



Evaluate Evaluate dependencies and impacts

For the Functional Materials business and Functional Foods Business at the Amagasaki Plant and the Kawasaki Works (Daishi Plant), which use animal and plant-based raw materials identified as targets through the aforementioned Scoping and Locate steps, we used the ENCORE^{*1} tool to identify and evaluate their dependencies^{*2} and impacts^{*3} on natural capital. Specifically, we identified and evaluated dependencies and impacts on natural capital of both businesses across the value chain, including upstream (cultivation, livestock, import, and processing of raw materials), our own operations (manufacturing), and downstream (storage and transportation of products, as well as customers' manufacturing that uses our plant products as raw materials). The results were summarized in a heat map.

The evaluation showed that with respect to dependencies on natural capital, multiple processes of the value chain share a high dependency on water (groundwater and surface water). In addition, plant cultivation and livestock farming (cattle and pigs) showed many dependency items and generally higher levels of dependency.

Meanwhile, with respect to impacts on natural capital, water usage was also identified as having a high impact across the entire value chain, similar to the dependency findings. Even within our own manufacturing operations, we recognize water use as a particularly high-impact factor, and we will continue our efforts to reduce water consumption and maintain water quality.

Relationship of value chain to dependencies and impacts on natural capital

Level of dependency and impact: Large Small

Process		Dependency on natural capital																				Impact on natural capital														
		Labor provided by livestock	Provision of raw materials such as fibers	Provision of genetic resources	Use of groundwater	Use of surface water	Pollination	Maintenance of soil quality	Ventilation by plants	Maintenance of the water cycle	Maintenance of water quality	Purification of pollutants	Dilution by water and air	Filtration of pollutants	Reduction of noise and light pollution	Regulation of river flow and other water volumes	Climate stabilization	Regulation of pests and diseases	Protection from storm and flood damage	Protection against soil erosion	Pest control	Water use	Use of terrestrial ecosystems	Use of freshwater ecosystems	Use of marine ecosystems	Other resource use	Greenhouse gas emissions	Air pollution	Water pollution	Soil contamination	Solid waste	light pollution				
Up-stream	Cultivation																																			
	Livestock																																			
	Import																																			
	Processing																																			
NOF	Manufacturing																																			
Down-stream	Storage and transportation																																			
	Manufacturing (functional materials business)																																			
	Manufacturing (functional foods business)																																			

^{*1} ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. A tool developed by organizations such as the Natural Capital Finance Alliance (NCFA), a financial-sector network, to help financial institutions understand the degree to which companies depend on and impact natural capital.

^{*2} Dependency: Ecosystem services on which business activities rely (e.g., crop cultivation depends on ecosystem services such as water supply and pollination by insects)

^{*3} Impact: Positive or negative effects of business activities on natural capital (e.g., chemical manufacturing impacts natural capital through water use and greenhouse gas emissions.)