Sustainable Use of Natural Capital

Sumitomo Chemical has set biodiversity conservation and sustainable use of natural capital as material issues in the Nature Positive area. We have formulated Sumitomo Chemical's Commitment to the Conservation of Biodiversity. To realize Nature Positive, we are promoting a variety of initiatives from the perspectives of both obligation and contribution, in an integrated manner with carbon neutrality and a circular economy.

The Sumitomo Chemical Group's Commitment to the Conservation of Biodiversity (Sustainability Report)

Disclosure in Line with TNFD Recommendations

We have registered as a TNFD Adopter and endorsed the TNFD Recommendations, which were published in September 2023 by the Taskforce on Nature-related Financial Disclosures (TNFD). Please see the Sustainability Report for details of our disclosures in the TNFD recommended disclosure areas: Governance, Risk Management, Strategy, and Metrics and Targets.

Sustainable Use of Natural Capital (Sustainability Report)

Governance

The Sumitomo Chemical Group has set conservation and regeneration of biodiversity and natural capital as one of the material issues to be addressed as management priorities. The Board of Directors supervises this matter by receiving reports on nature-related dependencies, impacts, risks, and opportunities, and by providing recommendations and instructions through management meetings, the Carbon Neutral Strategy Council, and the Internal Control Committee. Please see the Sustainability Report for details.

Governance (Sustainability Report)

Strategy

The Sumitomo Chemical Group assesses nature-related dependencies and impacts, as well as risks and opportunities, based on the LEAP approach recommended by the TNFD, and incorporates the results into the formulation of the Group's strategy.

Summary of the LEAP approach

❶ Scoping	❷ Locate	❸ Evaluate	❹ Assess	❺ Prepare
• Development of a hypothesis on the potential interface with nature	• Narrowing down potential nature-related interfaces • Setting priorities	• Identification of interface-related impact drivers • Identification and assessment of the dependencies and impacts	• Identification of risks and opportunities	• Performance management • Strategy and target setting for the future
• We have set the Agro & Life Solutions business (AGL business) as the important nature-related interface.	• Water risks are a significant factor in the crop protection product manufacturing phase in the crop protection product sector under the AGL business. • India has relatively high water risks among crop protection product manufacturing sites.	• Water stress is relatively high in relation to water intake for crop protection product manufacturing in India. • Major impact drivers include increased demand for agricultural water in the surrounding area and decreased precipitation, among others.	• We will identify and set priorities of risks and opportunities based on the result of the Evaluate step.	• We will continue to monitor environmental parameters and evaluate our progress against annual goals. • We plan to develop a long-term transition plan and roadmap.

Strategy (Sustainability Report)

Risk & impact management

The Sumitomo Chemical Group has a system in place to manage risk assessment items evaluated in the above-mentioned LEAP approach together with their impacts.

Promotion of Group-wide Priority Risk Assessment and Countermeasures (Sustainability Report)

Cross-organizational Risks and Crisis Response (Sustainability Report)

Metrics & targets

With respect to metrics for nature-related dependencies and impacts on a global scale, targets are set and managed both on a standalone basis for Sumitomo Chemical and on a consolidated basis including Group companies. With respect to metrics at the local level, targets are set and managed by each manufacturing site and Group company.

Environmental Activity Goals and Results (Sustainability Report)

Examples of Initiatives for "Obligation" and "Contribution" (Sustainability Report)

Example of Initiatives

Specific initiatives for "Obligation

We aim to continuously reduce the environmental impact of our business activities and endeavor to conserve and restore biodiversity and natural capital by taking characteristics of local communities into consideration and cooperating with stakeholders in our supply chains

- Reduction of greenhouse gas (GHG) emissions from energy and processes
- Appropriate chemical substance management
- Reduction of waste emissions
- Effective use of water resources
- Promotion of sustainableprocurement initiatives

Effective use of water resources: Initiative in Bhavnagar Plant of Sumitomo Chemical India Ltd.

Sumitomo Chemical India Ltd.'s Bhavnagar Plant serves as a crop protection product manufacturing site in India. The plant used to purchase river water from the local municipality to secure water for production. However, in recent years, securing the water required for production has become difficult due to population growth in the surrounding area, rising demand for agricultural water, and a decline in annual precipitation.

The plant then began purchasing a portion of household wastewater to be treated by surrounding municipalities, treating it in-house with earthworm farming technology, and using it in its production processes. By doing so, the plant resolved the long-standing challenge of securing a stable supply of water necessary for production. It also reduced the amount of river water traditionally purchased from the municipality by more than 70%, thereby cutting water purchase costs by nearly half.

Wastewater treatment



Treatment using earthworm farming technology instead of the common activated sludge method to suit the characteristics of household wastewater, which contains relatively high levels of nutrients

Specific initiatives for "Contribution"

We contribute to conserving and restoring biodiversity and natural capital across our value chain through development and provision of technologies, products, and services

- Provision of products and technologies that promote regenerative agriculture
- Development and implementation in society of technologies that contribute to recycling plastics and other resources
- Provision of products, technologies, and services that contribute to GHG emissions reduction

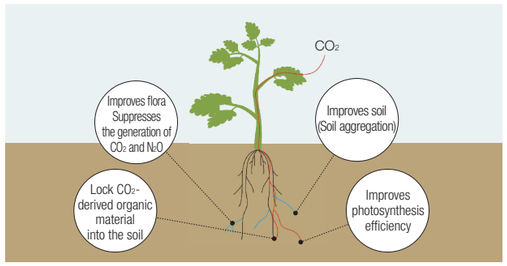
Provision of products and technologies that promote regenerative agriculture: ❶ Advancing no-till farming and cover crops

No-till farming is an agricultural method of growing crops without tilling. In addition to contributing to soil conservation and the retention of organic matter, it is expected to help reduce GHG emissions by contributing to the reduction of CO_2 emissions from the soil. In recent years, farming practices that combine no-till farming with cover crops, which are planted primarily to conserve soil and provide green manure benefits, have also attracted attention. We offer several herbicides that can be used before sowing. By improving the convenience of no-till farming and cover cropping through the promotion of these herbicides, we will contribute to the spread of this farming practice.

❷ Provision of products, technologies, and services that contribute to GHG emissions reduction: Soil fertility by mycorrhizal fungi

Mycorrhizal fungi, a type of soil-dwelling microorganism that lives in symbiosis with plant roots, stimulates plant growth. These fungi receive carbon compounds produced by plants through photosynthesis, which increases the amount of carbon compounds in the soil and promotes carbon fixation, thereby reducing atmospheric CO_2 and contributing to soil fertility. We are working on the development of technology utilizing mycorrhizal fungi to achieve carbon neutrality and solve food problems.

Benefits of mycorrhizal fungi (including some hypotheses undergoing validation)



Developing technologies for the effective use of water resources: Research and development of water utilization technologies using porous materials

The Company is conducting research and development on metal-organic frameworks (MOFs), leveraging their high surface area and excellent adsorption properties to efficiently capture water vapor from the air. Through this technology, we aim to address environmental challenges by reducing greenhouse gas emissions through improved energy efficiency and effectively utilizing water resources.

Development of metal-organic frameworks (MOFs)