

Materiality

Identification of Materiality

The MGC Group identified priority issues (materiality) to be addressed by management in April 2020 with the aim of conducting sustainability management. In the Medium-Term Management Plan announced in April 2021, we stated our goal of “balancing social and economic value.” We have set KPIs for fiscal 2030 materiality targets as well as fiscal 2023

targets for achieving those goals, and will apply the PDCA cycle to make improvements throughout the course of this management process.

Furthermore, materiality is revised around every three years in conjunction with the Medium-Term Management Plan.

STEP 1	Identification of issues	Compiled list of over 600 terms related to societal issues/changes from various sources, including requirements in GRI and SASB standards, ISO 26000 and SDGs and trends among other companies.
STEP 2	Winnowing	Classified the terms by keyword related to societal issues and societal change, and then winnowed them down to 39 materiality factors.
STEP 3	Prioritization	Assessed the priority of the materiality factors from the standpoint of both stakeholders and the MGC Group. The Sustainability Promotion Committee drafted a materiality prioritization hierarchy and submitted it to the Sustainability Promotion Council.
STEP 4	Management deliberation/approval	The materiality submitted by the Sustainability Promotion Committee was deliberated and determined by the Sustainability Promotion Council.
STEP 5	Revision of identified materiality	Materiality is subject to change in response to changes in societal imperatives and stakeholder needs and preferences. Materiality will accordingly be updated as needed in response to changes in society and/or the MGC Group's business activities.

Promotion of Sustainability Management

The MGC Group pursues sustainable growth balancing the social and economic value of the Group as “sustainability management,” based on its Mission of “creating value to share with society.”

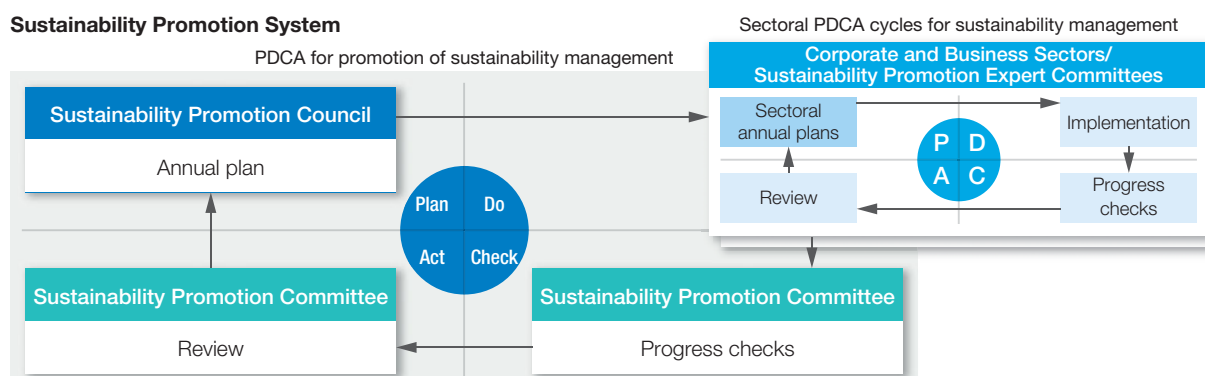
The Company has established the Sustainability Promotion Council, chaired by the President and primarily made up of all directors, including outside directors, with Audit & Supervisory Board members also attending. As an advisory body to the Sustainability Promotion Council, the Sustainability Promotion Committee is convened by the General Manager of the CSR & IR Division and attended by general managers of the head office's corporate sectors. Through these organizations, the Company has established a system for promoting ongoing advancement by applying a companywide PDCA cycle ranging from the identification of materiality to the establishment of KPIs, confirmation of progress and reviews.

The Sustainability Promotion Council deliberates and determines policies and measures that form the basis for sustainability management, such as identification and management of materiality, and receives reports on the









implementation status thereof from the Sustainability Promotion Committee. The Sustainability Promotion Committee confirms the status of implementation of measures in each division, and consults with the Sustainability Promotion Council on the necessary measures through periodic reviews. It also establishes various expert committees as needed to consider specialized and important matters. Sustainability Promotion Department within the CSR & IR Division has been established to serve as the secretariat for the council and the committee. Sustainability Promotion Department is responsible for administrative tasks such as overseeing non-financial information within the Company, considering policies and strategies on sustainability management, and handling engagement within and outside the Company.











We aim to obtain the trust and congruity of a variety of stakeholders and achieve ever greater corporate value by contributing to the resolution of issues for the realization of a sustainable society through our business more than ever before.







Sustainability Promotion System



Materiality Progress at a Glance

Materiality	Risks	Opportunities	Long-Term Targets for Fiscal 2030
<div> <div>CSV</div> <div>Creating Shared Value</div> <div>         </div> </div>			
Contribution through business operations <ul style="list-style-type: none"> Contribute to development of ICT/mobility society Solve energy and climate change problems Solve medical and food problems 	<ul style="list-style-type: none"> Increasing difficulty of development with intensifying competition; lengthening lead times Shift in share of low-cost alternative materials Existing product obsolescence 	<ul style="list-style-type: none"> Strong in-house development technology capabilities Customer credibility backed by multiple industry standards Portfolio of distinctive, differentiated products 	<p>[Specialty Chemicals Business] Multiple BMUs boasting high profitability and growth, high ROIC, and ability to generate stable cash flow</p> <p>[Basic Chemicals Business] Strengthening business infrastructure through ongoing business portfolio reform, and development/commercialization of products conducive to decarbonization</p>

<div> <div>S</div> <div>Foundation for Shared-Value Creation</div> <div>           </div> </div>			
Cultivating a corporate culture of job satisfaction	<ul style="list-style-type: none"> Declining labor productivity and outflow of personnel Declining quality of stakeholder engagement 	<ul style="list-style-type: none"> Strengthened foundation for creating innovation Improved employee engagement in their work 	Friendly, fulfilling and vibrant workplace enabling people to utilize strengths to produce results at work and maintain work-life balance
Promotion of diversity and inclusion	<ul style="list-style-type: none"> Uniform thinking and loss of new business opportunities due to imbalance in personnel attributes and skills 	<ul style="list-style-type: none"> Nurturing culture of collaboration among diverse values that is conducive to new ideas and technological innovation 	Fostering active culture where diverse ideas are created due to employees with diverse values and individuality working and being stimulated
Stakeholder engagement	<ul style="list-style-type: none"> Loss of credibility among stakeholders and damage to corporate value due to inappropriate responses 	<ul style="list-style-type: none"> Forming fair market valuation Improved management transparency 	Company that earns society's trust and empathy by contributing as a member of society and fulfilling responsibilities to variety of stakeholders
Promotion of socially responsible sourcing	<ul style="list-style-type: none"> Negative impacts on business activity due to illegal actions and compliance violations by suppliers 	<ul style="list-style-type: none"> Improved sustainability of society and long-term competitiveness 	Promote groupwide CSR procurement activities, and implement procurement of raw materials derived from biomass, recycling and CO ₂ to contribute to sustainable society
Occupational safety and health/Process safety and disaster prevention	<ul style="list-style-type: none"> Risk of disasters or other problems due to insufficient education and training Loss of societal trust due to accidents or scandals 	<ul style="list-style-type: none"> Nurturing culture of safety Accumulating expertise in preventive maintenance 	Identify cultural and technical factors of occupational accidents/process safety and disaster prevention, create preventative measures, and realize safe production sites where occupational accidents and process safety accidents do not occur
Highly energy- and resource-efficient production	<ul style="list-style-type: none"> Cost of responding to regulations and societal demands Cost of deploying high-efficiency equipment 	<ul style="list-style-type: none"> Optimization of production conditions through deployment of AI/IoT; improving productivity by predicting and preventing problems 	Ultra-stable operation of production equipment, improvement of outputs through use of high-efficiency equipment, pursuit of high-efficiency utilities, minimization of equipment trouble through utilization of DX technology
Chemical/product quality and safety assurance	<ul style="list-style-type: none"> Loss of societal trust due to inaccurate data handling and shipping of inappropriate products Strengthened chemical substance regulations in each country 	<ul style="list-style-type: none"> Facilitating continuous improvement and ensuring customer satisfaction through company- and groupwide quality assurance activities (Q-MGC) Sharing and centralization of information to enhance customer satisfaction and societal trust 	Creation of groupwide risk management system for chemicals and products, and quality assurance system meeting variety of high customer requirements
Promotion of innovative R&D	<ul style="list-style-type: none"> Discontinuous change in social and industrial structures Securing and developing personnel competent in cutting-edge technology fields 	<ul style="list-style-type: none"> Strengthened technology platform and creation of innovation built on collaboration among Group's own technologies 	Clarify division of roles of R (research) and D (development) to promote positive spiral of research and accelerate R&D throughout Group

<div> <div>E</div> <div>Harmonization of Shared-Value Creation with Environmental Protection</div> <div>       </div> </div>			
Proactive response to environmental problems <ul style="list-style-type: none"> Air quality control Water and biodiversity conservation Reduction of industrial waste 	<ul style="list-style-type: none"> Increased cost of responding to stronger environmental regulations Decline in competitive advantage due to delays in technological response to resource and energy conservation needs Reputational risks regarding environmental protection 	<ul style="list-style-type: none"> Participation in Fukushima natural gas power plant and geothermal project Commercial development of methanol and ammonia as hydrogen carriers and CO₂-free fuels Participation in CCUS proof-of-concept testing 	Minimization of air and water load, and realization of a clean air environment, preservation of water and sustainability of water resources through introducing new technologies and strengthening management

<div> <div>G</div> <div>Value-Creative Discipline</div> <div>     </div> </div>			
Strengthen systems <ul style="list-style-type: none"> Corporate governance Compliance Internal controls Risk management 	<ul style="list-style-type: none"> Slumping business activity, loss of societal trust and damage to corporate value due to compliance violations 	<ul style="list-style-type: none"> Establish stable management foundation by improving decision-making transparency and responding appropriately to change Gain stakeholder trust 	Steady implementation of improvements in environment, and creation of systems to address variety of social changes, enabling higher level of response to and sharing of strong social needs

	Results of Key Initiatives in Fiscal 2022	KPIs	Fiscal 2022 Results	Fiscal 2023 Targets	Fiscal 2030 Targets
	ICT/Mobility <ul style="list-style-type: none"> Completion of construction of super-pure hydrogen peroxide plant in China Increase in production capacity for semiconductor materials, etc. Energy and climate change <ul style="list-style-type: none"> Development of carbon recycling technology Medical and food <ul style="list-style-type: none"> Successful mass cultivation of antibody drug producing cells at a scale of 2,000 L 	Sales from ICT and mobility applications Investments aimed at solving energy and climate change problems Sales from medical and food applications	¥283.5 billion Projected investment: ¥13.9 billion (3-year cumulative) ¥56.2 billion	¥320.0 billion Investment: ¥12.0 billion (3-year cumulative) Investment: Acquisition; Financing: Approval basis ¥50.0 billion	Create new businesses that accelerate digital innovation Commercialize carbon-negative technology <ul style="list-style-type: none"> Advance preventative/predictive medicine; enhance healthy longevity Further advance food preservation technology

<ul style="list-style-type: none"> Formulated MGC Basic Policy on Health & Productivity Management Expanded support for balancing work and childcare Conducted activities to promote use of paid leave 	Percentage taking fewer than 10 days of annual paid leave ^{*1,2}	4%	0%	0%
<ul style="list-style-type: none"> Publishing of a pamphlet for employees designed to foster awareness of respect for diversity Expansion of career training for female employees 	—	—	—	—
<ul style="list-style-type: none"> Response to ESG interviews and stewardship interviews Carbon neutrality presentation for investors 	—	—	—	—
<ul style="list-style-type: none"> Implementation of supplier assessment through CSR surveys 	—	—	—	—
<ul style="list-style-type: none"> Utilization of MGC Group process safety and disaster prevention guidelines Promotion of safety activities through LINK activities Introduction of KY hazard prediction assist system Identification of water risks at manufacturing sites in Japan and overseas (floods, high tides, water shortage) Promotion of responsible care (RC) activities by Group companies 	Serious occupational accidents ^{*1,3}	1	0	0
	Serious accidents ^{*1,4}	0	0	0
<ul style="list-style-type: none"> Introduction of PI systems in all plants Trials and implementation of AI technology, IoT devices, etc. Examination of introduction of multivariable model predictive control and soft sensors 	GHG emissions intensity compared to fiscal 2013 ^{*1}	8.6% reduction	19.9% reduction	28.0% reduction
<ul style="list-style-type: none"> Maintenance and continuation of MGC Group Quality Management Promotion Meeting activities Promotion of introduction of quality data aggregation systems in all plants 	—	—	—	—
<ul style="list-style-type: none"> Promotion of DX analysis Implementation of education and practical exercises on statistical analysis for researchers 	R&D investments devoted to solving climate change problems ^{*1,5}	13% of R&D expenditures	5% or more of R&D expenditures	7% or more of R&D expenditures

<ul style="list-style-type: none"> Promotion of reduction of GHG emissions Identification of water risks in each business site Introduction of renewable energy aimed at reducing emission factor of purchased power Consideration of investment for biodiversity conservation Promotion of waste recycling Reduction of occurrence of sudden waste generation through stable production 	GHG emissions compared to fiscal 2013 ^{*1}	34% reduction	28% reduction	36% reduction
	Renewable energy as percentage of electric power purchased ^{*1}	19%	10%	50%
	Zero waste emission rate ^{*1,6}	0.25%	0.3% or less	0.15% or less

^{*1} On non-consolidated basis

^{*2} For employees granted 20 days of annual leave

^{*3} Accidents resulting in lost work days eligible for disability compensation, including death and permanent disability, or potential disability, and those with four or more lost work days

^{*4} Accidents that threaten third parties, including those resulting in environmental pollution involving community or that cause damage to local residents, and other accidents involving serious damage

^{*5} R&D investments including basic research, pilot plants, technical testing, etc.

^{*6} Amount of final disposal/total amount of waste generated

<ul style="list-style-type: none"> Consideration of General Meeting of Shareholders operation in response to Companies Act revision Consideration of response to geopolitical risks
