

Macro environment surrounding the Ajinomoto Group

Growing world population*1

2018 2050
7.6 billion ▶ 9.8 billion

Food production needed by 2050 compared to 2005-2007 **+60%*2**

· Rising demand for food, water, and energy

Global population aging

Population over 65*3
 2015 2050
0.6 billion ▶ 1.5 billion

· Rising needs for extending healthy life expectancy
 · Rising demand for healthcare

Climate change

Global average temperature by 2100*4 **+4.8°C**

· Accelerated decarbonization
 · Physical damage from natural disasters
 · Unstable materials sourcing
 · Breakdown in supply chain
 · Impact on health

Rapid urbanization





Urban population by 2050*5
 2018 2050
55% ▶ 68%

· New flow of goods
 · Rising middle-income class
 · Intense competition

Digital innovation

· Digital disruption (New business opportunities and competitors)
 · Changes of methods to provide information, products, and services
 · Accelerated use of AI and IoT

Ajinomoto Group corporate message Eat Well, Live Well.

Materiality items	Specific examples (<u>underlined</u> : 30 priority ESG items*6)	Related opportunities and risks (○ Opportunity ● Risk)	Key initiatives by the Ajinomoto Group
Health and well-being Realize wellness for people around the world Related SDGs 	Assurance of product safety · <u>Product quality and safety</u> · <u>Fair disclosure and labeling</u> · New technology application · Religious standards	○ Brand trust gained by increasing customer satisfaction ○ Trust gained through fair disclosure to stakeholders ● Impact on business of growing negative rumors regarding umami and MSG ● Lower customer confidence due to product quality complaints or incidents	· Properly sharing information on package and website · Reflecting customer feedback on developing and improving products and services · Enhancing communication to share the benefits of umami and MSG · Thorough quality assurance and human resource training based on the Ajinomoto System of Quality Assurance (ASQUA)
	Contribution to health and nutritional issues · Undernutrition and overnutrition (<u>customer welfare</u>) · Nutrition for infants, young women, and seniors · Well-being · Regenerative medicine · Preventive medicine	○ Rising health awareness and needs of consumers ○ Brand trust ○ Enhancing corporate value	· Offering tasty food and amino acid products as well as menus that nourish health and well-being · Low-salt, low-sugar and low-fat products · Promoting protein intake · Contributing to disease prevention with "AminoIndex technology" · Developing nutritional standards that Group products should meet · Customized programs to each consumer for improving nutrition (personal nutrition)
	Rapid response to consumer lifestyle changes · <u>Fair marketing and advertising</u> · <u>Product access and affordability</u> · Response to diversification of values (smart cooking, joy of eating) · Eating alone, eating personalized meals	○ Enhancing corporate reputation by offering the joy of eating together ○ New value creation using digital technology ● Loss of growth opportunities due to delayed response to consumer lifestyle changes or diversifying values ● Impact on seasonings business due to less cooking time and skills	· Creating strong communities and social bonds through food · Advanced marketing efforts by leveraging big data and consumer data · Building strategies to deal with smaller markets (due to urbanization, etc.) · Properly delivering products, services and information to customers · Expanding products and services to meet the need for convenience, such as smart cooking
Food resources Maximize limited food resources and provide more value Related SDGs 	Sustainable materials sourcing · Biodiversity impacts · Deforestation control · Eradication of child and forced labor · <u>Supply chain management</u> · Sustainable land use · Animal welfare · Animal and plant nutrition	● Increased risk of raw material procurement failure due to delays in addressing social and environmental issues across the supply chain ● Increased risk of raw material procurement failure due to climate change	· Management of fair operating practices (traceability, etc.) · Promoting sustainability to suppliers · Human rights due diligence · Identifying important raw materials and engaging in responsible procurement (paper, palm oil, skipjack, etc.) · Ensuring fair competition and providing thorough employee training · Contributing to sustainable agriculture by using co-products
	Reduction of food loss and waste · Efficient use of materials · Consumer edification (sustainable consumption, etc.) · Waste reduction in the distribution process	○ Cost reduction through initiatives to reduce product returns and waste ● Depletion of food resources	· Using raw materials in manufacturing process without waste · Upgraded, optimal supply-chain management using digital technology · Reducing product returns and waste by extending product best-before dates, etc. · Reducing food loss and waste during product use by consumers · Proposing eco-friendly lifestyles for enjoying food without leftovers
Global sustainability Reduce impact of business activities for global sustainability Related SDGs 	Climate change adaptation and mitigation · <u>Greenhouse gas emissions</u> (Scope 1, 2, and 3) · <u>Energy management</u> · <u>Fuel management</u> · <u>Air quality</u>	○ Collaboration with outside organizations on decarbonization ● Higher production costs due to delays in initiatives to eliminate carbon emissions or increased carbon tax burden ● Procurement risk of sustainable raw materials ● Damaged corporate value due to delayed response to climate change	· Long-term effort to turning the overall product lifecycle carbon neutral · Initiatives to reduce energy use during production and transportation · Shifting to renewable energy · Disclosing information in line with the Task Force on Climate-related Financial Disclosures (TCFD) (scenario analysis, etc.) · Lowering environmental impact by feed-use amino acids (reduction of soil and water pollution)
	Contribution to a circular economy · Waste reduction and 3Rs (Reduce, Reuse, Recycle) · <u>Product packaging</u> · <u>Waste and hazardous materials management</u> · Reduction of environmental impact from containers and packaging · <u>Lifecycle impact of products and services</u>	○ Development of environmentally-friendly materials ● Damaged corporate value due to delays in waste reduction or recycling efforts	· Supplying highly biodegradable amino acid-based detergent · Promoting the 3Rs of containers and packaging (reduction of plastic waste, etc.) · Using biodegradable plastic/plant-derived raw materials/certified paper · Promoting use of environmentally-friendly product labels
	Conservation of water resources · <u>Water and wastewater management</u> · Agriculture and livestock water use	● Production stagnation due to droughts, floods or water quality deterioration ● Raw material procurement failure due to water resource depletion	· Maintaining forests for water sources · Developing wastewater treatment technology
Business foundation Create a corporate group that grows sustainably Related SDGs 	Diverse talent · Employee engagement · Diversity and inclusion · <u>Employee health, safety, and well-being</u> · <u>Accident and safety management</u> · <u>Labor relations</u> · <u>Fair labor practices</u> · <u>Compensation and benefits</u> · <u>Recruitment, development and retention</u>	○ Company growth by improving employee engagement ○ Creation of an innovative environment ● Rising costs due to intense competition for human resources	· Promoting PDCA cycle using the engagement survey · Reforming organizational culture to promote diversity · Training and promotion of female employees · Promoting health management · Human rights awareness training · Occupational safety and health management
	Strong corporate governance · Compliance · <u>Competitive behavior</u> · Intellectual property protection · Political activities and contributions · <u>Business ethics and transparency of payments</u> · IT management · <u>Systemic risk management</u> · <u>Data security and customer privacy</u> · <u>Regulatory capture and political influence</u> · <u>Environment, social impacts on assets and operations</u> · Succession planning · Management transparency · <u>Human rights and community relations</u>	○ Enhancing corporate value ○ Appropriate risk-taking ● Decreased competitiveness due to inability to adapt to digital technology advances ● Decreased competitiveness due to vulnerabilities in IT management structure ● Confusion in organizational management and reduced business profitability due to unstable political, economic, and social conditions such as financial crises, trade issues, etc. ● Impact of intellectual property risks on business ● Impact of sudden foreign exchange and interest rate fluctuations on business ● Higher tax burden due to changes in tax and tax effect	· Raising awareness of the Ajinomoto Group Policies among all Group employees · Establishing whistleblower hotline · Strengthening corporate governance system · Selecting Group-wide significant risks and considering appropriate responses · Managing intellectual property risk · Strengthening information security through the creation of Information Security Regulations
	Preparation for intense global competition · Business selection and focusing · Early creation of innovation · Open innovation · Enhancement of basic infrastructure	○ Business foundation reform through digital disruption ○ Value creation from external collaboration ○ Specialty creation through technological innovation ○ Establishment of competitive advantage by forecasting future changes ● Impact of digital disruption on main businesses ● Emergence of competitors in areas with low entry barriers	· Value chain restructuring (production system reorganization) · Promoting digital transformation · Rapidly commercializing research findings (R&D system reorganization) · Competitive intelligence (medium- to long-term initiatives) · Promoting open & linked innovation

*1 United Nations (UN), 2017
 *2 Food and Agriculture Organization of the UN, 2014
 *3 UN, 2015
 *4 Intergovernmental Panel on Climate Change, 2013
 *5 2018 Revision of World Urbanization Prospects, UN
 *6 The 30 priority ESG items set by the Group have been incorporated.