

ESG Meeting

October 15, 2020



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Director & Senior Managing Executive Officer

Sumitomo Chemical's Sustainability Efforts

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Sumitomo's Business Principles

Sumitomo's business principles



Statue of Masatomo Sumitomo

Jiri-Rita Koushi-Ichinyo

Our business must benefit society at large, not just our own interests.



What We Strive to Be



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Example of integrated solution: The origin of Sumitomo Chemical



Example of integrated solution: **Olyset Net**

Infectious disease control

The number of deaths from malaria halved since 2000



Integrated solution

Employment and gender equality

Local production creating 7,000 jobs and contributing to improved work environment for women





Educational support

Part of the proceeds of the Olyset Net business used to assist 28 education support projects in 12 African countries, benefiting a total of 21,000 children





Trends related to Sustainability

"Build Back Better" from the coronavirus crisis

Calls from the UN Secretary-General

Called on countries to work together and turn this pandemic crisis into an opportunity to build back better Proposed six climate-related actions, demanding that **funds for recovery should be used to drive a shift to a green economy**

EU Recovery Plan

EU Green Deal

Circular Economy Action Plan

Imminent threats of climate change and environmental issues behind this battle

Need to address economy, COVID-19, and climate change and environmental issues in an integrated way

Roles of the Chemical Industry



Contribution of our businesses to tackling the coronavirus crisis





Approach to the Promotion of Sustainability



Establishment of the Sustainability Promotion Committee



Get a comprehensive picture and take action in an integrated way

Basic Principles for Promoting Sustainability



Material Issues that We will Address as Management Priorities

Material issues for social value creation	Material issues for value creation in the future
 Contribution to reducing environmental impact Mitigation of climate change Contribution through products and technologies Efficient use of energy and resources Contribution to the recycling of plastic resources Contribution to solving food issues Contribution to solving food issues Contribution to ICT innovation 	 Promotion of technology innovation and research and development Initiatives for digital innovation Promotion of diversity and inclusion

Foundation for Business Continuation

- □ Occupational safety and health,
 - and operational safety and disaster prevention
- Product safety and quality assurance
- □ Respect for human rights

- □ Promotion of employees' well-being
- □ Compliance
- □ Anti-corruption

List of KPIs

	Material Issues	KPIs	SDGs Target
Material Is	ssues for Social Value Creat	ion	
		Amount of Group's GHG emissions (Scope 1+2)	13.3
$\langle \rangle$	Mitigation of climate change	Contribution to reducing GHG emissions throughout the product life cycle (Battery-related materials)	13.3
Reducing	Contribution through products and technologies	Sales revenue of Sumika Sustainable Solutions designated products	_
impact	Efficient use of energy and resources	Unit energy consumption	7.3
		Number of petrochemical-related technology licenses	9.4
	Contribution to the recycling of plastic resources	Various initiatives are underway, and KPIs are to be determined	
	Food Issues	Effect of increasing production of animal protein including poultry	2.1
	roou issues	Agricultural land area where agro-solution products are used	2.4
Healthcare		Number of people protected by products for the control of tropical infectious diseases	3.3
		Constant development of new drugs in areas where high unmet medical needs exist	_
	CT innovation	Number of mobile devices using polarizing films	8.2

Material Issues for Future Value Creation				
Promotion of technology innovation and research and development	Patent asset size			
Initiatives for digital innovation	Digital maturity			
Promotion of diversity and inclusion	Each group company sets its own KPI in light of the environment facing each			

KPIs: Example and Progress (Contribution to Solving Food Issues)



Continue to contribute to solving the world's food issues

Contribution to Solving Healthcare Issues (in the area of infectious diseases)





Contribution to Solving Healthcare Issues (CDMO business of regenerative and cellular medicine)

CDMO business of regenerative and cellular medicine

(contract development and manufacturing)

- Demand for pharmaceutical contract development and manufacturing offers high growth potential.
- □ In the area of regenerative and cellular medicine, there are only a limited number of companies in Japan that have the advanced technologies required for CDMOs.
- Leverage the strengths of Sumitomo Chemical and Sumitomo Dainippon Pharma





- Basic technology related to ES/iPS cells
- Expertise of active pharmaceutical ingredients contract manufacturing organization (CMO) business



Contribute to resolving healthcare issues by generating group synergies in the area of regenerative and cellular medicine



External Sustainability Assessment

		2017	2018	2019	2020 (At present)	Remark
CLIMATE	Carbon Disclosure Project	В	Α	Α	To be announced in Jan 2021	Highest rating: A
FTSE Blossom Japan	FTSE Blossom Japan Index	2.8	4.0 4.2		To be announced in Dec 2020	Full score: 5
	MSCI Japan ESG Select Leaders Index	ΑΑΑ	ΑΑΑ	ΑΑΑ	ΑΑΑ	Highest rating: AAA
	MSCI Japan Empowering Women Index (WIN)	5.8	6.2	6.0	6.7	Full score: 10
COLD 2020 ecovadis Sustainability Itating	Ecovadis Sustainability Ratings	Silver	Bronze	Silver	Gold	Gold: top 5% level

Long-term Corporate Strategy



Sharing Our Aspirations with Stakeholders

Sumitomo Chemical creates economic value and social value in an integrated way.



Contribute to realizing a sustainable society through our business

- Sharing our aspirations with stakeholders -

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Highlights: Environment Sustainability Efforts: More Interconnected Across Nations and Areas of Challenges Addressing climate change problems Addressing plastic waste problems



Sustainability Efforts: More Interconnected Across Nations and Areas of Challenges



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Our Approach to Climate Change

Basic policy

Define response to climate change as one of the material issues that we will address as management priorities, and tackle climate change problems on two fronts: seizing opportunities and addressing risks

Governance

Major issues and measures are discussed and determined at the Management Meeting and executive-level committee meetings.

Risk Management

Risks are assessed and monitored by executive-level committees.

Strategy

Established an organization dedicated to response to climate change; will identify and analyze opportunity and risk based on **scenario analyses**

Key Performance Indicators and Targets

Seizing Opportunities

- Stepping up efforts to develop and promote
 Sumika Sustainable Solution products
- KPIs include sales revenue for Sumika Sustainable Solution products and the volume of GHG emissions reduction that these products contribute to achieving throughout their product life

Addressing Risks

- Taking measures to achieve our SBT*
- KPIs include the Group's GHG emissions volume and unit energy consumption index * SBT: Science Based Targets

Scenario Analysis

Set multiple scenarios, analyzed potential situations and the impact on our businesses, and based on the results of the analysis, formulated action plans in terms of both opportunity and risk





Sumika Sustainable Solutions

KPI: Sales revenue of Sumika Sustainable Solution products Provide solutions to build a sustainable society by promoting development and widespread use of Sumika Sustainable Solution products



Sumika Sustainable Solutions

Targets

ts Sales revenue of **560 billion yen** by FY2021

Initiative to designate the Group's products and technologies that contribute to addressing climate change and the reduction of environmental impact as Sumika Sustainable Solutions and promote their development and widespread use





Sumika Sustainable Solutions



- Sumitomo Chemical's Sumika Sustainable Solutions initiative has steadily been progressing, delivering results, and is certain to become comparable to the efforts by global leaders such as Unilever and Johnson and Johnson.
- I recommend that the Company demonstrate the relevance of this initiative to the SDGs in line with the United Nations 2030 Agenda for
 Sustainable Development (from the perspective of five Ps—
 People, Planet, Prosperity, Peace and Partnership).

□ I look forward to Sumitomo Chemical's efforts in the future.

Itaru Yasui Emeritus Professor, The University of Tokyo



The Sumitomo Chemical Group's SBT

The Group's targets for GHG emissions reduction approved by the SBT Initiative

Scope	Scope 3 *2	
By FY 2030	By FY 2050	By FY 2024
Reduce by 30%* ³	Reduce by 57% ^{*4}	Have major suppliers set reduction targets ^{*5}



- *1 Scope 1 : Direct emissions from the Company's plants, such as emissions due to the use of fuels in manufacturing processes Scope 2: Indirect emissions, such as emissions due to the purchase of power and heat by the Company from outside the Company's plants
- *2 Scope 3 : Emissions in the manufacturing and transportation of purchased raw materials
- *3 Compared to the level of FY2013
- *4 Compared to the level of FY2013. In addition to achieving Scope 1 and Scope 2 GHG emissions reduction, provide solutions to help to significantly reduce GHG emissions across the value chain
- *5 Engage the Company's major suppliers (suppliers who in aggregate account for 90% of the Company's purchased raw materials on a weight basis) in an effort to set their own science-based GHG reduction targets

Efforts in Progress to Achieve SBT

Reduction of GHG (CO₂) emissions by fuel conversion

Introduce high-efficiency gas turbine power generators

Replace some of existing boilers

Fuel conversion	Shift from coals, petroleum coke and heavy oil to LNG	Reduce CO2 emissions
Thermal efficiency	Supply steam, using high-temperature exhaust gas from gas turbines	2

	Ehime	Chiba
Fuel	Coals and heavy oil to LNG	Petroleum coke to LNG
Reduces CO ₂ emissions	650 thousand tons/year	240 thousand tons/year



Building a LNG tank, the largest of its kind in Japan, on the premises of Ehime Works

Effort Towards a Sustainable Carbon Cycle

* Develop key technologies to accelerate the progress on efforts towards a sustainable carbon cycle



Examples of Development for a Sustainable Carbon Cycle

Technology to selectively extract CO₂

Low-energy, highly efficient separation of CO₂ using functional membrane





- □ Established modularization technology
- Working to optimize the composition of membrane

Technology to convert CO2 into chemicals

Highly efficient technology to manufacture methanol, using new process and new catalyst

$$CO_2 + 3H_2 \rightleftharpoons CH_3OH + H_2O$$

Challenges in existing process

- □ Methanol yield: 10-20%, restricted by equilibrium reaction
- □ Unreacted CO2 circulates within the process (leading to high energy consumption)

Process under development

- \Box Methanol yield: 60-90%
- $\hfill\square$ Low energy-intensive and compact process
- □ Joint research with Shimane University
- Benchmark test facility scheduled to be in operation by the end of 2020

Approach to Hydrogen Problems

Hydrogen manufacturing cost with the use of renewable energy-based water electrolysis

"The Future of Hydrogen" IEA report, 2019.06.14

Due to its low competitiveness in manufacturing by renewable energy-based water electrolysis, Japan needs to consider import of hydrogen in an effort towards large-scale hydrogen use.



Ammonia as an energy carrier (a means of hydrogen transportation)

Transported in the forms of:	Temperature	Hydrogen density	Challenges
Liquefied hydrogen	−253°C or below	71 kg/m³	Many challenges exist, with large-scale transportation and storage technologies still in R&D phase
Ammonia	−33°C or below	120 kg/m ³	Reduction of CO2 generated in the manufacturing of ammonia and manufacturing cost reduction

Explore the possibility of drastically changing ammonia manufacturing process by leveraging our catalyst and process design technology



Overview of Plastic Waste Problems



*1 McKinsey & Company and Ocean Conservancy (2015), *2 Neufeld, L., et al. (2016)

Basic Policy Towards a Cirlular System for Plastics

- Recognize that plastic is a useful material supporting a sustainable society
- Work towards building a circular system for plastics and resolving plastic waste problems
- 1. **Contribute to resolving plastic waste problems through our business** by leveraging the power of chemistry
- Focus on innovation concerning 3Rs—reducing, reusing and recycling—of plastics and accelerate the adoption of new solutions by society, while also considering the impact on response to climate change
- 3. Take on challenges difficult to resolve alone by working with various stakeholders
- 4. Provide education and awareness-raising programs based on sound science, while also engaging in social actions
- 5. Constantly review progress and work to enhance and improve our efforts

Efforts for 3Rs-Reducing, Reusing and Recycling

	Examples			Features/Perfor	mance	
	Refill Pouch				Bottle	Large Refill Pouch
Redu	Lighter and stronger than bottles	洗剤 Detergent	Environmental	Weight of packaging materials (g) per 100g of contents	19	1.8
JCe	efficiency	57	The full less	Transportation efficiency	Fair	Good
			Utility value	Bag drop strength	Fair	Good
	Doturnable Box				Cardboard Paper Box	Returnable Box Expanded PP Sheet
R	Made of foamed polypropylene sheets and can be used repeatedly offers higher environmental- friendliness, and is superior	Frencist verta anten attention		Number of times one unit of the product can be used	1	50
euse			Environmental friendliness	Consumption of packaging materials (kg/year)	24.9 (equivalent to 50 sheets)	1.4
	in water resistance, load capacity			Reusability	Poor	Good
	and cleaniness.		Utility value	Water resistance, load bearing, cleanliness	×	0
	Glass Fiber Reinforced Polypropyle	ene Material	Envir	onmental Contribut	ion (FY20	18)
Rec	Boasts properties high enough to replace virgin polypropylene, even though it contains	A BER	Reduction of polypropyler	f virgin ne use: 4,	700 tons	s/year
/cle	 As much as 60% by weight recycled polypropylene. ► Highly rated by users as a technology meeting circular economy policies 		Reduction of as compared using virgin	GHG emissions, with the case of 12 polypropylene:	,300 ton (CO2 equiv	s/year alent)

Chemical Recycling



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Enhancing Efforts

 Provide products for 3Rs
 Develop technology for material recycling

Develop technology for chemical recycling Engage in various initiatives

In-house efforts	Efforts t initiative	hrough external s	stakeholders'
Explore new efforts	Initiatives	Objectives	Progress and result
 Issue-oriented exploration Promote alliances in and outside the company Established Cirlular 	AEPW	Efforts via infrastructure building, technological innovation, education, and collection and clean-up	Promoting plastic waste collection in high-leakage areas and building infrastructure
 Build ideas <u>Develop them into</u> proposals System for Plastics Working Group Raise awareness in the company 	CLOMA	Promoting sustainable use of plastic products and the development and introduction of alternative materials	Matching needs and seeds Providing technological consulting services for developing countries
 Communicate related information internally via intranet Share updates on issues and efforts across the Group 	JaIME	Raising social awareness and sharing and communicating information regarding marine plastic problem	Producing educational DVDs
	AEPW: Alliance to I JaIME: Japan Initia	End Plastic Waste CLOMA: Clean Ocea tive of Marine Environment	an Material Alliance

Enhancing Efforts



Highlights: Society and Governance

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Approach to the Promotion of Sustainability



Global Project, Engaging All Employees



Objective: learn about sustainability and lead it into actions
 How to participate: via a dedicated website

Quiz (learning) Gl	ossary (search)	Posting (action)			
	Sumitomo Chemical	o Group companies I in Japan	Group companies overseas	Total		
Quiz participants	4,993	8,529	9,274	22,796		
No. of posts	2,266	3,290	6,511	12,067		



Our Corporate Governance Organization



Independent Outside Directors & Corporate Auditors



Independent Outside Directors / Independent Outside Corporate Auditors

		Former business owner	Sales & Marketing	Research, technology, manufacturing	Economy in general	Global	HR, labor management, HR development	Humanities and social science	Legal, compliance	Accounting, tax	Finance	Governance
Koichi Ikeda		0	0									
Hiroshi Tomono	Q	0		0								
Motoshige Itoh	B				0	0		0				
Atsuko Muraki							0	0				0
Mitsuhiro Aso								0	0			
Yoshitaka Kato	0					0				0		
Michio Yoneda	B	0									0	0

Substantive Measures to Reinforce Corporate Governance ${\rm (1)}$

Maximum use of audit/advisory function of Outside Directors & A few days prior to



Substantive Measures to Reinforce Corporate Governance 2



Based on these measures, we also discuss medium- to long-term issues.

Executive Remuneration

Remuneration Policies for Senior Management and Directors



Global Management of Group Companies



Mechanism of Group Governance

Vertical and horizontal management of group companies

Corporate Planning Office

- Formulate a group operation system
- Provide information, assistance, and coordination
- Dispatch part-time auditors
- Monitor and instruct improvement of departments
- Training for directors and auditors, etc.

Departments in Charge

- Convey missions
- Formulate and share strategies
- Instruct and manage the organization of various governance systems
- Dispatch part-time directors
- Manage performance, policy, and plan

Depts related to Head Office + Regional headquarters

- Prepare group operation standard
- Guide/Support group companies
- Guide/Support internal control and compliance
- Perform internal audit/RC audit, etc.

Group companies

Corporate Governance of Listed Group Companies

Business

- Shared group strategies
- Preliminary meeting with the parent company regarding important matters
- Technological synergy as a diversified chemical company

Corporate governance

- Autonomous decision making by listed subsidiaries
- Ensure no conflict of interest with public shareholders of our subsidiaries



Maximize

results of

the group as a whole



Diversity and Inclusion

Promoting the Advancement of Women





* Sumitomo Chemical (non-consolidated)

Recruitment

 $\hfill\square$ Ratio of women in new graduates: Approx. 25%

Education

- The Women's Leadership
 Development Academy (2014-2019)
- Diversity Management Training (March, 2020-)
- Unconscious Bias Training (October, 2020-)



Lecture on diversity (Atsuko Muraki)

Workstyle

- Set up in-house nurseries (used by 139 employees in 6 offices from 2008 to present)
- Childcare leave:3 years 11 months at longest
- Leave due to overseas assignment of the spouse
- Re-employment system for those who left the Company after childbirth and childcare (Career coverage system)



Izumi Kids (Osaka Works)

Advancement of Women



We continue to work for further improvement.

History of Our Global Human Resource System



Toward Sustainable Growth of the Sumitomo Chemical Group

History of Our Global Human Resource System



Thorough dissemination of management principles at Overseas Manager Training
 Train next-generation leaders at Global Leader Training and Leader Training

Respect for Human Rights



Meet human rights obligation across the value chain



Cautionary Statement

Statements made in this document with respect to Sumitomo Chemical's current plans, estimates, strategies and beliefs that are not historical facts are forward-looking statements about the future performance of Sumitomo Chemical. These statements are based on management's assumptions and beliefs in light of the information currently available to it, and involve risks and uncertainties.

The important factors that could cause actual results to differ materially from those discussed in the forward-looking statements include, but are not limited to, general economic conditions in Sumitomo Chemical's markets; demand for, and competitive pricing pressure on, Sumitomo Chemical's products in the marketplace; Sumitomo Chemical's ability to continue to win acceptance for its products in these highly competitive markets; and movements of currency exchange rates.