Zero-Carbon Society

Climate Change

302-4,302-5

Our Basic Approach and Strategy

Unicharm recognizes that climate change is an issue that must be addressed with a matter of urgency. Therefore, in order to contribute to achieving the 2°C target*1 indicated in the Paris Agreement at the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21), we received certification in June 2018 under the Science Based Targets initiative (SBTi) for our CO_2 reduction plans up to 2045. Following the adoption of a more stringent 1.5°C target*2 at COP26 in 2021, we resubmitted our 1.5°C target to the SBTi for certification, which we received in October 2024. We also endorsed the Task Force on Climate-related Financial Disclosures (TCFD) in May 2019 and continue to report in accordance with its framework. Furthermore, in November 2023, we became a member of RE100 to achieve the goal of switching to 100% use of renewable energy in our business activities by 2030 as set forth in Kyo-sei Life Vision 2030, announced in October 2020.

Our 2050 vision of Environmental Targets 2030, announced in April 2020, calls for the realizing a society with net zero CO_2 emissions. We will strive to reduce CO_2 emissions from our various business activities in cooperation with the Japan Climate Initiative (JCI), the Japan Climate Leaders' Partnership (JCLP), the GX League, and RE100. At the same time, we will continue to actively encourage all parties involved in our supply chains to reduce their emissions throughout the product life cycle.

*1 Aims to limit the increase in global average temperature to under 2°C above pre-industrial levels in accordance with the Paris Agreement reached at COP21 in 2015
*2 COP26 in 2021 incorporated the pursuit of efforts to limit the temperature to within 1.5°C instead of the 2°C stipulated in the Paris Agreement.

P.32 Disclosure Based on the TCFD Recommendations

Risks and Opportunities

P.35 Disclosure Based on the TCFD Recommendations > Risk Management

Management Structure

P.32 Disclosure Based on the TCFD Recommendations > Governance

Indicators and Targets

▶ Responding to Climate Change Under Environmental Targets 2030

Implementation Items		Base Year	Fiscal 2022 Results	Fiscal 2023 Results	Fiscal 2024 Targets	Fiscal 2024 Results	Fiscal 2025 Targets	2030 Targets	2050 Vision
Reducing CO_2 emissions associated with raw materials procurement Scope 3, Category 1	Per unit of sales	2016	–12.6% (Japan)	+5.9%*	–5.9%	+4.1%	+0.6%	–17%	Realizing a society with net zero CO_2 emissions
Reducing CO_2 emissions in manufacturing Scope 1 and Scope 2			–35.2%	–55.4%	–57.8%	–59.8%	–62.2%	–34%	
Reducing CO_2 emissions associated with disposal of used products Scope 3, Category 12			–11.6% (Japan)	–35.8%*	–37.0%	–38.0%	–39.9%	–26%	

* Calculated using values from LCI database AIST-IDEA Ver. 3.4 Research Laboratory for IDEA, RISS, AIST, IPCC2021 with LULUCF AR6, and revised the calculation method for activity volume

▶ Kyo-sei Life Vision 2030: Safeguarding the Well-Being of Our Planet

Indicators	Fiscal 2022 Result	Fiscal 2023 Result	Fiscal 2024 Result	2030 Target
Percentage of renewable energy used for business operations in total	11.0%	22.8%	25.8%	100%

Initiatives and Results

CO_2 Emissions Throughout the Supply Chain (Overall Picture of Scopes 1 to 3)

305-1,305-2,305-3,305-5

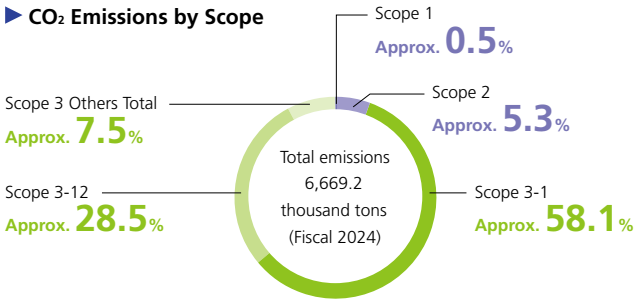
Unicharm calculates its CO_2 emissions according to the Greenhouse Gas Protocol,*1 the standard for calculating greenhouse gas (GHG) emissions most widely used in the world today. In fiscal 2024, life cycle CO_2 emissions were estimated to be approximately 58.1% for Scope 3 purchased materials, 28.5% for end-of-life treatment of sold products, 7.5% for others, and 5.8% for Scope 1 and Scope 2 manufacturing. Based on these estimates, we are working to reduce CO_2 emissions at all stages of the life cycle, from raw materials procurement to end-of-life treatment of sold products.

▶ CO_2 Emissions by Scope and Category

(Thousand tons)

Scope	Category	Fiscal 2022	Fiscal 2023	Fiscal 2024	Remarks
Scope 1	Direct emissions	31.6	29.2	✓ 30.1	
Scope 2	Indirect emissions from energy sources	454.5	376.9	✓ 354.6	
Scope 3*2	1 Purchased goods and services	3,830.6	3,756.1	✓ 3,877.7	
	2 Capital goods	85.2	99.0	121.2	
	3 Fuel- and energy-related activities not included in Scope 1 or Scope 2	59.3	51.1	49.5	
	4 Upstream transportation and distribution	320.7	225.5	206.7	*3
	5 Waste generated in operations	40.1	28.7	26.2	
	6 Business travel	2.1	2.0	2.1	
	7 Employee commuting	12.7	12.8	13.2	
	8 Upstream leased assets	0.0	0.0	0.0	*4
	9 Downstream transportation and distribution	79.9	81.0	63.2	*3
	10 Processing of sold products	0.0	0.0	0.0	*4
	11 Use of sold products	0.0	0.0	0.0	*4
	12 End-of-life treatment of sold products	2,151.8	1,875.7	✓ 1,903.4	
	13 Downstream leased assets	0.0	0.0	0.0	*4
	14 Franchises	0.0	0.0	0.0	*4
	15 Investments	39.6	34.7	21.3	
	Total for Scope 3	6,622.0	6,166.5	6,284.5	
Total		**7,108.1**	**6,572.6**	**6,669.2**	

▶ CO_2 Emissions by Scope



P.138 Environmental Data > CO_2 Emissions by Scope and Category

▶ Life Cycle CO_2 Emissions Ratio

Note: As a general rule, figures are rounded off to the nearest unit. Accordingly, the total amount may be different from the sum of its components.

*1 In 1998, the Greenhouse Gas Protocol was established to develop standards for calculating and reporting GHG emissions, led primarily by the World Resources Institute (WRI), an environmental NGO based in the United States, and the World Business Council for Sustainable Development (WBCSD), which comprises over 200 multinational corporations. In 2001, the first edition of the GHG Protocol Corporate Standard was established and, since then, this approach to calculating GHG emissions has become a global standard.

*2 Scope 3 was calculated using values from LCI database AIST-IDEA Ver. 3.4 Research Laboratory for IDEA, RISS, AIST, IPCC2021 with LULUCF AR6. Moreover, Scope 3 emissions up to fiscal 2023 were recalculated using the same database, in addition to revising the calculation method for activity volume.

*3 The overseas portion of 3-1, 3-2, 3-3, 3-5, 3-6, 3-7, 3-12, and 3-15 are calcu- lated based on activity level, while other categories are estimated based on sales weight.

*4 Does not apply to any work process

CO_2 Emissions Associated with Raw Materials Procurement

305-5

With regard to Scope 3, including CO_2 emissions associated with raw materials procurement, we have received certification from the SBTi for our targeted reduction in CO_2 emissions of 27.5% by 2031 compared to the base year of fiscal 2021. In fiscal 2024, we promoted the development of lighter, slimmer products and thinner packaging, and the transition to biomass and recycled materials.

P.138 Environmental Data > CO_2 Emissions by Scope and Category

Communicating the Importance of Climate Change Measures to Suppliers

As CO_2 emissions from purchased goods and services (Scope 3, Category 1) and end-of-life treatment of sold products (Scope 3, Category 12) account for approximately 58.1% and 28.5% of the overall product life cycle, respectively, it is essential that we promote measures together with suppliers. We are promoting the reduction of CO_2 emissions by actively requesting suppliers to switch to renewable electricity, use plant-derived biomass materials and recycled materials, and thinner and lighter materials. These efforts significantly contribute to low carbon emissions, not only in procurement but also in disposal.

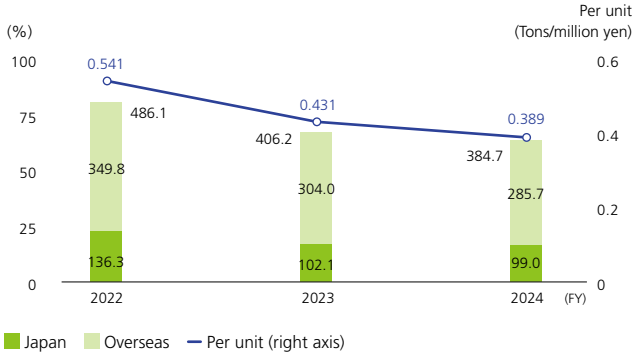
P.21 Medium- to Long-Term Policy Briefing Session for Suppliers

CO_2 Emissions During Manufacturing, Sales, and Distribution 305-5

Initiatives at Factories 305-1,305-2

Regarding Scope 1 and Scope 2, we have set the goal of transitioning to 100% renewable electricity by 2030, and the entire Group is working to reduce CO_2 emissions. Meetings on energy conservation and renewable energy are held four times a year with promoters of environmental activities at each site to promote their respective energy conservation activities and procurement of renewable energy by formulating annual plans, confirming progress, and sharing best practices for reducing electricity consumption and switching to renewable energy. In fiscal 2024, CO_2 emitted during manufacturing amounted to 384.7 thousand tons, a 59.8% reduction (per unit of sales) from the fiscal 2016 base year.

▶ Progress on CO_2 Emissions (Scope 1 and Scope 2)



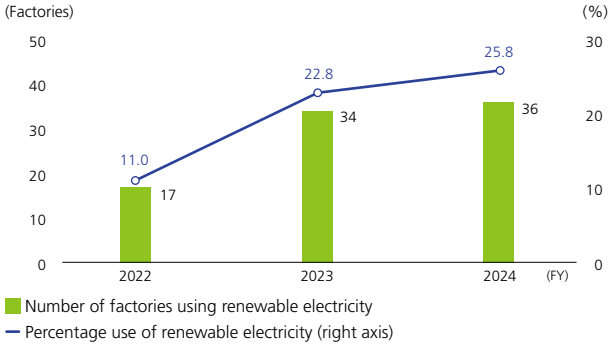
Note: Consolidated net sales is used as the denominator to calculate "Per unit (tons/million yen)."

P.138 Environmental Data > Scope 1 and Scope 2 CO_2 Emissions

• Switching to Renewable Electricity

In fiscal 2024, two factories installed solar power generators and three factories purchased renewable energy certificates, increasing the percentage use of renewable electricity to 25.8% and reducing CO_2 emissions by approximately 100 thousand tons per year.

▶ Number of Factories Using Renewable Electricity and Percentage Use of Renewable Electricity



South Korea: Solar power generators were installed at the Gumi Factory in December 2023, which generates approximately 600,000 kWh of electricity and reduce CO_2 emissions by approximately 200 tons per year.

Japan: Solar power generators were installed at the Peparlet's Shimada Factory in March 2024, which generates approximately 1.3 million kWh of electricity and reduces CO_2 emissions by approximately 480 tons per year.

Saudi Arabia: Solar power generators were installed at the Riyadh Factory in October 2024, which will generate 600,000 kWh of electricity and reduce CO_2 emissions by approximately 200 tons per year.

Indonesia: Renewable energy certificates were purchased for the Karawang Factory in January 2024 and for the East Java Factory and the nonwoven factory in June 2024.

▶ Factories Using 100% Renewable Electricity

Commencement of Operations	Factory Name
January 2017	Jaguariúna Factory (Brazil)
September 2020	Kyushu Factory (Japan)
February 2021	Itami Factory (Japan)
April 2021	Toyohama Works, Shikoku Factory (Japan)
December 2021	Hartz Pleasant Plain Factory (United States)
March 2022	Saitama Factory (Japan)
April 2022	Mie Factory (Japan)
April 2022	Peparlet's three factories (Japan)
April 2023	Unicharm Kokko Nonwoven (3 manufacturing sites) (Japan)
April 2023	Cosmotec (Japan)
April 2023	Kinsei Products (Japan)
March 2024	Peparlet's Shimada Factory (Japan)

• Installing Energy-Saving and Efficiently Operated Equipment

Energy-saving measures are being implemented at each factory, including the introduction of high-efficiency motors and other energy-saving equipment, efficient equipment operations such as motor speed adjustments and the use of inverters, measures to prevent air leaks from compressors, and the use of LED lighting. Meetings on energy conservation and renewable energy are held four times a year to share best practices and expand energy conservation and renewable energy measures throughout the Group.

For example, Unicharm's local subsidiary in Vietnam has been conducting tests to check for air leaks from compressors in all production lines since November 2024. The aim is to reduce compressor electricity consumption from air loss by 3% to 5%. In addition, Unicharm's local subsidiary in South Korea upgraded its fan inverter control and cooling systems and adjusted the heating time of hot melt (adhesive), reducing CO_2 emissions by approximately 746 tons in fiscal 2024. Our local subsidiary in China converted to energy-efficient motors for all of its production lines, which has reduced electricity use by approximately 40% on each line.

Development-Related Initiatives

Unicharm applies the SDGs Theme Guideline with the aim of constantly improving products and services during the new product development and improvement stages. This guideline aims to develop products and services that contribute to achieving the SDGs by realizing reduced output (contributing to reductions in environmental impact through reduced use of raw materials) and increased output (ensuring greater customer satisfaction by providing even more value through our products and services). Through these activities, we provide products and services that contribute to resolving environmental and social issues through Unicharm's business.

P.61 SDGs Theme Guideline: Internal Guideline for Contributing to Sustainability

Office-Related Initiatives

We have established 22 energy-saving measures including appropriate air conditioning settings, use of blinds, turning off unnecessary lights, and recommending the use of stairs, and continue to promote energy-saving efforts in the office.

▶ 22 Energy-Saving Measures

	Subcategory	Activities
1	Blinds	Blinds are lowered during work and blades are set at a 45-degree angle
2	Blinds	Blinds are closed when leaving the office
3	Air conditioning	Set air conditioning near south-side windows at 26°C and others at 28°C when cooling
4	Air conditioning	Set at 20°C when heating
5	Air conditioning	Use circulators to circulate air
6	Air conditioning	Make effective use of window fans on east-side windows
7	Air conditioning	Make effective use window ventilation openings
8	Air conditioning	Install air conditioning auxiliary fans, etc.
9	Air-conditioning	Replace old air conditioners when appropriate
10	Multi-functional machines	Set at power saving mode after use
11	Power supplies	Unplug microwave ovens when not in use
12	Lighting	Make effective use of outside light during bright hours
13	Lighting	Dim excessively bright lighting
14	Lighting	Make sure to turn off when leaving conference rooms
15	Lighting	Change to LED lighting when appropriate
16	Elevators	Use the stairs as much as possible when going up two floors or less and going down three floors or less (2 Up 3 Down policy)
17	Computers	Set to standby mode when away from computers for long periods of time
18	Computers	Make effective use of battery on laptop computers
19	Vending machines	Turn off beverage vending machines
20	Work	Designate a space for working on holidays
21	Work	Introduce daylight saving time
22	Work	Concentrate flex holidays (extended time off that can be taken at various times of the year) during periods of intense heat

• Unplugging Activities

In response to recent tight energy supply and demand conditions, we are promoting unplugging activities. Every day from 12:00 to 16:00 is designated peak power time, during which laptop computers are unplugged from power outlets and used on battery power to the extent that it does not interfere with business operations, and smartphone and cell phone charging is discouraged.

• Super Cool Biz and Warm Biz

To save electricity, we set air conditioning temperatures to 28°C in summer and 20°C in winter. We have implemented Super Cool Biz and Warm Biz since fiscal 2011, and permit employees to work wearing polo shirts in summer and jumpers in winter.

P.107 Matching Fund (Support for Disaster-Affected Areas)

• Head Office Relocated to ZEB Ready Certified Office Tower

In July 2023, we relocated our head office to a new ZEB Ready* certified office tower that consumes 50% less energy compared with conventional buildings. Primary energy consumption has been reduced by more than 50% through the installation of solar power generation systems, highly insulated glass, and high-efficiency air conditioning and lighting equipment. Electricity consumption has decreased by approximately 40% since the relocation.

* One in four tiers of the Net Zero Energy Building (ZEB) series. The certification criteria for ZEB Ready are applied to buildings that reduce primary energy consumption by 50% or more from the standard primary energy consumption through energy conservation, excluding renewable energy.

Transportation-Related Initiatives

Unicharm has been working with business partners to improve transportation efficiency, promote modal shift, and enhance cargo loading efficiency by making corrugated cardboard smaller and streamlining pallet modules. These are some of the measures actively being pursued toward the reduction of CO_2 emissions during transportation and the development of a sustainable logistics structure.

• Expanding Modal Shift Using Trains and Ships

As part of Unicharm's efforts to reduce CO_2 emissions, we are promoting a modal shift to rail and maritime shipping, which emit less GHG than trucks. Unicharm Products Co., Ltd. has been certified as a leading business under the Eco-Ship Mark certification system. We are also working to expand environmentally friendly rail transportation, especially for long-distance transportation between our Fukushima and Shikoku factories, and in fiscal 2019 we received Eco-Rail Mark certification, promoted by the Ministry of Land, Infrastructure, Transport and Tourism.

エコシップマーク

エコレールマーク
認定企業 T19-006

• Joint Transportation via Rail Freight Container

In 2021, Unicharm Products and Suntory Logistics, Ltd., a logistics subsidiary of Suntory Holdings Limited, began joint transportation via rail freight container over the route between Shizuoka Prefecture and Fukuoka Prefecture. By combining Suntory beverages, which are heavy goods, and our products, which are light goods, we maximize container loading efficiency. With this weekly joint transportation system, we have reduced CO_2 emissions by a combined total of approximately two tons per year.

• Joint Delivery of In-Store Promotional Materials

Unicharm has been working together with FineToday Co., Ltd. and Lion Corporation for the integration of logistics operations for promotional materials used at retail stores and on sales floors, conducting joint deliveries since fiscal 2019. This collaborative effort between three companies to minimizes environmental impact through using the same packaging materials, bundling deliveries, reducing the use of delivery trucks, conserving resources, and reducing CO_2 emissions. It also contributes to improvements in backyard operations by reducing the burden of receiving cargo and the storage space for promotional materials at retailers.

• Expanding Our Water Transport Network (China)

By revising our transport model and further expanding our water transport network, we will work to reduce CO_2 emissions from logistic processes. Water transport not only reduces CO_2 emissions but also transport costs.

Jointly Received Special Award at 2024 Green Logistics Partnership Conference

Unicharm Products Co., Ltd. jointly received the Special Award at the 2024 Green Logistics Partnership Conference (sponsored by the Ministry of Land, Infrastructure, Transport and Tourism, the Ministry of Economy, Trade and Industry, the Japan Association for Logistics and Transport, the Japan Institute of Logistics Systems, and Keidanren (Japan Business Federation)) for its joint logistics efforts with Suntory Holdings Limited, Suntory Logistics Ltd., Trancom Co., Ltd., and Asahi Tsusho Japan Co., Ltd.

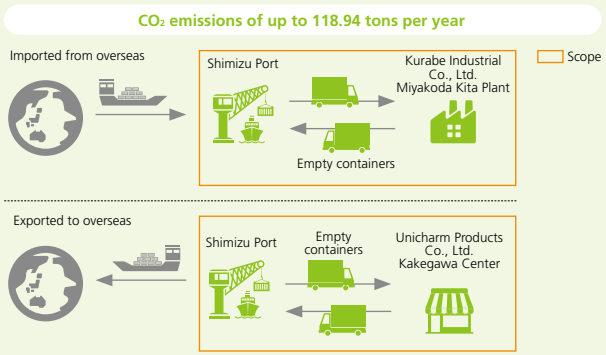
The award is in recognition of these companies' efforts to build and promote a long-distance transportation network that takes environmental aspects and labor shortages into account by combining Unicharm and Suntory's cargo and Asahi Tsusho's facilities to operate regular round-trip transport services between Shikoku and Kanto, and by introducing a driver rotation system and improving efficiency through the use of larger fleets. Through this initiative, we achieved round-trip operations for all vehicles (250 vehicles per year), reduced transport distance by 200,000 km per year, reduced CO_2 emissions by 223 tons per year, improved vehicle loading rate by 106%, and reduced the workload of drivers by enabling day-trip operations and scheduled operations.

みんなで地球にやさしい物流を
グリーン物流パートナーシップ

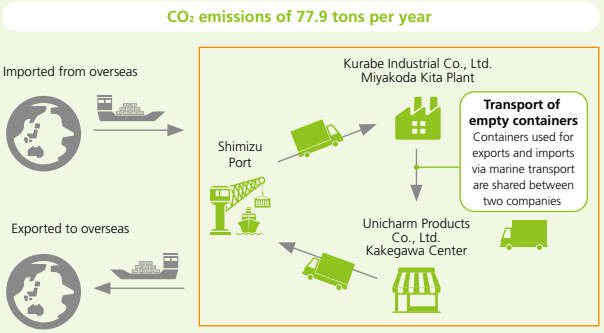
Received Special Award at 25th Logistics Environment Awards

Unicharm Products received the Special Award at the 25th Logistics Environment Awards (sponsored by the Japan Association for Logistics and Transport) for its joint logistics efforts with Kurabe Industrial Co., Ltd., Konoike Transport Co., Ltd., LOGISTEED, Ltd., and LOGISTEED Express, Ltd. This initiative was recognized for its significant contribution to a sustainable future, including the reduction of CO_2 emissions through the operation of round-trip transport* and the shortening of work hours of truck drivers.

Previous System



Current System

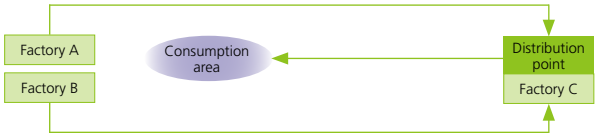


* A method of transport in which a truck that has unloaded goods does not return to its point of departure without loading separate cargo

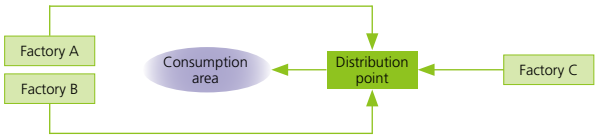
• Establishing Distribution Points on the Outskirts of Consumption Areas

By consolidating products that were previously concentrated at distribution point far from the areas of greatest consumption from factories into distribution point established near the consumption areas, we are working to reduce waste in delivery, improve delivery efficiency, and reduce CO_2 emissions.

Before



After improvement



• Environmental Efforts at Warehouses (Australia)

In cooperation with a logistics operator, Unicharm's local subsidiary in Australia is working to reduce CO_2 emissions by switching the power source for the forklifts used in its warehouses to solar power batteries.

• Using EV Trucks for Deliveries (China)

In China, we anticipate an approximate 42% reduction in CO_2 emissions by switching from gasoline vehicles to electric vehicles for short-distance deliveries. We are also looking to adopt new energy sources for trucks used in long-distance deliveries.

• Adopting Ultrasonic Coupling Technology to Improve Transportation Efficiency

In November 2023, Unicharm launched *Lifree Thin Lightweight Comfortable Pants* with improved comfort by changing the method of joining the elastic thread at the waist from the conventional hot melt (adhesive) gluing to ultrasonic bonding. By eliminating the need to consider the impact of compression on adhesive through this change, the package size is made approximately 10% more compact,* increasing loading efficiency during distribution and delivery. This is expected to reduce CO_2 emissions by approximately 220 tons per year.

* Front width comparison

• Improving Loading Efficiency Through Use of Thinner Packaging (China)

Unicharm's local subsidiary in China has reduced the thickness of its product sample packaging by about 30% by mixing washi (Japanese paper). It also reduced CO_2 emissions during transport and deliveries by approximately 50% through improvements in loading efficiency as a result of changing the method of filling packages and further reducing volume.

CO_2 Emissions Associated with End-of-Life Treatment of Sold Products

305-5

Unicharm works to reduce CO_2 emissions when used products are disposed of by promoting the 3Rs (reducing the amount of materials used by making products lighter and slimmer, using thinner packaging, and other efforts; reusing by providing refill and replacement products; and recycling used disposable diapers and other products). Through these efforts, in fiscal 2024 we reduced CO_2 emissions from the disposal and processing of used products by 38.0% (per unit of sales) compared with fiscal 2016.

P.26 Reducing Usage of Plastic in Packaging Materials
P.28 Product Initiatives

Raising Awareness of Proper Waste Separation and Disposal Methods

Although waste disposal methods vary between countries and regions, in some countries and regions where we provide our products, waste separation and collection are not widespread. In addition to raising awareness of proper disposal methods through product packaging, we conduct classes in various countries and regions for children, who are the future of our society, on the correct way to dispose of garbage, how garbage can be transformed into resources through sorting, and the recycling of used disposable diapers.

P.29 Raising Awareness About Proper Disposal of Used Products