

Company thinking

□ Background and purpose for accounting

- After conducting a company-wide life cycle assessment (LCA), it was discovered that the hot spot was Scope 3. Based on that result, we announced the "Kao Environmental Statement" in 2009 with the goals of reducing company-wide CO₂ emissions on a life-cycle basis and reducing water usage in the product usage phase.
- In order to understand the progress in achieving the above goals and to promote reduction activities, we are accounting for company-wide life cycle CO₂ emissions and water usage in the product usage phase.

□ Utilization of accounting results

- We are using LCA in product development.
- Reduction of life cycle CO₂ emissions is a display standard requirement for the "Eco Together" mark (product environment label).
- The results are being used to report the progress in achieving the above goals in our sustainability reports, to introduce our activities at the Kao Eco Lab Museum and various environmental exhibits, and to respond to various questionnaires.

□ Advantages of accounting

- Making the environmental load throughout the value chain "visible" will help sustain the global environment. By exposing the hot spot, we are able to take effective countermeasures.
- Accounting helps us avoid risks and create business opportunities.
- Our analysis showed that CO₂ emissions were high in the product usage phase. Therefore, we have been developing products with lower environmental loads in the usage phase. In addition to "Eco Together" with customers in this way, we are also calling for "Eco Together" with our business partners and all of society in order to make efforts from the point of view of life cycles.

□ Internal accounting organization

- Accounting is conducted for individual products and with our internal system that calculates the company LCI data. (Kao Japan) About 10,000 products are in the product database, and by linking the various internal databases we are making registration work more efficient. We also have data for our major products outside of Japan.
- Employees in charge of product development implement LCA for products under development by using the data in the above systems, and that information is used in product development activities.

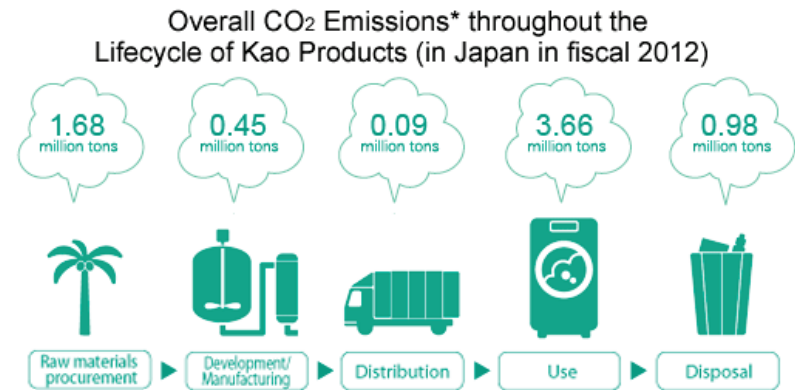
Company thinking

□ To reduce supply chain emissions

- In the raw materials procurement stage we are reducing materials by making products more compact, reducing the weight of containers, using refillable products, etc. As part of "Eco Together," we have recognized the need for cooperation with our suppliers.
- We have implemented various reduction activities at factories and operations centers for the production stage.
- With regard to the usage stage, we are developing and providing products that reduce the load during use. For example, we are making laundry detergents that only require one rinse cycle.
- For the waste stage, we are reducing materials by making containers lighter and promoting the use of refills. In addition, we are also promoting the introduction of bio-polyethylene, etc.

□ Tasks to account for supply chain emissions

- Tasks for society as a whole include producing calculation tools and databases, and spreading accounting tools, so that anyone can conduct an LCA easily.



*CO₂ emissions: Calculated by Kao (excluding the use and disposal of industrial products).

□ For those starting to account for supply chain emissions

- Because the makeup of environmental loads differ depending on the industry, the first thing to do is to find the "hot spot" for your company's products.

Category	Accounting methods	
	Activity data	Emission factor
Category 1: Purchased goods and services	<ul style="list-style-type: none"> Raw materials input 	<ul style="list-style-type: none"> Converted values from database, listed value and Input-Output tables
Category 2: Capital goods	<ul style="list-style-type: none"> Investment amount 	<ul style="list-style-type: none"> Database
Category 3: Fuel and energy related activities not included in Scope 1 or 2	<ul style="list-style-type: none"> Purchased amount 	<ul style="list-style-type: none"> Database
Category 4: Transportation and delivery (upstream)	<ul style="list-style-type: none"> Raw materials input, Energy Saving Act Product volume is calculated according to the Energy Saving Act as a specific cargo owner 	<ul style="list-style-type: none"> Database, Listed value
Category 5: Waste generated in operations	<ul style="list-style-type: none"> Waste weight 	<ul style="list-style-type: none"> Database
Category 6: Business travel	<ul style="list-style-type: none"> Number of employees 	<ul style="list-style-type: none"> Database
Category 7: Employee commuting	<ul style="list-style-type: none"> Number of employees 	<ul style="list-style-type: none"> Database
Category 8: Leased assets (upstream)	<ul style="list-style-type: none"> Including Scope 1 and 2 	

Category	Accounting methods	
	Activity data	Emission factor
Category 9: Transportation and delivery (downstream)	<ul style="list-style-type: none"> Product volume * Estimated from product transport data in Category 4 	<ul style="list-style-type: none"> Database
Category 10: Processing of sold products	<ul style="list-style-type: none"> Product volume 	<ul style="list-style-type: none"> Database
Category 11: Use of sold products	<ul style="list-style-type: none"> Depending on the scenario set up 	<ul style="list-style-type: none"> Emissions coefficients and databases for electricity and fuel that is calculated, reported and part of public systems.
Category 12: End-of-life treatment of sold products	<ul style="list-style-type: none"> Depending on the scenario set up 	<ul style="list-style-type: none"> Database, Listed value
Category 13: Leased assets (downstream)	<ul style="list-style-type: none"> Including Category 1 	
Category 14: Franchises	<ul style="list-style-type: none"> Not applicable 	
Category 15: Investments	<ul style="list-style-type: none"> Investment amount (stocks held are subject) 	<ul style="list-style-type: none"> Database