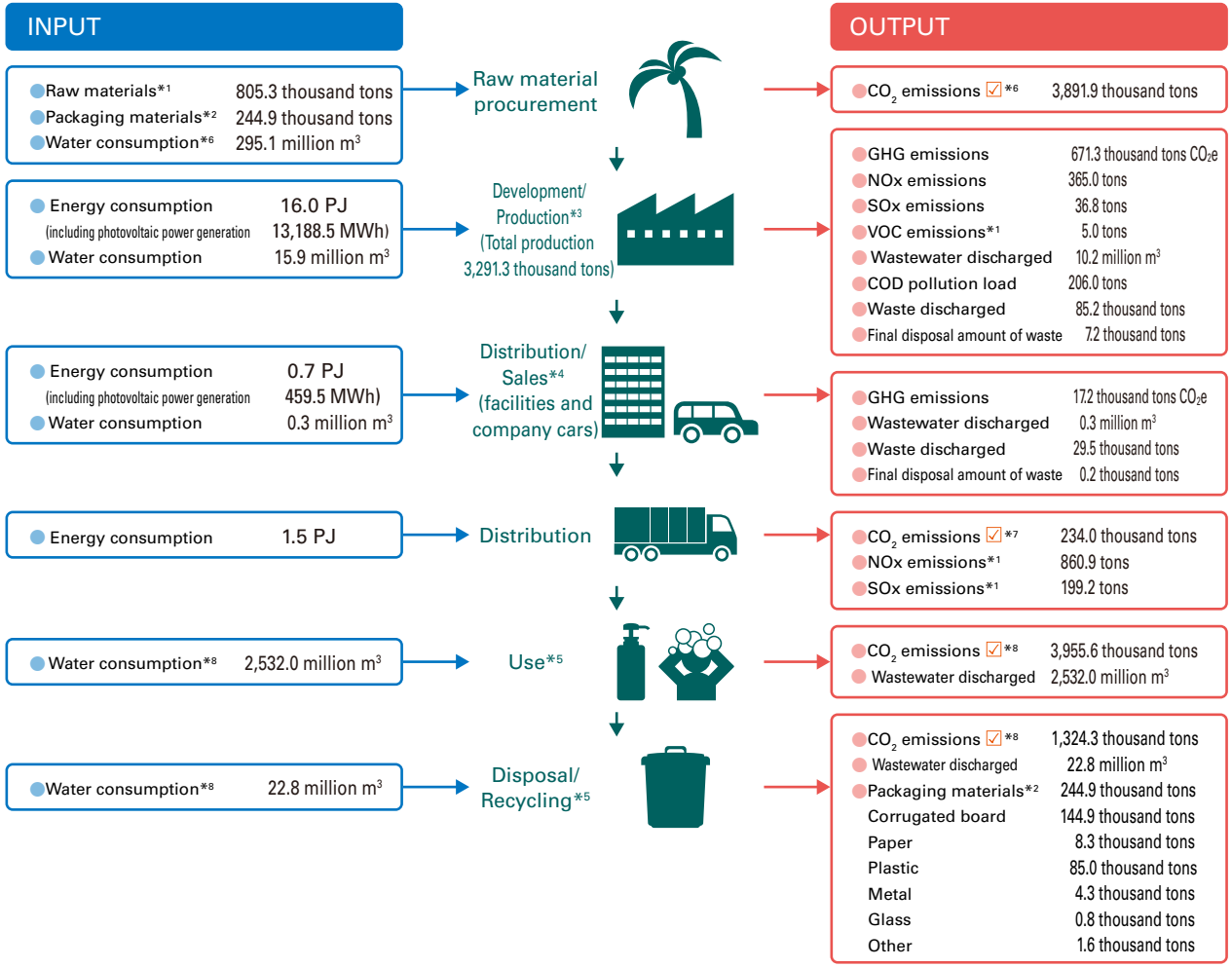
Product Lifecycle and Environmental Impact

GRI 301-1, 302-1, 303-3, 303-4, 303-5, 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 savings of natural resources and energy conservation.

2023 business operations and environmental impact



Scope 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 FY2023
*3 All production sites
*4 All non-production sites (including Training Centers, company dormitories, etc.)
*5 Consumer products
*6 Calculated by multiplying the per-unit CO_2 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 FY2023
*7 The scope is 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_2 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_2 emissions and water usage during use or per-unit CO_2 emissions and water usage during disposal by the annual sales number of consumer products

Product Lifecycle and Environmental Impact GRI 417-1

INPUT

- **Raw materials**
  The amount of raw materials directly used to manufacture products (excluding packaging materials and fuel)
- **Packaging materials**
  Total amount of packaging materials (including cardboard) used for products sold
- **Energy consumption [product development/production]**
  Total amount of energy consumed at production sites (Scope of solar photovoltaic power generation is limited to onsite 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) (Scope of 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 used

OUTPUT

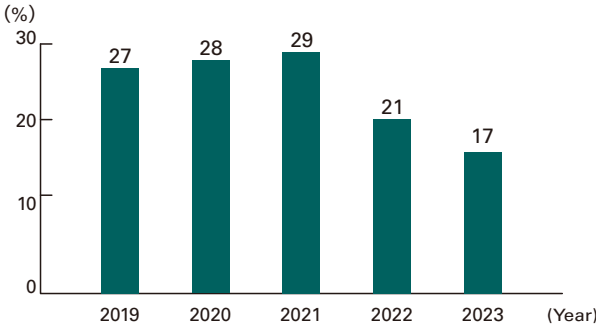
- **GHG emissions**
  Total amount of greenhouse gas emissions from sites (seven GHGs defined in the Kyoto Protocol) (in CO_2 equivalent, Scope 1+2)
- **CO_2 emissions**
  The amount of CO_2 emitted from manufacturing raw materials, consuming energy and decomposition of ingredients
- **NOx emissions**
  Total amount of NOx emissions from smoke-and soot-emitting facilities and transportation
- **SOx emissions**
  Total amount of SOx 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 consigned as waste or recyclable materials to waste treatment companies, and the amount of waste to landfill
- **Packaging materials**
  Total amount of packaging materials (including cardboard) used for products sold

"Eco together" logo certified products

We carry out certification that allows products with lower environmental impact that have passed our rigorous original certification standards to display the "eco together" logo.

In 2023, the sales ratio of products (consumer products in Japan) displaying the "eco together" logo was 17%, which represented a decrease compared to the previous year.

Percentage of total sales held by "eco together" logo certified products (consumer products in Japan)



Web "Eco together" logo certification criteria
https://www.kao.com/jp/sustainability/klp/policy/eco-products-policy/

List of "eco together" logo-certified products
https://www.kao.com/jp/sustainability/klp/policy/eco-products-policy/eco-together-products/