200%.

### Stock compensation

In order to increase incentives to sustainably enhance corporate value and to promote more value sharing with shareholders, a certain percentage of compensation is granted annually as non-monetary compensation for granting restricted shares (non-performance-based, provided in advance).

### Ratio of compensation

The ratio is designed to allow incentives for enhancement of corporate value to function appropriately. For basic compensation, short-term incentive compensation, and long-term incentive compensation, a ratio of 6:3:1 is set as a guideline (when KPI achievement is 100%).

## Other

- (1) Compensation for outside directors is to be fixed monetary compensation in view of their role and independence.
- (2) Compensation for corporate auditors is to be fixed monetary compensation in accordance with their duties and responsibilities, and is to be decided by discussions with the corporate auditors in view of their duties and responsibilities.
- (3) The Nomination and Compensation Advisory Committee, comprising a majority of outside directors as members, has been established as an advisory body to the Board of Directors to ensure the transparency and objectivity of decisions regarding compensation. The Nomination and Compensation Advisory Committee receives advice from the Board of Directors and deliberates on the system, level, and calculation method of officer compensation, in addition to the targets set for the company-wide performance evaluations forming part of the compensation by position. The Board of Directors makes the final decision on the amount of individual compensation based upon the report from the Nomination and Compensation Advisory Committee.

## Details of officer compensation (FY2023)

\* Including mid-period appointments and resignations

| Position  | Total compensation, etc. | Total compensation by type |                                |   | Number of officers* |
|---|--------------------------|----------------------------|--------------------------------|---|---------------------|
|   |                          | Basic compensation         | Performance-based compensation | Non-monetary compensation (Compensation for granting restricted shares) |                     |
|   | (¥ mn)                   | (¥ mn)                     | (¥ mn)                         | (¥ mn)  |                     |
| Directors (Including outside directors)                   | 407 (50)                 | 275 (50)                   | 101 (—)                        | 31 (—)  | 12 (5)              |
| Corporate Auditors (Including outside corporate auditors) | 70 (18)                  | 70 (18)                    | — (—)                          | — (—)   | 4 (2)               |
| Total (Including outside officers)                        | 478 (68)                 | 345 (68)                   | 101 (—)                        | 31 (—)  | 16 (7)              |

### Review of officer compensation system

In fiscal 2023, the Board of Directors partially revised the officer compensation system based on a study of social trends surrounding executive compensation and appropriate incentives to improve performance. The main points of the review are as follows and were implemented starting in July 2022.

#### (1) Composition of compensation

The guideline for the ratio of base compensation, short-term incentive compensation, and long-term incentive compensation (restricted stock compensation) will be changed as follows.

Pre-change: 7:2:1; Post-change: 6:3:1

#### (2) Composition of short-term incentive compensation

Pre-change: Calculated by multiplying evaluations of company-wide performance and departmental performance.

Post-change: The ratios of company-wide performance and departmental performance reflected in short-term incentive compensation are as follows:

- Representative directors and executive directors: company results only
- Directors: company performance = 2, Performance of the department in charge = 1
- Executive officers (full-time): company performance = 1, Performance of the department in charge = 2

### (3) Performance indicator for short-term incentive compensation

The KPI for company-wide performance will be changed from consolidated operating income to EBITDA\*, linking it to the targets of the 2025 medium-term management plan.

\* Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) is an indicator that indicates a company's profit level.

#### Ratio of compensation



In fiscal 2024, the Board of Directors decided to incorporate sustainability indices into short-term incentives for executive compensation from July 2024 as a means of pursuing perspectives including sustainable growth and Environment, Society, Governance (ESG).

## Evaluating the effectiveness of the board of Directors

In order to further enhance the functions of the Board of Directors, the company carried out an overall analysis and evaluation of the effectiveness of the Board of Directors in fiscal 2023 with the support of an external organization. An outline of this evaluation is as follows.

### Method of analysis and evaluation of effectiveness

- (1) Target: All directors and corporate auditors
- (2) Method: Conducted a survey with approximately 50 questions, and provided the responses directly to an external service provider.
- (3) Analysis and evaluation: The Board of Directors conducted the analysis and evaluation based on reports of aggregate results from the service provider.

### Summary of evaluation results

- (1) Member numbers for the Board of Directors, the ratio of internal and external members, and the Chair's management of meetings procedures were evaluated as generally appropriate.
- (2) It was confirmed that certain results and improvements were achieved as a result of addressing the five issues identified previously [1) strengthened risk management including of QA and of safety and disaster prevention, 2) Initiatives aimed at medium- to long-term themes, 3) Initiatives for succession planning and appointment procedures, 4) Further streamlining of management of meeting procedures, and 5) Strengthening of group governance]. However, some voices viewed the improvements as insufficient.
- (3) The items 2), 3), and 5) above in particular received relatively low evaluations, and were identified as issues to be addressed along with the newly identified issue of reviewing our business portfolio. In addition, the item 1) above remained an issue to be addressed in order to make further improvements through ongoing initiatives.

### Issues and future initiatives

The Board of Directors is working to improve its own effectiveness as a whole through the following initiatives.

#### (1) Risk management including of safety and disaster prevention, and QA

We will further enhance the risk management systems of our group as a whole, by means including supervision of the status of our initiatives for KPIs and materiality targets.

#### (2) Revision of our business portfolio

- We will set this as a priority theme in our annual plans, and will take it up at the beginning and work to enhance discussions.
- We will engage in a review of our business portfolio, with group companies included.



### (3) Strengthening of group governance

- We will receive reports on risk management at group companies and on other topics from the Corporate Business Management Department, and will engage appropriately.
- We will ensure the effectiveness of internal audit functions through means including audit plans from the Internal Audit Department and reports on their outcomes, and will work to strengthen group governance.

### (4) Initiatives for CEO succession planning and appointment procedures

We will further ensure transparency and fairness by means including activity reports from the Nomination and Compensation Advisory Committee.

### (5) Initiatives aimed at other medium- to long-term themes (DX, human capital, environmental action, etc.)

We will set this as a priority theme in our annual plans, and will take it up at the beginning and work to enhance discussions.

## Feature: Outside Director message



Outside Director message in the Integrate Report 2023 (247KB)



## Cross-shareholdings

The company shall periodically review cross-shareholdings from assorted perspectives, such as the impact on improving medium-to long-term corporate value and economic rationality, and sell any stock which is no longer meaningful as is appropriate. On the other hand, the company shall enter into cross-shareholdings with key business partners when judging that the maintenance and strengthening of stable relationships with the business partners will contribute to sustainable growth and enhancement of medium-to long-term corporate value of the company.

The Board of Directors individually reviews cross-shareholdings every year, including future business strategies and operational relationships, and determines whether or not to continue holding these shares.

Also, with regard to the exercise of voting rights in cross-shareholdings, the company deeply considers the status of the business partner and the content of the proposals, and as needed, discusses with the business partner. The company thereby confirms whether these holdings contribute to the sustainable growth and medium-to long-term enhancement of corporate value of the company and its business partner, and makes a comprehensive decision.

Attendance Record at Board of Directors and Corporate Auditors, Skills (As of June 2023)

|   | Outside | Independent | Age | Gender | Nomination and Compensation Advisory Committee | Chair of Each Committee  | Attendance record (attendance percentage) FY2023 |                             |  | Of the experience and background required by the company, skills that are particularly beneficial |                                   |                 |                    |                     |                                       | Term of Office | Reason for Appointment  |  |
|---|---------|-------------|-----|--------|--|--|--|-----------------------------|--|---|-----------------------------------|-----------------|--------------------|---------------------|---------------------------------------|----------------|---|--|
|   |         |             |     |        |  |  | Board of Directors                               | Board of Corporate Auditors | Nomination and Compensation Advisory Committee | Corporate Management  | Production/Technology/Development | Marketing/Sales | Finance/Accounting | Environment/Society | Governance/Risk Management/Compliance |                |   | IT/DX  |
| D<br>i<br>r<br>e<br>c<br>t<br>o<br>r<br>s   |         |             | 66  | Men    | ○  | Board of Directors   | 18/18<br>(100%)                                  |                             | 5/5<br>(100%)                                  | ○   |                                   | ○               | ○                  | ○                   | ○                                     | ○              | 12 years  | Based on his deep knowledge of finance, accounting, and other areas, Mr. Narahara has supported the long-term reform of the company's business portfolio, and, acting as President and Representative Director from April 2014, has led the management of the group, including the reworking of our corporate philosophy structure and the expansion of the film business. He has made an effort to contribute to the enhancement of corporate value. He assumed the post of Chair of the Board & Director in April 2021, and as the Chairman of the board, plays an appropriate role in decision-making on key matters and in the oversight of execution. |
|   |         |             | 60  | Men    |  | Board of Managing Executive Officers and Controlling Supervisors | 18/18<br>(100%)                                  |                             |  | ○   |                                   | ○               | ○                  | ○                   | ○                                     |                | 3 years   | After serving in key positions in corporate planning and overseas business sites of the company, Mr. Takeuchi was appointed as Head of the Functional Membranes and Environment Division, a position from which he set a concrete path toward growth of the business. From April 2021, he undertook formulation of the 2025 medium-term management plan as President and Representative Director, demonstrating strong leadership and steering the sustainable growth of the group.  |
|   |         |             | 63  | Men    |  |  | 18/18<br>(100%)                                  |                             |  | ○   | ○                                 | ○               |                    | ○                   |                                       |                | 2 years   | Mr. Morishige has held key positions in the fields of R&D and production technologies in the company's core Films Division, and has contributed to the expansion of the Division's performance. He assumed the post of Representative Director in June 2021 and has played a central role in management as an assistant to the President.  |
|   |         |             | 62  | Men    |  |  | 18/18<br>(100%)                                  |                             |  | ○   |                                   |                 |                    | ○                   |                                       |                | 3 years   | Mr. Otsuki has held key positions in the company's corporate departments, including in finance and accounting, corporate planning, and corporate communications. Since June 2020, he has contributed to the strengthening of the group's financial base and to corporate governance in the role of Director.   |
|   |         |             | 60  | Men    |  |  |  |                             |  |   | ○                                 |                 |                    | ○                   | ○                                     |                | 0 years   | Mr. Sakai has held key positions in the company's Production Technology Division and core manufacturing sites and, drawing on his abundant experience and expertise in the field of production technology, contributes to initiatives aimed at technological innovation.   |
|   |         | ○           | ○   | 74     | Men  |  |  | 18/18<br>(100%)             |  |   |                                   |                 |                    | ○                   |                                       |                | 5 years   | Leveraging specialized knowledge and wide-ranging insights gained as an academic expert versed in the field of quality control, Mr. Isogai made proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills roles expected of him by the company, including those of supervising management through vital decision-making and providing counsel to management, advising management in areas including technology and R&D.   |
|   |         | ○           | ○   | 64     | Women  | ○  |  | 18/18<br>(100%)             |  | 5/5<br>(100%)   |                                   | ○               |                    | ○                   | ○                                     |                | 4 years   | Leveraging her abundant experience and wide-ranging insights in fields including corporate ethics, compliance, and sustainability, Ms. Sakuragi made proactive statements from an independent standpoint at meetings of the Board of Directors. She appropriately fulfills roles expected of her by the company, including those of supervising management through vital decision-making and providing counsel to management, serving as a member of the Nomination and Compensation Advisory Committee.   |
|   |         | ○           | ○   | 72     | Men  |  |  | 17/18<br>(94%)              |  |   |                                   |                 |                    | ○                   | ○                                     |                | 3 years   | Leveraging specialized knowledge and wide-ranging insights gained as an attorney, Mr. Harima made proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills roles expected of him by the company, including those of supervising management through vital decision-making and providing counsel to management, advising management with the aim of strengthening risk management and governance.  |
|   |         | ○           | ○   | 65     | Men  | ○  |  | 14/14<br>(100%)             |  |   | ○                                 | ○               | ○                  |                     |                                       | ○              | 1 years   | Leveraging specialized knowledge and wide-ranging insights gained as a business manager, Mr. Fukushi made proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills roles expected of him by the company, including those of supervising management through vital decision-making and providing counsel to management, drawing on his high-level expertise in the bio and digital fields to advise management.  |
|   | ○       | ○           | 58  | Women  |  |  |  |                             |  | ○   | ○                                 | ○               |                    |                     | ○                                     | 0 years        | In addition to extensive experience and wide-ranging insights as a business manager, Ms. Takase possesses high-level expertise in the IT and digital fields. The company expects that she will appropriately fulfill roles including those of supervising management through vital decision-making and providing counsel to management.   |  |
| C<br>o<br>r<br>p<br>o<br>r<br>a<br>t<br>e<br><br>A<br>u<br>d<br>i<br>t<br>o<br>r<br>s |         |             | 62  | Men    |  |  | 18/18<br>(100%)                                  | 15/15<br>(100%)             |  | ○   |                                   | ○               |                    | ○                   |                                       | 2 years        | Mr. Tabo has a long involvement in the Accounting and Control Department of the company, possesses considerable knowledge of finance and accounting, and has a deep understanding of the management and business operations of the group.   |  |
|   |         |             | 63  | Men    |  |  |  |                             |  |   | ○                                 | ○               |                    | ○                   |                                       | 0 years        | Mr. Ota has a long involvement in the field of research and development, and, after serving as head of the Research Center, has held key positions in the biochemical business and in corporate planning, contributing to new business development and global expansion. He possesses abundant experience and a record of performance as a manager in charge of various departments, and has a deep understanding of the management and business operations of the group. |  |
|   |         | ○           | ○   | 66     | Men  |  | 18/18<br>(100%)                                  | 15/15<br>(100%)             |  | ○   |                                   | ○               |                    | ○                   | ○                                     | 2 years        | Mr. Irie possesses abundant experience in auditing and has served as a corporate auditor at listed companies.   |  |
|   |         | ○           | ○   | 66     | Men  | Observer   |  |                             |  |   |                                   | ○               |                    | ○                   |                                       | 0 years        | Mr. Shinmen possesses abundant experience in auditing as a certified public accountant.   |  |

# Outside Director message

**We will overcome our immediate issues and difficulties to achieve transformation.  
Look forward to the future of TOYOBO!**

**Hiroshi Fukushi**  
Outside Director



## Helping to overcome high hurdles to transform the business portfolio

Toyobo is currently undertaking the reorganization of our business portfolio, which is our biggest management challenge. It is a process that any long-established company must go through in order to grow sustainably when changes in the times diminish the competitiveness of the businesses it has built, resulting in pressure to transform the portfolio. Amid weakening growth potential at some of the businesses at Toyobo, excessive importance was placed on immediate profits, which resulted in the occurrence of serious fire accidents and quality problems, making it necessary to review the business structure. I commend the group's highly active initiatives under President Takeuchi, first of all for the strengthening of its safety and disaster readiness system that is a foundation of manufacturing as well as the rebuilding of its quality assurance system, while taking further steps to reorganize its business portfolio. Toyobo's Board of Directors has five outside directors with diverse backgrounds including business operation, research and development, and compliance, and engages in active discussions. Among these, I have been in charge of managing a manufacturing company, where I experienced a major business portfolio transformation. Transformation is not easy, but we must achieve it for the sake of the company's future survival and development. I will make the most of my own experience toward Toyobo's transformation, and I will back President Takeuchi and all of the executive officers in their efforts to overcome this high hurdle.

Most recently, our operating cash flow has dropped under the impact of the economic disturbances during the COVID-19 pandemic and soaring raw materials and fuel prices, so we must reclaim our earning power as we advance efforts to earn unwavering trust in our safety, disaster prevention, and quality. Although I think all chemical manufacturers are confronting the same issue, the difficulty of raising prices on product lines that have undergone commoditization is precisely what makes this a critical moment. Toyobo must change its business structure to one that generates cash flow by optimizing product prices and advancing the shift to high value-added products.

## Management aiming for a high position in the long term only makes sense in a harsh business environment

In order for Toyobo to be a company that continues to envision a growth trajectory through contributing to society while responding to changing times, there is enormous significance to our establishment of the TOYOBO PVVs corporate philosophy system and Sustainable Vision 2030. In addition to the major changes currently taking place in the global and business environments, we are also being rushed by a wave of digital transformation (DX). In order to weather high seas like these, it is crucial that everyone aim for a high position from a long-term perspective, and move toward that goal step by step.

In Japan, DX tends to be understood as the introduction of digital technology, but the genuine meaning of DX is the application of digital technology to the transformation of society. In looking at Amazon or Apple, we get a true sense of the power of advanced DX companies. DX has the kind of speed and power in which one equation can answer everything, so industrial and occupational structures change, renewing everything having to do with companies, lifestyles, and work. This kind of transformation has already started everywhere throughout industry, so that both companies and individuals are all under pressure to make a decision and do something about whether to ride this rogue wave or get swamped by it.

In order to realize the TOYOBO PVVs, it will be necessary for Toyobo to review its existing businesses and operations from the ground up and to rebuild the company, and DX will be essential to that effort. Ten years from now, Toyobo's business portfolio will have undergone some enormous changes. Now is the time that management must exercise its leadership to transform Toyobo into a company that will keep growing. As an outside director, I intend to solidly advance that transformation.

# Compliance

| Materiality                    |   |
|--------------------------------|---|
| Related ESG: <b>S</b> <b>G</b> |  |
| Compliance                     |   |

- ↓ Management approach
- ↓ Structure
- ↓ Targets and KPIs
- ↓ Initiatives
- ↓ Education and awareness-raising activities
- ↓ Compliance and risk assessment
- ↓ Anti-corruption initiatives

## Management approach

### Policy and approach

Based upon our corporate philosophy of *Jun-Ri-Soku-Yu* (adhering to reason leads to prosperity), at the core of Toyobo group's compliance activities is the idea of "Do what should be done" and "Don't do what should not be done."

Furthermore, based on the fundamental principles stated in the TOYOBO Group Charter of Corporate Behavior, the group has summarized the rules that employees must follow in the TOYOBO Group Compliance Manual in a specific and easy-to-understand manner and works to promote understanding and widespread awareness of the rules among group employees.

### TOYOBO Group Compliance Manual / TOYOBO Group Employee Conduct Standards (theme excerpts only) (21th edition, October 1, 2022)



1. Contribution to a sustainable society
2. Handling of company secrets
3. Handling of personal information
4. Engaging in fair transactions
5. Appropriate transactions with subcontractors
6. Responsible procurement and logistics
7. Management of export/import cargo and prevention of undeclared exports and imports
8. Rules on security trade control (export management)
9. Handling of gifts and entertainment (prevention of bribery)
10. Handling of political donations, etc.
11. Intellectual property
12. Proper accounting
13. Conclusion of contracts
14. Rules on credit management
15. Timely and appropriate information disclosure

16. Prohibition of insider trading
17. Respect for human rights
18. Ensuring quality and safety
19. Provision of information on products and services
20. Appropriate handling of quality data, etc.
21. Rules on research and development activities
22. Customer service
23. Respect for diversity in the workplace
24. Prevention of harassment
25. Safety and health
26. Appropriate working hours management
27. Business activities taking the global environment into consideration
28. Promotion of social contribution
29. Process safety and disaster prevention
30. Duty of care on overseas assignments and business trips
31. Response to anti-social forces, etc.
32. Ensuring cybersecurity
33. Social rules

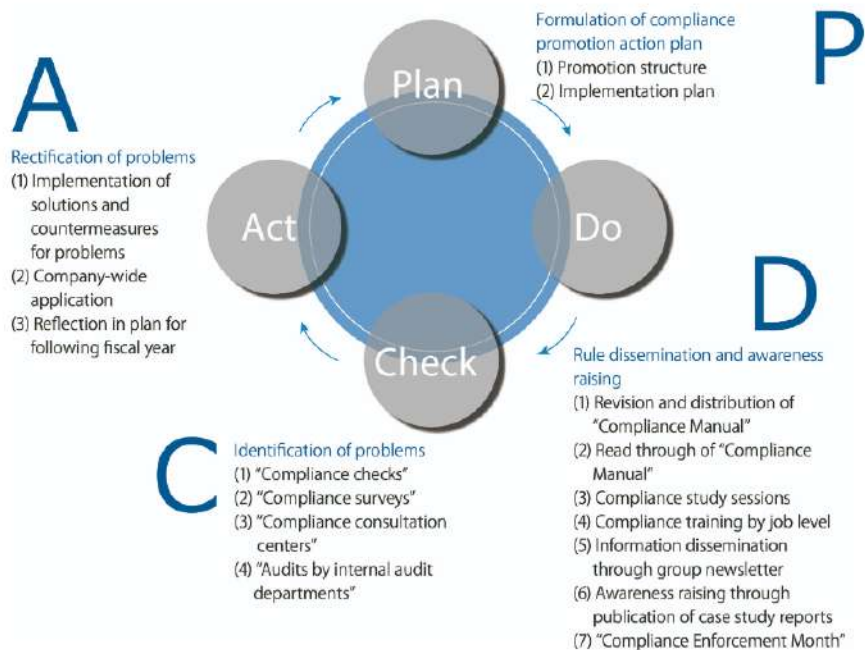
#### **Relevant policies and guidelines, etc.**

- [TOYOBO Group Human Rights Policy](#)
- [Toyobo Group Personal Information Protection Policy](#)
- [Our Anti-Bribery Policy](#)
- [Operation and management of public research funds and efforts to address research misconduct](#)

## Structure

A Compliance Committee is comprised of members from the Board of Managing Executive Officers and Controlling Supervisors. The goal is to promote group-wide compliance from a management perspective. A Compliance Promotion Committee has also been established as a sub-committee, which considers specific initiatives, and the Legal and Compliance Department promotes compliance throughout the group as a whole.

## Compliance promotion cycle



## Targets and KPIs

### Targets

Each and every employee complies with laws, regulations, and rules and acts transparently and appropriately, fostering an ethical corporate environment and culture.

### KPIs and results

| Initiatives                         | Targets   | Results (FY2023)   |
|-------------------------------------|---|--|
| Increase in awareness of compliance | Improvement in compliance questionnaire responses                             | <ul style="list-style-type: none"> <li>- Does the company emphasize compliance? I feel that it does, or by and large I feel that it does: 81% (up 2% YoY)</li> <li>- Awareness of "Compliance Mini Study" I read every issue, or I sometimes read it, or I read those articles that are of interest to me: 78% (roughly the same as in the previous year)</li> </ul> |
|                                     | Expansion of compliance study sessions (Managers) and various other trainings | <ul style="list-style-type: none"> <li>- Compliance study sessions: Held 20 times + video delivered to all employees</li> <li>- Various other trainings: Held 38 times</li> </ul>  |

|  |   |  |
|--|---|--|
| Awareness and use of compliance consultation desks | Improvement in compliance questionnaire responses | - Awareness of compliance consultation desks: 90% (up 3% YoY)<br>- Ease of use of compliance consultation desks Other than "Do not wish to use" : 92% (down 1% YoY)* |
|  | Disclosure of no. of cases handled                | 78 cases handled   |
| No. of serious legal violations                    | 0 violations per year                             | 0 violations   |

\* The questionnaire offered three responses to items: "Want to use", "Do not know; can't say either way", and "Do not wish to use".

## Initiatives

In fiscal 2023, the Compliance Committee convened twice, and the Compliance Promotion Committee convened four times. Working with the theme of "treating an atmosphere of raising compliance awareness," this worked toward enhancing the effectiveness of education, training, and preventive measures.

### Compliance consultation desks

Our group has established various consultation desks shown below as the internal reporting and compliance consultation desks for all employees. These desks receive reports and requests for consultation regarding legal violations, fraudulent acts, violations of competition law, acts of corruption such as bribery and embezzlement, bullying, harassment, and other issues occurring in the workplace, and work toward the early detection, correction, and prevention of these issues. To ensure worry-free use of these consultation desks, we guarantee protection of privacy (including the names of people who seek consultations), ensure that there will be no disadvantage for employees who consult or report, and accept anonymous requests for consultation.

We are making efforts to raise awareness of these consultation desks through means including the distribution of stickers with information on the desks' usage and the publication of monthly mini-studies.

#### Topics for consultation

1. Legal violations and violations of internal regulations and rules
2. Acts that violate the Compliance Manual "Corporate Code of Conduct"
3. Workplace harassment
4. Consultation on other compliance issues that are difficult to judge, etc.

#### Types of compliance consultation desks

1. Internal consultation desk
2. External professional service company consultation desk (corporate ethics hotline)
3. External legal counsel desk
4. Corporate auditor's consultation desk

In fiscal 2023, there were a total of 78 consultations, four of which were made through the external compliance consultation desk. The most frequent breakdown was communication, personal relationships, harassment, followed by Labor relations (attendance, treatment, etc.). Depending on the contents of the consultation, we implemented corrective measures, recommended disciplinary action, provided advice to the consulting parties, and answered their questions.

#### Number of consultations for compliance consultation desks (including internal reporting service)

| FY2019 | FY2020 | FY2021 | FY2022 | FY2023 |
|--------|--------|--------|--------|--------|
| 32     | 35     | 37     | 62     | 78     |

## Details of consultations (FY2023)

| Details of consultations                                 | Incidents |
|--|-----------|
| Communication, personal relations, harassment            | 31        |
| Labor-management relations (attendance, treatment, etc.) | 12        |
| Violations of work rules, etc.                           | 9         |
| Others   | 26        |
| <b>Total</b>   | <b>78</b> |

• [Our Establishment of Complaint Handling and Internal Reporting systems](#)

• [Our Initiatives for preventing harassment](#)

## Education and awareness-raising activities

### Revision and dissemination of compliance manual

Based on the principles declared in the TOYOB0 Group Charter of Corporate Behavior, we created the TOYOB0 Group Compliance Manual, which explains in concrete and easily understood terms the rules that employees should follow.

Every year we revise and distribute the Manual (Japanese and English versions) during Compliance Enforcement Month, while overseas sites create local versions with additional edits. We familiarize all employees with the TOYOB0 Group Charter of Corporate Behavior through readings of the Manual during training at workplaces.

Items covered in the Compliance Manual include prevention of bribery, unfair competition, illegal bidding, falsification of financial records, and other corrupt acts, along with health and safety and proper management of working hours.

### Awareness-raising activities during Compliance Enforcement Month

In fiscal 2023, we distributed video messages from the President concerning compliance.

We also use posters and digital signage to communicate information about the consultation desk for compliance.

### Holding compliance study sessions (training)

In fiscal 2023, we held 20 compliance study sessions (training) targeting management-level personnel (general managers, managers, section chiefs, etc.) from all Toyobo business sites including headquarters, branches, production centers, and at affiliate companies. We also held them face to face in conjunction with remotely as a COVID-19 measure. With members of the Compliance Department, HR and Labor Department, and IT Department serving as instructors, a total of 1,175 employees participated in these sessions, which covered topics such as management's role in preventing misconduct, preventing harassment, and cyber security. We have also created a video of the study sessions (training) edited for general employees, and distributed this to group companies.

### Various other trainings

As part of level-specific and occupation-specific training for managers, new employees, sales staff, and personnel being sent on overseas assignments, compliance education is provided. In fiscal 2023, a total of 38 various training sessions were held.

Also, we have implemented discussion-type training activities for managers, focusing on topics that are of particular importance to the company, such as safety, quality, and compliance, from fiscal 2022 onwards.



Seminar on gift giving and entertaining



## Issuing case study reports

A “Compliance Mini Study,” which educates employees about cases of violation in a case study format, is issued monthly, and heads-up reports are issued irregularly based on cases that occurred within Toyobo group.

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## Compliance and risk assessment

During Compliance Enforcement Month held each year, we hold an anonymous questionnaire. This includes a survey on employee awareness of compliance including of ethics, safety, quality, confidential corporate information, harassment, the organizational culture, and use of the consultation desks. Through this, we confirm the status of compliance risks in the workplace.

In fiscal 2023, we received 6,566 responses from employees, and results of the questionnaire are disclosed to all employees. Details on individual problems and issues are shared with related departments in a form that does not identify the respondent—this proves useful in improving the situation and preventing problems.

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## Anti-corruption initiatives

Our group positions the prevention of corrupt practices, including coercion, bribery, unfair bidding, unfair competition, and falsification of financial records, as a priority issue in compliance. Regarding bribery in particular, along with policies and regulations we have also set guidelines that detail specific rules covering matters such as judgments and monetary standards when giving gifts and entertainment. We work to make these known through inclusion in the Compliance Manual and explanations given during meetings and training. Every year, we make a report to the Board of Directors on the status of our corruption prevention initiatives and other compliance activities to enable effective supervision. To build fair and sound business relationships with partners, we have put in place rules for the receipt of gifts or entertainment. These include a requirement to refuse money or the equivalent, or gifts and entertainment that exceed socially accepted norms, and we have introduced a reporting system for the receipt of gifts and entertainment.

In fiscal 2022, as part of our company-wide risk management activities, we implemented a legal compliance risk assessment. Based on a variety of risk scenarios, we performed assessment in terms of the two axes of the severity of impact and the likelihood of a risk occurring. The results obtained confirmed that the level of corruption risk, including bribery, was relatively low across all Sales and Marketing Divisions.

In fiscal 2023, there were no legal violations, administrative dispositions, employee dismissals, fines, surcharges, or other outcomes related to acts of corruption.

### Related Pages

- [Toyobo Group Anti-Bribery Policy](#)

# Risk Management

| Materiality                |   |
|----------------------------|---|
| Related ESG : <b>E S G</b> |  |
| Risk Management            |   |

↓ Management approach   ↓ Data security, privacy   ↓ Business continuity plan (BCP)

## Management approach

### Policy and approach

As well as establishing a "Risk Management Basic Policy" that outlines our fundamental stance on risk management activities, Toyobo group is identifying various types of risk that could pose a threat across the entire range of our business activities, and are managing risk appropriately according to the characteristics of each risk. In an emergency, we immediately set up a task force under the instruction of the relevant corporate officer, and bring the crisis under control through a swift response. By putting these systems in place and conducting the initiatives, we work hard to earn the trust of our customers, the local community, and our shareholders and other stakeholders.

#### < Basic policy on business risk >

1. Toyobo group has a system for identifying the location of risks and the size of their impact (visualization)
2. Allocate resources appropriately to avoid or reduce identified risks
3. We will deepen and upgrade our activities by continuing to run PDCA
4. Enhance sensitivity and responsiveness to risks by each individual through information sharing, training, etc (eliminate ignorance)
5. All employees participate in risk management activities by personalizing them

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## Business risks

The main risks recognized that could have a material impact on Toyobo group's operating results and financial position are as listed below. The list does not include all the risks related to Toyobo group.

Forward-looking statements were determined by the group as of fiscal 2023-end.

### < Incurred or highly probable risks >

- (1) Occurrence of disasters, accidents, and infections
- (2) Further worsening of political and economic situations
- (3) Inappropriate behavior or similar in details of third-party certification registration

### < Medium- to long-term risks >

- (4) Purchase of raw materials
- (5) Product defects
- (6) Securing of human resources
- (7) Climate change
- (8) Environmental burden
- (9) Information security
- (10) Laws, regulations and compliance
- (11) Overseas business activities
- (12) Litigation

### < Financial risks >

- (13) Large forex movement
- (14) Large rise in interest rates
- (15) Sharp drop in share prices
- (16) Impairment loss of fixed assets

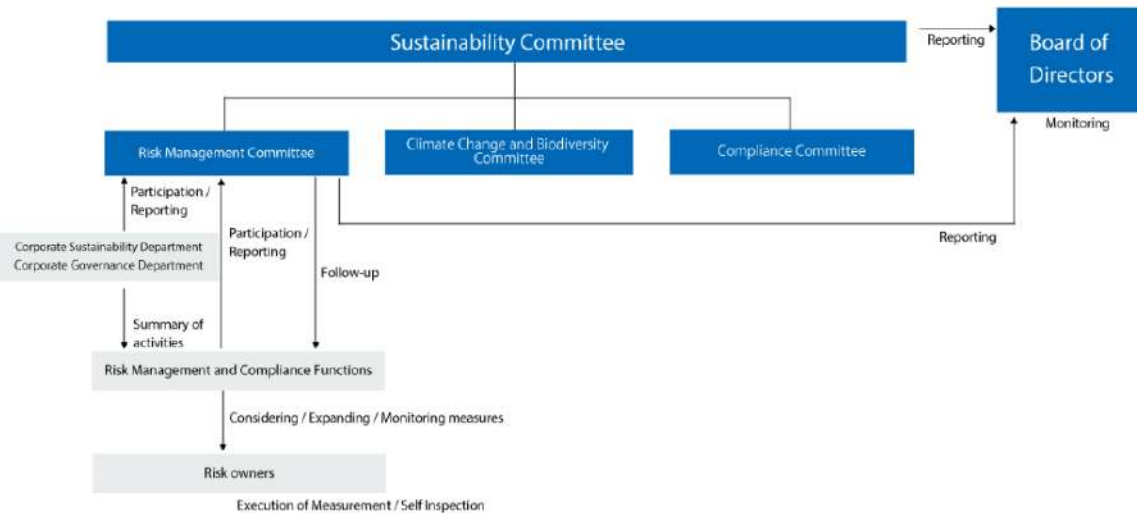
- [Annual Financial Report and the Business risks](#)

## Structure

On April 1, 2021, Toyobo group established a Risk Management Committee headed by the President for centralized management of risks throughout the group. The committee comprises members of the Board of Corporate Executive Officers and Controlling Supervisors as well as members nominated by the chair, and in fiscal 2023, it convened four times.

This Risk Management Committee brings together risk management activities (identification, analysis, evaluation, and response), as well as formulating risk management policies for the group as a whole. It is working to strengthen our risk management structure by aiming to build effective and sustainable organizations and approaches.

### Management structures and processes



## Initiatives

As part of our management policy, we seek to be a company that is able to grow sustainably by shifting from the survival-based thinking of the past to a sustainable growth orientation. We establish self-directed management activities appropriate to business areas and roles, assess company-wide risks and work toward their prevention and early detection, and, united as a group, will build a system to advance measures for preventing recurrence of risks.

As a starting point for these activities, we conducted an assessment of company-wide risks. We identified serious risks from the results of evaluations in terms of the two axes of severity of impact and likelihood of occurrence, and monitor these risks regularly.

In FY2023, we surveyed qualitative and quantitative information concerning serious risks at all of our group companies, confirming that those risks were the same as the serious risks that we identified in FY2022 for Toyobo group. We also surveyed serious risks specific to some group companies. Any detected items that are common across the group and that require attention are reported to the Risk Management Committee, and group-wide risk reduction activities are undertaken.

The Risk Management Committee also confirmed measures for the reduction of serious risks and instructed group companies to deploy these.

## Data security, privacy

| Materiality                    |   |
|--------------------------------|---|
| Related ESG: <b>S</b> <b>G</b> |  |
| Digital transformation         |   |

### Policy and approach

Today, as significance of information increasingly grows, how a company utilizes necessary information, advances development of products and technologies, and develops businesses in line with the times is a crucial factor in the company's survival.

The improper management of information can also have severe repercussions to a company from legal and social standpoints. As stated in our TOYOBO Group Charter of Corporate Behavior, our group must properly manage information and prevent problems involving information security from occurring if we are to contribute to society and remain a company that earns people's trust.

Restated, it is necessary that every one of our officers and employees recognizes the importance of information security and the information assets that are the key to corporate survival, and, while effectively utilizing our information assets throughout the organization, maintains and secures the confidentiality, integrity, and availability of those information assets. Based on this thinking, our group has declared our basic policies as follows:

#### < Information security policy (theme excerpts only) >

- 1. Management system  
We will establish an information security management system with responsible executives placed at top, and will strive for proper management in line with the importance of and risks to information.
- 2. Legal compliance and internal regulations  
We will establish internal rules in accordance with information security-related laws and ordinances, countries' national guidelines, and other social norms, and will take strict action against violators of these rules.
- 3. Education and training  
We will conduct education and training for our employees on an ongoing basis to ensure that information assets are used properly, and will work to enforce compliance with rules.
- 4. Operation of information systems  
We will enact appropriate measures and endeavor to operate information systems stably to prevent unauthorized intrusion and the leak, falsification, loss, theft, destruction, obstruction of use, etc. of information assets.
- 5. Handling of incidents  
In the event of a problem involving information security, we will enact measures to minimize the damage, promptly investigate the cause, and strive to prevent recurrence.

## Structure

Our group has established the TOYOBO-CSIRT, led by a CISO appointed by top management, as an organization to promote information security measures and activities. TOYOBO-CSIRT assesses the status of information security across the company, formulates basic policies, maintains management systems, and implements and supervises specific measures.

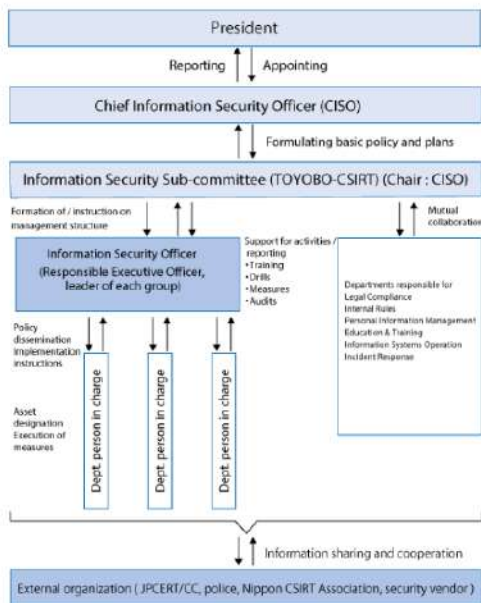
To advance measures based on the decisions of TOYOBO-CSIRT, we have established a front-line operations team. We also convene TOYOBO-CSIRT on a regular basis to evaluate risk countermeasures, each time also reporting on activities related to information security. By expanding the activities of TOYOBO-CSIRT throughout our entire group, we will work to instill understanding of information security and enforce the protection of information assets, creating a state across the group in which data, security, and privacy are secured and trusted.

Our IT and DX Planning Department, which has acquired ISO 27001\* certification, undergoes a yearly external audit based on ISO 27001 to confirm proper operation of information security management. The Department conducts on-duty management at five business sites of the company (the head office, Research Center, Tsuruga Research and Production Center, Iwakuni Production Center, Inuyama Plant: 50% of all business sites), and also performs comprehensive management of other business sites through the Department's management system.

\* An international standard for information security management systems

### Toyobo group information security management structure

We assign a person responsible for information security to each department and built a company-wide information management system to ensure the required information security level.



## Targets and KPIs

### < Targets >

Toyobo group establishes a structure to ensure cyber security as well as deepening employee understanding of information security and thoroughly ensuring protection of information.

## < KPIs and results >

| Initiatives   | KPIs  | Targets (FY2023)                    | Results (FY2023)   |
|---|---|-------------------------------------|--|
| <ul style="list-style-type: none"> <li>● Ensure cyber security</li> <li>● Protect confidential corporate information, personal information, and customer information</li> </ul> | 1. No. of times information security education provided <sup>1</sup>        | 1. 22 times per year                | 1. 51 times  |
|   | 2. No. of incidents (information leaks, service outages, etc.) <sup>1</sup> | 2. 0 incidents per year             | 2. 0 incidents   |
|   | 3. Implementation of information security measures <sup>2</sup>             | 3. Disclosure of promotion contents | 3. Activities being promoted, with the Cyber Security Committee playing a central role<br>( <a href="#">Share on the company website</a> ) |

1 Scope is TOYOBO CO., LTD., TOYOBO STC CO., LTD., and TOYOBO INFORMATION SYSTEM CREATE CO., LTD.

2 Scope is consolidated subsidiaries (determined while monitoring situation)

Specific measures aimed at consolidated subsidiaries

- Application of Information Security Policy
- Roll out of measures to strengthen IT/OT

## Initiatives

### Protection of personal information

Awareness of the protection of personal information is increasing worldwide. Toyobo group is revising our internal regulations to ensure handling of personal information in compliance with Japan's Amendments to the Act on the Protection of Personal Information and China's Personal Information Protection Law (PIPL).

We will continue to strengthen our systems for protection of the personal information of customers, our business associates, shareholders, and employees.

- [Personal Information Protection Policy](#)

### Promotion of digitalization

Digitalization is advancing rapidly with the development of IT. Amid this change, Toyobo group is advancing the construction of an IT system infrastructure that encompasses the entire value chain and is tackling the transformation of our business style and the creation of new solutions, making full use of digital technologies. By doing so, we seek to not only improve the efficiency of work but also strengthen our provision of value to society and to customers.

We have promoted the digitalization of business by actively incorporating IT in our operations, including streamlining sales activities through IT tools, using IT to enhance manufacturing control, and enhancing the efficiency of intellectual property management through AI.

In April 2020, we established a Digital Strategy Department as a dedicated department to advance such activities on a company-wide basis. In April 2023, we integrated systems subsidiary Toyobo Information System Create Co., Ltd. with this department to create the IT and DX Planning Department. This established a system that is capable of quickly responding to changes in the business environment, wielding digital technology as a competitive advantage. In accordance with our reorganized road map to achieve our vision for 2030, we will strengthen the group's internal IT system infrastructure and advance digital transformation.

The IT and DX Planning Department has become a "bridge" connecting digital and business, and has begun initiatives to implement organizational and business transformation across the entire company and across its businesses. All of our group companies will cooperate to increase the scope and degree of utilization of digitalization.

#### Status of major digitalization measures

- Conducted company-wide cognitive activities for in-house DX
- Planned and implemented the migration of legacy system adapted to DX
- Developed DX human resources and strengthened promotion structure

## Education and awareness-raising activities

As a part of our education and awareness-raising activities, we deliver the "Cyber Security Communication" every month to all employees at TOYOBO CO., LTD., TOYOBO MC Corporation, and TOYOBO STC CO., LTD. We also conduct testing of security comprehension twice a year to let employees self-check and reflect on their understanding of our education and awareness-raising activities.

In conjunction with Compliance Enhancement Month in FY2023, we conducted training for managers and disseminated information at all workplaces on the theme of information security, and conducted video-based education for all employees.

## Information security measures

Cyber attacks are intensifying year by year, often targeting overseas sites and group companies. In response, we are working to raise the information security measures of our domestic and overseas affiliates to the same level as that of our headquarters, and to strengthen information security across the group. Specific measures include support for communication and improvement of policies and regulations, support for the introduction of education for employees and managers, implementation of targeted email attack drills, deployment and inspection of IT reinforcement measures, and continuous strengthening of our contact system for security and incident response. We conduct biannual targeted email attack drills, varying the level of difficulty and subject matter each time, for all employees at TOYOBO CO., LTD., TOYOBO MC Corporation, TOYOBO TEXTILE CO.,LTD., and TOYOBO STC CO., LTD. To ensure the safety of customer information and our internal information, including confidential information, we continually assess new threats and take appropriate countermeasures, including strengthened monitoring of both IT and OT\*, patching of vulnerabilities, and prevention of unauthorized intrusions.

\* IT (Information Technology), OT (Operational Technology)

## Protection of information in outsourcing

When outsourcing information assets containing confidential information, the company has established outsourcing management rules for the following procedures: (1) evaluation and contracting of outsourcing partners; (2) monitoring of operations after the contract has been concluded; and (3) handling of information assets after the contract has been terminated.

When newly implementing operations to be outsourced (hereinafter referred to as "specified operations"), the department outsourcing the specified operations evaluates whether or not the candidate companies conform to the "outsourcer evaluation criteria" in accordance with these rules. After the selection, the department submits the 'outsourcer evaluation results' to the head of the information security department for approval. In addition, it is also stipulated that the implementation status of specified operations is to be regularly evaluated by the head of the information security department.

The "outsourcer evaluation criteria" are clearly stated in the "Information Security Policy".

## Initiative participation

Under the idea that we must address cyber attacks not only in our group companies and supply chains but across society as a whole, we engage in active information sharing in cooperation with the JPCERT Coordination Center and the Nippon CSIRT Association.

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## Business continuity plan (BCP)

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### Policy and approach

Toyobo group has drawn up a BCP focused on combining both "fulfillment of our responsibility to supply products as a manufacturer" and "coexistence with the global environment and society," and we make continual improvements. The BCP clarifies the chronological sequence of the roles and functions of each department from when a crisis occurs, through to its resolution. It also contains specific details of preparations during normal times.



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## Structure

Our Risk Management Committee, chaired by the President, assesses and confirms serious risks facing our group and, in the event of an emergency, immediately establishes a task force under the direction of the responsible executive officer to swiftly contain the crisis through swift response.

- [Sustainability Committee](#)

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## Initiatives

### Response to COVID-19

In addressing infectious diseases, our group places the highest priority on the safety and well-being of our employees and their families and makes the protection of society and the company our primary goal, under the conviction that doing so leads to business continuity.

Compared to the turmoil at the beginning of 2020, response methods and directions have become standardized to a certain extent, and we have made agile and flexible action our policy for responding to emerging infectious diseases.

So that the experience gained from our responses can be applied to future emergencies other than emerging infectious diseases, we have established a system to enable such response.

Moreover, through the activities of the Risk Management Committee, we will enhance our resilience with respect to crises and strengthen the continuity of our business.

#### < Ensuring employee safety >

- Implemented robust infection prevention and control measures

#### < Maintaining continuity of plants and production activities >

- Operation under BCP procedures
- Flexible inventory and production adjustments

### Response to natural disasters, etc.

In recent years, various areas have experienced significant damage from earthquakes, typhoons and sudden localized rainstorms. We have gained knowledge in the process of responding to these events, and aim to realize even more stable business continuity.

Each of our main business sites have formulated a BCP, which is reviewed at irregular intervals. We recognize that a pressing issue is a company-wide BCP review in light of the recent increasing complexity and diversification of risks.

In terms of our emergency response, we have established an emergency response process in "Risk Management and Disaster Prevention, etc.," a company-wide regulation, as well as setting out the systems for verifying damage and communication and the people with overall command, and structures and roles for carrying out recovery work. We have also established work procedures for recovery and the order of priority for recovery work after a disaster. In addition, we have introduced a safety confirmation system for employees and their families.

Buildings at our plants and business sites comply with the Act on Promotion of Seismic Retrofitting of Buildings. We also check hazard maps for the locations of our production plants, and each business site has formulated response procedures for the disaster risks (flooding, landslides, etc.). As part of our BCP, we strive to identify and manage risk throughout the supply chain. For procurement, we are looking to procure raw materials from multiple countries and regions, and for logistics, we are establishing alternative transportation means and routes in collaboration with logistics operators.

# Tax Affairs Policy

## Toyobo Group's Tax Policy

The Toyobo Group (hereafter the Group) is committed to contributing to society by providing solutions needed by people and the earth while trying to improve corporate values of the Group in a sustainable manner, based on the corporate philosophy of Jun-Ri-Soku-Yu (adhering to reason leads to prosperity).

The Group is engaged in business activities in various countries and regions around the world. Therefore, the Group has a basic policy to respect the taxation laws of all the international tax jurisdictions it operates in, as well as international taxation rules, and to pay taxes properly. At the same time, it will contribute to the development of those countries and regions to fulfill its social responsibilities.

## Compliance

The Group properly files corporate tax returns and pays taxes due, observing taxation laws applied in the countries/regions where it is engaged in business, and international taxation rules. Moreover, the Group uses its Toyobo Group Compliance Manual to maintain and enhance tax compliance by heightening awareness of compliance among its employees.

## Governance

The Group is committed to establishing an effective tax governance system by appointing the CFO of Toyobo Co. Ltd., as the leader of the task, with Toyobo's Accounting and Control Department sharing information with the accounting division of each Group company. If any tax issue arises, the accounting division is required to report it to the Accounting and Control Department of Toyobo and if necessary, the department will report it to the Board of Directors.

When improvement is required, Toyobo's Accounting and Control Department will monitor such efforts and report the result to the President, the CFO, Corporate Auditors and other parties concerned.

## Tax Planning

The Group undertakes legitimate and proper tax planning to improve cash flow in its business operations, but it is implemented in compliance with related laws and regulations and not for the purpose of avoiding tax excessively.

## Managing Tax Risk

If its tax position is uncertain, the Group endeavors to minimize tax risks by seeking the advice of qualified external experts and consulting with the tax authorities in advance.

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## Transfer Pricing

In transactions with foreign affiliated parties, the Group observes the OECD Transfer Pricing Guidelines; establishes prices in accordance with the arm's length principle and transfer pricing taxation in each country; and distributes income appropriately among the concerned parties. The Group also prepares proper transfer pricing documentation based on transfer pricing taxation in each country.

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## Relationship with Taxation Authorities

The Group endeavors to build and maintain healthy and amicable relationships with the taxation authorities by responding to requests from them in good faith.

# [ESG Performance Data]

## ESG Performance Data

### Environment

☑: Assured by an independent assurance provider

| Greenhouse gas (GHG) emissions from                    |        | Scope*                    | Unit                                | 2019   | 2020   | 2021   | 2022   | 2023    |
|--|--------|---------------------------|-------------------------------------|--------|--------|--------|--------|---------|
| Scope1, Scope2   | Scope1 | TOYOBO CO., LTD.          | Thousand tonnes-CO <sub>2</sub>     | 708    | 689    | 767    | 752    | 750     |
|  |        | Group companies in Japan☐ |                                     | 136    | 131    | 77     | 81     | 74      |
|  |        | Japan                     |                                     | 844    | 820    | 844    | 833    | 824     |
|  |        | Overseas                  |                                     | 60     | 54     | 58     | 67     | 69      |
|  |        | Global                    |                                     | 904    | 873    | 902    | 900    | ☑ 894   |
|  | Scope1 | TOYOBO CO., LTD.          |                                     | 591    | 588    | 646    | 641    | 638     |
|  |        | Group companies in Japan☐ |                                     | 99     | 90     | 55     | 59     | 54      |
|  |        | Japan                     |                                     | 690    | 678    | 702    | 700    | 692     |
|  |        | Overseas                  |                                     | 18     | 21     | 16     | 19     | 20      |
|  |        | Global                    |                                     | 709    | 699    | 718    | 720    | ☑ 712   |
|  | Scope2 | TOYOBO CO., LTD.          |                                     | 117    | 101    | 120    | 113    | 112     |
|  |        | Group companies in Japan☐ |                                     | 37     | 40     | 22     | 22     | 20      |
|  |        | Japan                     |                                     | 154    | 141    | 142    | 135    | 132     |
|  |        | Overseas                  |                                     | 42     | 33     | 41     | 49     | 49      |
|  |        | Global                    |                                     | 196    | 174    | 183    | 183    | ☑ 182   |
| GHG emissions reduction rate (base: FY2014) <b>KPI</b> |        | Global                    | %                                   | 26     | 28     | 26     | 26     | 26      |
| GHG emissions reduction rate (base: FY2021)            |        | Global                    | %                                   | —      | —      | —      | 0.2    | 0.9     |
| GHG emissions intensity per unit of sales              |        | Global                    | Tonnes-CO <sub>2</sub> /million yen | 2.7    | 2.6    | 2.7    | 2.4    | 2.2     |
| Energy consumption                                     |        | Global                    | TJ                                  | 12,221 | 11,942 | 13,166 | 13,216 | 13,048  |
|  |        |                           | GWh                                 | —      | —      | —      | —      | ☑ 2,937 |

(FY)

| Scope1                           |                  | Scope*           | Unit                            | 2019  | 2020  | 2021  | 2022  | 2023  |
|----------------------------------|------------------|------------------|---------------------------------|-------|-------|-------|-------|-------|
| Energy-related GHG emissions     | CO <sub>2</sub>  | Global           | Thousand tonnes-CO <sub>2</sub> | 699.7 | 692.5 | 710.3 | 712.5 | 706.9 |
| Non energy-related GHG emissions | CO <sub>2</sub>  | TOYOBO CO., LTD. |                                 | 7.7   | 5.8   | 6.3   | 6.1   | 3.2   |
|                                  | N <sub>2</sub> O |                  |                                 | 1.1   | 1.0   | 1.1   | 1.2   | 1.2   |
|                                  | HFC              |                  |                                 | 0.4   | 0.1   | 0.4   | 0.7   | 0.5   |
|                                  | PFC              |                  |                                 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
|                                  | CH <sub>4</sub>  |                  |                                 | 0.1   | 0.1   | 0.2   | 0.2   | 0.2   |
|                                  | SF <sub>6</sub>  |                  |                                 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| NF <sub>3</sub>                  | —                | —                |                                 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(FY)

| GHG emissions throughout the value chain  |   | Scope*           | Unit                            | 2019 | 2020  | 2021  | 2022  | 2023    |
|---|---|------------------|---------------------------------|------|-------|-------|-------|---------|
| Scope3  | 1. Purchased goods and services<br>2. Capital goods<br>3. Fuel- and energy-related activities(not included in Scope 1 or Scope 2)<br>4. Upstream transportation and distribution<br>5. Waste generated in operations<br>6. Business travel<br>7. Employee commuting<br>8. Upstream leased assets<br>9. Downstream transportation and distribution<br>10. Processing of sold products<br>11. Use of sold products<br>12. End-of-life treatment of sold products<br>13. Downstream leased assets<br>14. Franchises<br>15. Investments | —                | Thousand tonnes-CO <sub>2</sub> | —**  | —**   | 2,714 | 3,415 | 5,290   |
|   |   | Global           |                                 |      |       | 1,028 | 1,707 | 2,055   |
|   |   |                  |                                 |      |       | 104   | 115   | 55      |
|   |   |                  |                                 |      |       | 54    | 115   | ☑ 113   |
|   |   |                  |                                 |      |       | 55    | 52    | 50      |
|   |   |                  |                                 |      |       | 35    | 49    | 53      |
|   |   |                  |                                 |      |       | 1     | 2     | 7       |
|   |   |                  |                                 |      |       | 5     | 5     | 6       |
|   |   |                  |                                 |      |       | —**   | —**   | —**     |
|   |   |                  |                                 |      |       | —**   | —**   | —**     |
|   |   |                  |                                 |      |       | —**   | —**   | —**     |
|   |   |                  |                                 |      |       | 1,288 | 1,209 | ☑ 2,745 |
|   |   |                  |                                 |      |       | 143   | 161   | 207     |
|   |   |                  |                                 |      |       | —**   | —**   | —**     |
|   |   |                  |                                 |      |       | —**   | —**   | —**     |
| —**   | —**   |                  | —**                             |      |       |       |       |         |
| Ratio of reduction in CO <sub>2</sub> emissions per unit of transportation in relation to logistics (year on year) <b>KPI</b> |   | TOYOBO CO., LTD. | %                               | —    | △ 0.6 | △ 0.6 | △ 0.5 | △ 5.3   |

\*\* Data from fiscal 2018 through fiscal 2020 are not publicly available due to a revision of the calculation method since fiscal 2021.

3 changed the calculation method from FY2021 (see IDEAv2.3 information).

8, 13, 14 are not applicable to the company.

9, the emissions up to the shipping destination are included in 4. Due to the varying processing conditions of the products at the destination, the transportation after the destination is excluded from the calculation as it is not possible to make a reasonable calculation.

10The downstream of the product destination has a large number of potential uses and it is not possible to determine all GHG profiles, so a reasonable calculation is not possible. Therefore, a reasonable calculation is not possible and is not disclosed.

12, the calculation method has been established and the calculation is carried out retrospectively to 2020.

15 is not disclosed due to very low emissions.

(FY)

| Waste                      | Scope*    | Unit            | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------|-----------|-----------------|------|------|------|------|------|
| Amount of waste generation | Japan     | Thousand tonnes | 108  | 99   | 110  | 109  | 106  |
|                            | Overseas  |                 | 4    | 6    | 6    | 11   | 16   |
|                            | Global    |                 | 113  | 105  | 116  | 120  | 122  |
| Amount of waste emission   | Japan     |                 | 99   | 93   | 104  | 103  | 102  |
|                            | Overseas  |                 | 4    | 6    | 6    | 11   | 16   |
|                            | Global*** |                 | 103  | 99   | 109  | 114  | 118  |
| Amount recycled externally | Japan     |                 | 93   | 85   | 99   | 98   | 97   |
|                            | Overseas  |                 | 3    | 5    | 6    | 11   | 16   |
|                            | Global    |                 | 96   | 90   | 104  | 109  | 112  |
| Landfill                   | Japan     | 0.6             | 0.5  | 0.3  | 0.2  | 0.4  |      |
|                            | Overseas  | 0.0             | 0.9  | 0.2  | 0.2  | 0.2  |      |
|                            | Global    | 0.6             | 1.4  | 0.5  | 0.5  | 0.6  |      |
| Landfill rate <b>KPI</b>   | Japan     | %               | 0.6  | 0.5  | 0.2  | 0.2  | 0.4  |
|                            | Overseas  | 0.0             | 14.6 | 3.4  | 2.2  | 1.5  |      |
|                            | Global    | 0.6             | 1.3  | 0.4  | 0.4  | 0.5  |      |

\*\*\* Excluding the amount of construction waste from affiliated companies

(FY)

| Water intake       | Scope*   | Unit                    | 2019   | 2020   | 2021   | 2022   | 2023   |
|--------------------|----------|-------------------------|--------|--------|--------|--------|--------|
| Total water intake | Japan    | Thousand m <sup>3</sup> | 86,406 | 89,139 | 83,411 | 84,494 | 84,714 |
|                    | Overseas |                         | 1,162  | 1,410  | 1,061  | 1,430  | 1,482  |
|                    | Global   |                         | 87,569 | 90,549 | 84,472 | 85,924 | 86,197 |
| Tap water          | Japan    |                         | 427    | 422    | 439    | 452    | 442    |
|                    | Overseas |                         | —      | 141    | 120    | 170    | 509    |
|                    | Global   |                         | —      | 563    | 559    | 622    | 951    |
| Groundwater        | Japan    |                         | 31,376 | 32,504 | 28,783 | 29,708 | 28,841 |
|                    | Overseas |                         | —      | 669    | 450    | 565    | 684    |
|                    | Global   |                         | —      | 33,173 | 29,233 | 30,273 | 29,526 |
| Industrial water   | Japan    |                         | 2,422  | 2,564  | 2,551  | 2,700  | 2,894  |
|                    | Overseas |                         | —      | 546    | 452    | 639    | 289    |
|                    | Global   |                         | —      | 3,110  | 3,003  | 3,339  | 3,183  |
| Seawater           | Japan    |                         | 0      | 0      | 0      | 0      | 0      |
|                    | Overseas |                         | —      | 6      | 0      | 0      | 0      |
|                    | Global   |                         | —      | 6      | 0      | 0      | 0      |
| River water        | Japan    |                         | 52,181 | 53,650 | 51,638 | 51,634 | 52,537 |
|                    | Overseas |                         | —      | 45     | 45     | 0      | 0      |
|                    | Global   |                         | —      | 53,695 | 51,683 | 51,634 | 52,537 |
| Other              | Japan    |                         | 0      | 0      | 0      | 0      | 0      |
|                    | Overseas |                         | —      | 46     | 38     | 56     | 0      |
|                    | Global   |                         | —      | 46     | 38     | 56     | 0      |
| Recycled water     | Japan    | 60,924                  | 66,268 | 59,182 | 57,527 | 53,440 |        |
|                    | Overseas | —                       | 0      | 0      | 0      | 46     |        |
|                    | Global   | —                       | 66,268 | 59,182 | 57,527 | 53,486 |        |

(FY)

| Water discharge       | Scope*   | Unit                    | 2019   | 2020   | 2021   | 2022   | 2023   |
|-----------------------|----------|-------------------------|--------|--------|--------|--------|--------|
| Total water discharge | Japan    | Thousand m <sup>3</sup> | 82,775 | 84,858 | 80,267 | 82,611 | 81,885 |
|                       | Overseas |                         | 1,055  | 892    | 636    | 960    | 1,024  |
|                       | Global   |                         | 83,830 | 85,750 | 80,904 | 83,571 | 82,909 |
| Sewage system         | Japan    |                         | 355    | 296    | 324    | 377    | 164    |
|                       | Overseas |                         | 154    | 67     | 76     | 167    | 580    |
|                       | Global   |                         | 509    | 363    | 400    | 544    | 744    |
| Freshwater            | Japan    |                         | 36,853 | 36,452 | 35,473 | 35,968 | 34,132 |
|                       | Overseas |                         | 901    | 773    | 519    | 734    | 440    |
|                       | Global   |                         | 37,754 | 37,225 | 35,992 | 36,702 | 34,572 |
| Seawater              | Japan    |                         | 44,269 | 45,216 | 44,020 | 46,064 | 47,384 |
|                       | Overseas |                         | 0      | 6      | 4      | 3      | 4      |
|                       | Global   |                         | 44,269 | 45,222 | 44,024 | 46,067 | 47,388 |
| Groundwater           | Japan    |                         | —      | —      | 0      | 0      | 0      |
|                       | Overseas |                         | —      | —      | 0      | 0      | 0      |
|                       | Global   |                         | —      | —      | 0      | 0      | 0      |
| Other                 | Japan    |                         | 1,298  | 2,894  | 450    | 202    | 205    |
|                       | Overseas |                         | 0      | 46     | 38     | 56     | 0      |
|                       | Global   |                         | 1,298  | 2,940  | 488    | 258    | 205    |

(FY)

| PRTR Substances |  | Scope* | Unit   | 2019  | 2020  | 2021  | 2022  | 2023  |
|-----------------|--|--------|--------|-------|-------|-------|-------|-------|
| Emissions       |  | Japan  | Tonnes | 188   | 151   | 221   | 197   | 108   |
|                 | Emissions to atmosphere                            |        |        | 176   | 136   | 200   | 166   | 94    |
|                 | Emissions to rivers and other waterways <b>KPI</b> |        |        | 12    | 18    | 21    | 32    | 14    |
|                 | Emissions to soil                                  |        |        | 0     | 0     | 0     | 0     | 0     |
| Transfer volume |  | Japan  | Tonnes | 1,153 | 1,179 | 1,237 | 2,302 | 2,668 |
|                 | Transfer to public sewage system                   |        |        | 0     | 0     | 0     | 0     | 1     |
|                 | Transfer to waste                                  |        |        | 1,153 | 1,179 | 1,237 | 2,302 | 2,667 |

(FY)

| Air emissions            |       | Scope* | Unit   | 2019 | 2020  | 2021  | 2022  | 2023 |
|--------------------------|-------|--------|--------|------|-------|-------|-------|------|
| VOC emissions <b>KPI</b> |       | Japan  | Tonnes | 176  | 136   | 200   | 166   | 94   |
| NOx emissions            | 883   |        |        | 922  | 1,251 | 1,077 | 1,361 |      |
| SOx emissions            | 1,018 |        |        | 959  | 968   | 907   | 1,033 |      |

(FY)

| Effluents                  |     | Scope* | Unit   | 2019 | 2020  | 2021 | 2022  | 2023  |
|----------------------------|-----|--------|--------|------|-------|------|-------|-------|
| COD, BOD emissions         |     | Japan  | Tonnes | 972  | 1,009 | 860  | 1,022 | 1,031 |
| Total nitrogen emissions   | 188 |        |        | 161  | 156   | 200  | 187   |       |
| Total phosphorus emissions | 25  |        |        | 25   | 37    | 35   | 35    |       |

(FY)

| Visualization of Environmental Contribution                     |  | Scope*           | Unit        | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|--|------------------|-------------|------|------|------|------|------|
| ECO-PARTNER SYSTEM <sub>®</sub> products sales                  |  | TOYOBO CO., LTD. | Billion yen | 55.2 | 60.6 | 59.0 | 81.8 | 89.2 |
| ECO-PARTNER SYSTEM <sub>®</sub> products sales ratio <b>KPI</b> |  |                  | %           | 27.7 | 30.4 | 29.9 | 33.8 | 35.2 |

(FY)

| Environmental Accounting                        |  | Scope*           | Unit        | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|--|------------------|-------------|------|------|------|------|------|
| Environmental preservation costs (investment)   |  | TOYOBO CO., LTD. | Billion yen | 1.1  | 1.6  | 0.6  | 1.5  | 0.4  |
| Environmental preservation costs (expenditure)  |  |                  |             | 2.3  | 2.3  | 2.5  | 2.9  | 2.9  |
| Economic benefits of environmental preservation |  |                  |             | 2.6  | 2.0  | 2.0  | 3.0  | 1.7  |

(FY)

| Compliance with Environmental Laws and Regulations |  | Scope* | Unit  | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|--|--------|-------|------|------|------|------|------|
| Environment-related accidents                      |  | Global | Cases | 0    | 0    | 0    | 0    | 0    |
| Violations to environmental laws and regulations   |  |        | Cases | 0    | 0    | 0    | 0    | 0    |
| Total fine   |  |        | Yen   | 0    | 0    | 0    | 0    | 0    |

\* Scope

TOYOBO CO., LTD.: TOYOBO CO., LTD. only

Group companies in Japan: domestic consolidated subsidiaries

Japan: TOYOBO CO., LTD. and domestic consolidated subsidiaries

Overseas: Overseas consolidated subsidiaries

Global: Whole Group in Japan and overseas

—: No data

# ESG Performance Data

## Social

July 2023  
(FY)

| Employees   |     | Scope*  | Unit         | 2019                     | 2020   | 2021   | 2022   | 2023   |       |
|---|-----|---|--------------|--------------------------|--------|--------|--------|--------|-------|
| Number of employees by region                             |     | TOYOBO CO., LTD.  | people       | 3,108                    | 3,181  | 3,365  | 3,831  | 4,015  |       |
|   |     | Global  |              | 9,215                    | 10,073 | 10,149 | 10,503 | 10,885 |       |
| Number of employees by gender                             |     | TOYOBO CO., LTD.  | people       | Male                     | 2,301  | 2,349  | 2,479  | 2,868  | 3,006 |
|   |     |   |              | Female                   | 807    | 832    | 886    | 963    | 1,009 |
|   |     |   |              | Total                    | 3,108  | 3,181  | 3,365  | 3,831  | 4,015 |
|   |     |   | Female ratio | %                        | 26.0   | 26.2   | 26.3   | 25.1   | 25.1  |
| Number of employees by age                                |     | TOYOBO CO., LTD.  | people       | 10s<br>(Ages 18 or over) | 57     | 40     | 62     | 82     | 79    |
|   |     |   |              | 20s                      | 471    | 516    | 559    | 684    | 787   |
|   |     |   |              | 30s                      | 783    | 771    | 775    | 841    | 874   |
|   |     |   |              | 40s                      | 1,027  | 973    | 994    | 1,096  | 1,084 |
|   |     |   |              | Over 50s                 | 770    | 881    | 975    | 1,128  | 1,191 |
| Ratio of employees with disabilities                      | KPI | TOYOBO CO., LTD.  | %            | 2.3                      | 2.2    | 2.2    | 2.2    | 2.3    |       |
| Number of Management personnel                            |     | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people       | Male                     | 560    | 572    | 589    | 648    | 626   |
|   |     |   |              | Female                   | 12     | 14     | 19     | 25     | 31    |
|   |     |   |              | Total                    | 572    | 586    | 608    | 673    | 657   |
|   |     |   | Female ratio | %                        | 2.1    | 2.4    | 3.1    | 3.7    | 4.7   |
| Number of Management personnel<br>(manager-class)         |     | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people       | Male                     | 472    | 481    | 498    | 546    | 527   |
|   |     |   |              | Female                   | 12     | 14     | 18     | 23     | 28    |
|   |     |   |              | Total                    | 484    | 495    | 516    | 569    | 555   |
|   |     |   | Female ratio | %                        | 2.5    | 2.8    | 3.5    | 4.0    | 5.0   |
| Number of Management personnel<br>(general manager-class) |     | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people       | Male                     | 88     | 91     | 91     | 102    | 99    |
|   |     |   |              | Female                   | 0      | 0      | 1      | 2      | 3     |
|   |     |   |              | Total                    | 88     | 91     | 92     | 104    | 102   |
|   |     |   | Female ratio | %                        | 0.0    | 0.0    | 1.1    | 1.9    | 2.9   |

(FY)

| Comfortable Working Environment   |  | Scope*  | Unit   | 2019                        | 2020 | 2021 | 2022 | 2023 |       |
|---|--|---|--------|-----------------------------|------|------|------|------|-------|
| Average years of service  |  | TOYOBO CO., LTD.  | Years  | Male                        | 17.3 | 17.5 | 17.1 | 15.1 | 14.9  |
|   |  |   |        | Female                      | 16.6 | 17.1 | 16.7 | 15.3 | 14.4  |
|   |  |   |        | Total                       | 17.1 | 17.4 | 17.0 | 15.2 | 14.7  |
| Number of Employee turnover   |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | Male                        | 82   | 92   | 106  | 124  | 204   |
|   |  |   |        | Female                      | 34   | 34   | 28   | 35   | 63    |
|   |  |   |        | Total                       | 116  | 126  | 134  | 159  | 267   |
| Number of Voluntary turnover  |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | Male                        | 58   | 69   | 70   | 87   | 118   |
|   |  |   |        | Female                      | 20   | 27   | 21   | 14   | 18    |
|   |  |   |        | Total                       | 78   | 96   | 91   | 101  | 136   |
| Number of employees whose overtime hours<br>exceeded 80 hours a month   |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | Non-management<br>employees | 25   | 0    | 0    | 0    | 0     |
|   |  |   |        | Management<br>personnel     | 107  | 106  | 95   | 68   | 10    |
|   |  |   |        | Total                       | 132  | 106  | 95   | 68   | 10    |
|   |  |   | Ratio  | %                           | 4.8  | 3.3  | 2.8  | 1.8  | 0.2   |
| Overtime work hours(Ratio of employees<br>working more than 360 hours of overtime /<br>total number of employees) |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | %      | —                           | 2.6  | 3.0  | 3.8  | 4.2  |       |
| Monthly average overtime hours  |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | Hours  | 10.3                        | 10.1 | 9.4  | 10.4 | 10.7 |       |
| Ratio of taking paid leave  |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | %      | 68.2                        | 72.5 | 64.0 | 72.3 | 80.2 |       |
| Number of employees taking childcare<br>leave   |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | Male                        | 1    | 50   | 69   | 58   | 98    |
|   |  |   |        | Female                      | 24   | 27   | 30   | 32   | 39    |
|   |  |   |        | Total                       | 25   | 77   | 99   | 90   | 137   |
| Ratio of taking childcare leave   |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | %      | Male                        | 1.1  | 46.3 | 80.0 | 64.4 | 104.3 |
|   |  |   |        | Female                      | 100  | 100  | 100  | 100  | 100   |
|   |  |   |        | Total                       | 21.6 | 57.0 | 85.0 | 73.8 | 103.0 |
| Return rate of employees<br>from childcare leave  |  | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD.,TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | %      | Male                        | 100  | 100  | 100  | 100  | 100   |
|   |  |   |        | Female                      | 96   | 100  | 100  | 100  | 100   |
|   |  |   |        | Total                       | 96   | 100  | 100  | 100  | 100   |

(FY)

| Comfortable Working Environment                                       |        | Scope*   | Unit   | 2019 | 2020 | 2021  | 2022  | 2023  |
|---|--------|--|--------|------|------|-------|-------|-------|
| Number of employees taking short working hour program for childcare   | Male   | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | 1    | 1    | 2     | 2     | 4     |
|   | Female |  |        | 74   | 63   | 68    | 65    | 79    |
|   | Total  |  |        | 75   | 64   | 70    | 67    | 83    |
| Number of employees taking telecommuting systems                      | Male   | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | 0    | 135  | 1,415 | 1,688 | 1,750 |
|   | Female |  |        | 0    | 71   | 630   | 725   | 770   |
|   | Total  |  |        | 0    | 206  | 2,045 | 2,413 | 2,520 |
| Number of employees taking family care leave                          |        |  | people | 1    | 0    | 0     | 1     | 2     |
| Number of employees taking short working hour program for family care |        |  |        | 1    | 0    | 0     | 2     | 2     |
| Number of employees taking telecommuting systems for family care      |        |  |        | 0    | 0    | 0     | 0     | 0     |
| Union membership rate   |        |  |        | %    | 84.4 | 86.2  | 84.3  | 79.0  |

(FY)

| Recruitment   |              | Scope*   | Unit   | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|--------------|--|--------|------|------|------|------|------|
| Number of new hires   | Male         | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | 134  | 172  | 277  | 507  | 323  |
|   | Female       |  |        | 58   | 62   | 102  | 130  | 123  |
|   | Total        |  |        | 192  | 234  | 379  | 637  | 446  |
|   | Female ratio |  |        | %    | 30.2 | 26.5 | 26.9 | 20.4 |
| Number of mid-career hires                                    | Male         | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | 76   | 108  | 183  | 371  | 198  |
|   | Female       |  |        | 19   | 19   | 43   | 76   | 65   |
|   | Total        |  |        | 95   | 127  | 226  | 447  | 263  |
|   | Female ratio |  |        | %    | 20.0 | 15.0 | 19.0 | 17.0 |
| Number of new university graduates (technical positions)      | Male         | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | 24   | 24   | 31   | 43   | 37   |
|   | Female       |  |        | 15   | 15   | 13   | 13   | 20   |
|   | Total        |  |        | 39   | 39   | 44   | 56   | 57   |
|   | Female ratio |  |        | %    | 38.5 | 38.5 | 29.5 | 23.2 |
| Number of new university graduates (administrative positions) | Male         | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | 6    | 11   | 10   | 12   | 14   |
|   | Female       |  |        | 6    | 10   | 10   | 13   | 7    |
|   | Total        |  |        | 12   | 21   | 20   | 25   | 21   |
|   | Female ratio |  |        | %    | 50.0 | 47.6 | 50.0 | 52.0 |
| Number of new junior college /high school graduates           | Male         | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people | 28   | 29   | 68   | 81   | 74   |
|   | Female       |  |        | 18   | 18   | 27   | 28   | 31   |
|   | Total        |  |        | 46   | 47   | 95   | 109  | 105  |
|   | Female ratio |  |        | %    | 39.1 | 38.3 | 28.4 | 25.7 |

(FY)

| HR Development & Evaluation, Human Rights                    |     | Scope*   | Unit             | 2019 | 2020   | 2021                          | 2022     | 2023     |
|--|-----|--|------------------|------|--------|-------------------------------|----------|----------|
| Education hours per employee                                 |     | TOYOBO CO., LTD.,<br>TOYOBO STC CO., LTD.,<br>TOYOBO INFORMATION<br>SYSTEM CREATE CO., LTD.    | Hours            | 14.1 | 14.9   | 12.8                          | 17.67    | 17.97    |
| Education investment per employee                            | KPI |  | Ten thousand yen | 5.6  | 3.7    | 2.4                           | 5.0      | 5.0      |
| Number of overseas core personnel trained in Japan           |     | Global   | people           | —    | 20     | ※Canceled because of COVID-19 |          |          |
| Education & Training-Related Total training attendees        |     | TOYOBO CO., LTD.,<br>TOYOBO STC CO.,<br>LTD., TOYOBO<br>INFORMATION SYSTEM<br>CREATE CO., LTD. | people           | —    | 1,564  | 1,558                         | 2,269**  | 2,410**  |
| Education & training Total training hours                    |     |  | Hours            | —    | 36,248 | 25,120                        | 38,936** | 39,816** |
| Implementation status of human rights education and training |     |  | KPI              | %    | —      | —                             | 24.1     | 27.6     |

\*\*Includes trainings related to women empowerment promotion from FY2022

(Year)

| Safety/Prevention   |     | Scope* | Unit  | 2018                      | 2019 | 2020 | 2021 | 2023 |
|---|-----|--------|-------|---------------------------|------|------|------|------|
| Number of major accidents   | KPI | Japan  | Cases | 0                         | 0    | 1    | 0    | 0    |
|   |     | Global |       | —                         | —    | —    | —    | 0    |
| Number of abnormal events, accidents (fire & explosion accidents) | KPI | Japan  |       | 5                         | 2    | 1    | 1    | 0    |
|   |     |        |       | Number of spill accidents | KPI  | 1    | 0    | 0    |

· TOYOBO CO., LTD. merged with TOYOBO INFORMATION SYSTEM CREATE CO., LTD. in April 2023



(Year)

| Safety/Prevention  | Scope*           | Unit   | 2018 | 2019 | 2020 | 2021  | 2023  |
|--|------------------|--|------|------|------|-------|-------|
| Occupational accident frequency rate (lost time) (including accidents at affiliated companies) | Japan            | Lost workday injuries per million hours worked | 0.74 | 0.31 | 0.70 | 0.42  | 0.55  |
| Number of fatalities due to work-related accidents (employees)                                 | Japan            | people   | 0    | 0    | 2    | 0     | 0     |
| Number of fatalities due to occupational accidents (cooperative companies(contractor))         |                  |  | 0    | 0    | 0    | 0     | 0     |
| Number of employees trained on safety  | Japan            | people   | —    | —    | —    | 7,152 | 4,331 |
| ISO45001 Number of certified sites ***   | TOYOBO CO., LTD. | site   | —    | —    | —    | 1     | 2     |
| Number of sites in denominator   |                  | —  | —    | —    | 7    | 7     |       |
| Ratio of certified sites   |                  | %  | —    | —    | —    | 14.3  | 28.6  |

\*\*\* is the fiscal year

(FY)

| Quality  | Scope* | Unit  | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|--------|-------|------|------|------|------|------|
| Number of incidents related to products                                | Japan  | Cases | 0    | 0    | 0    | 0    | 0    |
| Implementation status of product safety and quality assurance training |        | %     | 100  | 100  | 80   | 100  | 100  |

(FY)

| Occupational Health                        | Scope*  | Unit   | 2019        | 2020        | 2021        | 2022        | 2023        |
|--|---|--------|-------------|-------------|-------------|-------------|-------------|
| Average rate of lifestyle-related diseases | TOYOBO CO., LTD.,<br>TOYOBO STC CO., LTD.,<br>TOYOBO INFORMATION SYSTEM<br>CREATE CO., LTD. | %      | 34.0        | 36.2        | 36.7        | 35.0        | 35.4        |
| Severity rate of sick leave                |   |        | 47.9        | 43.9        | 44.6        | 54.5        | 84.4        |
| Smoking rate                               |   |        | 25.7        | 25.0        | 24.6        | 23.2        | 22.9        |
| Injury and illness allowance               | TOYOBO CO., LTD.,<br>TOYOBO STC CO., LTD.,<br>TOYOBO INFORMATION<br>SYSTEM CREATE CO., LTD. | Yen    | 16,081,899  | 26,724,497  | 30,843,349  | 27,360,253  | 55,101,222  |
| Legal benefit cost                         |   |        | 513,571,748 | 544,275,419 | 502,477,649 | 620,239,062 | 758,820,258 |
| Number of employees trained on health      | TOYOBO CO., LTD.,<br>TOYOBO STC CO., LTD.,<br>TOYOBO INFORMATION<br>SYSTEM CREATE CO., LTD. | people | —           | —           | —           | 700         | 1,952       |

(FY)

| Supply Chain  | Scope*           | Unit | 2019 | 2020 | 2021 | 2022 | 2023                        |
|---|------------------|------|------|------|------|------|-----------------------------|
| CSR Procurement Survey(conducted every other year) response ratio | TOYOBO CO., LTD. | %    | —    | —    | —    | 93   | Follow-up on survey results |

(FY)

| Data Security & Privacy   | Scope*  | Unit  | 2019 | 2020 | 2021 | 2022 | 2023   |
|---|---|-------|------|------|------|------|--------|
| Number of instances of information security education implementations | TOYOBO CO., LTD.,<br>TOYOBO STC CO., LTD.,<br>TOYOBO INFORMATION SYSTEM<br>CREATE CO., LTD. | Cases | —    | 17   | 19   | 23   | 51**** |
| Number of incidents (information leaks, service outages, etc.)        |   | Cases | —    | 2    | 0    | 0    | 0      |

\*\*\*\* The aggregation method was changed in FY2023.

(FY)

| Communication with stakeholders                    | Scope*           | Unit  | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|------------------|-------|------|------|------|------|------|
| Number of press releases                           | TOYOBO CO., LTD. | Cases | —    | 74   | 90   | 93   | 103  |
| Number of interviews with investors                |                  | Cases | —    | 130  | 144  | 148  | 124  |
| Number of meetings with employees and labor unions |                  | Cases | —    | 30   | 14   | 47   | 77   |
| Number of engagement with stakeholders             |                  | Cases | —    | —    | 2    | 1    | 3    |

(FY)

| Social Contributions            | Scope* | Unit        | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------------|--------|-------------|------|------|------|------|------|
| Social contribution expenditure | Japan  | Million yen | 30   | 34   | 28   | 123  | 119  |

· TOYOBO CO., LTD. merged with TOYOBO INFORMATION SYSTEM CREATE CO., LTD. in April 2023

\* Scope

TOYOBO CO., LTD. : TOYOBO CO., LTD. only

Japan : TOYOBO CO., LTD. and domestic consolidated subsidiaries

Overseas : Overseas consolidated subsidiaries

Global : Whole Group in Japan and overseas

# ESG Performance Data

## Governance

July 2023

(FY)

| Board of Directors   |                                     | Scope*           | Unit   | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|-------------------------------------|------------------|--------|------|------|------|------|------|
| Number of Directors  | Male                                | TOYOBO CO., LTD. | people | 9    | 9    | 9    | 10   | 9    |
|  | Female                              |                  |        | 0    | 1    | 1    | 1    | 1    |
|  | Total                               |                  |        | 9    | 10   | 10   | 11   | 10   |
|  | Outside directors                   |                  | (3)    | (4)  | (4)  | (4)  | (5)  |      |
|  | Independent directors               |                  | (3)    | (4)  | (4)  | (4)  | (5)  |      |
|  | Ratio of outside directors          |                  | 33     | 40   | 40   | 36   | 50   |      |
|  | Female ratio                        |                  | 0      | 10   | 9    | 9    | 10   |      |
| Number of Corporate Auditors   | Male                                | TOYOBO CO., LTD. | people | 4    | 4    | 4    | 4    | 4    |
|  | Female                              |                  |        | 0    | 0    | 0    | 0    | 0    |
|  | Total                               |                  |        | 4    | 4    | 4    | 4    | 4    |
|  | Outside corporate auditors          |                  | (2)    | (2)  | (2)  | (2)  | (2)  |      |
|  | Independent corporate auditors      |                  | (2)    | (2)  | (2)  | (2)  | (2)  |      |
|  | Ratio of outside corporate auditors |                  | 50     | 50   | 50   | 50   | 50   |      |
|  | Female ratio                        |                  | 0      | 0    | 0    | 0    | 0    |      |
| Number of meetings of the Board of Directors / committees** <b>KPI</b> |                                     | TOYOBO CO., LTD. | cases  | 21   | 22   | 25   | 24   | 23   |

\*\* Nomination and Compensation Advisory Committee

| Research & Development             |        | Scope*      | Unit | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------------------|--------|-------------|------|------|------|------|------|------|
| R&D expenses                       | Global | Billion yen | 11.0 | 11.7 | 12.7 | 13.8 | 14.1 |      |
| Ratio of R&D expenses to net sales |        |             | %    | 3.3  | 3.5  | 3.8  | 3.7  | 3.5  |

| Compliance   |          | Scope* | Unit | 2019 | 2020                                      | 2021                                      | 2022                                      | 2023 |
|--|----------|--------|------|------|---|---|---|------|
| Serious legal and regulatory violations <b>KPI</b>   | Global   | cases  | 0    | 0    | 2   | 0   | 0   |      |
| Number of consultations for compliance consultation desks (including internal report contact office) |          |        | 32   | 35   | 37  | 62  | 78  |      |
| Recommendations for exclusion by relevant authorities (including the Japan Fair Trade Commission)    | Japan    | cases  | 0    | 0    | 0   | 0   | 0   |      |
| Operational suspension due to misconduct   |          |        | 0    | 0    | 0   | 0   | 0   |      |
| Criminal prosecution for compliance-related incidents and accidents                                  | Overseas | cases  | 0    | 0    | 0   | 0   | 0   |      |
| Exposure of price cartels  |          |        | 0    | 0    | 0   | 0   | 0   |      |
| Exposure of bribery  |          |        | 0    | 0    | 0   | 0   | 0   |      |
| Exposure of other violations   | Global   | cases  | 0    | 0    | 0   | 0   | 0   |      |
| Violations and administrative disciplines relating to corrupt activities                             |          |        | 0    | 0    | 0   | 0   | 0   |      |
| Dismissal of employees relating to corrupt activities  |          |        | 0    | 0    | 0   | 0   | 0   |      |
| Fines and penalties relating to corrupt activities   | Global   | cases  | 0    | 0    | 0   | 0   | 0   |      |
| Number of Compliance study sessions for managers and various other trainings <b>KPI</b>              |          |        | —    | 41   | 24 + video distribution for all employees | 31 + video distribution for all employees | 58 + video distribution for all employees |      |

| Other               |                  | Scope*      | Unit | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------|------------------|-------------|------|------|------|------|------|------|
| Political donations | TOYOBO CO., LTD. | Million yen | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |      |

\* Scope

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Overseas: Overseas consolidated subsidiaries

Global: Whole Group in Japan and overseas

# GRI Content Index

This content index shows the GRI Guideline references on our website and other communication channels.

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| GRI Standards  | Disclosures   | References   |
|--|---|--|
| <b>GRI2 : General Disclosures 2021</b>                 |   |  |
| <b>1. The organization and its reporting practices</b> |   |  |
| 2-1  | Organizational details  | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Data</a></li> </ul>   |
| 2-2  | Entities included in the organization's sustainability reporting            | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Data</a></li> </ul>   |
| 2-3  | Reporting period, frequency and contact point                               | <ul style="list-style-type: none"> <li>• <a href="#">Editorial Policy</a></li> </ul>   |
| 2-4  | Restatements of information   | Not applicable   |
| 2-5  | External Assurance  | <ul style="list-style-type: none"> <li>• <a href="#">External Assurance</a></li> </ul>   |
| <b>2. Activities and workers</b>                       |   |  |
| 2-6  | Activities, value chain and other business relationships                    | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Data</a></li> <li>• <a href="#">Products</a></li> <li>• <a href="#">Annual Securities Reports</a></li> <li>• <a href="#">Supply Chain Management</a></li> </ul>   |
| 2-7  | Employees   | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Social</a></li> </ul>   |
| 2-8  | Workers who are not employees   | —  |
| <b>3. Governance</b>                                   |   |  |
| 2-9  | Governance structure and composition  | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">Corporate Governance Report</a></li> </ul>  |
| 2-10   | Nomination and selection of the highest governance body                     | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">Corporate Governance Report</a></li> </ul>  |
| 2-11   | Chair of the highest governance body  | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">Corporate Governance Report</a></li> </ul>  |
| 2-12   | Role of the highest governance body in overseeing the management of impacts | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">Corporate Governance Report</a></li> </ul>  |
| 2-13   | Delegation of responsibility for managing impacts                           | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">Corporate Governance Report</a></li> <li>• <a href="#">Sustainability Management &gt; Policy and approach &gt; Sustainability management structure</a></li> </ul> |

|  |   |   |
|--|---|---|
| 2-14                                       | Role of the highest governance body in sustainability reporting | <ul style="list-style-type: none"> <li>• <a href="#">Sustainability Management&gt; Policy and approach&gt; Sustainability management structure</a></li> </ul>   |
| 2-15                                       | Conflicts of interest   | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance Report</a></li> </ul>   |
| 2-16                                       | Communication of critical concerns                              | <ul style="list-style-type: none"> <li>• <a href="#">Sustainability Management&gt; Policy and approach&gt; Sustainability management structure</a></li> <li>• <a href="#">Risk Management</a></li> </ul>  |
| 2-17                                       | Collective knowledge of the highest governance body             | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> </ul>  |
| 2-18                                       | Evaluation of the performance of the highest governance body    | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> </ul>  |
| 2-19                                       | Remuneration policies   | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">Corporate Governance Report</a></li> </ul>   |
| 2-20                                       | Process to determine remuneration                               | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">Corporate Governance Report</a></li> </ul>   |
| 2-21                                       | Annual total compensation ratio                                 | —   |
| <b>4. Strategy, policies and practices</b> |   |   |
| 2-22                                       | Statement on sustainable development strategy                   | <ul style="list-style-type: none"> <li>• <a href="#">Message from the President</a></li> <li>• <a href="#">Sustainability Management&gt; Our officer's commitment</a></li> <li>• <a href="#">Sustainable Vision 2030</a></li> </ul>   |
| 2-23                                       | Policy commitments  | <ul style="list-style-type: none"> <li>• <a href="#">TOYOBO Group Charter of Corporate Behavior</a></li> <li>• <a href="#">Respect for Human Rights</a></li> </ul>  |
| 2-24                                       | Embedding policy commitments                                    | <ul style="list-style-type: none"> <li>• <a href="#">Respect for Human Rights</a></li> <li>• <a href="#">Supply Chain Management</a></li> <li>• <a href="#">Compliance</a></li> </ul>   |
| 2-25                                       | Processes to remediate negative impacts                         | <ul style="list-style-type: none"> <li>• <a href="#">Respect for Human Rights&gt; Initiatives&gt; Establishment of complaint handling and internal reporting systems</a></li> <li>• <a href="#">Compliance&gt; Initiatives&gt; Compliance consultation desks</a></li> </ul>   |
| 2-26                                       | Mechanisms for seeking advice and raising concerns              | <ul style="list-style-type: none"> <li>• <a href="#">Compliance&gt; Initiatives&gt; Compliance consultation desks</a></li> </ul>  |
| 2-27                                       | Compliance with laws and regulations                            | <ul style="list-style-type: none"> <li>• <a href="#">Respect for Human Rights&gt; Initiatives&gt; Reducing excessive working hours</a></li> <li>• <a href="#">Compliance&gt; Anti-corruption initiatives</a></li> <li>• <a href="#">ESG Performance Data&gt; Governance</a></li> </ul>  |
| 2-28                                       | Membership associations   | <ul style="list-style-type: none"> <li>• Japan Business Federation (Keidanren)</li> <li>• Kansai Economic Federation (Kankeiren)</li> <li>• Japan Chemical Industry Association</li> <li>• Japan BioPlastics Association (JBPA)</li> <li>• Japan Chemical Fibers Association (JCFA)</li> <li>• Japan Spinners' Association</li> <li>• <a href="#">Sustainability Management&gt; Participation in Initiaves</a></li> <li>• <a href="#">Plastic Resource Circulation&gt; Participating in initiatives</a></li> <li>• <a href="#">External Evaluation (ESG Factors)</a></li> </ul> |

| 5. Stakeholder engagement |                                    |  |
|---------------------------|------------------------------------|--|
| 2-29                      | Approach to stakeholder engagement | <ul style="list-style-type: none"> <li>• <a href="#">Dialogue with Stakeholders</a></li> <li>• <a href="#">Social Contribution</a></li> </ul>  |
| 2-30                      | Collective bargaining agreements   | <ul style="list-style-type: none"> <li>• <a href="#">Dialogue with Stakeholders</a>&gt;<a href="#">Dialogue with stakeholders and investors</a>&gt;<a href="#">Employees</a>&gt;<a href="#">Dialogue between management and labor</a></li> <li>• <a href="#">Respect for Human Rights</a>&gt;<a href="#">Initiatives</a>&gt;<a href="#">Respecting worker s' rights</a></li> </ul> |

#### GRI3 : Material Topics 2021

|     |                                      |   |
|-----|--------------------------------------|---|
| 3-1 | Process to determine material topics | <ul style="list-style-type: none"> <li>• <a href="#">Materiality</a></li> </ul>   |
| 3-2 | List of material topics              | <ul style="list-style-type: none"> <li>• <a href="#">Materiality</a></li> </ul>   |
| 3-3 | Management of material topics        | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Safety, Disaster Prevention</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Quality</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Respect for Human Rights</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Materiality</a></li> <li>• <a href="#">Environment</a>&gt;<a href="#">Management Approach</a></li> <li>• <a href="#">Supply Chain Management</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Human Resource Management</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Diversity &amp; Inclusion</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Health and Productivity Management</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Social Contribution</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Compliance</a>&gt;<a href="#">Management approach</a></li> <li>• <a href="#">Risk Management</a>&gt;<a href="#">Management approach</a></li> </ul> |

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#### GRI 201: Economic Performance 2016

|       |  |  |
|-------|--|--|
| 201-1 | Direct economic value generated and distributed                                | <ul style="list-style-type: none"> <li>• <a href="#">Annual Securities Reports</a></li> <li>• <a href="#">Financial Results</a></li> <li>• <a href="#">ESG Performance Data &gt; Social &gt; Social contribution expenditure</a></li> </ul>          |
| 201-2 | Financial implications and other risks and opportunities due to climate change | <ul style="list-style-type: none"> <li>• <a href="#">Annual Securities Reports</a></li> <li>• <a href="#">Sustainability Management &gt; Participation in initiatives &gt; Task Force on Climate-related Financial Disclosures (TCFD)</a></li> </ul> |
| 201-3 | Defined benefit plan obligations and other retirement plans                    | <ul style="list-style-type: none"> <li>• <a href="#">Annual Securities Reports</a></li> </ul>  |
| 201-4 | Financial assistance received from government                                  | —  |

#### GRI 202: Market Presence 2016

|       |  |   |
|-------|--|---|
| 202-1 | Ratios of standard entry level wage by gender compared to local minimum wage | — |
| 202-2 | Proportion of senior management hired from the local community               | — |

| GRI 203: Indirect Economic Impacts 2016 |   |                                      |
|---|---|--------------------------------------|
| 203-1                                   | Infrastructure investments and services supported                               | —                                    |
| 203-2                                   | Significant indirect economic impacts   | —                                    |
| GRI 204: Procurement Practices 2016     |   |                                      |
| 204-1                                   | Proportion of spending on local suppliers                                       | —                                    |
| GRI 205: Anti-corruption 2016           |   |                                      |
| 205-1                                   | Operations assessed for risks related to corruption                             | —                                    |
| 205-2                                   | Communication and training about anti-corruption policies and procedures        | • <a href="#">Compliance</a>         |
| 205-3                                   | Confirmed incidents of corruption and actions taken                             | —                                    |
| GRI 206: Anti-competitive Behavior 2016 |   |                                      |
| 206-1                                   | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | —                                    |
| GRI 207: Tax 2019                       |   |                                      |
| 207-1                                   | Approach to tax   | • <a href="#">Tax Affairs Policy</a> |
| 207-2                                   | Tax governance, control, and risk management                                    | —                                    |
| 207-3                                   | Stakeholder engagement and management of concerns related to tax                | —                                    |
| 207-4                                   | Country-by-country reporting  | —                                    |

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| GRI 301: Materials 2016 |  |  |
|-------------------------|--|--|
| 301-1                   | Materials used by weight or volume               | —  |
| 301-2                   | Recycled input materials used                    | —  |
| 301-3                   | Reclaimed products and their packaging materials | —  |
| GRI 302: Energy 2016    |  |  |
| 302-1                   | Energy consumption within the organization       | • <a href="#">ESG Performance Data &gt; Environment</a>  |
| 302-2                   | Energy consumption outside of the organization   | —  |
| 302-3                   | Energy intensity                                 | —  |
| 302-4                   | Reduction of energy consumption                  | <ul style="list-style-type: none"> <li>• <a href="#">Management Approach &gt; Environmental management system &gt; Safety and environment assessment</a></li> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul> |

|  |   |  |
|--|---|--|
| 302-5                                    | Reductions in energy requirements of products and services  | <ul style="list-style-type: none"> <li>• <a href="#">Eco-Conscious Products &gt; Initiatives &gt; LCA Calculation Initiatives</a></li> <li>• <a href="#">Climate Change &gt; Initiatives related to the entire value chain &gt; Expanding our avoided emissions</a></li> </ul> |
| <b>GRI 303: Water and Effluents 2018</b> |   |  |
| 303-1                                    | Interactions with water as a shared resource  | <ul style="list-style-type: none"> <li>• <a href="#">Water Resources</a></li> </ul>  |
| 303-2                                    | Management of water discharge-related impacts   | <ul style="list-style-type: none"> <li>• <a href="#">Chemical Substance Management and Reducing Environmental Impact &gt; Reducing Environmental Impact &gt; Initiatives</a></li> <li>• <a href="#">Water Resources &gt; Initiative &gt; Risk reduction</a></li> </ul>         |
| 303-3                                    | Water withdrawal  | <ul style="list-style-type: none"> <li>• <a href="#">Water Resources</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>   |
| 303-4                                    | Water discharge   | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| 303-5                                    | Water consumption   | —  |
| <b>GRI 304: Biodiversity 2016</b>        |   |  |
| 304-1                                    | Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | <ul style="list-style-type: none"> <li>• <a href="#">Biodiversity &gt; Identifying risks</a></li> </ul>  |
| 304-2                                    | Significant impacts of activities, products, and services on biodiversity   | <ul style="list-style-type: none"> <li>• <a href="#">Biodiversity &gt; Initiatives</a></li> </ul>  |
| 304-3                                    | Habitats protected or restored  | <ul style="list-style-type: none"> <li>• <a href="#">Biodiversity &gt; Initiatives</a></li> </ul>  |
| 304-4                                    | IUCN Red List species and national conservation list species with habitats in areas affected by operations                                | —  |
| <b>GRI 305: Emissions 2016</b>           |   |  |
| 305-1                                    | Direct (Scope 1) GHG emissions  | <ul style="list-style-type: none"> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| 305-2                                    | Energy indirect (Scope 2) GHG emissions   | <ul style="list-style-type: none"> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| 305-3                                    | Other indirect (Scope 3) GHG emissions  | <ul style="list-style-type: none"> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| 305-4                                    | GHG emissions intensity   | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| 305-5                                    | Reduction of GHG emissions  | <ul style="list-style-type: none"> <li>• <a href="#">Climate Change</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| 305-6                                    | Emissions of ozone-depleting substances (ODS)   | —  |
| 305-7                                    | Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions   | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| <b>GRI 306: Waste 2020</b>               |   |  |
| 306-1                                    | Waste generation and significant waste-related impacts  | <ul style="list-style-type: none"> <li>• <a href="#">Waste Reduction</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>   |

|       |   |  |
|-------|---|--|
| 306-2 | Management of significant waste-related impacts | <ul style="list-style-type: none"> <li>• <a href="#">Waste Reduction</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul> |
| 306-3 | Waste generated                                 | <ul style="list-style-type: none"> <li>• <a href="#">Waste Reduction</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul> |
| 306-4 | Waste diverted from disposal                    | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |
| 306-5 | Waste directed to disposal                      | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul>  |

#### GRI 307: Environmental Compliance 2016

|       |  |  |
|-------|--|--|
| 307-1 | Non-compliance with environmental laws and regulations | <ul style="list-style-type: none"> <li>• <a href="#">Management Approach &gt; Environmental management system &gt; Environmental compliance</a></li> <li>• <a href="#">Chemical Substance Management and Reducing Environmental Impact &gt; Reducing Environmental Impact &gt; Environmental compliance</a></li> <li>• <a href="#">Water Resources &gt; Environmental compliance</a></li> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> </ul> |
|-------|--|--|

#### GRI 308: Supplier Environmental Assessment 2016

|       |  |   |
|-------|--|---|
| 308-1 | New suppliers that were screened using environmental criteria        | <ul style="list-style-type: none"> <li>• <a href="#">Supply Chain Management</a></li> <li>• <a href="#">CSR Procurement Guidelines</a></li> <li>• <a href="#">Green Procurement Guidelines</a></li> </ul> |
| 308-2 | Negative environmental impacts in the supply chain and actions taken | —   |

[↓ General Disclosures](#)  
 [↓ Economic](#)  
 [↓ Environmental](#)  
 [↓ Social](#)

#### GRI 401: Employment 2016

|       |  |   |
|-------|--|---|
| 401-1 | New employee hires and employee turnover   | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Social</a></li> </ul>  |
| 401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees | —   |
| 401-3 | Parental leave   | <ul style="list-style-type: none"> <li>• <a href="#">Human Resource Management &gt; Initiatives &gt; Work-life balance</a></li> <li>• <a href="#">ESG Performance Data &gt; Social</a></li> </ul> |

#### GRI 402: Labor/Management Relations 2016

|       |  |   |
|-------|--|---|
| 402-1 | Minimum notice periods regarding operational changes | — |
|-------|--|---|

#### GRI 403: Occupational Health and Safety 2018

|       |  |   |
|-------|--|---|
| 403-1 | Occupational health and safety management system                   | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> </ul>   |
| 403-2 | Hazard identification, risk assessment, and incident investigation | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> <li>• <a href="#">TOYOBO's Way of Manufacturing &gt; Security and Disaster prevention Initiatives(1.1MB)</a> </li> </ul> |
| 403-3 | Occupational health services                                       | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> </ul>   |



|   |  |  |
|---|--|--|
| 403-4   | Worker participation, consultation, and communication on occupational health and safety                        | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> </ul>  |
| 403-5   | Worker training on occupational health and safety  | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> </ul>  |
| 403-6   | Promotion of worker health   | <ul style="list-style-type: none"> <li>• <a href="#">Health and Productivity Management</a></li> </ul>   |
| 403-7   | Prevention and mitigation of occupational health and safety impacts directly linked by business relationships  | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> </ul>  |
| 403-8   | Workers covered by an occupational health and safety management system   | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> </ul>  |
| 403-9   | Work-related injuries  | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> <li>• <a href="#">ESG Performance Data &gt; Social</a></li> </ul>  |
| 403-10  | Work-related injuries  | <ul style="list-style-type: none"> <li>• <a href="#">Safety, Disaster Prevention</a></li> <li>• <a href="#">ESG Performance Data &gt; Social</a></li> </ul>  |
| <b>GRI 404: Training and Education 2016</b>                           |  |  |
| 404-1   | Average hours of training per year per employee  | <ul style="list-style-type: none"> <li>• <a href="#">Human Resource Management &gt; Initiatives &gt; Human resources development</a></li> <li>• <a href="#">ESG Performance Data &gt; Social</a></li> </ul>  |
| 404-2   | Programs for upgrading employee skills and transition assistance programs                                      | <ul style="list-style-type: none"> <li>• <a href="#">Human Resource Management &gt; Initiatives &gt; Human resources development</a></li> </ul>  |
| 404-3   | Percentage of employees receiving regular performance and career development reviews                           | <ul style="list-style-type: none"> <li>• <a href="#">Human Resource Management</a></li> </ul>  |
| <b>GRI 405: Diversity and Equal Opportunity 2016</b>                  |  |  |
| 405-1   | Diversity of governance bodies and employees   | <ul style="list-style-type: none"> <li>• <a href="#">Corporate Governance</a></li> <li>• <a href="#">ESG Performance Data &gt; Governance</a></li> <li>• <a href="#">Human Resource Management</a></li> <li>• <a href="#">Diversity &amp; Inclusion</a></li> <li>• <a href="#">ESG Performance Data &gt; Social</a></li> </ul> |
| 405-2   | Ratio of basic salary and remuneration of women to men   | <ul style="list-style-type: none"> <li>• <a href="#">Annual Securities Reports</a></li> </ul>  |
| <b>GRI406: Non-discrimination 2016</b>                                |  |  |
| 406-1   | Incidents of discrimination and corrective actions taken   | <ul style="list-style-type: none"> <li>• <a href="#">Compliance &gt; Initiatives &gt; Compliance consultation desks</a></li> </ul>   |
| <b>GRI 407: Freedom of Association and Collective Bargaining 2016</b> |  |  |
| 407-1   | Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk | <ul style="list-style-type: none"> <li>• <a href="#">Respect for Human Rights &gt; Initiatives &gt; Respecting workers' right</a></li> </ul>   |
| <b>GRI408 : Child Labor 2016</b>                                      |  |  |
| 408-1   | Operations and suppliers at significant risk for incidents of child labor                                      | <ul style="list-style-type: none"> <li>• <a href="#">Respect for Human Rights</a></li> <li>• <a href="#">Supply Chain Management</a></li> </ul>  |
| <b>GRI 409: Forced or Compulsory Labor 2016</b>                       |  |  |
| 409-1   | Operations and suppliers at significant risk for incidents of forced or compulsory labor                       | <ul style="list-style-type: none"> <li>• <a href="#">Respect for Human Rights</a></li> <li>• <a href="#">Supply Chain Management</a></li> </ul>  |

| GRI 410: Security Practices 2016           |   |   |
|--|---|---|
| 410-1                                      | Security personnel trained in human rights policies or procedures                             | —   |
| GRI 411: Rights of Indigenous Peoples 2016 |   |   |
| 411-1                                      | Incidents of violations involving rights of indigenous peoples                                | —   |
| GRI 413: Local Communities 2016            |   |   |
| 413-1                                      | Operations with local community engagement, impact assessments, and development programs      | —   |
| 413-2                                      | Operations with significant actual and potential negative impacts on local communities        | —   |
| GRI 414: Supplier Social Assessment 2016   |   |   |
| 414-1                                      | New suppliers that were screened using social criteria  | <ul style="list-style-type: none"> <li>• <a href="#">Supply Chain Management</a></li> <li>• <a href="#">CSR Procurement Guidelines</a></li> </ul> |
| 414-2                                      | Negative social impacts in the supply chain and actions taken                                 | —   |
| GRI 415: Public Policy 2016                |   |   |
| 415-1                                      | Political contributions   | • <a href="#">ESG Performance Data &gt; Governance</a>  |
| GRI 416: Customer Health and Safety 2016   |   |   |
| 416-1                                      | Assessment of the health and safety impacts of product and service categories                 | —   |
| 416-2                                      | Incidents of non-compliance concerning the health and safety impacts of products and services | • <a href="#">ESG Performance Data &gt; Governance</a>  |
| GRI 417: Marketing and Labeling 2016       |   |   |
| 417-1                                      | Requirements for product and service information and labeling                                 | • <a href="#">Quality</a>   |
| 417-2                                      | Incidents of non-compliance concerning product and service information and labeling           | • <a href="#">Quality</a>   |
| 417-3                                      | Incidents of non-compliance concerning marketing communications                               | —   |
| GRI418 : Customer Privacy 2016             |   |   |
| 418-1                                      | Substantiated complaints concerning breaches of customer privacy and losses of customer data  | • <a href="#">Risk Management &gt; Data security, privacy</a>   |

# TCFD Index

Disclosure based on TCFD Recommendations in the Integrated Report 2023 (310KB)



↓ Governance ↓ Strategy ↓ Risk management ↓ Metrics and targets

## Governance

Disclose the organization's governance around climate-related risks and opportunities.

| Recommended disclosure content  | Relevant sections   |
|---|---|
| a)The board's oversight of climate-related risks and opportunities                    | <ul style="list-style-type: none"> <li>• <a href="#">Environment&gt; Management Approach&gt; Structure</a></li> <li>• <a href="#">Environment&gt; Climate Change&gt; Structure</a></li> </ul> |
| b)Management's role in assessing and managing climate-related risks and opportunities | <ul style="list-style-type: none"> <li>• <a href="#">Annual Securities Reports</a></li> <li>• <a href="#">Integrated Report</a></li> </ul>  |

↓ Governance ↓ Strategy ↓ Risk management ↓ Metrics and targets

## Strategy

DiscDisclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

| Recommended disclosure content  | Relevant sections  |
|---|--|
| a)The climate-related risks and opportunities the organization has identified over the short,medium, and long term.                               | <ul style="list-style-type: none"> <li>• <a href="#">Sustainability&gt; TOYOBO Group's Sustainability&gt; Materiality</a></li> <li>• <a href="#">Environment&gt; Climate Change&gt; Initiatives related to our manufacturing business</a></li> </ul> |
| b)The impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning                        | <ul style="list-style-type: none"> <li>• <a href="#">Environment&gt; Climate Change&gt; Initiatives related to the entire value chain</a></li> </ul>   |
| c)The resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario | <ul style="list-style-type: none"> <li>• <a href="#">Annual Securities Reports</a></li> <li>• <a href="#">Integrated Report</a></li> </ul>   |

## Risk management

DiscDisclose how the organization identifies, assesses, and manages climate-related risks.

| Recommended disclosure content  | Relevant sections   |
|---|---|
| a)The organization's processes for identifying and assessing climate-related risks  | <ul style="list-style-type: none"> <li>• <a href="#">Governance &gt; Risk Management</a></li> </ul>   |
| b)The organization's processes for managing climate-related risks   | <ul style="list-style-type: none"> <li>• <a href="#">Environment &gt; Management Approach &gt; Structure</a></li> <li>• <a href="#">Environment &gt; Climate Change &gt; Structure</a></li> </ul> |
| c)How processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management | <ul style="list-style-type: none"> <li>• <a href="#">Annual Securities Reports</a></li> <li>• <a href="#">Integrated Report</a></li> </ul>  |

## Metrics and targets

DiscDisclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

| Recommended disclosure content   | Relevant sections   |
|--|---|
| a)The metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process | <ul style="list-style-type: none"> <li>• <a href="#">Environment &gt; Climate Change &gt; Targets</a></li> <li>• <a href="#">Environment &gt; Climate Change &gt; Results</a></li> <li>• <a href="#">Environment &gt; Climate Change &gt; Strengthening climate change measures &gt; Introduction of internal carbon pricing system</a></li> <li>• <a href="#">Plastic Resource Circulation &gt; Targets and results</a></li> </ul> |
| b)Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks   | <ul style="list-style-type: none"> <li>• <a href="#">Sustainability &gt; TOYOBO Group's Sustainability &gt; Sustainable Vision 2030</a></li> <li>• <a href="#">Governance &gt; Corporate Governance &gt; Officer compensation system</a></li> <li>• <a href="#">Investor Relations &gt; IR Library &gt; Medium-Term Management Plan &gt; 2025 Medium-Term Management Plan (FY3/23-FY3/26)</a></li> </ul>                            |
| c)The targets used by the organization to manage climate-related risks and opportunities and performance against targets                       | <ul style="list-style-type: none"> <li>• <a href="#">ESG Performance Data &gt; Environment</a></li> <li>• <a href="#">Annual Securities Reports</a></li> <li>• <a href="#">Integrated Report</a></li> </ul>   |

# External Assurance

## Independent assurance report

To enhance the reliability of the data disclosed, selected environmental data has obtained independent assurance by KPMG AZSA Sustainability Co., Ltd.. In the information given below, the  mark indicates fiscal year 2023 data that has obtained independent assurance.



- [Environmental data including items of independent assurance](#)
- [ESG Performance Data](#)



## Independent Assurance Report

To the President & Representative Director, CEO & Co-COO of TOYOBO Co., Ltd.

We were engaged by TOYOBO Co., Ltd. (the “Company”) to undertake a limited assurance engagement of the environmental performance indicators marked with ☑ (the “Indicators”) for the period from April 1, 2022 to March 31, 2023 included in its TOYOBO REPORT 2023 (the “Report”) for the fiscal year ended March 31, 2023.

### The Company’s Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the “Company’s reporting criteria”), as described in the Report.

### Our Responsibility

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

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

### Conclusion

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

### Our Independence and Quality Management

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

*Shinosuke Kayumi*

Shinosuke Kayumi, Director  
KPMG AZSA Sustainability Co., Ltd.  
Osaka, Japan  
October 20, 2023

# Editorial Policy

Toyobo group endeavors to provide comprehensive and easy-to-understand information disclosure, with a focus on sustainability information, to communicate initiatives for sustainable development of society and our group to our stakeholders on our sustainability website.

We also disclose basic company information on the About Toyobo website and information on financial results on the Investor Relations website. In addition, since fiscal 2020, we have issued the Integrated Report which summarizes financial and sustainability information in one publication as a tool for gaining understanding of our medium- to long-term growth strategy.

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## Period covered by the report

Fiscal 2023 (April 1, 2022 to March 31, 2023)

\* Results of some activities in fiscal 2024 are also included

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## Scope of the report

The scope of the report is TOYOBO CO., LTD. and its consolidated group companies. However, where it is difficult to gather information on the consolidated basis, the report discloses information on a non-consolidated basis or for group companies in Japan. In either of these cases, the scope of reporting is stated.

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## Updated

September 2023 (next update planned: September 2024)

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## Guidelines referenced

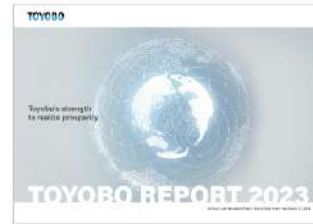
- GRI Standards (Japanese version)
- VRF "International Integrated Reporting Framework"
- Task Force on Climate-related Financial Disclosures (TCFD Recommendations)
- Ministry of the Environment "Environmental Reporting Guidelines" (2018 versions)
- Ministry of Economy Trade and Industry "Guidance for Collaborative Value Creation 2.0"

## Disclosure of information

### TOYOBO REPORT (Integrated Report)

This report outlines our company's value creation-oriented growth strategy, and presents an overview of our business operations. We actively utilize this report as a tool for dialogue with shareholders, investors and other stakeholders.

<https://www.toyobo-global.com/sustainability/report/>



#### Our website

##### Investor Relations

Here, we bring together investor relations (IR) materials such as financial results, annual financial reports and business results presentations for the benefit of shareholders and investors. We also present an overview of the company's current financial status and business performance, stock information, an IR calendar, and a FAQ, etc.

<https://ir.toyobo.co.jp/en/ir.html>

##### Annual Financial Report

Prepared in accordance with the requirements of Paragraph (1), Article 24 of the Financial Instruments and Exchange Act, the Annual Financial Report presents a summary of the company's current situation, details of its business areas, the current state of its facilities, its operational status, and its financial statements, etc.

<https://ir.toyobo.co.jp/en/ir/library/securities.html>

##### FACT BOOK

The FACT BOOK presents key financial data, for both the company as a whole and individual segments, covering a period of 11 years. It also presents non-financial data covering a period of five years.

<https://ir.toyobo.co.jp/en/ir/library/fact.html>

#### Our website

##### Sustainability

Here, we present information about Toyobo group's ESG-related initiatives, along with relevant data.

<https://www.toyobo-global.com/sustainability/>

##### Sustainability Report

PDF versions, compiled in November each year, of sustainability-related information posted on the company's website.

<https://www.toyobo-global.com/sustainability/report/>

##### Corporate Governance Report

This report presents information about Toyobo group's approaches and systems, in accordance with Japan's Corporate Governance Code.

<https://ir.toyobo.co.jp/en/ir/library/governance.html>

financial information

sustainability information