

Zero-Carbon Society

Disclosure Based on the TCFD Recommendations

Our Basic Approach and Strategy

Unicharm announced its endorsement of the TCFD recommendations in May 2019. We have examined the risks and opportunities associated with climate change and disclosed them in accordance with key areas of the TCFD framework: governance, strategy, risk management, and indicators and targets.



Governance

The president & CEO is responsible for evaluating risks and opportunities related to climate change and for setting and enforcing CO₂ reduction targets. The ESG Committee, chaired by the president & CEO and staffed by directors and all executive officers, meets quarterly to report and deliberate on overall environmental activities including those related to climate change, our response to social issues, and important issues for governance. For ESG Committee meetings, the ESG Division—which is responsible for responding to Groupwide environmental issues—collects and checks environmental data and information on our activities every month for each site, and after discussions with the executive officer in charge of ESG, agendas are set for committee meetings.

► Overview of TCFD Pillars and Initiative Status

| TCFD Recommended Disclosure Pillars | | Unicharm Initiative Status |
|-------------------------------------|--|--|
| Governance | Organizational governance with respect to climate-related risks and opportunities | <ul style="list-style-type: none"> The ESG Committee, chaired by the president & CEO, meets quarterly and reports deliberations and decisions to the Board of Directors one or more times annually In fiscal 2020, we introduced ESG criteria into the evaluation metrics for determining performance-linked remuneration of executive officers |
| Strategy | Impact of climate-related risks and opportunities on organization's businesses, strategy, and financial planning | <ul style="list-style-type: none"> We conducted scenario analysis of financial impacts in 2030 based on TCFD 1.5°C and 4°C conditions In Environmental Targets 2030 and Kyo-sei Life Vision 2030, we set reduction targets by scope and targets for switching to renewable electricity, and disclosed the results Through the GHG Emissions Visualization Project, we formulated the GHG emissions reduction road map and promoted the visualization of GHG emissions starting with raw materials |
| Risk Management | Methods for identifying, assessing, and managing climate-related risks | <ul style="list-style-type: none"> Risks and opportunities related to climate change are positioned as "Business Risks," with the ESG Committee discussing details and taking appropriate actions as necessary |
| Indicators and Targets | Indicators and Targets used to assess and manage relevant climate-related risks and opportunities | <ul style="list-style-type: none"> Under our 2050 Vision, we have set the target of realizing a "three zeros" society (zero plastic waste, zero CO₂ emissions, and zero deforestation) in 2050, and to achieve this, formulated medium- to long-term ESG targets in Environmental Targets 2030 and Kyo-sei Life Vision 2030, and disclosed progress toward their achievement |

The activities of the ESG Committee are then supervised by the Board of Directors, which receives reports on committee activities from the executive officer in charge of ESG at least once a year. The ESG Committee and the Board of Directors perform checks and provide guidance and instructions on these activities in accordance with the progression of Environmental Targets 2030 and Kyo-sei Life Vision 2030. To allow Unicharm to achieve its goals, we also set the term (years) for return on investment, deliberate on investment decisions on a case-by-case basis, implement necessary measures, and aim to meet our targets. Following the recommendations of the TCFD, since fiscal 2021, we have publicly shared information about specific plans based on Environmental Targets 2030 and Kyo-sei Life Vision 2030.

Moreover, in order to accomplish ESG strategies and targets under the direction of directors and executive officers, in fiscal 2020 we introduced ESG items into the evaluation indexes used to determine performance-linked compensation for directors (excluding those who are Audit & Supervisory Committee members) and executive officers. Furthermore, ESG criteria were also added as evaluation indicators for all employees in fiscal 2023.

- P.124** Evaluation Criteria for and Basic Policy on Executive Remuneration and Fiscal 2023 Remuneration Targets and Results
- P.023** Management Structure
- P.009** Sustainability Promotion System

Strategy

Unicharm considers risks and opportunities with reference to our situation year by year (the short term), in alignment with our medium-term management plan (the medium term, three to five years) and international prospects (the long term, 10 to 20 years) encompassing factors such as the SDGs and the Paris Agreement. We also use an enterprise risk management (ERM) approach to identify business and other risks facing the entire Group and address climate change-related risks. In order to respond to the risks and opportunities identified, we are implementing the course of action shown on the right in conjunction with our financial plan.

► Risks and Scenarios Envisioned by the Company Based on the TCFD Recommendations

We evaluated impacts on business and profits in terms of major, moderate, and minor scenarios.

Scenarios and Planning

Scenario analysis was conducted using two situations assuming global average temperature increases of 1.5°C and 4°C by 2100 compared to pre-industrial times. The Representative Concentration Pathways (RCP) scenario* is used as the basis for calculating estimated physical impacts.

To participate with a scientific approach in efforts focused on the 2°C target indicated in the Paris Agreement of 2015, we received approval from SBTi in 2018 for our reduction target toward 2030, but following COP26 in 2021, which called for a more stringent 1.5°C target, we are currently revising our target to 1.5°C and have resubmitted to SBTi for certification.

We set 2030 targets in Environmental Targets 2030 and Kyo-sei Life Vision 2030, which are key environmental targets for the entire Group, and have incorporated environmental considerations into product development strategies in the marketing and development divisions, as well as into short- and long-term plans in the production division, including energy-saving activities and the introduction of renewable electricity.

* Multiple representative concentration pathway scenarios are prepared to project future climates in each pathway, and various socioeconomic scenarios can be formulated to realize these concentration pathways. These include risks associated with factory operations in coastal areas where sea levels are rising, operational risks associated with supply chain disruptions caused by cyclones and other weather events, risks of lower GDP in equatorial regions due to heat waves, and raw material costs due to delays in the growth of forest resources and the harvesting of crops and other products due to changes in terrestrial ecosystems.

| | Evaluation Criteria | Assessed Financial Impact | Financial Consequences in 2030 | | Progress of Unicharm's Measures | | |
|-------|------------------------------|---|--|--|--|---|--|
| | | | 1.5°C | 4°C | | | |
| Risks | Transition | Policies, laws, and regulations | Introduction of a GHG emissions trading scheme and implementation of raised carbon taxes | Higher factory operation costs due to the introductions of and increases in GHG emissions trading and carbon taxes | Major | Minor | Set GHG emissions reduction targets and implemented initiatives to reduce energy use |
| | | | GHG emissions | <ul style="list-style-type: none"> Mandatory reporting of GHG emissions Highly accurate reporting level requirements | Major | Minor | Continued to visualize GHG emissions and develop specific reduction methods by proceeding with the GHG Emissions Visualization Project |
| | | Introduction of plastic waste regulations | Impact on commodity production costs due to regulatory compliance with regulations on petroleum-derived containers and packaging materials | Major | Minor | Set targets for reduction of petrochemical-derived plastics use and implemented initiatives to reduce usage | |
| | | | Increase in material and product costs due to mandatory use of renewable plastic | Major | Minor | Trim plastic materials generated in the manufacturing process are recycled into raw materials for product packaging | |
| | Technologies | Up-front costs associated with the transition to low-carbon technology | Costs for visualizing GHG emissions (system construction costs and other investments) | Major | Minor | Continued to visualize GHG emissions and develop specific reduction methods by proceeding with the GHG Emissions Visualization Project | |
| | Markets | Increase in energy prices | <ul style="list-style-type: none"> Fluctuations in retail electricity prices Impact of procurement costs due to the increased use of renewable electricity | Major | Minor | Set target of 100% use of renewable electricity for our business activities by 2030, switching to renewable energy | |
| | | Higher raw materials prices | Impact of cost increase due to conversion from petrochemical-derived materials to naturally-derived materials | Major | Minor | Established reduction targets for the use of petroleum-derived plastic and implemented measures accordingly | |
| | | | Procurement cost impact of increased demand for certified pulp for forest conservation | Major | Minor | Engaged in responsible procurement and procured raw materials through emphasis on manufacturing and supply capabilities in accordance with the Basic Policy of Procurement and the Sustainable Procurement Guidelines | |
| | Changes in consumer behavior | <ul style="list-style-type: none"> Growing ethical awareness among consumers Growing demand for products with low GHG emissions | Major | Minor | Appropriately disclosed information through public relations, packaging, our website, news releases, and other methods of disclosure | | |
| | Reputation | Criticism toward other sectors | <ul style="list-style-type: none"> Reputation risk as a company that uses pulp and other forest resources Use of certified materials as a criterion for determining whether a company is committed to environmental measures | Major | Minor | Established targets for 100% procurement of certified pulp (PEFC- and CoC-certified) and certified palm oil by 2030 and disclosed the status of these initiatives | |

| | | Evaluation Criteria | Assessed Financial Impact | Financial Consequences in 2030 | | Progress of Unicharm's Measures | |
|---------------|--|---|---|---|--|---|--|
| | | | | 1.5°C | 4°C | | |
| Risks | Physical | Acute | Criticism toward other sectors | Impact of suspended operations due to supply chain disruptions resulting from floods and other major disasters related to typhoons, cyclones, or weather anomalies | Major | Major | Conducting medium- to long-term water risk analysis using the Aqueduct Overall Water Risk Map (Aqueduct) and implement countermeasures in cooperation with external parties, especially in areas with high water risk |
| | Chronic | Excess demand for water | <ul style="list-style-type: none"> • Suspension of operations due to unstable supply of forest-derived raw materials (pulp, paper, etc.) indirectly caused by water resource depletion • Suspension of product sales due to tight supply of water used in the manufacturing process of wet wipes and pet food • Increased operating costs due to higher water usage fees | Major | Moderate | Using Aqueduct to conduct medium- to long-term water risk analysis and introduce water recycling systems at water-intensive nonwoven fabric and <i>Paper-sand</i> ® manufacturing plants to reduce water withdrawal | |
| Opportunities | Resource efficiency | | Efficient use of transportation | Impact of reduced CO ₂ emissions and costs through the use of railroads and ships, including collaborations with other companies | Major | Major | Modal shift from truck to ocean vessel for material transport is underway |
| | | | More efficient production and distribution processes | Impact of reduced CO ₂ emissions and costs from promoting factory emissions recycling activities and switching to compressed packages for more efficient use of resources | Major | Major | <ul style="list-style-type: none"> • Recycling of plastic trim generated when cutting materials in the manufacturing process into raw materials for use in product packaging • Reducing emissions through secondary use of product waste, such as cat continence care products (<i>Paper-sand</i>®), throughout the entire Group • Reducing package size and improving loading efficiency by reviewing product specifications and package filling methods |
| | | | Use of recycling methods | <ul style="list-style-type: none"> • Expanded use of used disposable diaper recycling technologies and increased cost absorption opportunities • Practical application of advanced used disposable diaper recycling technology • Growing demand for products with low environmental impact | Major | Major | Realized a system that washes and separates collected used disposable diapers and recycles them into pulp that is as hygienic and safe as unused pulp |
| | | | Reduction of water usage and consumption | Designing environmentally friendly products and promoting factory efficiency | Major | Moderate | Set target for reducing water withdrawal for the entire Group by 1% each year from the previous fiscal year, and promoting water withdrawal reduction, water recycling, and purification at production sites |
| | Energy sources | Use of renewable electricity | Achieve carbon neutrality in 2050, reduce energy costs | Major | Moderate | Introducing renewable electricity at production sites | |
| | Products and services | <ul style="list-style-type: none"> • Development and expansion of lineup of low-carbon products and services • Development of new products and services through R&D and innovation • Leveraging of ability to diversify business activities • Adaption to changes in consumer preferences | <ul style="list-style-type: none"> • Product development to encourage GHG emissions reduction • Purchasing with built-in GHG indicators • Promoting environmentally friendly products and development of environmental labels | Major | Major | <ul style="list-style-type: none"> • Implementing system construction to visualize the GHG emissions of raw materials through the GHG Emissions Visualization Project • Continued to develop and market products conforming to the SDGs Theme Guideline, an internal guideline for contributing to sustainability | |
| | Markets | Tapping into new markets | <ul style="list-style-type: none"> • Impact from the spread of environmentally friendly products • Impact of the proliferation of products using certified wood | Major | Minor | Expanding our lineup of environmentally friendly products and products made of certified materials in accordance with the SDGs Theme Guideline | |
| Resilience | Participation in renewable electricity programs and adoption of energy-saving measures | <ul style="list-style-type: none"> • Switching to renewable electricity • Reducing electricity consumption • Reducing raw material consumption | Major | Moderate | Establishing calculation rules and systems for the GHG Emissions Visualization Project and continuing to collect primary data from suppliers | | |

Conforming to Regulations and Standards

In response to the transition to a 1.5°C target at COP26, Unicharm has revised its 2°C target previously approved by the SBTi in 2018 and resubmitted our 1.5°C target for certification.

In Japan, we are prioritizing capital expenditure that allows us to aim for the target of an annual 1% increase in energy efficiency as stipulated in the country's Act on Rationalizing Energy Use.

Financial Optimization Calculations

For investment in energy conservation, we are expanding our criteria for assessing expected depreciation periods, with the intention of facilitating assessment of return on investment and increasing investment opportunities.

Budget Dedicated to Research and Development of Low-Carbon Products

We are actively investing in the GHG Emissions Visualization Project to facilitate accurate assessments of GHG emissions, which vary according to the materials and production methods used, and enabling developers to appropriately select low-carbon raw materials by urging suppliers of raw materials to provide primary information concerning GHG emissions for each material.

Risk Management

We use an enterprise risk management (ERM) approach to identify risks to the Group as a whole and engage with climate change risks as one of them.

Groupwide climate-related risk assessment is conducted by the ESG Division. First, we run simulations of climate change impact that cover severity, scope, and transition risks (carbon pricing, energy prices, etc.) based on the recommendations of the TCFD and create multiple qualitative scenarios (1.5°C target scenario and 4°C scenario) for the period up to 2050, using information from sources such as the IPCC*¹ *Climate Change Report* and the IEA's*² *World Energy Outlook 2023*.

These scenarios are then used, together with the estimated value of damage (calculated as part of site-level risk assessment), to estimate the total damage costs of Group companies. The results of this evaluation are reported to the ESG Committee and the Board of Directors and are then used in the formulation of our business strategy and business plan. In the event that the ESG Committee, in which the Board of Directors and all executive officers participate, judges that the aforementioned scenarios would be impacted, a responsible task team will be established for developing a plan, with the ESG Division acting as secretariat. This plan will then be approved at the next ESG Committee meeting, upon which the responsible team will implement it and report on progress at ESG Committee meetings.

*1 IPCC: Intergovernmental Panel on Climate Change

*2 IEA: International Energy Agency

P.132 Business Risks

Indicators and Targets

To develop a specific action plan for mitigating climate change, Unicharm has endorsed SBTi since May 2017. After conducting simulations up to 2045 and consulting with SBTi, in June 2018, Unicharm became the 17th company in Japan to have its reduction plan certified for consistency with the 2°C target.



We have set specific long-term CO₂ reduction targets for both Scope 1 (direct emissions: from our own factories, offices, vehicles, etc.) and Scope 2 (indirect energy-related emissions: energy consumed by Unicharm, such as electricity).

SBTi CO₂ Emissions Reduction Targets

By 2030, Unicharm aims to achieve reductions of 90% for Scope 1 and 30% for Scope 2 compared with fiscal 2016 levels. These targets function as our management indicators.

By achieving these goals, we will also be preparing for the following risks.

- (1) If regulations are strengthened in order to achieve the goals of the Paris Agreement, there is a risk that the development of energy-saving measures and the purchase of emissions credits will become necessary and that costs will rise for electric power companies, manufacturing sites, and suppliers.
- (2) Electricity prices in Japan have risen by approximately 10% on average due to carbon taxes and the cost structure for purchasing renewable electricity. If carbon taxes are introduced in all of the overseas countries and regions where Unicharm carries out manufacturing or the cost structure for purchasing renewable electricity is not improved, operating costs could rise by 10%.

Unicharm has established a medium- to long-term vision and targets for climate change in its 2050 vision and Environmental Targets 2030. “Reducing CO₂ emissions associated with raw materials procurement” (Scope 3, Category 1), “reducing CO₂ emissions in manufacturing” (Scope 1 and Scope 2), and “reducing CO₂ emissions associated with disposal of used products” (Scope 3, Category 12), which account for a large proportion of CO₂ emissions over the product life cycle, have been set as our targets for climate change response. For Scope 1 and Scope 2, meetings on energy conservation and renewable energy are held with promoters of environmental activities at each site four times a year, and implement and monitor the progress of annual plans. For “CO₂ emissions from raw material procurement” (Scope 3 Category 1) that form the bulk of our Scope 3 emissions, we perform LCAs*³ to calculate CO₂ emissions for each product from the design phase onward, and product developers and the ESG Division discuss these emissions and consider countermeasures from the perspectives of product function and CO₂ emissions. Following COP26, we have also reapplied with our 1.5°C target.

*³ LCAs: Life Cycle Assessments. A method used to quantitatively assess the potential environmental impact on our planet and ecosystem of the resources used and CO₂ emissions generated throughout a product's life cycle, encompassing raw materials procurement, production, logistics, use, and disposal.

P.035 CO₂ Emissions Throughout the Supply Chain (Overall Picture of Scopes 1 to 3)

P.035 CO₂ Emissions Associated with Raw Materials Procurement

P.036 CO₂ Emissions During Manufacturing, Sales, and Distribution