



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 nature. Specifically, we identified and evaluated dependencies and impacts on nature 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 nature, 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 nature, 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 nature

Level of dependency and impact: Large Small

Process		Dependency on nature															Impact on nature															
		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	Noise, vibration, and light pollution	Pest control	Protection against soil erosion	Protection from storm and flood damage	Regulation of pests and diseases	Climate stabilization	Regulation of river flow and other water volumes	Reduction of noise and light pollution	Filtration of pollutants	Dilution by water and air	Purification of pollutants	Maintenance of water quality	Maintenance of the water cycle	Ventilation by plants	Maintenance of soil quality	Pollination	Use of surface water	Use of groundwater	Provision of genetic resources	Provision of raw materials such as fibers	Labor provided by livestock
Upstream	Cultivation																															
	Livestock																															
	Import																															
	Processing																															
NOF	Manufacturing																															
Downstream	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 nature.

^{*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 nature (e.g., chemical manufacturing impacts nature through water use and greenhouse gas emissions.)