Environmental management

Policy and Concept

Throughout its 400-year history, Sumitomo Group has pursued industrial development in harmony with local communities and the natural environment. Based on this foundation, Sumitomo Corporation Group pursues business activities in such a way as to promote environmental conservation.

Recognizing that various initiatives such as creating a low-carbon society that alleviates climate change, preserving biodiversity and the global environment, using energy, water and resources sustainably, preventing pollution and controlling waste emissions are the most important and long-term concerns that all individuals and organizations must address, we have established our Environmental Policy as detailed on the right.

Sharing this policy, Sumitomo Corporation Group companies are committed to reducing the environmental impacts of their business activities as well as to improving the environment through their business activities, based on the ISO 14001 environment management system.

Sumitomo Corporation Group Environmental Policy

Ⅰ. Basic Policy

The Sumitomo Corporation Group recognizes that environmental issues are global in scale and that they are long-range concerns affecting future generations. As a global organization, the Sumitomo Corporation Group, through sound business activities, will strive to achieve sustainable development aimed at both social and economic progress and environmental preservation.

Ⅱ. Basic Guidelines

In pursuing its diversified business activities both within Japan and overseas, the Sumitomo Corporation Group shall comply with the following guidelines, and, through cooperation between its Group companies, work to achieve the aims of its environmental Basic Policy.

1 Basic stance with regard to the environment:
To place great importance on protecting the global environment as a good corporate citizen in accordance with the Sumitomo Corporation's Activity Guidelines.

2 Compliance with environmental legislation:
To strictly observe legislation related to environmental matters not only in Japan but also overseas, and to abide by any agreements made.

3 Caring for the natural environment:
To place great importance on preserving the environment, including the natural ecosystem and biodiversity.

4 Response to climate change:
To place great importance on mitigating climate change and adapting to its impact.

5 Efficient use of resources and energy:
To be mindful of the finite availability of resources and energy and strive to use them both efficiently and effectively.

6 Contributing to the building of a recycling-oriented society:
To endeavor to help build a recycling-oriented society by reducing waste and reusing and recycling resources.

7 Promotion of businesses that contribute to environmental preservation:
To utilize our integrated corporate strength to promote businesses and projects, which contribute to environmental preservation and reduction of the impact of society on the natural environment.

8 Establishment of environmental management:
To use an environmental management system to prevent environmental pollution and set environmental objectives and targets which are regularly reviewed and continuously upgraded.

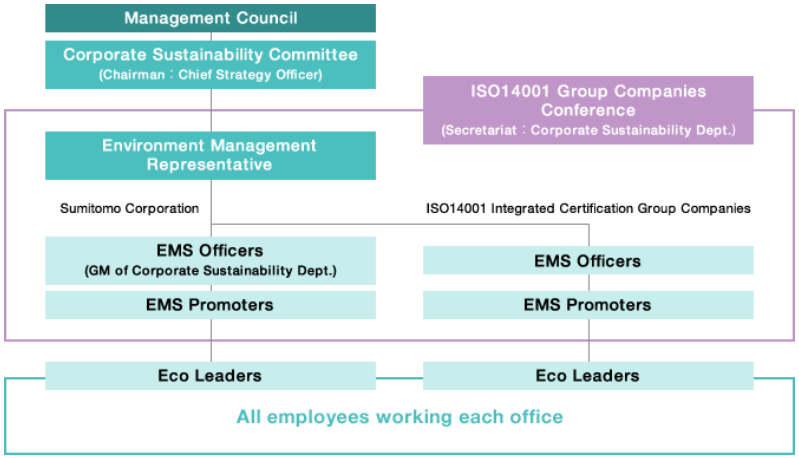
9 Disclosure of the environmental policy:
To communicate this Environmental Policy to all people who are working for or on behalf of the Sumitomo Corporation Group, as well as disclosing it externally.

Environmental management

System

Environmental Management Structure

Sumitomo Corporation Group has established, based on the environmental policy, the environmental management structure with the Corporate Sustainability Committee as the center of the structure. As for the ISO 14001 Environmental Management System (EMS), since Tokyo and Osaka offices of Sumitomo Corporation acquired the Group's first ISO 14001 certification in June 1999, the coverage of the system has been extended continuously. About 20,000 employees in domestic locations of Sumitomo Corporation and certain group companies participates in these environmental management activities. At the ISO 14001 Group Companies Conference, which consists of Sumitomo Corporation and ISO 14001 integrated certification group companies, we share the environmental activities, and report to Corporate Sustainability Committee if necessary. Depending on the importance of the subject, Corporate Sustainability Committee discusses and reports to the Management Council and the Board of Directors.



ISO14001 Integrated Certification Group Companies (Sumitomo Corporation and 25 Group companies as of April 2021)

Group Companies with ISO 14001 Certified (19 Group companies as of June 2021)

Targets and Results

Taking account of the results of the 2℃ target set forth by the Paris Agreement, Sumitomo Corporation sets long-term goals for electricity consumption, water consumption and waste emissions and promotes environmental improvement activities respectively.

Long-term goals (Non-consolidated in Japan)

Electricity Consumption	To reduce electricity consumption per square meter by an average of at least 1% annually and at least 20% until FY2035 both from base year of FY2013.
Water Consumption	To reduce water consumption per employee by an average of at least 1% annually from base year of FY2010.
Waste Emissions	To reduce waste emissions per employee by an average of at least 1% annually from base year of FY2010.

The targets converted from long-term goals, results of FY2020, targets of FY2021 are as follows.

Index		Results of the Base year	Targets of FY2020	Results of FY2020	Targets of FY2021
Electricity Consumption	Consumption (MWh)	7,859	5,673	3,074	5,553
	Intensity (MWh/m2)	0.1079	0.1006	0.0551	0.0996
Water Consumption	Consumption (m3)	32,191	20,450	4,234	20,190
	Intensity (m3/employee)	6.93	6.26	1.3	6.2
Waste Emissions	Emissions (t)	508	323	43	319
	Intensity (t/employee)	0.109	0.099	0.013	0.098

The figures in the table below are calculated from the fuel, heat and electricity consumption data with appropriate GHG emission factors, and the GHG emissions of FY2013 (the base year) are calculated as 5,626t-CO2e and targets and results for FY2020 and FY2021 are as follows.

Index		Results of the Base year	Targets of FY2020	Results of FY2020	Targets of FY2021
GHG Emissions (Scope1・Scope2)	Total (t-CO2e)	5,626	3,678	2,396	3,514

Environmental management

Targets

Sumitomo Corporation Group promotes activities that are beneficial to the environmental improvement and reduce environmental negative impact. Further, as the whole Sumitomo Corporation Group, we follow to a policy related to climate change that stated in Medium-Term Management Plan SHIFT 2023, in which we aim to achieve carbon neutrality in 2050. At Sumitomo Corporation, Eco Leader identifies the environmental aspects of each department and evaluates their impacts, and defines risks and opportunities considering relevant compliance obligations. Based on the results, EMS Promoters specify significant environmental aspects, risks and opportunities for each Business Unit and the Corporate Sustainability Department reviews them for the entire company. At the Corporate Sustainability Committee, we review the achievement of the environmental targets and decide new objectives for the following year.

Environmental Objectives		FY2020 Major Environmental Achievements
Comply with environmental laws and regulations	• Implement continuing education program on the Waste Disposal and Public Cleansing Act and other environment-related laws/regulations	• Held trainings featuring outside instructors by Corporate Sustainability Department • Conducted education of legal compliance in e-learning environmental course
Pursue environmentally-sound projects	• Expand renewable energy businesses • Promote businesses that help create a recycling-oriented society • Promote other businesses to reduce environmental burden	• Promoted renewable energy businesses both in Japan and abroad: participated in an offshore wind power generation project in Europe, implemented the solar power project in Australia and in Minamisoma City in Fukushima Prefecture, Japan, in Thang Long Industrial Park II, Vietnam, geothermal power plant in Indonesia, use of renewable energy fund, etc • Promoted businesses to create a recycling-oriented society, to reduce environmental burden: Sustainable forest management, verification of a large scale power storage system utilizing reused EV batteries in Satsumasendai City in Kagoshima Prefecture, investment in Taiwan's largest electric bus manufacturer, Promotion of hydrogen-related businesses including efforts for Japan-Australia Hydrogen Supply Chain Development, Sales of lithium carbonate produced in the U.S, Investment in a plant-based plastic substitute material manufacturing business, etc
Manage and reduce environmental burden	• Measure and reduce electric power/gas consumption and waste generation at all sites in Japan • Measure and reduce the environmental burden/impact of business activities • Assess environmental impact in relevant supply chains and work to reduce such impact	• Reduced the consumption of electric power/gas/water and waste generation at office year-on-year • Measured consolidated environmental data • Conducted environment assessments on mine development and mining operation businesses abroad and on domestic construction and real estate businesses, as well as Environmental Management
Promote environmental education and communication related to environmental issues	• Hold events, including awareness-raising seminars related to environmental conservation • Promote effective use of environmental management systems • Expand disclosure of non-financial information	• Continued to hold trainings on environment-related laws/ordinances • Held seminar on climate change measures • Conducted e-learning environmental course which was completed by 100% of new employees • Publication of ESG Communication Book 2020

Environmental management

Activities

Internal Environmental Audit

Sumitomo Corporation conducts internal environmental audits on an annual basis to ensure the environmental management system of Sumitomo Corporation and group companies with ISO14001 integrated certification are properly functioning.

<Audit Priority Items>

(1) proper establishment of environmental targets,
(2) management of progress in implementing the environmental action plan,
(3) evaluation of compliance with legal requirements and
(4) implementation and enhancement of environmental training.

As a result of the audits in 2020, serious nonconformity was not found.

External Audit

In March 2021, the third-party audits were conducted by an independent auditing organization, Japan Quality Assurance Organization, for the renewal of the current ISO 14001 certification status. We received approval as a result of the audits.

ISO14001 Management System Certificate

Environmental Educational Activities

Sumitomo Corporation Group develops a variety of educational programs to help its employees engage in environmental conservation. We raise environmental awareness among all Group employees by organizing such programs as trainings on environmental laws and regulations as well as global environmental issues given by outside experts.

Theme	Summary	Number of Activities
Training on the ISO 14001 Environmental Management System	The management principles, environmental contribution activities and the processes of an environmental management system in accordance with the ISO 14001 international standard.	Twice a year
Training for internal environmental audits	The basics and processes of internal environmental audits, through exercises, to be able to conduct audits effectively.	Twice a year
Trainings on industrial waste disposal	Practical knowledge, including responsibilities of industrial waste generators, contract criteria and proper disposal methods.	Twice a year
Trainings on environmental laws and regulations	The latest trends in environmental laws and regulations, basic knowledge on these, and points to note to comply with the laws and regulations.	Twice a year
Basic environmental education (e-learning)	Sumitomo Corporation Group's environmental policy and its environmental management system.	once a year

Climate change

Policy and Concept

The impact of climate change is a global threat to the stability of society and the environment across generations. Considering that climate change is also a serious risk to our group, which is globally engaged in various business areas, we have recently reviewed the group's policy on climate change in response to relevant international trends. For details of the policy, please refer to the Special Section on Page 25.

Activities

Renewable Energy Related Business

We have entered power generation business using renewable energy, which is expected to grow as a medium- to long-term energy source, contributing to mitigating climate change.

As of March 31, 2021

Fuel	Power plant	Country	Generation capacity (MW)
Solar power	Osaka Hikarinomori Project	Japan	10.0
	Solar Power Saijo	Japan	29.0
	Solar Power Kitakyushu	Japan	16.0
	Solar Power Tomakomai	Japan	15.0
	Solar Power Minamisoma/Kashima	Japan	59.9
	Solar Power Minamisoma/Haramachi	Japan	32.3
	EVM/EVM2	Spain	14.0
Wind power	Oga Wind Power Plant	Japan	28.8
	Summit Wind Power (Kashima)	Japan	20.0
	Datang Sino-Japanese (Chifeng) New Energy	China	50.0
	Stanton Wind Energy	USA	120.0
	Cimarron Ⅱ Wind	USA	131.1
	Ironwood Wind	USA	167.9
	Dorper Wind	South Africa	100.0
	Mesquite Creek Wind	USA	211.2
Offshore wind power	Northwind	Belgium	216.0
	Nobelwind	Belgium	165.0
	Northwester2	Belgium	219.0
	Galloper	UK	352.8
	Race Bank	UK	573.3
Woody biomass	Summit Handa Power	Japan	75.0
	Summit Sakata Power	Japan	50.0
	Summit Myojo Power	Japan	50.0
	Sendai-ko Biomass Power	Japan	112.0
Geothermal Power	Muara Laboh	Indonesia	85.0
Hydraulic power	CBK	Philippines	792.0

Climate change

Activities

Other Eco-Friendly Business

To address climate change issues, we have entered power generation business using renewable energy. Our efforts also include eco-friendly business using new technology to promote the use of renewable energy and to increase energy efficiency.

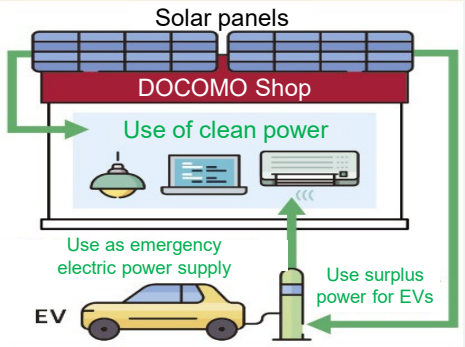
Project	Details
Secondary Use of Lithium-ion Batteries for EVs	Power storage business by recycling lithium-ion batteries used for electric vehicles (EVs), enabling stable power supply with renewable energy sources and stable power supply by power companies and maintenance of its quality.
Production of CO_2-Free Hydrogen	CO2-free hydrogen can be produced via electrolysis of water using renewable energy such as solar, wind, hydro power, and geothermal power. The goal is to create a supply chain for CO2-free hydrogen from two perspectives: to build “local production for local consumption” model, which aims to expand the use of hydrogen by fostering demand based on local characteristics; and to create an international large-scale value chain that manufactures and transports large volume of hydrogen in areas with abundant sources of renewable energy.
Initiatives for creating a carbon fiber business	We are considering expanding into the business of manufacturing and recycling base materials and composites for carbon fiber, which are lighter and stronger than conventional materials such as steel. Carbon fiber composite materials are increasingly being used for a variety of applications, including aircraft, automobiles, wind power generation, pressure vessels, and sports/leisure equipment. They will help reduce environmental impact by conserving energy through weight reductions.
CCUS (Carbon Capture, Utilization and Storage)	We are a shareholder of Japan CCS Co., Ltd. (JCCS). The company is conducting demonstration tests on the use of CCS technology, which involves capturing and storing CO2 in the ground, as well as chemical synthesis of CO2. In December 2018, we joined the Global CCS Institute (GCCSI) to promote global development, verification and application of carbon capture and storage (CCS) through sharing of GCCSI's knowledge and fact-based advice and advocacy. Our aim is to meet conditions desirable to apply CCS. Since 2021, the company has been participating in the Asia CCUS Network to share knowledge with and educate Asian countries with regard to CCUS.

Business description

Ecological Solution Using Solar Panels

T-Gaia Corporation, which operates about 2,000 mobile phone shops in Japan, entered the solar power business based on “local production for local consumption” concept through its fully owned subsidiary TG Power Inc. T-Gaia has been installing solar panels at T-Gaia‘s mobile phone shops, distribution warehouses, restaurants and other facilities. The use of clean power generated by solar panels helps reduce CO2 emissions and address climate change. It also allows shops and facilities to optimize energy balance between supply and demand and improve cost efficiency.
Designated by NTT DOCOMO, INC. as a company to install solar power generation systems at DOCOMO Shops nationwide, T-Gaia is gradually installing systems at about 300 DOCOMO Shops. The company is also planning to deploy electric vehicles (EVs) as an energy storage combined with power generation system in cooperation with Sumitomo Mitsui Auto Service Company, Limited, which is engaged in car leasing. In the event of a disaster, electric power will be supplied from solar panels as well as the batteries of EVs to resume the operation of shops as quickly as possible and to ensure the safety and security of customers and staff members.

Battery chargers: the bottom left of the picture



Installation of solar panels, EVs and battery chargers at mobile phone shops

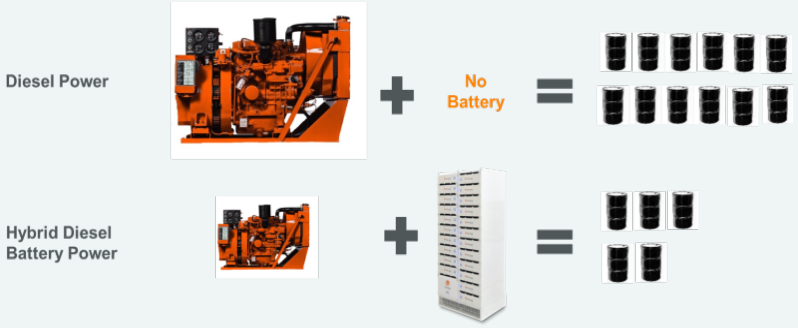
Climate change

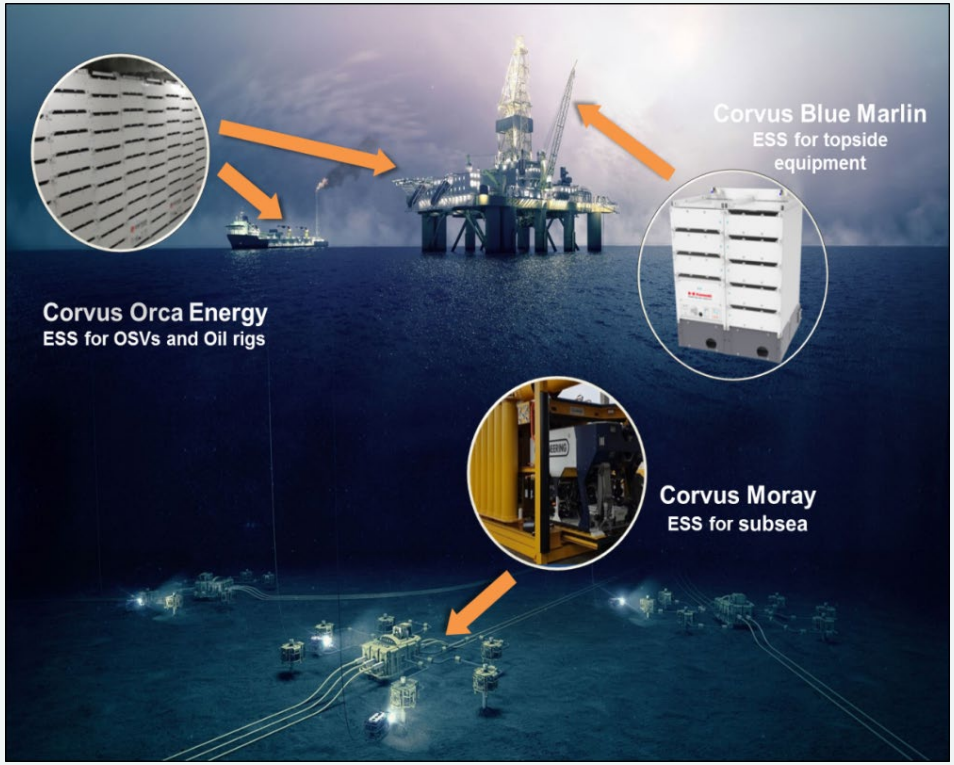
Activities

Business description

Efforts to Reduce Greenhouse Gas Emissions from Ships to Zero

We collaborate with Corvus Energy Holding SA, a leading provider of marine battery systems in Norway, to conduct market research on energy storage systems, promote the sale of these systems, and introduce them in Japan and other areas in Asia.
The energy storage system provided by Corvus Energy consists of lithium-ion battery module and its control system, whose strength lies in temperature control of individual battery cells. An energy storage system on a ship increases the supply of required power and electricity and levels the load (peak cutting), and thereby improves the ship's fuel efficiency and enables downsizing of its generators. Ships with an energy storage system can cruise in a port/harbor or an emissions control area with electric propulsion using batteries, which generates less or no gas emissions and causes less vibration and noise, thereby contributing to improving the onboard environment as well. An energy storage system is a core system for the electrification of ships, which leads to an improved environment inside and outside ships, improved fuel efficiency, and labor-saving inspections, and eventually contributes to achieving zero emissions of greenhouse gases from ships.





Climate change

Activities

Business description

Green Building Initiatives

In our real estate business, we have formulated and implemented basic policies related to environmental, social and governance (ESG) issues.

As a real estate management company, Sumisho Realty Management Co., Ltd. believes that incorporating ESG elements into investment decisions and operation processes is essential to maximizing value of medium- to long-term investor. For SOSiLA Logistics REIT, Inc. and other fund properties under the company's management, it has had its real estate performance evaluated by CASBEE, DBJ Green Building, LEED, BELS, and so on. Also, SOSiLA Logistics REIT Inc. has been awarded "4 Stars" in the 2021 GRESB Real Estate Assessment and the second highest "B Level" for the GRESB Public Disclosure, which assess the width of ESG disclosure.

● Acquisition of major environment-related certifications at fund properties managed by Sumisho Realty Management Co., Ltd. (as of July 2021).

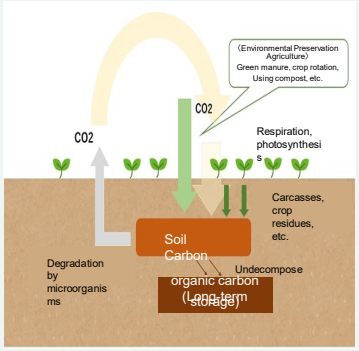
Certification Obtained	Property Name	Evaluation
CASBEE: 6 properties	SOSiLA Yokohama Kohoku	Rank A
	SOSiLA Sagamihara	Rank A
	SOSiLA Kasukabe	Rank A
	SOSiLA Kawagoe	Rank A
	SOSiLA Nishiyodogawa Ⅰ	Rank A
	SOSiLA Nishiyodogawa Ⅱ	Rank A
LEED: 3 properties	203 North LaSalle	PLATINUM
	Miami Tower	GOLD
	Atlanta Financial Center	SILVER
BELS：7 properties	SOSiLA Yokohama Kohoku	★★★★★
	SOSiLA Sagamihara	★★★★★
	SOSiLA Kasukabe	★★★★★
	SOSiLA Kawagoe	★★★★★
	SOSiLA Nishiyodogawa Ⅰ	★★★★★
	SOSiLA Ebina	★★★★★
	SOSiLA Nishiyodogawa Ⅱ	★★★★★

Business description

Use of Agricultural Soil Carbon Storage technology

Sumitomo Corporation and Indigo Agriculture (hereinafter, "Indigo") are pleased to announce that the parties have entered into a Memorandum of Understanding to explore new business approaches to improve the sustainability of Sumitomo's existing businesses, looking at a wide spectrum of areas centering on agricultural technology and soil carbon storage in Japan and Asia.

One potential collaboration includes Sumitomo's investment in agricultural carbon offsets through Indigo Carbon, a program designed to support farmers in transitioning to practices that reduce atmospheric carbon dioxide levels by maximizing soil carbon sequestration and abating on-farm emissions. Agriculture, currently a major carbon emitting industry, has the potential to be a nature-based solution to climate change. Through a set of farming methods, known as regenerative practices – including crop rotation and cover cropping – farmers have the ability to curtail on-farm carbon emissions and pull atmospheric carbon dioxide into their soils. To support farmers in transitioning to these practices, the Indigo Carbon program provides a financial incentive to farmers in the form of a third-party-verified carbon credit for soil carbon sequestration and on-farm emissions reductions. Sumitomo Corporation will collaborate with Indigo to explore new businesses approaches to higher added value for existing businesses, looking at a wide spectrum of business areas centering on agricultural soil carbon storage. Additional areas of exploration include: sale of carbon-neutral LNG and steel oil/gas pipes with carbon credits; generation of carbon credits in Japan and Asia; and expanding the distribution of Indigo's biological seed treatments. Under the Agreement, Sumitomo Corporation and Indigo are exploring potential paths to addressing the global challenge of achieving a low-carbon society.



Agricultural Soil Carbon Storage

Climate change

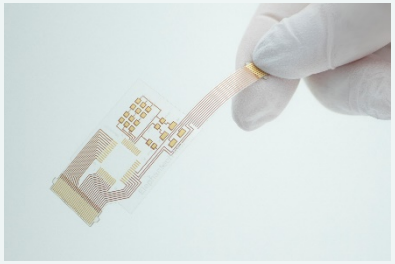
Activities

Business description

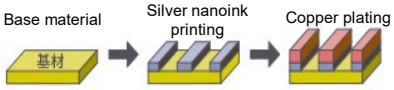
Promoting an Energy-saving Society through Funding Startups

We invest in Elephantech Inc., which has successfully developed its original method of manufacturing flexible printed circuits (FPC) board based on inkjet printing technology. This technology can reduce waste, energy consumption and water consumption to less than one-tenth compared to the conventional method, in which unnecessary parts of copper foil are melted, thus significantly reducing environmental impact. Unlike the conventional technology designed to remove unnecessary parts, the inkjet-based manufacturing technology allows the printing of material only on the necessary parts. It is expected that this inkjet-based technology will become the international standard in the future.

Automobile manufacturers that aim to reduce the weight of their vehicles have shown an interest in the application of this technology to In-Mold Electronics (IME, integral molding of resin and electronic circuits). We, in cooperation with other companies that invested in Elephantech at the same time we did, will focus our efforts on creating new value based on Elephantech's technology. We will aim, for example, to establish global supply chains in the FPC licensing business and commercialize in-vehicle IME.



Flexible Printed Circuit Board manufactured by Elephantech Inc.



Advantages of the Elephantech manufacturing method

- Wires can be formed only on necessary parts, reducing manufacturing costs and environmental impact.
- The simple manufacturing process can shorten the lead time.

Business description

Efforts to Establish an International CO2 Free Hydrogen Supply Chain

Utilizing the plentiful water resources and hydroelectric power available in Sarawak, Malaysia, Sumitomo Corporation, in collaboration with the Sarawak Economic Development Corporation (SEDC) and ENEOS Corporation, is studying the production of CO2-free hydrogen, hydrogen utilization in Sarawak, and the export of hydrogen to Japan in the form of MCH (methylcyclohexane).

In November 2019, we launched a feasibility study with SEDC, a company operated by the state government, and ENEOS Corporation joined the project in October 2020. We will begin by producing CO2-free hydrogen for local consumption by 2023, and once we have expanded hydrogen utilization and production in the state, we will promote the export of hydrogen to Japan via MCH and thus contribute to establishing a CO2-free hydrogen supply chain.

Participation in Initiatives

As a member of the Subcommittee on Global Environment of the Committee on Environment and Safety of Keidanren (Japan Business Federation), our company addresses global warming and climate change and helps design environmental policies that will not harm the economy. We also participate in the Global Environment Committee of Japan Foreign Trade Council, Inc. to discuss how to realize a low-carbon society and a recycling society, and to compliance with environment-related laws and regulations. When assessing whether to join membership with an industry group, we confirm whether the group's climate change initiatives are consistent with our policy on climate change. Also, we implement appropriate climate change countermeasures regardless of the level of influence of the affiliated industry group.

Water resources

Policy and Concept

Water is an essential natural resource. However, due to an increase in water demand as a result of population growth and economic development, there will be more and more areas where water will become scarce. According to the Organization for Economic Co-operation and Development (OECD), water demand is projected to increase by 55% between 2000 and 2050 and, in 2050, 240 million people will have no access to clean water and 1.4 billion people will be without access to basic sanitation.

Our Group conducts its business around the world, including in highly water-stressed areas. Fully recognizing the finiteness of water resources, we approach relevant issues both in terms of risk and opportunity through our efforts to reduce water consumption, improve efficiency, and establish water infrastructure.

Activities

Water Business

While water demand is expected to increase on a global basis as a result of population growth, urbanization and industrialization, the infrastructure environment to ensure the supply of safe and hygienic water has not been improved and water issues are expected to become even more serious. In response, in the 21st century, water business that aims to address water issues has started attracting people's attention globally. Increasing awareness that developed countries are responsible for contributing to achieving a safe and hygienic living environment in developing countries has also contributed to the increased attention to water business.

We regard water business combining water supply and sewerage systems as an important pillar of social infrastructure. Based on this recognition, we are engaged in various business projects around the world. We have been expanding our water business from BOOT and BOO business*2 using private-sector capabilities*1, such as water and sewage treatment and seawater desalination, to fully privatized business in promising markets around the world, including areas with rapidly increasing water demand. We have realized substantial achievements in these business areas. We will continue to take on challenging issues in globally expanding and multifaceted water business by supplying safe and secure water using Japanese technology and responding to the demand for reducing social costs by using private capital.

*1 Use of private-sector capabilities: Use of business operation capabilities and funds of the private sector for business projects that have traditionally been conducted and financed by the public sector to increase efficiency

*2 BOOT (Build–Own–Operate–Transfer) is a form of providing services under a long-term contract with the public sector and, after the contract period, transferring the business assets to the public sector
BOO (Build-Own-Operate) is a form of providing services under a long-term contract with the public sector as in BOOT but the assets will be maintained by the business operator.

Country	Business description	Business category
Brazil	Investment in BRK Ambiental, a top Brazilian company engaged in water business, holds assets of 23 business projects of water supply and sewerage and industrial water treatment (our indirect ownership ratio is 14%). We are participating in promising water supply and sewerage business in Brazil.	Water supply and sewerage business
UK	We acquired 50% of the shares of Sutton & East Surrey Water, a UK water business company, and became involved in fully-privatized water business in the UK.	Water supply business
China	We entered a partnership with Beijing Capital Co., Ltd., a major Chinese water business company and has been involved in sewage treatment business in China. We currently hold assets in Shandong Province and Zhejian Province.	Sewage treatment business
Oman	We have been awarded a seawater desalination project using reverse osmosis membrane technology and private-sector capabilities/funds. Commercial operation was started in February 2016.	Fresh water generation business

Water resources

Activities

Business description

Water Business in Brazil

We hold shares in BRK Ambiental, the largest private water supply and sewerage company in Brazil, with 23 subsidiary companies engaged in water supply and sewerage and industrial water treatment, and have been involved in water business in Brazil. Due to the low penetration rate of water supply and sewerage systems in Brazil, infrastructure needs to be established and relevant business operations need to be improved. The aim of our business project is to provide services of water supply and sewerage in about 100 municipalities in 13 provinces with about 15 million residents in Brazil. We contribute to expanding the use of water supply and sewerage systems and improving their operational quality in Brazil with high quality Japanese operational know-how and technology.
We use our expertise gained through our extensive experience in water business and send our knowledgeable employees to operate water business in Brazil. We consider that the stable provision of water infrastructure contributes to improving the regional water environment and furthermore developing regional communities.

Sewage treatment plant in Rio Grande do Sul Province

Water treatment plant in the State of São Paulo

Biodiversity

Policy and Concept

Sumitomo Corporation Group's business activities largely depend on the wealth of Earth's diverse living organisms as well as from the biodiversity that is generated by their many networks. Therefore, our Environmental Policy recognizes placing great importance on preserving the environment, including the natural ecosystem and biodiversity as an important issue for us. We make efforts to understand how our business activities that may have a significant impact on biodiversity depend on such biodiversity, as well as what kind of impact such activities have on biodiversity, in order to minimize their impact on ecosystems and contribute to ecosystem restoration.

In the process of reviewing new projects and monitoring existing projects, we also assess social and environmental risks including impact on ecosystems, and check the status of management and improvement.

Activities

Business and Biodiversity Offsets Program (BBOP) is an initiative to prepare international standards regarding biodiversity offsets, participated in by companies, governments, NGOs and other specialists. BBOP is referred to by the Convention on Biological Diversity and has become recognized as an international standard regarding biodiversity offsets. We, as a Japanese company, participate in the program through the Ambatovy Project in Madagascar. (Refer to the next page.)

BBOP Principles on Biodiversity Offsets

1	**Adherence to the mitigation hierarchy:** A biodiversity offset is a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate avoidance, minimization and on-site rehabilitation measures have been taken according to the mitigation hierarchy.
2	**Limits to what can be offset**: There are situations where residual impacts cannot be fully compensated for by a biodiversity offset because of the irreplaceability or vulnerability of the biodiversity affected.
3	**Landscape Context**: A biodiversity offset should be designed and implemented in a landscape context to achieve the expected measurable conservation outcomes taking into account available information on the full range of biological, social and cultural values of biodiversity and supporting an ecosystem approach.
4	**No net loss**: A biodiversity offset should be designed and implemented to achieve in situ, measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity.
5	**Additional conservation outcomes**: A biodiversity offset should achieve conservation outcomes above and beyond results that would have occurred if the offset had not taken place. Offset design and implementation should avoid displacing activities harmful to biodiversity to other locations.
6	**Stakeholder participation**: In areas affected by the project and by the biodiversity offset, the effective participation of stakeholders should be ensured in decision-making about biodiversity offsets, including their evaluation, selection, design, implementation and monitoring.
7	**Equity**: A biodiversity offset should be designed and implemented in an equitable manner, which means the sharing among stakeholders of the rights and responsibilities, risks and rewards associated with a project and offset in a fair and balanced way, respecting legal and customary arrangements. Special consideration should be given to respecting both internationally and nationally recognised rights of indigenous peoples and local communities.
8	**Long-term outcomes**: The design and implementation of a biodiversity offset should be based on an adaptive management approach, incorporating monitoring and evaluation, with the objective of securing outcomes that last at least as long as the project's impacts and preferably in perpetuity.
9	**Transparency**: The design and implementation of a biodiversity offset, and communication of its results to the public, should be undertaken in a transparent and timely manner.
10	**Science and traditional knowledge**: The design and implementation of a biodiversity offset should be a documented process informed by sound science, including an appropriate consideration of traditional knowledge.

Biodiversity

Activities

Business description

Ambatovy Project Contributing to Sustainable Development in Madagascar

One of the examples of collaboration between BBOP and Japanese companies in implementing biodiversity offsets is a nickel mine development project in Ambatovy in Madagascar in which we have made a capital participation. This is the Ambatovy Project in Madagascar, one of the largest-scale mine development projects in the world, which has been developed since 2007 in preparation for increasing demand for nickel, cobalt and other metals.

In the Ambatovy Project, many new facilities, such as mining sites, refinery plants and pipelines, need to be constructed and operated, which poses substantial impacts on the surrounding environment. Particularly in Madagascar, there remains a globally precious natural environment where as many as 1,000 species of endangered animals are living. We give careful consideration to these natural habitats in developing and operating the project. In developing and implementing plans for the project, special emphasis is placed on environmental management in compliance with not only Madagascar national laws but also various guidelines, such as the World Bank safeguard policy, the International Financial Corporation's (IFC) Performance Standards, the World Health Organization (WHO) standards, and the Equator Principles.

In the project, rigorous measures have been applied to protect the environment, including efforts to maintain biodiversity, in compliance with the aforementioned and various other standards. For example, in developing the mining area, we created a buffer zone around the mining site of about 1,600 ha to ensure protection of wild animals. When trees are cut down to develop the mine site, felled trees are left on site for a while so that animals inhabiting these trees can move into the buffer zone. We also conduct ecosystem surveys jointly with international environmental NGOs. If endangered or other species that need to be protected are identified in such a survey, we adopt various programs designed to reduce impacts on ecosystems, for example, relocation of such species to a sanctuary and use of a fish farming system.

After starting the construction of pipelines, habitats of endangered animals were found on the routes where the construction was planned. In response, we changed 24 routes in total to bypass these habitats. We are also promoting a large-scale biodiversity offset program under the “no net loss, net gain” concept. This is an approach to mitigate impacts of the development on ecosystems by restoring or creating another ecosystem. Specific measures include the conservation of a forest area of 6,800 ha in the Ankerana area, which has an ecosystem similar to that of the development site of the project. In an attempt to offset the net loss of biodiversity, we are implementing measures to protect four conservation areas of more than 14,000 ha in total, equivalent to about nine times the affected areas, such as protection of areas near the mine site, tree replanting after the installation of pipelines, and tree replanting on the mine site after the closure of the mine.

Diademed sifaka (Propithecus diadema), critically endangered species

Coquerel's Sifaka (Propithecus coquereli), endangered species

Golden Mantella (Mantella aurantiaca), critically endangered species

Biodiversity

Activities

Business description

Bird Friendly® Coffee

Sumitomo Corporation Group has imported and supplied Bird Friendly®-certified coffee (BF®-certified coffee) since 2004 as part of our biodiversity-friendly activities, which ensures a stable income for farmers. Since FY2014, SC Foods Co., Ltd. started dealing in BF®-certified coffee. BF®-certified coffee is grown under the shade of natural forest trees to conserve the environment and provide migratory birds a place to rest. The BF certification was created by the Smithsonian Migratory Bird Center (SMBC). As of May 2020, 52 farms and agricultural cooperation in 12 countries*1 are certified and part of the proceeds are used for SMBC's research, surveys and conservation activities.

*1 12 countries: Ethiopia, Thailand, El Salvador, Columbia, Peru, Nicaragua, Bolivia, Honduras, India, Mexico, Dominica, Guatemala

Harvest of BF®-certified coffee

In 2019, this project was recognized by the Japan Committee of the International Union for Conservation of Nature and Natural Resources (IUCN) as a cooperative project authorized by the Japan Committee for the United Nations Decade on Biodiversity (UNDB-J)*2. This authorization means that the project is an important activity to conserve biodiversity as well as an activity that has achieved results toward meeting the Aichi Biodiversity Targets*3. We will continue our efforts to contribute to protecting migratory birds and ecosystems through this project.

*2 The committee was established in September 2011 to encourage the participation and cooperation of all sectors in Japan to promote efforts to conserve biodiversity and ensure its sustainable use.
*3 New international targets to conserve biodiversity, which were adopted by the 10th Conference of Parties (COP10)

This project has been recognized as a project recommended by the Japan Committee for the United Nations Decade on Biodiversity (UNDB-J).

Business description

Bird-strike Prevention in Wind Power Generation

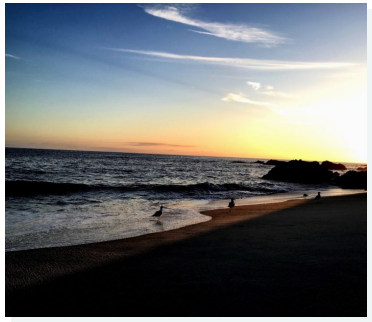
Dorper Wind Farm generates electricity using wind in a mountainous area of about 130 km2 in Eastern Cape, South Africa. In the Doper wind power generation project, measures to prevent bird strikes are implemented.
Windmills are installed in pastures and bird strikes are caused by birds that flock to feed on the carcasses of livestock and other animals. We therefore ensure to remove animal carcasses found in the power plant.
We also hire local residents to visually confirm if there is any endangered bird species circling around the windmills and, if detected, to send an emergency notice to stop the operation of the windmills. It is our aim to achieve a harmonious balance between wild animal conservation and wind power generation business.

Dorper Wind Farm Pty Ltd. in South Africa

Prevention of pollution

Policy and Concept

Sumitomo Corporation Groups business covers a wide range of areas around the world. As described in the Environmental Policy, the Group complies with environment-related laws and regulations and contributes to creating a recycling society. We consider it important not only to comply with laws, ordinances and standards to prevent pollution caused by waste water, sludge, exhaust and other wastes but also to reduce environmental impact through waste reduction, reuse and recycling in order to achieve a sustainable society. We will continue to address relevant issues through our business activities.



Activities

Business description

Efforts to Reduce Environmental Impacts in the Agrochemical/Fertilizer Sales Business

Our major mission in the realm of agrochemical/fertilizer business is to provide the best-quality agrochemicals/fertilizers that fulfill the needs of farmers worldwide with the aim of contributing to increasing the productivity of agricultural crops. We select and combine functions such as import, manufacturing, wholesale and direct sales by taking into account the characteristics of each market, and we are currently conducting agrochemical/fertilizer business in over 30 countries.

In some areas, unfortunately, farmers and distributors inappropriately dispose of emptied plastic bottle containers and aluminum bags of agrochemicals, which can pollute the environment. There are also concerns that agrochemical remains in such containers could lead to an accident and adversely affect the environment. Agro Amazonia Produtos Agropecuarios Ltda. in Brazil and Summit Agro Mexico S.A. de C.V. in Mexico involve other companies in the industry to make joint efforts to collect and recycle empty containers of agrochemicals to promote environmental conservation.

Efforts are also made to reduce the environmental impacts of agrochemicals themselves, including investment in Futureco Bioscience S.A., a bioagrochemical manufacturer in Spain, and application of integrated pest management (IPM), which does not depend on agrochemicals alone and has low environmental impacts.

As an IPM effort, we are spreading the use of a communication disruptor (pheromone agent) developed by Shin-Etsu Chemical Co., Ltd., which uses insect's natural sex pheromone. It is harmless to non-target organisms, and not only reduces the population of the target pest but is also effective on pests that enter inside plants and are hard to control.

It can also be expected to reduce the pesticide resistance of pests. This control method is currently applied by about 60% of orchards in France.

In the European region, we have expanded our sales territory to include Poland, Bulgaria and Russia since 2015. In Russia, Summit Agro LLC, a local distributor, is recognized as the first company to have introduced a pheromone agent to the country.

In addition, we put our efforts into reducing the amount of conventional chemical fertilizer applied and reducing environmental impacts on farmland by expanding the sales of coated fertilizers (allowing farmers to control the pace of fertilizer elution and enhance the effective utilization rate of fertilizer constituents, thereby reducing the amount of fertilizer applied) and biostimulants (which increase plants' tolerance to diseases and pests as well as to cold/heat stresses by enhancing their innate immunity and vitality, thereby enabling the use of reduced amounts of fertilizer).

Agrochemical project in Brazil (Agro Amazonia Produtos Agropecuarios Ltda.)

Investment in a bio-agrochemical manufacturer in Spain

Use of a pheromone agent

Prevention of pollution

Activities

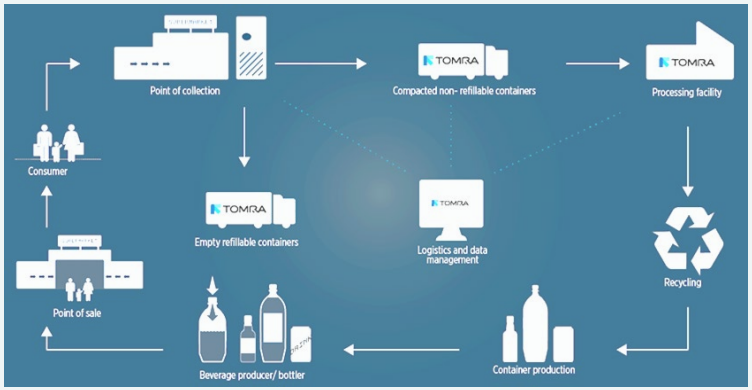
Business description

Tomra Japan: Creating and deploying a PET bottle recycling system in which consumers take part actively

Reducing the usage of plastic resources while ensuring its effective consumption - importance of this issue is increasing year by year as a measure for addressing global environmental issues, such as marine litter and global warming. In this context, horizontal recycling, in which used PET bottles are recycled into new PET bottles, is growing more widespread as a method of sustainable resource recycling. Tomra Japan is a joint venture between TOMRA Systems ASA (Norway) and our company. In addition to selling equipment such as reverse vending machines (RVMs) for the efficient collection of used PET bottle, we have also created and deployed a recycling system whereby we collect PET bottles from RVMs installed at convenience stores as well as supermarkets and deliver them to recyclers. RVMs only collect PET bottles after their caps and labels are removed by the consumers, this enables us to collect high-quality resources with fewer impurities. Through those activities, where consumers actively take part in collecting and recycling higher-quality resources in an efficient manner, Tomra Japan is contributing to reduction of the environmental burden and development of the recycling-based society.

Reverse Vending Machine

Slogan of the TOMRA Group ：
「RETURNS INTO VALUE」



Circulation recycling system with RVM as a platform

Business description

Reducing the environmental impact of marine fuel

Since 1952, we have been supplying marine fuel to shipping companies in Japan and abroad. To contribute to reductions in the shipping industry's environmental impact, we are also working to supply LNG fuel, which emits no sulfur oxides and contains 40-70% fewer nitrogen oxides and 20% less carbon dioxide than conventional fuels. Specifically, through a joint venture with Uyeno Transtech Ltd., Yokohama-Kawasaki International Port Corporation, and the Development Bank of Japan Inc., we placed an order for an LNG bunkering vessel in February 2019, and we plan to start supplying LNG fuel to ships in Tokyo Bay beginning in 2022.

The International Maritime Organization (IMO), a specialized agency of the United Nations, has formulated a strategy to halve greenhouse gas (GHG) emissions from maritime transportation globally by 2050 compared to 2008 levels. In this context, it is believed that ammonia will be the next generation of alternative marine fuels that have the potential to contribute significantly to reducing GHG emissions in the shipping industry because it does not emit CO_2 during combustion. Green ammonia in particular has the potential to be a major factor in making the shipping industry carbon-free, as it is produced solely from renewable electricity, water, and air and emits no CO_2 during its lifecycle. We have signed a Memorandum of Understanding with five partners, including A.P. Moller - Maersk A/S, regarding a joint study on the commercialization of the ammonia fuel supply for ships in Singapore. Through this initiative, we aim to contribute to the decarbonization of the shipping industry by introducing and spreading ammonia fuel throughout the world through the creation of a comprehensive supply chain that includes the supply, transportation, storage, and bunkering of ammonia fuel.

Resource use

Policy and Concept

Humans depend on the socially beneficial functions of forests. Forests are therefore a significantly important resource for the sustainable development of the world. More than 1.6 billion people in the world receive benefits from forests, such as food, water, houses, fuel, medicinal plants and means of livelihood. Sumitomo Corporation Group, which is engaged in wood business using such precious forest resources, has been expanding its business to include forest management with the aim of securing and using forest resources in a more sustainable manner than before.

In line with the concept of sustainable forest management, which means that activities using forests should be conducted in such a way as not to lose the socially beneficial functions of forests, the Group sets its business goals in such a way as to fulfill its social responsibilities and in compliance with the Environmental Policy and Supply Chain CSR Activity Guidelines.

Results

We are selling the certified log, certified wood products and wood chips from forests owned by the Sumitomo Corporation Group in Russia (OAO Terneyles) and New Zealand (Summit Forests New Zealand).

		FY2020 Results
Certified log (Russian)		325 thousand m3
Certified log (New Zealand)		383 thousand m3
Certified wood products (Russian)	Softwood lumber	47 thousand m3
	Veneer	126 thousand m3
	Softwood laminated lumber	29 thousand m3
	Hardwood lumber/laminated lumber	3 thousand m3
Wood chips (Russian)		55 thousand BDT

Activities

＜Note＞ Regarding trading business of Russian timber, we respond in accordance with each special measure.

Business description

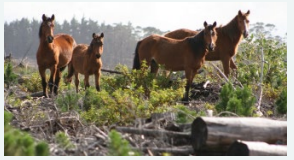
Russia Timber Business (FSC License Number：C009842/C106397/C016535)

In 2004, to be certified that we manage forests appropriately with consideration for the environment and local communities based on objective evaluation, OAO Terneyles obtained FSC® Certification(*1), an international standard, for part of 2.66 million hectares of the forest area in the Russian Far East. After receiving FSC-FM certification(*2) in 2004 as the first company in the Russian Far East, Terneyles made improvements one by one to meet the requirements for the FSC-CoC (Chain-of-Custody) certification(*3). In 2011, the company successfully acquired the certification for all of its products, from round wood to lumber, laminated timber, veneer, and woodchips. Sumitomo Corporation also received the FSC-CoC certification, and the supply chain for providing customers with FSC®-certified products from raw materials logged by Terneyles was completed.

Forest owned by Terneyles

New Zealand Timber Business (FSC License Number: C112972)

In New Zealand, a sustainable supply of timber resources is provided in a 30-year cycle through a harmonious arrangement with local communities under the environmentally friendly forest management system of planting trees, growing them, cutting them down, and replanting them. In the approximately 37,000 hectares of forest owned by Summit Forests New Zealand, besides protecting water resources and primeval forests and co-existing in harmony with the wildlife, the company has also forged friendly relationships with the indigenous Maori people in the course of running its business. Moreover, most of the company's forest holdings are FSC®-certified, which offers objective proof that the company is managing the forest appropriately.



Forest owned by SFN

(*1) FSC® Certification : a global forest certification system provided by FSC（Forest Stewardship Council®）
(*2) FSC-FM (Forest Management) Certification: confirms that the forest is managed in a proper way
(*3)FSC-CoC (Chain-of-Custody) Certification (the management of processing and distribution processes): verifies that FSC® certified material is identified or kept separated from non-certified material throughout the chain.

Resource use

Policy and Concept

Sumitomo Corporation Group Forest Management Policy

We established the Sumitomo Corporation Group Forest Management Policy in March 2022. Furthermore, in order to reinforce due diligence to mitigate risks, we also set Operational Guidelines for putting the policies into actions.

Sumitomo Corporation Group Forest Management Policy

Scope of application

Forestry business directly managed by Sumitomo Corporation and its Consolidated subsidiaries. In addition, other forestry business that Sumitomo Corporation and its subsidiaries are involved in management are included if determined to be material.

Governance

This policy was approved by the Management Council and the Board of Directors of Sumitomo Corporation. If any serious issues arise in implementing this policy, measures and corrective action plans will be discussed at the Corporate Sustainability Committee and reported to the Management Council and the Board of Directors.

Commitment

Based on the principles of zero deforestation and respect for human rights, Sumitomo Corporation will strive to implement the following in its sustainable forest management, with the cooperation of its Group companies.

Environmental aspects:

- We will not engage in development that leads to gross deforestation, or the conversion of natural forests into plantations for forestry business.
- We will not develop forests with high conservation value (HCVF), or forests with high carbon stock (HCSF) such as in peatlands.
- We will work to protect endangered species and reduce the impact of our forestry business on ecosystems.
- We will conduct thorough management to prevent forest fires and will not conduct any operations which can cause forest fires.
- We will engage in forest conservation and reforestation.

Social aspects:

- We will conduct our forestry business with consideration for human rights in accordance with the Sumitomo Corporation Group's Human Rights Policy.
- We will respect human rights as stipulated in the "International Bill of Human Rights" and the International Labor Organization's "Declaration on Fundamental Principles and Rights at Work," and we will operate in accordance with the "United Nations Guiding Principles on Business and Human Rights."
- We will respect international norms related to the rights of indigenous peoples, such as the "United Nations Declaration on the Rights of Indigenous Peoples" and the "principle of Free, Prior and Informed Consent (FPIC)."
- We will support local communities through creating employment and offering educational programs related to forests.

Operational guidelines

Risk assessment and monitoring:

- We will conduct environmental and social risk assessments in accordance with the Sumitomo Corporation Group Forest Management Policy before starting any new forest management. In addition, we will continue monitoring the status of our environmental and social commitments after the project started.

Certification:

- In addition to the above monitoring, we will make effective use of the internationally recognized forest management certification system for the forests managed by the Group and promote obtaining certification.

Stakeholder dialogue:

- In order to prevent global deforestation and forest degradation, we will promote the sustainable use of forest resources in society through dialogue with our stakeholders in the regions where our forests are located.
- We will develop a grievance mechanism* to respond to issues raised by our stakeholders.

Disclosure:

- In order to implement forest management with high level of transparency, we will strive to disclose information on our initiatives in accordance with the Sumitomo Corporation Group Forest Management Policy.

Reviewing process of the Guidelines:

- The Business Units will annually report on implementation of the policy to the Corporate Sustainability Department.
- Based on the report, the Corporate Sustainability Department will annually review the necessity of updating the Operational Guidelines.
- If any serious issues arise in implementing this policy, measures and corrective action plans will be reported to the Management Council and the Board of Directors.

* A process that employees, local residents or other stakeholders can use to lodge complaints regarding human rights violations and other issues related to enterprise's business activities including its supply chain, for resolving such issues

Resource use

Policy and Concept

Sumitomo Corporation Group Sourcing Policy for Forest Products

We established the Sumitomo Corporation Group Sourcing Policy for Forest Products in March 2022. Furthermore, in order to reinforce due diligence to mitigate risks, we also set Operational Guidelines for putting the policies into actions.

Sumitomo Corporation Group Sourcing Policy for Forest Products

Scope of application

Logs, wood products (plywood, lumber, veneer, laminated timber), wood chips and wood pellets traded by Sumitomo Corporation and its Consolidated subsidiaries.

Governance

This policy was approved by the Management Council and the Board of Directors of Sumitomo Corporation. If any serious issues arise in implementing this policy, measures and corrective action plans will be discussed at the Corporate Sustainability Committee and reported to the Management Council and the Board of Directors.

Commitment

In accordance with the principles of zero deforestation and respect for human rights, Sumitomo Corporation will strive together with its Group companies to source products based on this policy while cooperating with suppliers and customers.

Environmental aspects:

- We will not procure materials sourced from lands associated with destructive forest use or development which leads to gross deforestation causing significant environmental impacts.
- We will not procure materials sourced from lands associated with serious environmental issues including the destruction of forests with high conservation value (HCVF) or high carbon stock (HCSF) such as in peatlands.
- We will not procure materials produced from genetically modified wood.
- We will procure in compliance with the Washington Convention to protect endangered species.

Social aspects:

- We will procure products harvested in forests where human rights are respected in accordance with the Sumitomo Corporation Group's Human Rights Policy.
- We will respect human rights as stipulated in the "International Bill of Human Rights" and the International Labor Organization's "Declaration on Fundamental Principles and Rights at Work," and we will operate in accordance with the "United Nations Guiding Principles on Business and Human Rights."
- We will respect international norms related to the rights of indigenous peoples, such as the "United Nations Declaration on the Rights of Indigenous Peoples" and the "principle of Free, Prior and Informed Consent (FPIC)."
- We will not procure materials produced from illegally logged wood.

Operational guidelines

Monitoring:

- In order to procure forest products in accordance with the "Sumitomo Corporation Group Sourcing Policy for Forest Products," we will promote the use of products that have been certified by reliable international forest management certification systems. Additionally, we will request detailed information from suppliers through audit activities such as questionnaires and on-site visits.
- In order to ensure compliance with the Commitment, we will conduct supplier risk assessments and consult with non-compliant suppliers to request improvements. If no improvement is observed, we will consider reviewing the transaction.

Stakeholder dialogue:

- In order to prevent global deforestation and forest degradation, we will promote the sustainable use of forest resources in society through dialogue with our stakeholders, including suppliers and customers.
- We will develop a grievance mechanism* to respond to issues raised by stakeholders.

Disclosure:

- We will strive to disclose the status of our initiatives based on the "Sumitomo Corporation Group Sourcing Policy for Forest Products," including reporting on monitoring results.

Reviewing process of the Guidelines:

- The Business Units will annually report on implementation of the policy to the Corporate Sustainability Department.
- Based on the report, the Corporate Sustainability Department will annually review the necessity of updating the Operational Guidelines.
- If any serious issues arise in implementing this policy, measures and corrective action plans will be reported to the Management Council and the Board of Directors.

* A process that employees, local residents or other stakeholders can use to lodge complaints regarding human rights violations and other issues related to enterprise's business activities including its supply chain, for resolving such issues