

### Kao's approach

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

## 2018 environmental accounting report

- 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.
- Boundary: the domestic Kao Group\*<sup>1</sup> and major overseas subsidiaries\*<sup>2</sup>.
- Concerns the period from January 1, 2018 to December 31, 2018.



Please see below for environmental conservation results (numerical results).  
→ p. 92 Conservation > Product lifecycle and environmental impact

\*1 Kao Corporation, Kao-Quaker Company, Limited., Kao Group Customer Marketing Co., Ltd., Kao Sanitary Products Ehime Co., Ltd., Kanebo Cosmetics Inc., Kanebo Cosmetics Sales Inc., e'quipe, Ltd., Kao Professional Services Co., Ltd., Goldwell Japan Co., Ltd., Molton Brown Japan Ltd., Kao Paper Manufacturing Fuji, Kao Business Associe Co., Ltd., Kao Logistics Co., Ltd., Kao System Logistics Co., Ltd., Kao Field Marketing Co., Ltd., Kao Creative House Corporation, Shohi Seikatsu Kenkyusho Inc., Kao Peony Co., Ltd., Healthcare Committee Inc., and Kao Cosmetic Products Odawara Co., Ltd.

\*2 Kao Chemical Corporation Shanghai, Kao (Taiwan) Corporation, Kao Vietnam Co., Ltd., Pilipinas Kao, Incorporated, Kao Industrial (Thailand) Co., Ltd., Kao Soap (Malaysia) Sdn. Bhd., Fatty Chemical (Malaysia) Sdn. Bhd., Kao Plasticizer (Malaysia) Sdn. Bhd., Kao Oleochemical (Malaysia) Sdn. Bhd., PT. Kao Indonesia Chemicals, Kao Specialties Americas LLC, Quimi-Kao, S.A. de C.V., Kao Corporation S.A., Kao (Hefei) Co., Ltd., Kao Chemicals GmbH, PT Kao Indonesia, Kao Manufacturing Germany GmbH, Kao (Shanghai) Chemical Industries Co., Ltd., Kao USA Inc., Molton Brown Limited, Kao Corporation Shanghai, Huludao Jinxing Casting Materials Co., Ltd.

### Environmental conservation costs (categories corresponding to business activities)

(Unit: millions of yen)

Categories		Key activities	Inside Japan		Asia, Americas and Europe	
			Investment	Cost* <sup>1</sup>	Investment	Cost* <sup>1</sup>
<b>(1) Business area costs</b>			2,169	3,632	1,254	3,625
Breakdown	①Pollution prevention	Air pollution prevention, water contamination prevention	628	1,464	879	1,491
	②Global environmental conservation	Energy conservation	506	365	248	753
	③Resource circulation	Resource conservation, waste processing and disposal	1,035	1,803	127	1,381
<b>(2) Upstream/downstream costs</b>			337	2,619	0	83
<b>(3) Administration costs</b>			5	2,057	27	207
<b>(4) R&amp;D costs</b>			2,402	4,399	6	105
<b>(5) Social activity costs</b>			0	148	13	13
<b>(6) Environmental remediation costs</b>			0	0	0	11
<b>Total</b>			<b>4,913</b>	<b>12,855</b>	<b>1,300</b>	<b>4,044</b>

### Environmental conservation costs (categories corresponding to areas of environmental conservation measures)

(Unit: millions of yen)

Categories		Key activities	Inside Japan		Asia, Americas and Europe	
			Investment	Cost* <sup>1</sup>	Investment	Cost* <sup>1</sup>
①Cost related to global warming measures		Energy conservation	506	365	214	387
②Cost related to ozone layer protection measures		Switch to CFC alternatives	0	0	34	346
③Cost related to air quality conservation measures		Air pollution prevention, dust pollution prevention, malodor prevention	15	439	473	467
④Cost related to noise and vibration measures		Noise prevention	0	2	16	52
⑤Cost related to environmental conservation measures for aquatic, ground, and geologic environments		Water contamination prevention	613	1,023	390	960
⑥Cost related to waste and recycling measures		Resource conservation, industrial waste volume reductions, recycling	1,373	4,422	127	1,461
⑦Cost related to measures to reduce chemical risks and emissions		R&D on products and production	2,402	4,399	6	105
⑧Cost related to nature and environmental conservation		Nature and environmental conservation and tree-planting activities outside worksites, donations	0	123	13	83
⑨Other costs		Acquisition and maintenance of EMS certification, environmental publicity, tree-planting activities within worksites	4	2,082	27	183
<b>Total</b>			<b>4,913</b>	<b>12,855</b>	<b>1,300</b>	<b>4,044</b>

### Economic effect associated with environmental conservation activities\*<sup>2</sup>

(Unit: millions of yen)

Details of benefits		Inside Japan	Asia, Americas and Europe
		Amount	Amount
Revenue	Sales value of valuable resources and fixed assets	455	214
	Reduction in costs through energy conservation	213	148
	Reduction in costs through resource conservation	1,460	866
Cost reductions* <sup>3</sup>	Reduction in operation costs (maintenance costs, etc. of eco-conscious equipment)	266	443
	<b>Total</b>	<b>2,394</b>	<b>1,671</b>

\*1 Cost includes depreciation costs.

\*2 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.

\*3 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.