

# Environment

Toward achievement of the 2050 Environmental Vision

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## Environment

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Environmental Vision

- Global warming prevention
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Global warming prevention



The Toyota Boshoku group regards climate change as a major issue that affects all living things on the planet, and established “Global warming prevention” as one of the three priority actions formulated in 2023. Accordingly, we have set ourselves the challenge of achieving GHG Net-zero in the product life cycle<sup>1</sup> and GHG Net-zero in the plant.

Activity toward 2030

**2030 GHG emissions reduction target (base year: 2019)**  
**Scope 1 and 2: 50% reduction; Scope 3: 30% reduction**

Active introduction of renewable energy

Aiming for GHG Net-zero in the plant, the Toyota Boshoku group is proactively introducing renewable energy. The group will continue to systematically introduce renewable energy at our sites and respond to the need for carbon neutrality in various regions around the world.

**Number of solar panel installations: 39 entities (as of August 2024)**

Major recent and planned installations

Installation results

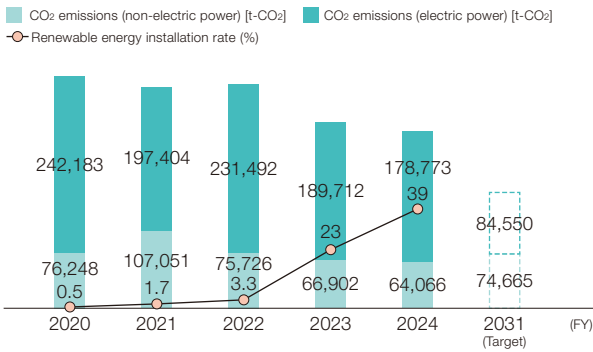
- Electricity purchased by Toyota Boshoku from Chubu Electric Power: 100% CO<sub>2</sub>-free electricity (since October 2022)
- Electricity used at all sites in Europe region (excluding Africa): 100% renewable energy (since January 2023)
- Electricity used at Toyota Boshoku Kyushu: Expansion of solar power generation (since July 2023)

Plan

- Toyota Boshoku Illinois: Solar power generation (2024)
- Toyota Boshoku Türkiye: Solar power generation (2024)
- Electricity in the Americas (US and Canada): 100% renewable energy (2026)

<sup>1</sup> To achieve net-zero greenhouse gas emissions

Renewable energy installation rate



Toyota Boshoku Türkiye and TB Sewtech Turkey solar panels



Solar panels at the Tsutsumi Plant

SBT certification

In October 2022, we made a commitment to SBTi, an organization that certifies Science Based Targets (SBT), which are greenhouse gas emission reduction targets consistent with the levels required by the Paris Agreement, to working toward obtaining SBT certification, and this was completed in September 2024.

We will contribute to achieving the goals of the Paris Agreement while also promoting activities to realize a low-carbon economy.

CDP rating: Highest A rating in both Climate Change and Water Security categories

Toyota Boshoku Corporation was selected for the second consecutive year as an “A List Company,” the highest rating in both the Climate Change and Water Security categories of the survey conducted by CDP (formerly the Carbon Disclosure Project), one of the most trusted rating organizations among investors. This is a result of the high rating given to our climate change and water security initiatives, as well as our efforts in collaboration with customers, suppliers, and other business partners.

Global Headquarters Received the ECCJ Chairman’s Award

The Kariya Global Mainstay Hub, which began operation in August 2020, received the Chairman’s Award in the energy conservation category of the Energy Conservation Grand Prize 2023 organized by the Energy Conservation Center, Japan (ECCJ). Our global headquarters was restructured under the concept of the Global Mainstay Hub, connecting people and information globally, and is positioned as our headquarters for creating the next 100 years of our evolution, founded on the century of tradition that constitutes the origins of the Toyota Group. In addition to creating an environment where people can work “anytime, anywhere, with anyone” through the development of an IT infrastructure, the facility has also been designed to promote active communication on a daily basis, to conserve energy, and to contribute to the local community through greening and disaster preparedness.

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# Resource circulation



To address the depletion of natural resources, the Toyota Boshoku group has designated “Resource circulation” as one of its three priority actions, and is taking on the challenge of sustainable resource circulation and waste minimization. In the area of sustainable resource circulation, we are promoting easy disassembly and recyclable design, material recycling through the development of recycling technologies, and material replacement through the use of plant-derived materials and other resources. In the area of waste minimization, we are also working on design and production preparation to reduce the product defect rate, improve the component recycling rate, and reduce the material loss rate.

## Activity toward 2030

Response to ELV<sup>1</sup> regulations: Promoting use of PCR<sup>2</sup> materials

## Participating in industry-government-academia collaboration projects aimed to realizing a recycling-oriented society

Until now, the mainstream method for processing ELVs has been to crush the vehicles, sort them by material, and

recycle each material. When generating high-purity recycled materials, it is extremely difficult to sort the materials, and the horizontal recycling rate<sup>3</sup> is low. In addition, because there has been insufficient coordination between the arterial and venous<sup>4</sup> sectors, initiatives to use recycled materials as materials for automotive parts, which require high quality, have not progressed. Along with solving these issues, a shift to new processing methods for ELVs is needed also to ensure the quality and quantity of recycled materials.

In addition to promoting the development of materials for the application of recycled materials to interior components, the Toyota Boshoku group is actively participating in industry-government-academia collaborative projects to determine the quality of recycled materials required for automobiles and to secure the used volumes. (See the figure below)

In circulation model (1), resin is extracted from end-of-life vehicles and verification is performed up to component application. In circulation model (2), we are considering the direction in which recycled materials can be applied, not only for automobiles, but also for waste as a whole.

1 End-of-Life Vehicle  
2 Post-consumer Recycling  
3 A recycling system in which used products are turned into resources and used to make the same products  
4 Likening economic activity to the circulation of blood, the term “arterial industry” refers to industries that process resources to manufacture products, while “venous industry” refers to industries that collect used products and distribute them back into society through resale and reprocessing, etc.

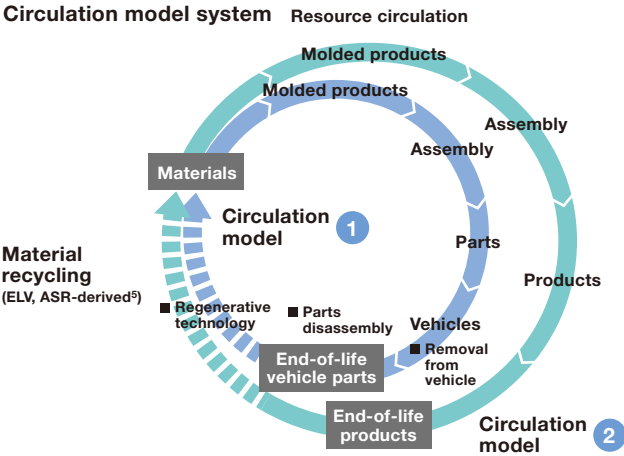
## Circulation model (1)

In order to accelerate the construction of a resource circulation system that contributes to the creation of a decarbonized society, we are participating in the Ministry of the Environment’s technical demonstration of the automotive parts disassembly process aimed at expanding the use of recycled materials in automobile recycling. Participating corporations, including ELV dismantling and shredding operators, dismantling system providers, material manufacturers, automotive parts manufacturers, and research institutions are collaborating by utilizing AI and other technologies. Through the technological demonstration of an integrated arterial and venous process, starting with the automated precision disassembly process—a new ELV processing method that ensures both the quality and quantity of recycled materials, we will identify the challenges in implementing this ecosystem in society. Our role is to give concrete shape to the process of disassembling seat components, to recycle the materials used, and to evaluate the trial production of components. Through this demonstration, we aim to expand the use of recycled materials for components while contributing to the integration of arterial and venous processes and the realization of a circular economy in the automotive industry.

## Circulation model (2)

Based on its “Growth-Oriented, Resource-Autonomous Circular Economy Strategy” formulated in March 2023, the Ministry of Economy, Trade and Industry established Circular Partners, a partnership to promote collaboration between industry, government and academia with the aim of realizing a circular economy.

We will also participate in this project, and in issues that are difficult for individual companies to resolve, we will collaborate with related entities throughout the lifecycle to study the measures needed to realize a circular economy.



## Circulation model 1 (End-of-Life vehicle parts)

Project to Promote Collaboration to Increase the Use of Recycled Materials in Automobile Recycling: led by the Ministry of the Environment

## Circulation model 2 (End-of-life products)

Circular Partners: led by the Ministry of Economy, Trade and Industry

5 ASR: Automobile Shredder Residue

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# Co-existence with nature



The Toyota Boshoku group considers the conservation of biodiversity and the sustainable use of natural resources to be important issues that should be addressed on a global scale. We have designated “Co-existence with nature” as one of our three priority actions, and will take on the challenges of water resource impact minimization and conservation and regeneration of natural capital. We aim to reduce the impact of our business activities as a whole on biodiversity and pursue the potential of environmental technologies that contribute to biodiversity conservation, thereby contributing to the realization of a society that coexists in harmony with nature. In order to effectively implement ecosystem conservation activities, we will strive to proactively disclose information while utilizing evaluation methods recommended by the Taskforce on Nature-related Financial Disclosures (TNFD).

## Activities toward 2030

- Enhancing “nature positive” activities
- Information disclosure in line with TNFD

## Water risk assessment

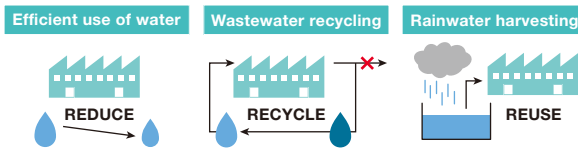
Assessments were conducted for group production sites inside and outside Japan (109 sites) using the World Resources Institute’s Aqeduct<sup>1</sup> water risk assessment tool. The places where production sites are located were

evaluated using the assessment item “water stress”<sup>2</sup> and stratified into five levels to identify high-risk sites for water.

We will focus on the high-risk sites identified in this assessment to minimize water risk and address water issues in each region.

## Reduction of water consumption

The Toyota Boshoku group uses a large amount of water for such purposes as cleaning products and cooling equipment. We are promoting initiatives to reduce water consumption based on the concepts of REDUCE to reduce water consumption through efficient use of water, RECYCLE to clean and reuse wastewater, and effective REUSE to make effective use of water collected through rainwater harvesting. In fiscal 2020, the Toyohashi Plant developed a device that filters and reuses water discharged from the plant, creating a zero wastewater system. This system is being horizontally expanded to other plants, and we will continue to work together as a group to further reduce water consumption.



## So-shigi Project

As a manufacturer of interior materials that use a large amount of plastic materials, the Toyota Boshoku group has launched the “So-shigi Project” with the aim of addressing the microplastics problem.<sup>3</sup> The project name “shigi” means sandpiper in Japanese.



In order to protect the feeding grounds of coastal wildlife such as sandpipers, where there is concern about the impact of microplastics, we will engage in various measures including volunteer activities focused on cleaning tidal flats, reducing the volume of plastic used, and employing recycled materials.

Toyota Boshoku has a connection with the sandpiper (“shigi”), and at the time of our founding, the company exported a wide range of cotton fabrics to India, Southeast Asia, East Africa, and other regions under the trademark of “So-shigi” (“Sandpipers”).

<sup>3</sup> A problem in which minute plastic particles of 5mm or less in size are discharged into the sea, and there are concerns about their adverse effects on marine organisms and human health. It is a global challenge that is difficult to address.

## Activities aimed at registration as an OECM<sup>4</sup> certified site for co-existence with nature

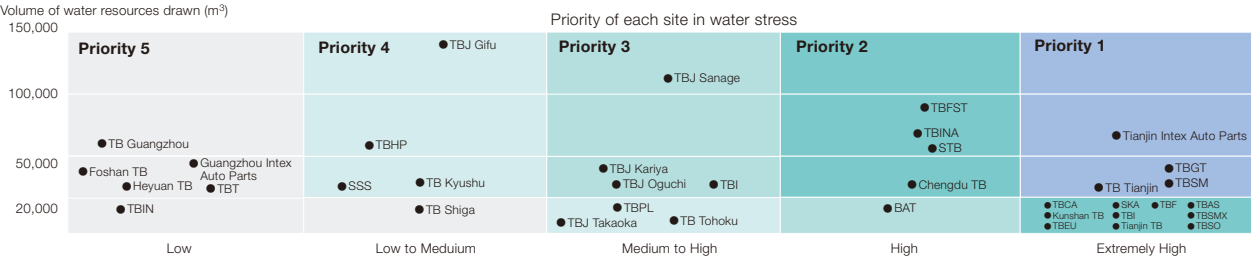
In order to achieve the “30by30,”<sup>5</sup> a national system was launched in fiscal 2024 to certify areas where biodiversity conservation is being promoted through private initiatives and other means.

Certification of Toyota Boshoku’s Tajimi Technical Center was finalized in September 2024, and OECM registration is planned in future. We will continue to promote the conservation of areas including the land we own, and contribute to the achievement of international targets.



<sup>4</sup> Other Effective area based on Conservation Measures: Areas contributing to biodiversity conservation other than protected areas  
<sup>5</sup> International target of effectively conserving at least 30% of the land and sea as healthy ecosystems by the year 2030

## Identifying high-risk sites through water stress assessment of our plants<sup>2</sup>



<sup>1</sup> Source: Compiled based on regional scores for Baseline Water Stress in the Aqeduct water risk atlas of Aqeduct 4.0 published by the World Resources Institute  
<sup>2</sup> Measured as the ratio of total water demand to renewable surface water and groundwater supply. Higher values indicate greater competition among users. In this case, water demand includes domestic, industrial, agricultural, and livestock uses.  
Available renewable water supply includes the impact of upstream water users and large dams on downstream water availability.