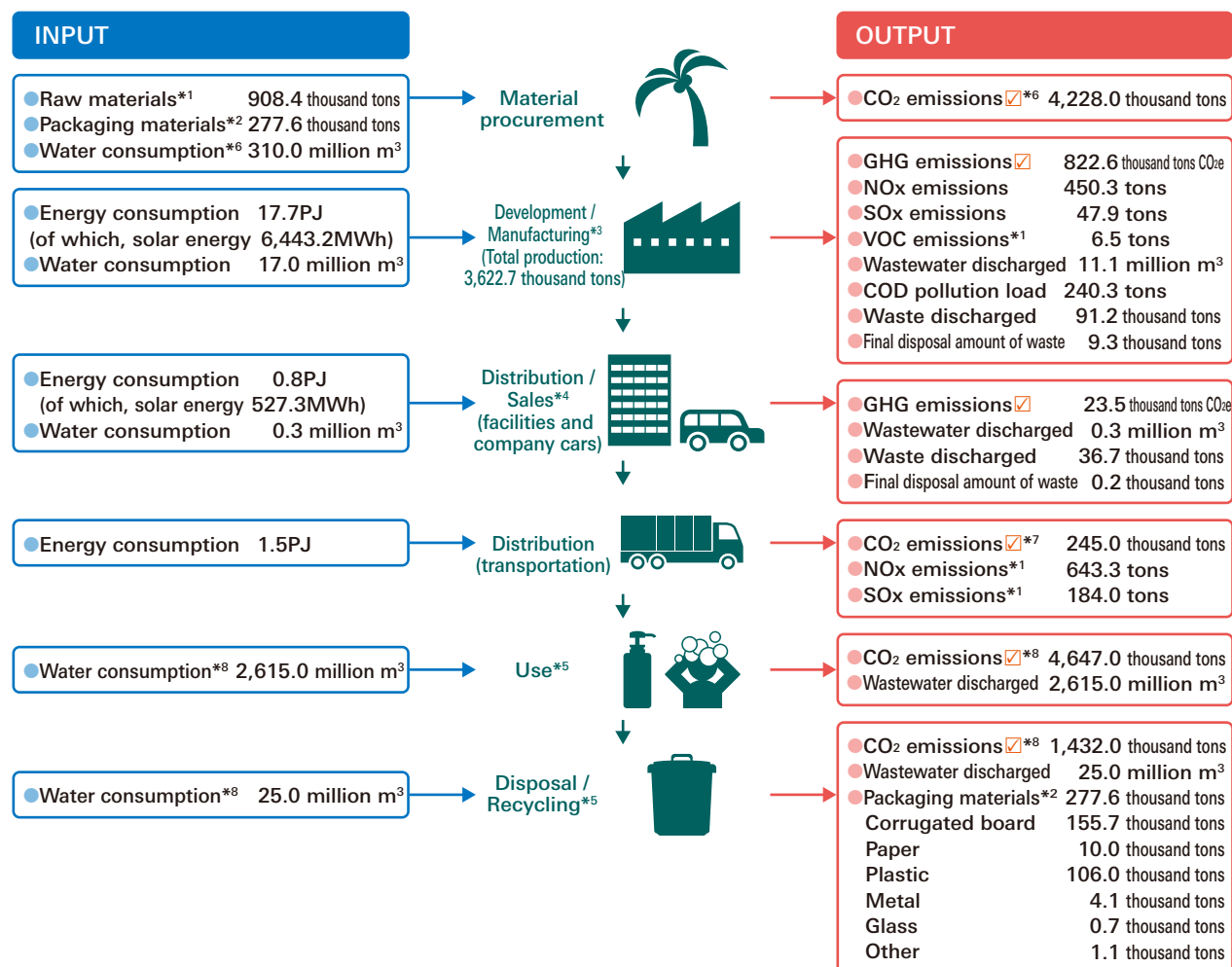


Product lifecycle and environmental impact

301-1, 302-1, 303-3, 303-4, 303-5 (Water and effluents 2018), 305-1, 305-2, 305-3, 305-7

Kao is pursuing efficient resource utilization across the product lifecycle, as well as technologies to achieve further resource and energy savings.

2021 business operations and environmental impact



Boundary of calculations

- *1 Kao Group in Japan
- *2 For consumer products excluding cosmetics and human health care. Calculated by multiplying the amount of packaging used per product by annual sales in 2021
- *3 All production sites
- *4 All non-production sites (including training facilities, company dormitories, etc.)
- *5 Consumer products
- *6 Calculated by multiplying the per unit CO₂ emissions and water usage in the raw materials production stage (excluding Kao Group manufacturing processes) by the annual sales number of consumer and industrial products in 2021
- *7 Consumer products and industrial products. Figures for Japan are calculated based on the Energy Conservation Act. Figures for outside Japan are calculated multiplying the per unit CO₂ emissions during transport (calculated based on figures for Japan) by the quantity sold in each country and the estimated domestic transport distance in each country.
- *8 Calculated by multiplying the per unit CO₂ emissions and water usage during use or per unit CO₂ emissions and water usage during disposal by the annual sales number of consumer products in 2021

Product lifecycle and environmental impact⁴¹⁷⁻¹

INPUT

● Raw materials

The amount of raw materials directly used to manufacture products (excluding packaging materials and fuel)

● Packaging materials

The amount of packaging used for products sold (including corrugated box)

● Energy consumption [product development/manufacturing]

Total amount of energy consumed at manufacturing sites (Boundary for solar photovoltaic power generation is limited to on-site power generation)

● Energy consumption [distribution/sales (facilities and company cars)]

The amount of energy consumed at non-production sites and by vehicles (used for sales activities) (Boundary for solar photovoltaic power generation is limited to on-site power generation)

● Energy consumption [transportation]

The amount of energy consumed during transportation of consumer products (from plants to distribution bases), industrial products, raw materials, etc.

● Water consumption

Industrial water, municipal water, groundwater, rainwater consumed

OUTPUT

● GHG emissions

Total amount of greenhouse gas emissions from sites (seven GHGs defined in the Kyoto Protocol) (in CO₂ equivalent, Scope 1+2)

● CO₂ emissions

The amount of CO₂ emitted from manufacturing raw materials, consuming energy and decomposition of ingredients

● NO_x emissions

Total amount of NO_x emissions from smoke-and-soot-emitting facilities and transportation

● SO_x emissions

Total amount of SO_x emissions from smoke-and-soot-emitting facilities and transportation

● VOC emissions

Total amount of volatile organic compounds (VOCs) emitted into the atmosphere from production sites

● Wastewater discharged

The amount of wastewater discharged at production sites and consumer product use stages

● COD pollution load

The amount of COD pollution load in wastewater

● Waste discharged and final disposal amount of waste

Of the waste generated from sites, the amount that is sold or entrusted as waste or recyclable materials to waste treatment companies, and the amount of waste to landfill

● Packaging materials

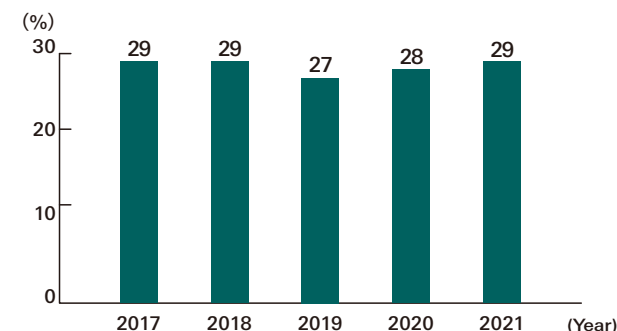
Total amount of packaging materials (including corrugated box) used for products sold

Expansion of the range of products that display the “eco together” logo

Products with lower environmental impact that have passed our rigorous original certification standards display the “eco together” logo.

In 2021, the sales ratio of products (consumer products in Japan) displaying the “eco together” logo was 29%, which represented an increase compared to the previous year.

Percentage of total sales held by products displaying the “eco together” logo (consumer products in Japan)



“eco together” logo display standards

List of products displaying the “eco together” logo (Japanese)