

Kao's approach

To efficiently and effectively promote its environmental activities, Kao quantifies the costs and results of those activities in numerical terms.

2017 environmental accounting report

- 1 The aggregation methods we use comply with the Japanese Ministry of the Environment's Environmental Accounting Guidelines 2005. We also reference the Environmental Accounting Guidelines for Chemical Companies (November 2003) issued by the Japan Chemical Industry Association.
- 2 Boundary: Kao Corporation, Kao Group companies in Japan and Kao Group companies outside Japan with production sites.
- 3 See Product lifecycle and environmental impact for environmental conservation results (numerical results).



→ p. 71 Conservation > Product lifecycle and environmental impact

Environmental conservation costs (categories corresponding to business activities)

(Unit: millions of yen)

| Categories | Key activities | Inside Japan | | Outside Japan | |
|--|---|--------------|---------------|---------------|--------------|
| | | Investment | Cost* | Investment | Cost* |
| (1) Business area costs | | 1,493 | 3,844 | 1,362 | 3,407 |
| Breakdown | ① Pollution prevention | 264 | 1,442 | 635 | 1,277 |
| | ② Global environmental conservation | 880 | 582 | 296 | 743 |
| | ③ Resource circulation | 349 | 1,820 | 431 | 1,387 |
| (2) Upstream/downstream costs | Plant and equipment for eco-conscious products, packaging recycling | 579 | 2,618 | 0 | 77 |
| (3) Administration costs | Acquisition and maintenance of EMS certification, environmental publicity, tree planting within worksites | 4 | 2,031 | 0 | 261 |
| (4) R&D costs | Eco-conscious R&D | 2,402 | 4,399 | 1 | 113 |
| (5) Social activity costs | Nature and environmental conservation and tree-planting activities outside worksites, donations | 7 | 134 | 14 | 11 |
| (6) Environmental remediation costs | | 0 | 0 | 0 | 11 |
| Total | | 4,485 | 13,026 | 1,377 | 3,880 |

Environmental conservation costs (categories corresponding to areas of environmental conservation measures) (Unit: millions of yen)

| Categories | Key activities | Inside Japan | | Outside Japan | |
|--|--|--------------|---------------|---------------|--------------|
| | | Investment | Cost* | Investment | Cost* |
| ① Cost related to global warming measures | Energy conservation | 880 | 582 | 236 | 357 |
| ② Cost related to ozone layer protection measures | Switch to CFC alternatives | 0 | 0 | 58 | 366 |
| ③ Cost related to air quality conservation measures | Air pollution prevention, dust pollution prevention, malodor prevention | 13 | 457 | 149 | 470 |
| ④ Cost related to noise and vibration measures | Noise prevention | 0 | 4 | 15 | 42 |
| ⑤ Cost related to environmental conservation measures for aquatic, ground, and geologic environments | Water contamination prevention | 251 | 981 | 472 | 755 |
| ⑥ Cost related to waste and recycling measures | Resource conservation, industrial waste volume reductions, recycling | 928 | 4,438 | 431 | 1,460 |
| ⑦ Cost related to measures to reduce chemical risks and emissions | R&D on products and production | 2,402 | 4,399 | 1 | 112 |
| ⑧ Cost related to nature and environmental conservation | Nature and environmental conservation and tree-planting activities outside worksites, donations | 7 | 133 | 15 | 77 |
| ⑨ Other costs | Acquisition and maintenance of EMS certification, environmental publicity, tree-planting activities within worksites | 4 | 2,032 | 0 | 241 |
| Total | | 4,485 | 13,026 | 1,377 | 3,880 |

* Cost includes depreciation costs.

Economic effect associated with environmental conservation activities*1 (Unit: millions of yen)

| Details of benefits | | Inside Japan | Outside Japan |
|---------------------|---|--------------|---------------|
| | | Amount | Amount |
| Revenue | Sales value of valuable resources and fixed assets | 539 | 231 |
| Cost reductions*2 | Reduction in costs through energy conservation | 143 | 98 |
| | Reduction in costs through resource conservation | 873 | 1,432 |
| | Reduction in operation costs (maintenance costs, etc. of eco-conscious equipment) | 57 | 646 |
| Total | | 1,612 | 2,407 |

*1 For economic effect, only amounts from selling valuable resources and fixed assets and the amount of cost reductions are recorded. Economic effects based on assumption such as risk mitigation, so-called "deemed effects" are not recorded.

*2 The amounts of cost reductions contains only the relevant fiscal year of the annual cost reduction for items generated during that year. Cost reduction amounts generated over multiple years are not included.