Visualizing and Quantifying Social and Environmental Value

Seeking to expand the product lineup from the starting point of contributing to the natural and living environments

The Kuraray Group has identified material issues relevant to the Company, following the steps shown at right. Among these issues, we are taking products and technologies that contribute to the natural and living environments as our starting point as we aim to create a sustainable product portfolio. To this end, we constructed the Kuraray PSA system based on the PSA guidelines of WBCSD*, which offer a consistent methodology for evaluating products with a high degree of objectivity and transparency.

Looking at products, applications, and the regions where they are used, we evaluate products using a five-point scale based on criteria such as fundamental requirements, social and regulatory trends, and comparison of contributions to the natural and living environments against benchmark products. Products receiving the two top rankings are designated as products that contribute to the natural and living environments. We will build a more sophisticated business portfolio by expanding sales of such products, from 46% of all sales in 2020 to 55% in 2024 and 60% in 2026.

* World Business Council for Sustainable Development.

Assessment of contribution using Kuraray PSA system

Fundamental requirements
- Chemical and hazardous substance management
- Application to Kuraray Action Guidelines
- Economic value
- Reputational risks

Stakeholder requests
- Regulatory trends by region
- Sustainability policies across the value chain
- Eco labeling, certification, etc.

Performance assessment
- Relative assessment against benchmark

<Assessment ranking>

Assessment based on contribution by Kuraray products

5 Top performance
4 Positive performance
3 Neutral
2 Negative performance
1 High risk

P.31

Procedure to Identify Materiality

Identify and organize issues	Incorporate SDGs	Prioritize issues	Materiality candidate determination	Materiality determination
Social issues were extracted and organized based on international guidelines and the contents of surveys conducted by sustainability assessment institutions. Extracted items: 326 Organized aspects: 26	The four aspects extracted from the "The Chemical Sector SDG Roadmap" of the World Business Council for Sustainable Development (WBCSD), which do not overlap with the 26 aspects in STEP 1, make a total of 30 aspects.	The 19 aspects that should be addressed as priorities were determined by evaluating comprehensively along two axes of the "materiality for stakeholders" and "materiality for the Kuraray Group."	As a result of discussions with all division general managers of the Kuraray Group in Japan and overseas, five candidate material issues were determined by grouping the 19 aspects in STEP 3.	The candidate material issues mentioned at left were reported at a meeting of the Board of Directors and finalized.

Procedure to Identify Materiality

Materiality of the Kuraray Group

Creating Value through Business

Improving the natural environment	Improving the living environment
• Climate change measures—GHG reduction and energy conservation • Solution of marine plastics and plastic waste • Water and air purification • Biodiversity conservation • Development of next-generation applications, products, and technologies • Circular economy	• Contribution to the safe and reliable supply of food and water • Improvement of quality of life • Promotion of health and wellness for all • Development of next-generation applications, products, and technologies

Creating Value to Strengthen the Foundation of Kuraray

Effective use of resources and reduction of environmental impact	Improving supply chain management	Building a "company that people can take pride in"
• Reduction of GHG emissions • Reduction of chemical emissions • Reduction of waste volume and intensity • Reduction of marine plastics and plastic waste	• Sustainability procurement • Improvement of product stewardship	• Promotion of safety activities • Improvement of safety and disaster prevention preparedness • Enhancement of technology and working smarter • Promotion of workplace diversity and inclusion

Materiality

Maximizing Environmental Value

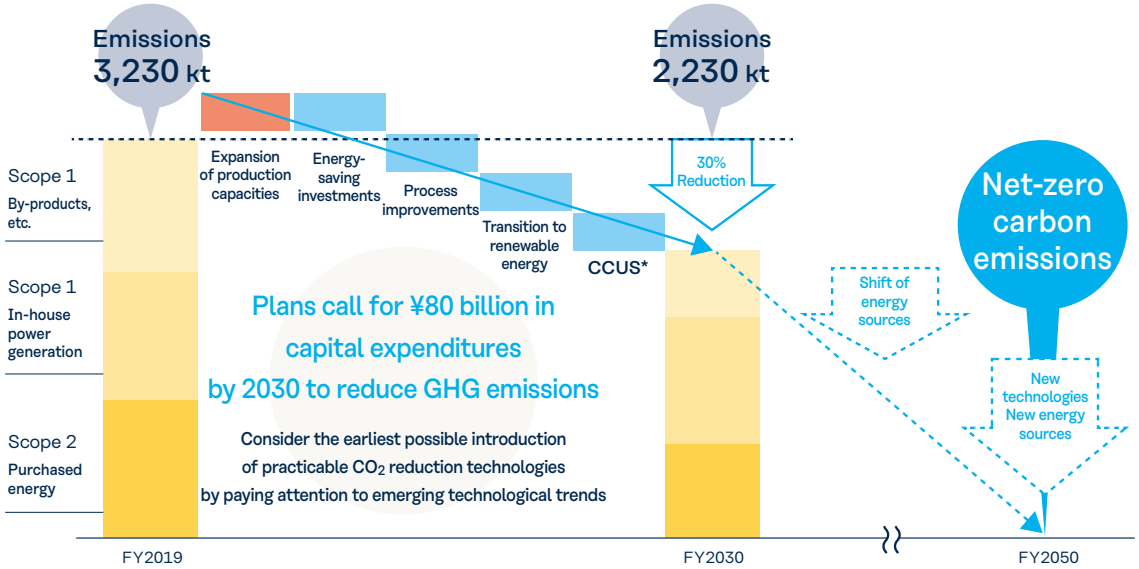
The Kuraray Group has formulated a roadmap for reducing Scope 1 and Scope 2 greenhouse gas (GHG) emissions, aiming to achieve net-zero carbon emissions in 2050. During "PASSION 2026," the roadmap calls for investments in energy saving, converting purchased electricity to renewable energy (including the purchase of renewable energy certificates), and other reduction measures to maintain GHG emissions below the 2019 benchmark, even while expanding our businesses. The roadmap includes a plan to invest ¥80 billion in GHG emissions reductions by 2030, targeting a further 30% reduction compared to 2019. This mainly entails establishing CCUS* technologies and shifting fuels used in in-house power generation. In 2050, we aim to achieve net-zero carbon emissions by identifying and harnessing emerging technologies that prove effective, such as green hydrogen and green ammonia technologies.

Viewing carbon neutrality as a business opportunity as well, the Kuraray Group will maximize environmental value by reducing GHG emissions while simultaneously expanding the lineup of products that contribute to the natural and living environments.

* Carbon dioxide Capture, Utilization, and Storage: An initiative to utilize or store CO_2 separated from exhaust gas from industrial facilities.

P.29

Roadmap towards net-zero carbon emissions in 2050



Adoption of Internal Carbon Pricing (ICP) System

In 2021, the Kuraray Group adopted an internal carbon pricing (ICP) system to govern capital spending. In line with the start of "PASSION 2026," we revised our internal carbon pricing from 2022, to ¥10,000 per ton of CO_2e. We will use this system in multiple ways as we aim to reach the goal of net-zero carbon emissions, including as an incentive to promote capital spending that leads to energy conservation, as a means of identifying profit opportunities and risk, and as a social and environmental value indicator for evaluating businesses and making investment decisions.

Operation of ICP system

Internal carbon pricing	¥10,000/ ton-CO_2e (calculated using internal exchange rates overseas) Effective from January 1, 2022

Already implemented	Under consideration
• Capital spending to increase/decrease GHG emissions • Calculating virtual cost/profit with internal carbon pricing and using as a criteria in making investment decisions	• Converting GHG emissions of each business and product to cost at an internal carbon price and evaluating their resilience to future carbon taxes, etc.