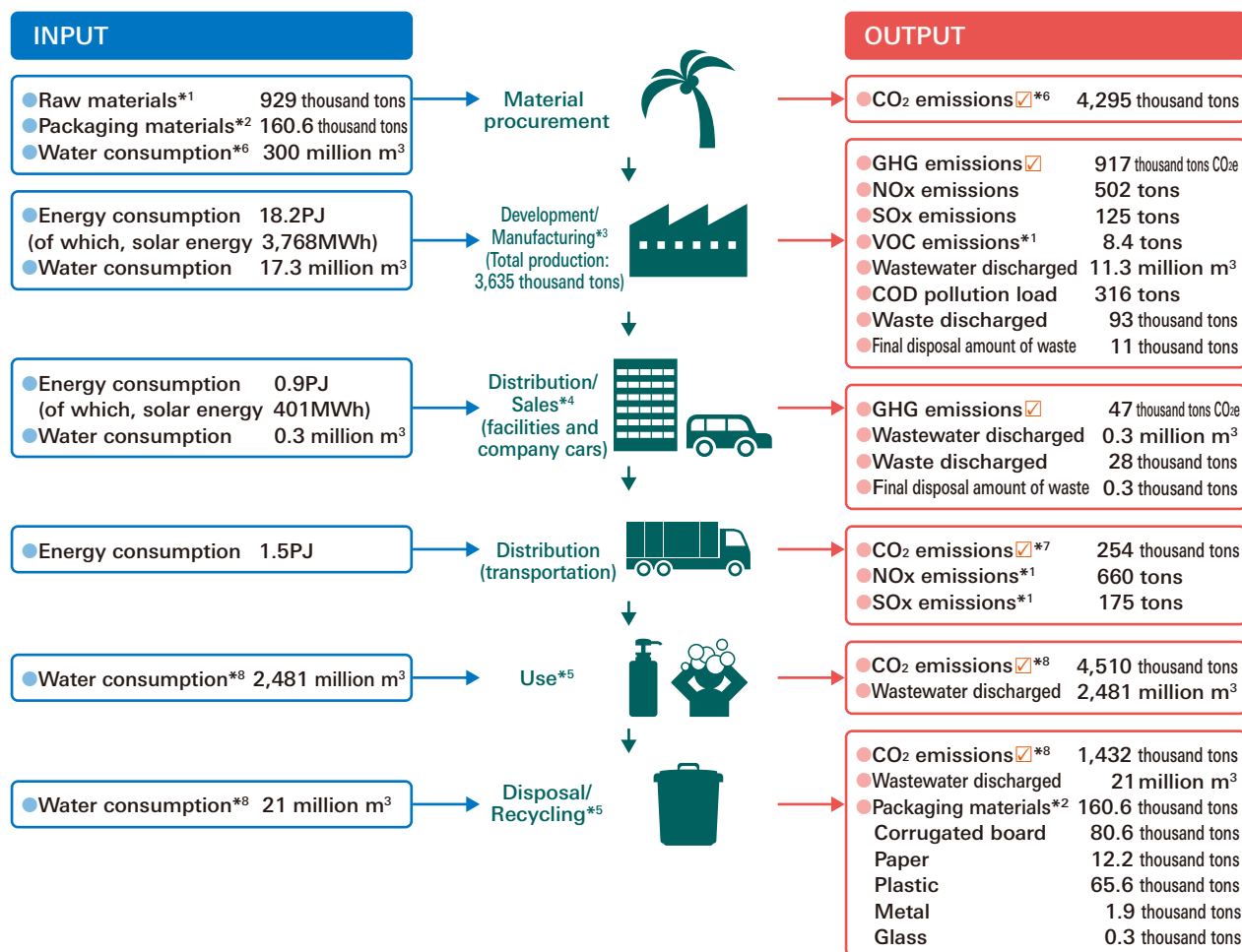


# Product lifecycle and environmental impact

301-1, 302-1, 303-3 (Water and effluents 2018), 303-4 (Water and effluents 2018), 303-5 (Water and effluents 2018), 305-1, 305-2, 305-3, 305-7, 306-2

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

## 2019 business operations and environmental impact



### Boundary of calculations

- \*1 Kao Group in Japan.
- \*2 Kao Corporation, Kanebo Cosmetics Inc., Kao Professional Services Co., Ltd.
- \*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 CO<sub>2</sub> 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 2019.
- \*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 CO<sub>2</sub> 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 CO<sub>2</sub> emissions and water usage during use or per unit CO<sub>2</sub> emissions and water usage during disposal by the annual sales number of consumer products in 2019.

# Product lifecycle and environmental impact

301-1, 302-1, 303-3 (Water and effluents 2018), 303-4 (Water and effluents 2018), 303-5 (Water and effluents 2018), 305-1, 305-2, 305-3, 305-7, 306-2, 417-1

## 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

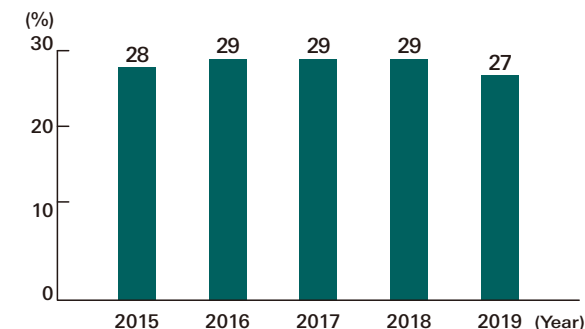
- **GHG emissions**  
Total amount of greenhouse gas emissions from sites (seven GHGs defined in the Kyoto Protocol) (in CO<sub>2</sub> equivalent, Scope 1+2).
- **CO<sub>2</sub> emissions**  
The amount of CO<sub>2</sub> emitted from manufacturing raw materials, consuming energy and decomposition of ingredients.
- **NO<sub>x</sub> emissions**  
Total amount of NO<sub>x</sub> emissions from smoke-and-soot-emitting facilities and transportation.
- **SO<sub>x</sub> emissions**  
Total amount of SO<sub>x</sub> emissions from smoke-and-soot-emitting facilities and transportation.
- **VOC emissions**  
Total amount of VOCs (volatile organic compounds) 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 2019, the sales ratio of products displaying the “eco together” logo (consumer products in Japan) was 27%, lower than the 29% of the previous year. This is attributed to some refill products not displaying the “eco together” logo even though they met the “eco together” standards. Even without displaying the logo, refill products themselves communicate environmental considerations to consumers, and therefore the ratio of eco-conscious products is considered to substantively be at the same level as 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)