GLOBAL PRACTICE
FOR SUSTAINABILITY

2023 Hyosung Sustainability Report

HYOSUNG

About this report

After the first publication in 2012, Hyosung has been publishing a Sustainability Report every year since 2018 to communicate actively with our stakeholders. The '2023 Hyosung Sustainability Report' is the eighth sustainability report that we have published. Through this report, we would like to share and transparently disclose our sustainable management activities and achievements across the economic, social, and environmental domains, as well as foster communication with stakeholders.

Key Terms

Hyosung Hyosung Corporation and operating companies
Operating company Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials, Hyosung Chemical
PG Performance Group
PU Performance Unit

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Reporting Principles

The 2023 Hyosung Sustainability Report was conducted with reference to the 2021 GRI (Global Reporting Initiative) Standards. In addition, to respond to the interests and demands of various stakeholders, external sustainability initiatives and indicators such as SASB, TCFD, and ISO 26000 were reflected in the selection of materiality issues.

Reporting Period and Scope

This report covers our activities and performance from January 1, 2023 to December 31, 2023. To provide readers with a better understanding of trends, it includes quantitative data from the past three years. In terms of qualitative activities and achievements, the report may include data up to May 2024. The financial data in this report is consistent with the consolidation standards under the Korean International Financial Reporting Standards (K-IFRS).

On June 1, 2018, Hyosung was spun-off into the holding company and four operating companies. Hyosung Corporation, the holding company, is in charge of group-wide investment and the management of operating companies – Hyosung TNC Corp., Hyosung Heavy Industries Corp., Hyosung Advanced Materials Corp., and Hyosung Chemical Corp. The business areas of these operating companies cover textile and trading, heavy industries and construction, industrial materials, and chemicals, respectively.

The scope of this report includes Hyosung Corporation and the four operating companies, as well as some qualitative and quantitative data from subsidiaries that account for more than 90% of consolidated sales. To avoid confusion, separate explanations are provided for matters that require attention regarding the reporting scope. For the convenience of readers, we have abbreviated company names. Some of the business outcomes and activities described in this report may not apply to certain operating companies. If corrections are required for data presented in our previous reports, the data has been recalculated as of 2023, and the reasons for and results of the corrections are indicated separately at the bottom of the relevant content.

Reporting Cycle

Annually (Last report published: July 2023)

Data Assurance

To ensure the reliability and fairness of this report, we have acquired assurance from the independent professional institution, Econine, in accordance with the four principles of AA1000AS (v3) and AA1000AP (2018). The assurance results are included on page 143 of this report.

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INTERACTIVE USER GUIDE

This report was published in the form of interactive PDF with functions including navigation to related pages and web page links.

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Overview

CEO Message

“Hyosung will lead a better future for humanity based on the best technology and business capabilities.”

Dear stakeholders,

We offer sincere gratitutde to all of you who have shown genuine interest and trust in Hyosung, including shareholders, customers, partner companies, local communities and employees.

Hyosung has been striving to contribute to a sustainable future and prosperous life for humanity. We have been conducting ESG education for all employees to ensure that sustainable management becomes a foundation for organizational culture, while making extensive efforts to explore new territories in the global market through differentiated technologies and product development. In particular, we practice customer-centric management, listening to the demands of customers worldwide who pay close attention to enhancing environmentally and socially sustainable values, aligning the visions of the company and the customers.

Hyosung perceives global warming as a significant risk over the company and the society at large. For systemic management of the climate change risks and opportunities, we have established and implemented Green Vision 2030. Specifically, we proactively address changes in global regulations and guidelines such as carbon emissions regulations and plastic agreements through new technologies and products development.

Moreover, human rights management, one of the founding philosophies, is a fundamental business principle for Hyosung, which ensures that the human rights of all stakeholders are safeguarded and respected throughout our operations. Hyosung actively supports international labor and human rights standards, including the UN Universal Declaration of Human Rights, the core conventions of the International Labour Organization (ILO), and the OECD Guidelines for Multinational Enterprises, in line with the first principle of the UNGC, which states that "businesses should support and respect the protection of internationally proclaimed human rights." In 2023 and 2024, we will increase the number of sites to be assessed for human rights impacts while simultaneously making efforts to improve working conditions and promote workplace health and safety.

Furthermore, we diligently practice collaborative partnership to grow and develop with all our stakeholders across the value chain including customers, investors, business partners, and local communities. As a part of the collaborative partnership project, we provide a variety of business support such as consulting, marketing, education and items to suppliers, small and medium-sized enterprise customers, and startups. Also,through the active participation of executives and employees in local communities near the workplace, various support projects are being carried out for biodiversity conservation activities and community development.

Also, Hyosung is developing governance system with expertise and transparency to make rational and prompt decisions in the midst of rapidly changing business environment. This approach will enable us to establish responsible business system across the business operations including sustainability management, and thus enhance business value in continuation.

Hyosung will persist in leading better lives for humanity and achieving sustainable development based on our exceptioinal technology and business capabilities. We ask for the support and encouragement of all our stakeholders in Hyosung’s path to relentlessly strive toward its goals and take on challenges.

Chairman & CEO **Hyun-Joon Cho**

Hyosung, a Corporation Creating Value for Customers

Business Area

Hyosung group owns a total of 132 affiliated companies, 54 in Korea and 78 overseas.

Textiles/Trade	Power & Industrial Systems/Construction	Advanced Materials	Chemicals	Information and Communication	IT Components
Hyosung TNC Spandex, Nylon/Polyester Yarn, Trade Business, etc.	**Hyosung Heavy Industries** Transmission and Distribution Equipment, New and Renewable Energy, Construction Business Division	**Hyosung Advanced Materials** Aramid, Carbon Materials, Tire Cord, Airbags, Carpets	**Hyosung Chemical** PP/DH, TPA, Polyketone, Specialty Gases, Nylon/ Polyester Film	**Hyosung TNS** ATM Machines, KIOSK, S/W Solutions	**Shinhwa Intertek** Optical Films for LCD BLU
	Hyosung Good Springs Industrial Pumps, RO (Reverse Osmosis) Desalination Plant Business	**Global Safety Textiles** Airbag Fabric		**Hyosung Information System** ICT Integrated Services	**Galaxia Electronics** LED Display Systems, Architectural Landscape Lighting, LED Lighting Fixtures
	Chinhung International Civil Engineering, Construction, and Housing Business			**Hyosung ITX** IT Services, CRM Channel Management	
				Galaxia Moneytree Fintech, Comprehensive Financial Platform Services	

※ In July 2024, Hyosung Corporation plans to split into the existing company and a new company, titled HS Hyosung Corporation.

Company History

Over the past 50 years, Hyosung has led domestic and overseas key industries. Its history is characterized by relentless innovation and the history of overcoming numerous obstacles with the willingness to embrace challenges.

1971	Established the first company-affiliated technical research institute in Korea	2008	Developed the world's first recycled yarn from discarded fishing nets
1978	Developed Korea's first PET tire cord	2011	Developed Korea's first high-performance carbon fiber
1998	Developed the world's first 800kV GIS	2013	Successfully commercialized the world's first polyketone
2003	Obtained Korea's first ATM Quality Certification for the US financial industry	2019	Established the Production Technology Center

Global Technology

TEXTILE

No. 1 brand, 'creora' in the spandex global market share

Hyosung TNC

ENERGY

GIS (Gas Insulated Switchgear) selected as a world-class product

Hyosung Heavy Industries

TIRE CORD

Polyester tire cord chosen by 50% of passenger cars worldwide

Hyosung Advanced Materials

INDUSTRIAL MATERIALS

No. 1 market share in seatbelt yarn and airbag fabric

Hyosung Advanced Materials

NEW MATERIALS

World's first commercialization of a new material 'POKETON'

Hyosung Chemical

ATM

No. 1 Market Share in ATM Market in the USA and Nigeria

Hyosung TNS

HYOSUNG WAY

HYOSUNG WAY is a value system combining the strength and resolve of Hyosung members around the world to turn dreams into reality. Through the practice of Hyosung Way, Hyosung will become a global top-tier company and contribute to enhancing the life quality of our customers.

Mission	Enhance and enrich the quality of life for humanity with its leading technology and management capability			
Core Value	Global Excellence	Innovation	Accountability	Integrity
Principle	• Maximize the competitiveness with ceaseless self-improvement efforts to win in any situation • Blaze new trails in markets around the world with a global outlook	• Eliminate all inefficiencies that do not add value • Challenge new possibilities with a positive mindset	• Act like owners and take charge in actions • Never give up until achieving the goal	• Uphold transparency and fairness based on facts and principles • Respect and cooperate with each other to make a great workplace

Business Performance

Hyosung is intent on bolstering its market position by fortifying its business capabilities to increase profitability through value management based on global excellence, and accelerating continuous development through establishing global networks of its core businesses.

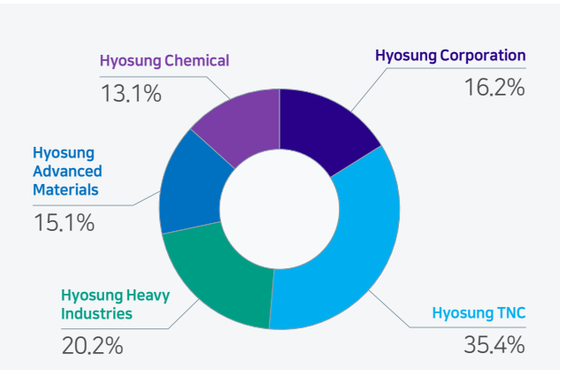
Group Business Performance

Sales
KRW 21.2581 trillion

Operating profit
KRW 549.1 billion

Total assets
KRW 20. 706 trillion

Group Proportion of Sales (%)



Business Performance of Holding Company and Major Operating Companies

(Unit: KRW million)

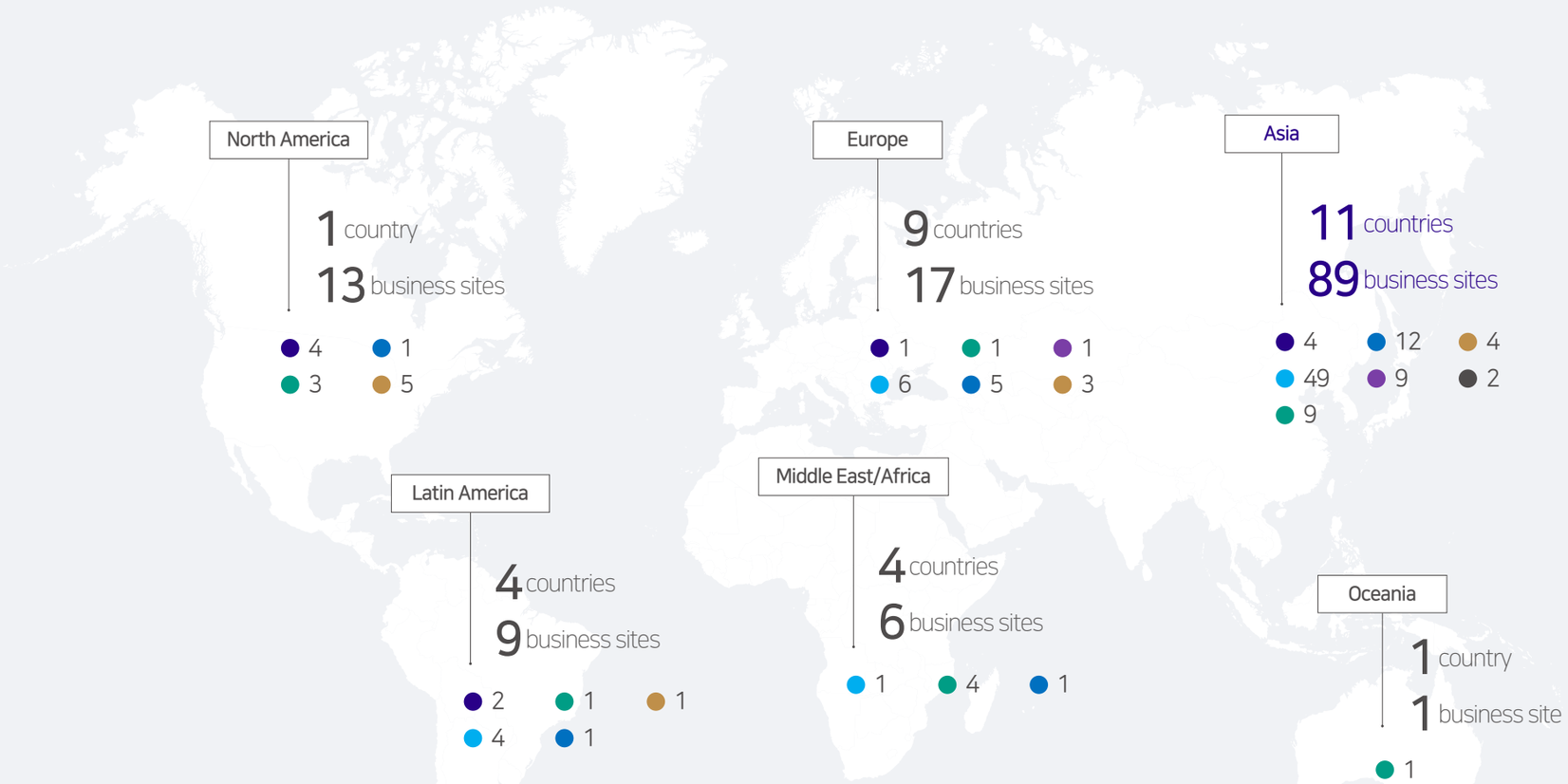
	Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical
Sales	3,436,688	7,526,919	4,300,572	3,202,331	2,791,629
Operating profit	94,367	213,393	257,837	172,374	(188,836)
Total assets	5,088,858	4,070,471	4,761,300	3,034,403	3,115,611

Hyosung, a Corporation Creating Value for Customers

Global Network

Hyosung operates 135 business sites in 30 countries to expand and develop in overseas markets. In particular, we are actively pursuing localization strategies and facility investments to occupy the position of leading companies in related industries in Vietnam, India, China, Brazil, and the Republic of Turkey (Turkey), which have a large market size and high growth potential. In 2023, we made sizable investments in Vietnam, China, Republic of Turkey, etc. to establish new subsidiaries and factories, focusing on developing and mass producing key products as well as on strategic growth of advanced technologies and products such as carbon fiber.

※ 135 business sites in 30 countries(except for R&D centers)



Asia

- Republic of Korea
- China
- Japan
- Vietnam
- India
- Bangladesh
- Indonesia
- Malaysia
- Singapore
- Thailand
- Taiwan

Europe

- United Kingdom
- Germany
- Italy
- Poland
- Luxembourg
- Romania
- Russia
- Spain
- Türkiye

North America

- USA

Latin America

- Mexico
- Brazil
- Panama
- Chile

Middle East/Africa

- South Africa
- Kuwait
- Saudi Arabia
- United Arab Emirates

Oceania

- Australia

● Hyosung Corporation ● Hyosung TNC ● Hyosung Heavy Industries ● Hyosung Advanced Materials ● Hyosung Chemical ● Hyosung TNS ● Hyosung HGS

Production Network

Domestic Headquarters	Domestic Factory	Overseas Manufacturing Corporation
7	19	36

Trade Network

Trading corporation/ branch	Trade office/sales office
39	34

R&D Center

Domestic	Overseas
7	3

Sustainability Management Direction

The HYOSUNG WAY, which stands for "Enhance and enrich the quality of life for humanity with its leading technology and management capability" carries on the founding ideology of Hyosung's founder, which includes technical progress for the nation, business contributions to the country, and respect for humanity. Hyosung's management philosophy has been centered around "enhancing the value of human life" over the last fifty years, which is consistent with the present emphasis on sustainable management. Hyosung is launching the RE:GEN brand with a vision to create a safer and more prosperous world by presenting sustainable technologies and solutions to today's generation as well as to future generations, and promoting sustainable management for 100 years of business.

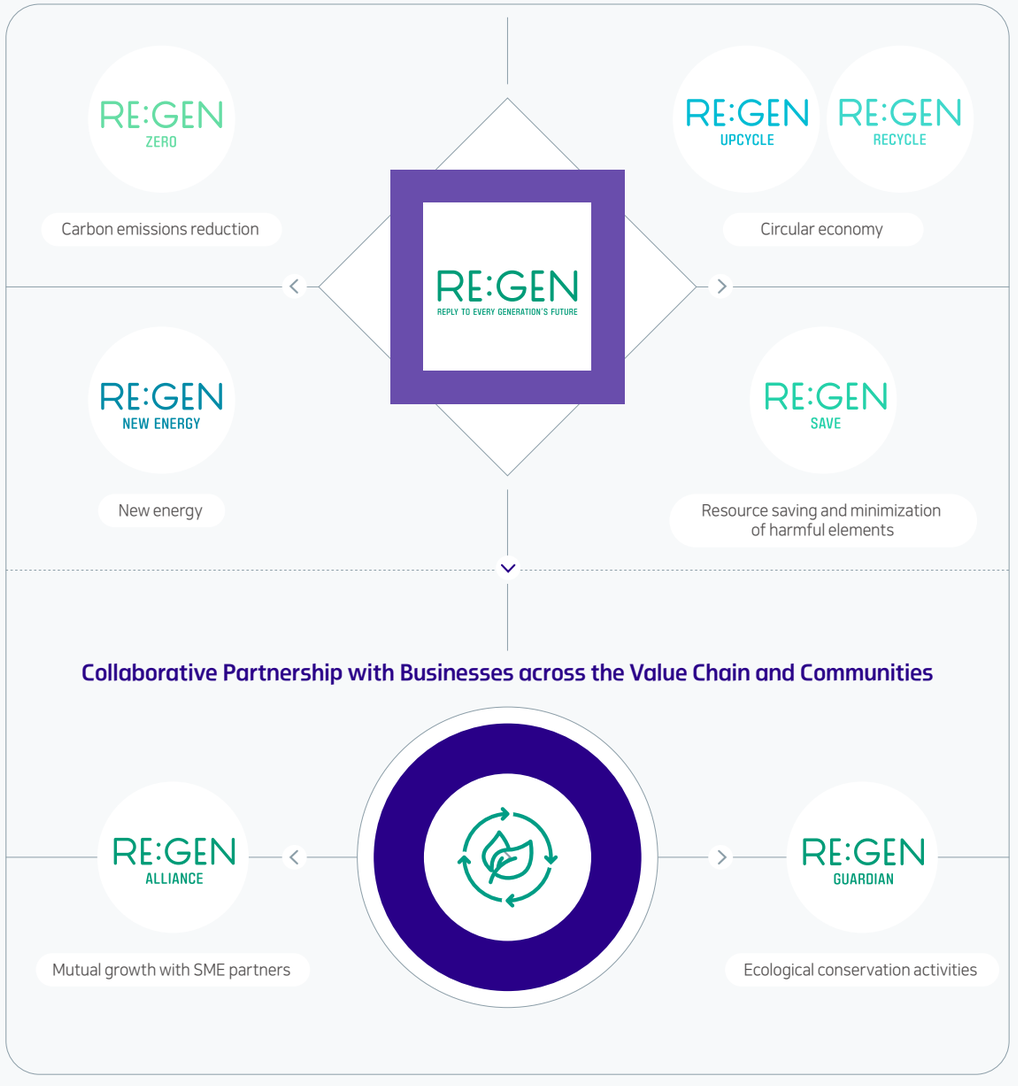
Foundational spirit	Technical Progress for the Nation, Business Contributions to the Country, and Respect for Humanity		
Mission	Enhance and enrich the quality of life for humanity with its leading technology and management capability		
Sustainability Brand	RE:GEN, Reply to Every Generation's Future		
Strategic tasks by area	**Environmental**	**Social**	**Governance**
	Green Management VISION 2030 An eco-friendly company that enhances and enriches quality of life for humanity • More than 14.5% of emissions reduction by 2030 compared to the level of 2018 • Market discovery and business expansion through green technology development • Facilitating eco-friendly corporate culture by establishing green infrastructure • Increasing stakeholder trust through transparent information disclosure	Human Rights Management 2030 Business management that protects and respects human rights of all stakeholders Safety and Health 2030 Establishing a pleasant and safe zero-accident workplace Collaborative Partnership with Local Communities 2030 Expansion of positive impacts for the ecological environment in local communities and revitalization of local culture	Sustainability leadership enhancement Ethics and compliance management enhancement Integrated risk management Stakeholder communication and information disclosure

Sustainability Management Roadmap

Classification	2021~2023	2024~2027	2028~2030
Goals	Establishment of sustainability management framework	Expansion of the sustainability management system application	Sustainability management advancement
Targets	Holding company and 4 operating companies	Holding company and 4 operating companies, and key domestic and foreign subsidiaries	Group-wide
Strategic tasks	• Establishment of a dedicated committee under the supervision of the Board of Directors and senior esxecutives, as well as organizations, regulations and processes • Expansion of the scope of subsidiaries subject to sustainability data management • Establishment of the mid- to long-term roadmap by sector • Setting and managing key performance indicators by sector	• Expansion of the scope of sustainability management system to key subsidiaries • Enhancement of activities for sustainable supply chain establishment • Establishment of sustainability data management system	• Establishment of the group-wide integrated sustainability management system • Internalization of sustainability in management activities • Expansion of sustainability across the entire value chain

Reply to Every Generation's Future, RE:GEN

Hyosung's Sustainable Business



Stakeholder Engagement

Hyosung has identified consumers, workers, shareholders and investors, business partners, and local communities as major stakeholders among the many who trade affects with the company. Also, we actively reflect stakeholders' opinions on business activities by operating stakeholder engagement channels by stakeholder type.

	Customer	Employee	Business Partner	Shareholder/Investor	Local Community
Interests	• Providing high quality sustainable products and services • Enhancing price competitiveness • Risk management for human rights and the environment • Fortifying sustainability activities	• Providing fair evaluation and opportunities • Respecting human rights • Vitalizing communication between executives and employees • Enabling work and life balance • Creating safe and healthy working environment	• Activating communication and collaborative partnership • Distributing generated results fairly • Avoiding unjust requirements and unnecessary management interference • Establishing fair trade order • Supporting enhancement of sustaintbiliy capabilities	• Securing financial soundness and profitability • Securing future growth engines • Securing executive trust and governance transparency • Sustainability risk management	• Partnership with local community • Vitalizing communication • Conducting genuine social contribution activities
Communication Channels and Communication Cycle	• Company website, blog, SNS, YouTube (ongoing) • Global exhibitions (ongoing) • Technology exchange meetings (ongoing) • Hyosung VOC (Voice of Customer) program (ongoing)	• Intranet 'Wagle Wagle' and Tong Tong Bulletin Board (ongoing) • HR Counseling Center, Grievance Office (ongoing) • Homepage Reporting Center (ongoing) • Conversation with Management meeting (once a quarter), • Intranet management message (twice a year) • Company magazine (once a month), • HBS (Hyosung Broadcasting System)(twice a week)	• Business partners meetings (ongoing) • Operating business partners support program (ongoing) • Homepage reporting center (ongoing)	• Corporate IR (Investor Relations) activities (ongoing) • Board Meetings (at least once per quarter) and Annual General Meeting (once a year) • Annual Business Report (once a year) • Corporate Disclosure Materials (ongoing)	• Clean-up activities near the business sites (monthly) • Social contribution programs (ongoing) • Factory invitation events for locals (at least once a year)

Hyosung Corporation

※ Part of the Focus Issue includes details about operating companies. In this case, the company is referred to as 'Hyosung.'

Hyosung, a Corporation Creating Value for Customers

Hyosung Corporation is a holding company of Hyosung Group, responsible for managing subsidiaries' equity and investments. We establish mid- to long-term business plans and strategies, as well as manage business portfolio. Additionally, we operate R&D Center, Human Resources Development Center, and IT Strategic Office to support the core competencies enhancement of our key subsidiaries.

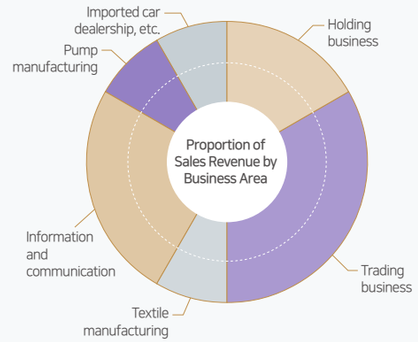
Company Overview

Company name	Hyosung Corporation
Date of establishment	November 3, 1966
CEO	Hyun-Joon Cho, Kyoo-Young Kim
Headquarters location	119 Mapodaero, Mapo-gu, Seoul, Republic of Korea(Gongdeok-dong)
Number of employees	656 People (As of December 31, 2023)
Key business areas	Holding business (including management and investment of subsidiary shares, research services, and group CI management), textile manufacturing, etc.
Major countries of operation	Korea, USA, Mexico, Vietnam, etc.

Hyosung Corporation's Key Business Areas

Holding business	CI royalty, research services, transportation services
Trading business	Steel, tire reinforcements
Textile manufacturing	Airbag cushions, tire reinforcements
Information and communication	Financial automation devices
Pump manufacturing	Pump manufacturing
Imported car dealership	Imported car dealership

※ Based on Hyosung Corporation and 28 consolidated subsidiaries



Financial Performances

Total ssets KRW 5.0889 trillion

Revenue KRW 3.4367 trillion

Operating profit KRW 94.4 billion

ESG Ratings and Key Certifications

한국ESG기준원 A
KCGS Rating

CDP B-
CDP Climate Change Score

ISO International Organization for Standardization
Environmental Management System ISO 14001

Global Recycled Standard
Eco-friendly Certification

ISO International Organization for Standardization
Safety and Health Management System ISO 45001

Family-friendly Certification

Community Contribution Certified Company

Materiality Assessment

Hyosung Corporation evaluates the impact of our business activities on the environment, society, and the economy (Inside → Out), as well as the impact of sustainability topics on our business performance (Outside → In) to select material sustainability topics. Hyosung Corporation, as a holding company is significantly influenced by the business performance of operating companies in terms of profits, as they account for over 90 percent of investment assets on affiliated companies. Consequently, we strategically selected five material topics, reflecting material topics of operating companies, matters reviewed by executives, and demands of investors and key stakeholders. These topics were finalized after the ESG Management Promotion Committee and the ESG Management Committee under the Board of Directors went through the review and approval process. Also, to focus on managing material topics with the highest priorities, we reduced the number of material topics from 12 in 2022 to 5 in 2023.

Materiality Assessment Process

<table>
<tr><td>STEP 1</td><td>Organize Sustainability Issue Pool</td><td colspan="2">Global sustainability issues / Global guidelines / Sector-specific issues / 2022 Material topics

※ Hyosung used the issue pool formed by the operating companies.
Environment : Hyosung TNC 8, Hyosung Heavy Industries 10, Hyosung Advanced Materials 8, Hyosung Chemical 7
Social : Hyosung TNC 7, Hyosung Heavy Industries 10, Hyosung Advanced Materials 9, Hyosung Chemical 7
Governance and Other : Hyosung TNC 7, Hyosung Heavy Industries 10, Hyosung Advanced Materials 9, Hyosung Chemical 8</td></tr>
<tr><td>STEP 2</td><td>Identify topics with significant impact and take stakeholder interests into account</td><td>Internal

• Employees: Survey
• Key Department Heads: Focus Group Interview (FGI)
• Executives: ESG Management Promotion Committee, Analysis of PU Business Report Items</td><td>External

• Investors: Letters, Questionnaires, Analysis of Requirements during Meetings, Written Interviews
• Customers: Written Interviews, Review of VOC (Voice of Customer) Materials
• Partners: Opinions from Consultative Meetings
• Local Communities: Surveys from Partner Organizations, Requirements from Local Governments and Government Agencies
• Sustainability Management Experts: Written Interviews
• ESG Management Auditors: ESG Information Disclosure Requirements
• Media: 2023 Media Coverage</td></tr>
<tr><td>STEP 3</td><td>Assess the relevance to business performance</td><td colspan="2">FGI with finance and key department team leaders</td></tr>
<tr><td>STEP 4</td><td>Determine priorities through comprehensive analysis</td><td colspan="2">Topic priority selected in steps 1, 2, and 3 + 2023 Sustainability performance + 2024 Sustainability management plan</td></tr>
<tr><td>STEP 5</td><td>Report to the executives and reflect their feedback</td><td colspan="2">Report to executives and reflect their opinions</td></tr>
<tr><td>STEP 6</td><td>Board makes decisions</td><td colspan="2">Reflect the Board members' opinions and determine material topics</td></tr>
<tr><td>STEP 7</td><td>Reflect on sustainability management strategies/goals and disclose them in the report</td><td colspan="2">Reflect 2024 sustainability strategies/goals/business projects,
Disclose material topic management status in the sustainability report</td></tr>
</table>

※ Materiality Assessment of operating companies (Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials, Hyosung Chemical)

2023 Material Topics

Category	Area	Topic	2022 Material Topic
1	Environmental	Sustainable Products and Technology Development	O
2	Environmental	Response to Climate Change	O
3	Social	Collaborative Partnership with Businesses across the Value Chain and Communities	O
4	Social	Reinforcement of Workplace Health and Safety	O
5	Governance	Reinforcement of sustainability leadership and risk management	O

Changes in Material Topics Compared to the 2022 Sustainability Report

Classification	Topic and Reason for Change
Integrated Topics	• 'Green business,' 'Reducing resource consumption and establishing circular economy system,' 'Generating economic outcome,' and 'Securing new growth engines and business diversification' have been integrated into 'Sustainable product and technology development.' • 'Ethical/compliance management' has been integrated into 'Reinforcement of sustainability leadership and risk management.'
Excluded Topics	• 'Product safety & quality and customer satisfaction,' 'Strengthening human rights management,' and 'Environmental pollutant management (water, air, waste, soil)' have been incorporated as ongoing management tasks.
Added Topics	• None
Others	• Hyosung's materiality assessment was combined and disclosed in 2022, but as of 2023, each operating company's materiality assessment has been reported independently.

Materiality Assessment

Performance and Plans for Each Material Topic

Area	Topic	Significance of the Topics to Hyosung	2023 Performance	2024 Implementation Plans	Relevant GRI Disclosures
Environmental	Sustainable Products and Technology Development	• We intend to classify sustainable products according to the green taxonomy and transparently communicate the environmental effect of these items to disseminate positive influence throughout the industry • We have expanded research, development, and business activities to lead the hydrogen energy ecosystem and contribute to energy efficiency. • We have reduced adverse environmental impacts and secured new growth drivers by increasing the supply of products made with recycled and bio-based materials. • As global environmental regulations tighten, customers' demand for low-carbon, pollution-reducing, and energy-efficient products increases.	• Establishment of Hyosung Sustainable Product Classification System • Investment of KRW 11.6 billion in Hyosung Corporation's environmental sustainability R&D - Development of lightweight materials for hydrogen vehicles - Development of recycled/bio-material technology • Hyosung Corporation's sales from recycled/bio-material products increased 79% compared to the previous year • Maintaining GRS (Global Recycled Standard) certification	• Verifying/improving the mutual consistency of the Sutainable Product Classification System • Investment of KRW 30 billion in Hyosung Corporation's environmental sustainability R&D - Development of high-pressure containers of a hydrogen car and propelling motors for eco-friendly vessels - Development of technology for separation/purification of materials from used textiles and apparel • 106% increase in sales of recycled and bio products by Hyosung Corporation • Support for GRS certification acquisition of raw material suppliers	GRI 201 GRI 301
Environmental	Response to Climate Change	• We must increase the greenhouse gas emissions reduction goals and broaden the scope of carbon emissions management to alleviate the impact on climate change. • Major customers and investors' demands for Greenhouse gas emissions reduction from our business sites and products are increasing	• Hyosung Corporation approved the increase in 2030 Emissions Reduction Goal(Reduction of 23.6% compared to the emissions in 2018, up from 14.5%) • Hyosung Corporation reduced 6.4% of emissions compared to the previous year. • Increased the Hyosung Corporation's LCA items to 10, up from 3 • Calculated Scope 1 and 2 emissions of major subsidiaries in 2023.	• Implementation of 7 investment plans for Hyosung Corporation's greenhouse gas emissions reduction (Reducing 2023 emissions by 2.7%, equivalent to approximately 800 tons per year) • Third-party -verification of scope1 and 2 emissions for major subsidiaries in 2024 • Calculating scope3 emissions for 2024 of major subsidiary manufacturers	GRI 201 GRI 302 GRI 305
Social	Collaborative Partnership with Businesses across the Value chain and Communities	• To achieve Hyosung's mission of "Enhance and enrich the quality of life for humanity with its leading technology and management capability", it is essential to establish sustainable supply chain, proliferate eco-friendly materials and technology through customers as well as build mutually beneficial relationship with local community through cooperation. • Hyosung aims to establish a system of virtual cycle promoting mutual growth by identifying impacts exchanged with partners, as it proliferates positive impacts and mitigates adverse impacts.	• Organized the Collaborative Partnership Deliberation Committee • Collaborative partnership with stakeholders in the value chain - Climate change mitigation and adaptation with 73 companies - New product research and marketing with17 companies - Promoting safety and human rights with107 companies - Improving quality and productivity with 23 companies - Providing sustainability education and consulting for 106 companies • Conducting activities for partnership with local community and biodiversity conservation with 5 regions	• Expanding collaborative partnership with stakeholders in the value chain - Supporting supply chain assessment, risk identification and improvement - Supporting development and expansion of eco-friendly products for small and medium-sized enterprise customers • Supporting economy and biodiversity of local communities (Marine Forest Fostering Project)	GRI 203 GRI 304 GRI 308 GRI 414
Social	Reinforcement of Workplace Health and Safety	• Safety accidents are highly likely to expose workers in manufacturing facilities and research laboratories, which can also harm the surrounding local communities. • With the intensification of safety and health regulations, significant financial loss, due to an operational shutdown, for example, could arise as a consequence of serious accidents.	• 0 Industrial Accidents occurred at Hyosung Corporation • Established the 2030 Safety and Health Roadmap • Hyosung Corporation enacted and revised 7 safety and health regulations • Conducted risk assessment for Hyosung Corporation's Anyang Plant, including sub contractors, R&DB Labs and Hyosung Power&Industrial Systems R&D Center. • Identified 712 non-compliance cases during Hyosung Corporation's safety inspections and achieved 100% improvement.	• Hyosung Corporation achieving 0% accident rate in 2024 • Improving risk assessment procedure and implementation capabilities • Revitalizing communication with employees and sub-contractors • Establishing sub-contractor safety and health management process and expanding the implementation checks	GRI 403
Governance	Reinforcement of Sustainability Leadership and Risk Management	• Sustainability-related risks and demands of stakeholders increase for us as a holding company of a global group with various manufacturing-based subsidiaries and affiliates. • Fulfill the corporate social responsibility and pursue sustainable growth by enhancing the management system for sustainability management and risks as well as roles and responsibilities of the Board and senior executives	• Hyosung Corporation held 7 ESG Management Committee meetings and 4 ESG Management Promotion Committee meetings. • Established and revised ESG policies. • Improved the human rights impact assessment checklist. • Identified biodiversity and water risks. • Established Terminology Definition Book and reorganized data collection standards to prepare for mandatory disclosures	• Key risk and potential risk disclosure • Detailed sustainability risk assessment for investment reviews • Improving the risk assessment criteria	Non-GRI

Sustainable Products and Technology Development

Why So Important?

In order to address the climate crisis and achieve sustainable development goals, demands and needs for sustainable products and services are increasing.
Hyosung fully acknowledges the responsibility and significance of providing environmentally sustainable products and services, including low-carbon products, pollution-reducing products, and energy-efficient products.

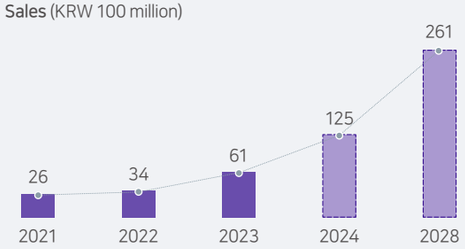
Our Approach

Hyosung is dedicated to manufacturing products with recycled and bio-based materials, enhancing energy efficiency, and expanding research development and businesses contributing to hydrogen energy ecosystem. Through these initiatives, we would reduce negative environmental impacts and secure new growth drivers at the business level.
Furthermore, we will define sustainable products in accordance with global green taxonomy and reveal the related information to transparently disclose environmental impacs to all stakeholders, including customers.

Our Achievement

- Establishment of **Hyosung Sustainable Product Classification System**
- Investment of **KRW 11.6 billion** in Hyosung Corporation's environmental sustainability R&D
- The sales performance and plans of Hyosung Corporation's **recycled and bio-material products**

Sales (KRW 100 million)



- Maintaining GRS (Global Recycled Standard) certification for textile products and supporting raw material suppliers to acquire GRS certification

Sustainable Products and Services

Sustainable Products and Services Classification System

Hyosung has developed a sustainable products and services classification system, reflecting the green classification frameworks and environmental certification of Korea and the EU. We designed this approach to prevent greenwashing across the Hyosung Group and maintain transparent communication with stakeholders. Additionally, we will continue monitoring revisions of the green classification system to adjust Hyosung's classification system accordingly and enhance the legitimacy of the sustainable products classification.

Classification		Definition	Products and Services
Greenhouse Gas Emissions Reduction	RE:GEN ZERO RE:GEN NEW ENERGY	• Utilization of raw materials with low global warming potential	● Gas Insulated Switchgear that use SF_6 alternative gas - DAIS (Dry Air Insulated Switchgear) - GIS with alternative gas
		• Products with a lower carbon footprint than current products	● New material engineering plastic POKETON
		• Increasing energy efficiency - High-efficiency energy products (certification acquired) - Energy savings through lightweight design	● Premium electric motors ● SGM (Shaft Generator Motor) or ships ● Carbon fiber to reduce product weight
		• Production based on renewable (bio-based) materials	● regen bio-based spandex ● Lyocell tire cord ●● Bio-polyester yarn/tire cord/automotive carpet ● Bio-based TAC (Tri-acetyl Cellulose) film
		• New and renewable energy (hydrogen, wind, solar) technologies	● Hydrogen charging stations and liquefied hydrogen production ● Wind power generation system
		• Contribution to renewable energy transmission and distribution infrastructure and grid stabilization	● Direct Current Transmission and Distribution System (HVDC, MVDC), STATCOM, Energy Storage System (ESS), Variable Reactor for Renewable Power Generation
Adjustment to Climate Change		• Obtaining the Green Standards For Energy and Environmental Design (G-SEED)	● Construction of green buildings
Sustainable Water Conservation		• Wastewater treatment • Products and services providing clean drinking water • Acquisition of environmental certification (Environmental New Excellent Technology, Green Technology)	● Submerged membrane technology for water treatment ● Pressurized membrane technology for water treatment
Circular Economy	RE:GEN RECYCLE RE:GEN UPCYCLE	• Application of recycled raw materials • Acquirement of certification for using recycled materials (GRS, RCS, ISCC PLUS, SGS ECO-Product)	● regen Ocean Nylon: Recycled nylon from waste fishing nets ● regen Nylon: Recycled nylon from manufacturing waste ● regen Polyester: Recycled polyester from discarded PET bottles ● regen Spandex: Recycled spandex from manufacturing waste ● regen Ocean Spandex: Recycled spandex from waste fishing nets ●● Recycled yarn, tire cord, and automotive carpet ● PCR-PP (Post Consumer Recycled Poly Propylene) ● TAC film using recycled materials
		• Products designed to improve recyclablility by simplifying materials	●● Recyclable automotive carpet
Pollution Prevention and Management	RE:GEN SAVE	• Reducing the use or emission of pollutants • Acquisition of Environmental Certification (Environmental New Excellent Technology, Green Technology)	●●● Polyester with antimony (Sb)-free catalyst ●● Dope-dyed Yarn without the need for dyeing process ● Transformers that are insulated with biodegradable ester oils ● Formalin free Dip solution for tirecords
Biodiversity Conservation		• Obtaining the Green Standards For Energy and Environmental Design (G-SEED)	● Construction of buildings with biotope landscaping

● Hyosung Corporation ● Hyosung TNC ● Hyosung Heavy Industries ● Hyosung Advanced Materials ● Hyosung Chemical

Sustainable Products and Technology Development

Research & Development Governance

Decision-making body	Board of Directors	• Management and supervision of sustainable products and technology development
	ESG Management Committee	• Annual review of sustainable products and technology development performance and plan
	R&D Committee	• Involves the CEO and key executives • Takes place twice a year • Establishes R&D strategies by incorporating feedback from relevant teams such as sales, marketing and R&D • Discusses each operating companies' demands on environmentally friendly technology, customer requests upon main items, and R&D status
Working-level organizations	Technology Exchange Meetings	• Regular meetings for departments to share information in order to enhance the R&D efficiency • Consultation on securing core foundational technologies and internalization of research capabilities
	R&D Labs and Centers	• Conducting research either through participation in national research projects by reflecting the R&D topics confirmed in the R&D Committee or autonomous R&D planning and implementation

Working-level Organizations for R&D

Organization	Company	Key R&D performances
Hyosung R&D Business Labs (Basic Tech)	Hyosung Corporation	R&D in composite materials, aramid, tire reinforcements, carbon fibers, tech yarn, nylon, polyester, spandex, and film recycling
Hyosung R&D Business Labs (Commercial)	Hyosung Corporation	Secondary batteries, bio-materials, and PP/DH technologies
Hyosung Power&Industrial Systems R&D Center	Hyosung Corporation	Heavy electrical equipment, ESS (Energy Storage Systems), STATCOM (Static Synchronous Compensator), voltage-source HVDC (High Voltage Direct Current), MVDC (Medium Voltage Direct Current), LVDC (Low Voltage Direct Current), converter/drive technology for Eco-friendly vessels
Production Tech Center	Hyosung Corporation	Optimization of process designs and process conditions for smooth transition of new product recipes developed by R&D Labs and Centers to factory mass production
Europe R&D Center	Hyosung Heavy Industries	Gas Insulated Switchgear that use SF_6 alternative gas
Steel Wire Technical Center	Hyosung Advanced Materials	Production technology for tire reinforcements (steel cord and bead wire) with eco-friendly steel wire rods, and process enhancements to reduce CO_2 emissions
Technology R&D Department (Pump)	Hyosung Good Springs	High-efficiency industrial pump development
Technology R&D Center (ATM)	Hyosung TNS	Low-power financial automation device (ATM)

Sustainable Products Development and Performance

Textile/Chemical Sector

Product Development Utilizing Bio-based Raw Materials	• Development completion and mass production of bio-based spandex applying bio-PDO (propanediol) • Promotion of introduction and mass production of bio BDO (Butane diol), which is a raw material for spandex • Promotion of bio-nylon yarn development • Investment in manufacturers of bio-AN (Acrylonitrile), a raw material for carbon fiber
Resource Recycling Technology Development	• Completion of technologies required for mechanical recycling of nylon waste chips/waste yarns and chemical recycliycling of nylon waste fishing nets • Development of industrial yarn such as tirecord/technical yarn from polyester recycling raw materials • Promotion of technology needed to separate waste fabrics and waste clothing materials and refine recycled monomers
Product Development Utilizing Lightweight/ Hazardous Chemicals Reduction Materials	• Development of lightweight carbon fiber/composite materials to improve the fuel efficiency for hydrogen cars and aircraft • Tirecord development promotion using adhesives without resorcinol and hazardous chemicals

Heavy Industries Sector

Technology Development for Transition to Sustainable Products	• Development of transformers that substitute mineral oil with biodegradable ester oil • Gas Insulated Switchgear that use SF6 alternative gas
New Products and Technology Development for Eco-friendly Power Grids	• Development of DC transmission and distribution systems with higher transmission efficiency and without lectromagnetic issues compared to traditional AC transmission: completion of 200MW HVDC and 30MW MVDC systems
Eco-friendly Mobility Propulsion System and Infrastructure Development	• Development of MW-level converter and drive technology for electric motor propulsion, a critical component of eco-friendly ships • Completion of biogas convergence hydrogen charging station technology development and demonstration

Information and Communication Sector

Low-power financial automation devices	• Accomplishment of a 30% reduction in power consumption compared to existing devices through the development and application of high-efficiency power supplies and minimization of standby power

Response to Climate Change

Why So Important?

Tackling climate change is an essential task for not only present generation, but also the survival of future generations. Hyosung, as a global corporation conducting businesses in textiles, chemical, industrial materials, heavy industries, IT devices and services, fully acknowledges its significant influence on climate change and crises across the business value chain.

Our Approach

Hyosung Corporation supports carbon neutrality policies of the international society and Korean government, participating in climate actions. We strive to raise greenhouse gas reduction targets of our business sites and to reduce the greenhouse gas emissions throughout the entire process of products and services.
Additionally, since 2022, we have calculated emissions of the subsidiaries, which account for 90% of sales in consolidated basis, disclosing the calculation in Sustainability Report and CDP report transparently. We will gradually expand the scope of greenhouse gas emission calculation and increase the accuracy of information.

Our Achievement

- Hyosung Corporation approved the raise in the 2030 Emissions Reduction Goal (Reduction of **23.6%** compared to the emissions in 2018, up from 14.5%)
- Hyosung Corporation reduced **6.4%** of emissions compared to the previous year.
- Increased the Hyosung Corporation's LCA items to **10**, up from 3
- Calculated Scope 1 and 2 emissions of major subsidiaries in 2023.

2024 Goals

- Implementation of 7 investment plans for Hyosung Corporation's greenhouse gas emissions reduction ((Reducing 2023 emissions by **2.7%**, equivalent to approximately 800 tons per year)
- Third-party assurance for Scope 1 and 2 emissions of major subsidiaries in 2024
- Calculating Scope 3 emissions of Major subsidiary manufacturing companies in 2024

Governance for Climate Action

Hyosung Corporation has established and operated <ESG Management Committee> within the Board of Directors to address the climate change across the company. <ESG Management Promotion Committee> and < R&D Committee> under the leadership of the CEO manage climate change issues and report major issues to the Board of Directors.

Decision-making Body	ESG Management Committee Manages and supervises sustainability risks such as climate change	
	ESG Management Promotion Committee Manages and supervises policies, goals, strategies, and their implementation	R&D Committee Establishes strategies for products and technology development for greenhouse gas emissions reduction
Working-level Organizations	ESG Manager Establishes strategies, manages implementation, and discloses performances	Power and Production Department Develops and implements energy and greenhouse gas reduction projects

Responsibilities of the Board of Directors

The <ESG Management Committee> within Hyosung Corporation's Board of Directors deliberates on ESG policies and goals, including climate change, risk management, investment, and activity plans. The <ESG Management Committee> at Hyosung has involved experts in climate change and energy. The former Minister of Environment served as an outside director until March 2023, and the former Minister of Trade, Industry and Energy has been serving from April 2023 onward.

Agendas Reviewed by the ESG Management Committee under the Board of Directors (Jan. 2023 – Jan. 2024)

- Disclosure of the compiled ESG data, including subsidiaries' greenhouse gas emissions
- Expected amount of greenhouse gas emissions and carbon credits purchase and sale
- Raise in greenhouse gas emission reduction goals
- 2023 performance and 2024 plan for supporting supplier climate action

Responsibilities of the Senior Executive Management

Hyosung Corporation holds a quarterly <ESG Management Promotion Committee> led by its CEO to review management issues related to climate crises and select key agendas for the Board approval. In order for the prompt implementation of the committee's decision across the business sites, executives of each operational organization for strategies, finance, support, operations, R&D, etc. join the committee.
The <R&D Committee> is a committee in which the CEO and executives participate. It convenes semi-annually to establish R&D strategies regarding climate change, reflecting opinions of the relevant departments including sales, marketing, and R&D.

2023 Agendas Reviewed by the ESG Management Promotion Committee

- Report on research projects for environmentally friendly technologies and products
- Approval of the report on expected greenhouse gas emissions and carbon credits purchase and sale
- Approval of policies for environment and forest destruction prevention, and biodiversity
- Approval of raised greenhouse gas emissions reduction targets
- Report on 2023 performances and 2024 plans to support supplier climate action

Response to Climate Change

Climate Action Strategies

Hyosung identified and assessed risks and opportunities based on the climate risk classification system included in the TCFD framework, and established response strategies to proactively respond to climate crises. We identified the transition risks, physical risks, and opportunity factors that companies are facing due to climate change, and based on them, we identified the financial impact of each factor on their business activities.

Climate Change Risks, Financial Effects, and Action

Classification		Definition	Period*	Financial Effects on Hyosung Corporation**		Action
Transition Risk	Policy and legal	• Enhancement of carbon regulations such as Emissions Trading System, EU Carbon Border Tax, etc.	Mid- to long-term	●	• Increase in the cost for following global climate change regulations • Increase in the cost for carbon credits due to reduction of greenhouse gas quotas in the domestic Emissions Trading System and an increase in the proportion of allowances that must be purchased • Decrease in price competitiveness in consequence of the increased costs of product due to regulatory compliance	• Understanding Korean and international climate change policies/regulations trends and establishing response strategies • Establishing and implementing action plans pursuant to 2030 NDC targets for the industrial sector and Hyosung Corporation's reduction goals • Establishing mid- to long-term roadmap to achieve the industrial sector goals of the national 2050 carbon neutrality scenario
	Market	• Demands of customers to reduce carbon emissions and acquire eco-friendly certification • Increase in demands to join RE100 • Incertainty following changes in supply chain and market environment	Mid- to long-term	-	• Decrease in sales of the existing products due to reduced demands of high-carbon products • Rise of costs due to REC purchase and increased electricity expenses • Rise of costs following the changes in the supply chain for eco-friendly raw materials	• Conducting sustainable products R&D and acquiring eco-friendly certification • Expanding the sourcing of renewable energy through measures including the Green Premium rate system and the Renewable Energy Certificates(REC) purchase. • Diversifying supply chains and continuing to discover low-carbon raw material supply chains
	Technology	• Transition to eco-friendly, low-carbon technologies/ products	Mid- to long-term	●	• Incrsease in costs for low-carbon technology R&D investment • Increase in costs for low-carbon recycling and use of bio-based materials • Increase in investment costs for reducing greenhouse gas emissions and high-efficiency energy facilities	• Securing technologies to minimize green house gas emissions based on recycling and bio-based materials • Promoting the low-carbon product development by calculating carbon emissions throughout the entire product lfecycle
	Reputation	• Stakeholders' demands for climate change action and information disclosure	Mid-term	-	• Unfulfilling stakeholder demands may lead to difficulties in investment procurement and higher costs for financing interests	• Disclosure of climate response strategies in the sustainability report and homepage • Respond to external ESG evaluations • Active participation in information disclosure including TCFD and CDP
Physical Risk	Acute	• Increase in frequency and intensity of the extreme weather conditions such as typhoons and floods	Short -term	●	• Loss and operational halt of production facilities • Potential damage due to loss of inventory assets such as raw materials and finished products • Increase in investment costs for improving facilities such as waterproffing and drainage systems	• Complementary investments to prepare for extreme weather conditions, such as excessive rainfall (e.g., flood prevention walls) • Conducting workplace safety inspections and developing accident response manuals • Disaster insurance acquisition
	Chronic	• Long-term climate change patterns such as sea-level rise and increase of average temperature	Long-term	-	• Increased heating and cooling expenses to preserve the quality of the products and working environment • Operational halt due to workplace flooding • Expenses associated with the relocation of the workplace	• Introduction of high-efficiency heating and cooling systems • Relocation of the workplace to a safe area

*Short term (1~3 years), Mid- to long-term (3~5 years), Long-term (5~10 years)

** Financial Effects: High (●) More than KRW 1 billion per year, Medium (●) KRW 500 million~1billion per year, Low (●) Less than 500 million per year

Response to Climate Change

Climate Action Strategies

Hyosung identified and assessed risks and opportunities based on the climate risk classification system included in the TCFD framework, and established response strategies to proactively respond to climate crises. We identified the transition risks, physical risks, and opportunity factors that companies are facing due to climate change, and based on them, we identified the financial impact of each factor on their business activities.

Climate Change Opportunities, Financial Effects and Response Strategies

Classification	Definition	Period*	Financial Effects on the Hyosung Corporation**		Response Strategies
Energy Source	• Expansion of hydrogen market in accordance with Korean national policies promoting hydrogen economy • Increase in demands following declarations such as RE100 and carbon neutrality	Mid- to long-term	-	• Increase in sales through collaboration within the group to promote new hydrogen businesses • Decrease in investment or financing expenses as a result of policy subsidies or incentives	• Responding to the increased demand for renewable energy through self-reliance of technologies including hydrogen generation and saving as well as portfolio expansion • Establishing mid- to long-term renewable energy usage plan and conducting analysis of cost-effectiveness by renewable energy procurement option • Securing incentives through participation in government support programs including national carbon neutrality support project
Product/ Service	• Expansion of the sustainable product market in line with the circular economy activation, including the use of recycled products • Increased market demand for carbon-reducing bio-based plastic materials	Mid- to long-term	●	• Increase in sales due to rising demand for recycled and low-carbon products • Reduction of energy cost by improving manufacturing process energy efficiency to decrease carbon footprint	• Gradual expansion of product development based on recycled and bio-based materials • Achieving a competitive edge through LCA (Life Cycle Assessment) and products' carbon footprint reduction • Expanding eco-friendly certified products and supporting raw material suppliers to achieve certification
	• Expansion of new markets suchas carbon absorption	Long-term	-	• Entry into new markets and increase in sales by diversifying business portfolio	• Establishing and implementing participation plans for new business projects such as carbon capture and sinks
Market	• Sales generation through participation in the emissions trading system	Short-term	●	• Revenue from the sales of carbon credits through internal and external reduction projects	• Conducting continuous greenhouse gas emissions reduction activities and external reduction projects

*Short term (1~3 years), Mid- to long-term (3~5 years), Long-term (5~10 years)

** Financial Effects: High (●) More than KRW 1 billion per year, Medium (●) KRW 500 million~1billion per year, Low (●) Less than 500 million per year

Climate Change Scenario Analysis

Classification	Scenario Type	Analysis Scope	Temperature Change Applied	Analysis
Transition	Modification of Korea's 2030 NDCs *and 2050 carbon neutrality scenario	Company-wide	1.6℃ – 2℃	• Hyosung Corporation has established a greenhouse gas reduction goal of 23.6% by 2030 in comparison to 2018, surpassing the sector target outlined in Korea's 2030 NDCs. We have also established action plans to achieve this goal. • Hyosung Corporation plans on achieving 2050 carbon neutrality scenario sector targets through additional analysis and establishment of tansition plans.
Physical	High carbon scenario, RCP 8.5**, provided by the Korea Meteorological Administration	Company-wide	4.7℃ (Based on the Korean Peninsula in the year 2100)	• According to the Korea Meteorological Administration, by the year 2100, temperature of the Korean Penninsula will rise by 4.7℃, number of hot days will increase by 93.4 days(36.5 days→129.9 days), and the average precipitation will rise by 14%(±12%). • Hyosung Corporation plans on providing response strategies against potential quality degradation of products as a result of textile product characteristics, deterioration of working conditions and increased cooling costs, fatality and damange on assets due to flooding.

* NDCs(Nationally Determined Contributions): National greenhouse gas emissions reduction targets

**RCP 8.5: The scenario, among other RCP(Representative Concentration Pathways) scenarios, in which an additional 8.5 W/m² of solar energy is absorbed by the Earth, with the greenhouse gas emissions reflecting the current trend

Green Management Vision 2030

Hyosung has established 'Green Management Vision 2030' for systematic management of the identified climate change risks and opportunities. We have established and operate the company-wide climate change response strategies on top of our 4 goals of greenhouse gas emissions reduction, development of eco-friendly technologies and their expansion in the market, establishment of eco-friendly corporate culture, and enhancement of stakeholder trust. See details

Mid- to long-term Roadmap for Climate Action

Hyosung plans to systematically conduct detailed tasks such as greenhouse gas inventory establishment, climate change scenario analysis, and reduction implementation plan development based on the mid-to long-term company-wide climate change roadmap. See details

Participation in Initiatives for Climate Action

Hyosung Corporation and 4 operating companies declared support for TCFD(Task Force on Climate-related Financial Disclosures) in 2022, in order to participate in the international cooperation to tackle climate change. Additionally, Hyosung Corporation has been participating in CDP(Carbon Disclosure Project) since 2010 for transparent and accurate disclosure of carbon emissions information.

TCFD(Task Force on Climate-related Financial Disclosures)	Climate Action Assessment
TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES	CDP DRIVING SUSTAINABLE ECONOMIES
Climate Disclosure Task Force	**Research Association for Textile Industry Greenhouse Gas Emissions Reduction**
Korea TCFD Alliance	한국화학섬유협회 Korea Chemical Fibers Association

Response to Climate Change

Climate Risk Management

Climate Risk Management Process

Hyosung has established and operated risk management process through which we identify climate change risk and opportunities as well as systematically respond against these factors.

Risk Management Process (see details)

Hyosung conducts annual update of risk management status to identify new risks and enhance the level of action plans. Key risks are reported to the <ESG Management Promotion Committee> where action plans and implementation status are reviewed annually.

Report on the EU Climate Regulations Compliance (see details)

Smart Factory Establishment

Hyosung designated the establishment of smart factory as its policy, continuously enhancing the system. Smart factory connects all resources related to production to business sites in real-time and maintains the optimized production environment by analyzing the collected data. This approach not only improves production yield but also reduces energy consumption and greenhouse gas emissions.

Activities for GHG Emissions Reduction

Hyosung Corporation's Greenhouse Gas Emissions Reduction Activities at Business sites

Electricity consumption reduction is a critical strategy for Hyosung Corporation's reduction activities, as it accounts for approximately 70% of its total greenhouse gas emissions.

The secondary voltage tap of the primary transformer at the Anyang facility was altered from 3.2kV to 3.4kV in 2023 to mitigate power losses in the cables. The company anticipates an annual reduction of approximately 800 tons of greenhouse emissions by 2024, which will involve the implementation of seven reduction activities, such as the replacement of high-efficiency pumps and the installation of facility to recover waste heat from boilers.

Activities for GHG Emissions Reduction

Efforts to Reduce Product Carbon Emssions

In 2022, Hyosung Corporation was certified for product carbon footprint for three types of automative floor carpets made of polyester, nylon, and biopolyester. In 2023, 7 types of products were added to the existing calculation targets, and 16 environmental impact assessments (LCA: Life Cycle Assessment) were conducted for a total of 10 types of products, including water consumption, ozone layer depletion, and eutrophication, as well as greenhouse gases in accordance with ISO14044The company plans on going through third-party assurance in 2024.

Products Subject to Life Cycle Assessment

- Polyester automative floor carpet/automotive floor mat
- Nylon automative floor carpet/automotive floor mat
- Bio-polyester automative floor carpet/automotive floor mat
- Recycled polyester automative floor carpet/automotive floor mat
- Recycled nylon automative floor carpet/automotive floor mat

The pre-manufacturing stage is responsible for over 80% of the total carbon emissions in general products, with nylon and polyester fibers contributing 16-52% of the emissions. Consequently, Hyosung Corporation is committed to minimizing the carbon footprint of its products by increasing the utilization of bio and recycled materials.

Providing Energy Reduction Consulting and Equipment Installation Support for Suppliers

Hyosung provides energy diagnosis consulting for energy and greenhouse gas emissions reduction of suppliers. We diagnosed the processes and on-site environments of suppliers. The diagnostic results we provided included issues, improvement plans, investment costs, and an analysis of cost-efficiency. Moreover, for actual greenhouse gas emissions reduction achievement, we supported the costs associated with replacing greenhouse gas reduction facilities.

In 2023, Hyosung Corporation supported key suppliers of raw and subsidiary materials with the installation of thermal insulation covers, through which we expect to reduce annual electricity consumption by 87 MWh and greenhouse gas emissions by 40 tons.

Raising Awareness of the Climate Crisis

Climate Crisis Education for Employees

Hyosung conducts climate crisis education for all employees. In February 2023, we invited an external expert to provide a lecture titled 'Climate Crisis and the Era of Carbon Neutrality: Corporate Survival Strategies.' In July, we conducted the in-house online education on 'climate change and biodiversity' detailing the ocean forests' role in inhaling and saving carbon, as well as conserving the ocean biodiversity. Furthermore, we provide an annual education on the climate crisis and carbon neutrality for new employees, and business divisions conduct customized education to meet the practical needs of employees, covering topics such as the greenhouse gas emissions trading system, the Carbon Border Adjustment Mechanism (CBAM), and LCA calculation.

Expansion of Climate Crisis Awareness among Stakeholders

Hyosung provides sustainability education and consulting for suppliers on the importance of climate action and environmentally friendly business management. A consulting firm commissioned by Hyosung visited the business sites to interview the CEO and conducted education and consulting for the department heads. In 2023, Hyosung Corporation provided climate related education and consulting for 5 suppliers. Additionally, in April and October 2023, we educated the University Student Supporters of Hyosung on sustainability management and climate action. In May, the Supporters participated in the Marine Forest Conservation Event with our employees.

Response to Climate Change

Climate Change Metrics and Targets

Energy Consumption and Greenhouse Gas Scope 1 & 2 Emission Management

Hyosung monitors monthly energy consumption and Scope 1 and 2 greenhouse gas emissions by business sites using the internal greenhouse gas management system Moreover, to oversee the greenhouse gas emissions of major subsidiaries, we conduct education on the calculation of greenhouse gas emissions using a GHG calculator, as well as on the identification and management of energy consumption. We also plan to educate subsidiaries on the ways to use the internal greenhouse gas management system.
In 2023, Hyosung Corporation conducted an internal audit of its 18 subsidiaries' Scope 1 and 2 emissions. The third-party assurance for the Scope 1 and 2 emissions is scheduled to be conducted in 2024.

Assignment of Climate Change KPI and Evaluation

Hyosung implements a performance evaluation system assigning KPI related to sustainability management by department, in order to yield actual results. Specifically, climate change related performance indicators are assigned and evaluated for all members and senior executives (including C-Level) of the teams related to energy conservation and greenhouse gas emission reduction, including ESG Management Team, Production Team and Utility Team. Incentives are provided according to the evaluation results.

Implementation of Internal Carbon Pricing System

Hyosung has implemented an internal carbon pricing system that can be employed in strategic decisions, including mid- to long-term business initiatives and facility investments. This system assists in the exploration of opportunities and the management of climate change risks. The internal carbon price is announced by Hyosung every October, and guidelines for the calculation of carbon emissions and economic assessments, as well as a greenhouse gas emissions calculator, are distributed. This approach facilitates accounting for the cost of surplus or shortage of emissions allowances under the Emissions Trading System, establishing energy usage plans for business sites, and conducting economic analyses based on greenhouse gas emissions when investing in facilities.

Greenhouse Gas Scope 3 Management

Since 2018, Hyosung has been calculating Scope 3 emissions, and the annual CDP report discloses the results.
In 2022, Hyosung Corporation calculated Scope 3 emissions for 9 out of 15 categories.

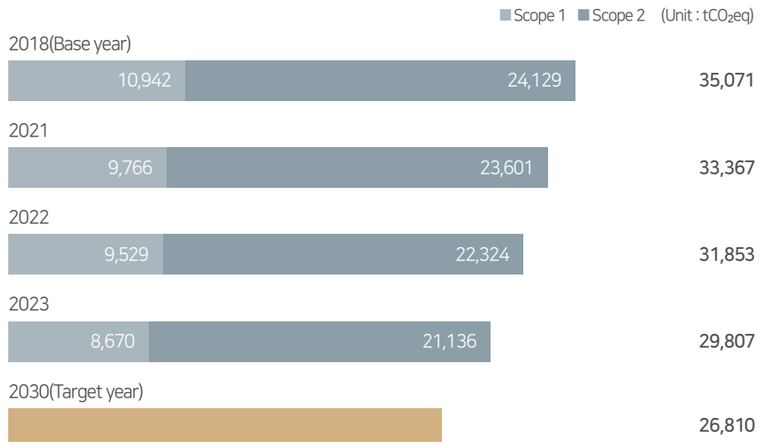
Category	Details	Calculation	Emission rate	Note
1	Purchased products and services	O	13.9%	
2	Capital goods	O	0.0%	Calculation for items with identifiable emission factors
3	Fuel and energy related activities not included in Scope 1 and 2	O	0.9%	
4	Upstream transportation and logistics	O	0.2%	
5	Operational waste	O	0.1%	
6	Business travel	O	0.1%	
7	Employee commuting	Not applicable	-	Included in Scope 1 and 2 GHG emissions under the domestic emissions trading scheme
8	Upstream leased assets	Not applicable		Included in Scope 1 and 2 GHG emissions under the domestic emissions trading scheme
9	Downstream transportation and logistics	O	0.1%	
10	Processing of sold products	X	-	Difficulties in tracking emissions in the processing phase
11	Utilization of sold products	Not applicable	-	Emissions in the usage stage does not exist due to key product (carpet) characteristics
12	End-of-life treatment of sold products	O	2.3%	
13	Downstream leased assets	Not applicable	-	Included in Scope 1 and 2 GHG emissions under the domestic emissions trading scheme
14	Franchise	Not applicable	-	Franchise does not exist
15	Investment	O	82.6%	19 subsidiaries and affiliates

We plan to increase the number of calculation items in the categories of 'purchased products and services' and 'capital goods,' while also calculating the emissions of the products sold during the processing phase. For subsidiaries, we plan on gradually expanding the calculation range, beginning with the Scope 3 emissions calculation for manufacturing companies.

Raising GHG Emissions Reduction Targets

By 2030, Hyosung Corporation and the operating companies aim to reduce Scope 1 and 2 emissions by 14.5% (annual 1.2%) compared to 2018. We are investigating the possibility of raising reduction targets in light of sector characteristics and the prospect of joining SBTi.
In July 2023, the ESG Management Committee under the Hyosung Corporation's Board of Directors raised its GHG emissions targets by 23.6% compared to 2018, by 2030. Hyosung annually establishes and implements facility investment plans for energy reduction in order to accomplish this reduction goal. The Board of Directors conducts regular reviews of the mid- to long-term reduction plans developed by all pertinent departments, such as planning, research, production, and power. Furthermore, subsidiaries will also be required to set reduction targets, which were previously restricted to the parant company once the greenhouse gas inventories of subsidiaries are established. Additionally, the implementation status of reductions at each subsidiary will be monitored.

Hyosung Corporation Greenhouse Gas Emissions and 2030 Target Emissions



Collaborative Partnership with Businesses across the Value chain and Communities

Why So Important?

Hyosung's mission is 'Enhance and enrich the quality of life for humanity with its leading technology and management capability'. Accomplishing this objective requires robust cooperation with our stakeholders, such as suppliers, customers, and local communities. In this regard, Hyosung aims to establish a system of mutual development and positive cycles with its stakeholders.

Our Approach

Hyosung has selected suppliers, customers and local communities as partners for collaboration. We plan on identifying impacts exchanged by Hyosung and the respective stakeholder to proliferate positive impacts and mitigate negative impacts. Accordingly, Hyosng has established the Collaborative Partnership Deliberation Committee to determine collaborative partnership activities, managing the consequences following the activities.

Our Achievement

Hyosung's 2023 Collaborative Partnership Performances

• Climate change action and adaptation	**73 companies**
• New products R&D and marketing	**17 companies**
• Safety and human rights improvement	**107 companies**
• Quality and productivity improvement	**23 companies**
• Sustainability education and consulting	**106 companies**
• Biodiversity conservation	**5 regions**
• Local community development	**5 regions**

Collaborative Partnership Governance

Collaborative Partnership Deliberation Committee Operation

Hyosung operates the monthly Collaborative Partnership Deliberation Committee to review and address matters in need of improvement as a result of risk assessment related to suppliers, customers and local communities of each operation company since June 2023.

Chairperson	CSO (Chief Strategic Planning Officer)		
Vice-chairperson	Head Division of Strategic Planning executive		
Member (ESG Management)	Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries
	Hyosung Advanced Materials	Hyosung Chemical	
	Planning collaborative partnership activities and reviewing efficiency by operating company		
Member (Headquarters)	Head Division of Strategic / Planning Management	Head Division of Finance / Tax and Accounting	Head Division of Management Support / Human Resources and General Affairs
	Review of the financial and business risks for collaborative partnership activities		
Secretary	Corporate Partnership Team		

Collaborative Partnership Process

Collaborative Partnership Activities Planning	ESG Management team of each operating company	⟷	Relevant department
Decision-making by Operating Company	Follows the systems of each operating company, including report to the ESG Management Promotion Committee and the CEO		
Collaborative Partnership Deliberation	Hyosung Group Collaborative Partnership Deliberation Committee		
Collaborative Partnership Activities	ESG Management team of each operating company	⟷	Relevant department
Monitoring of the Outcome	Report to the Board of Directors and the ESG Management Promotion Committee by operating company		

2023 Key Agendas of the Collaborative Partnership Deliberation Committee

Supply chain related agendas (suppliers and SME clients)

Climate Action and Adaptation

- Energy consumption reduction consulting and facility installation
- Acquiring certification to activate eco-friendly business (GRS, LCA, etc.)
- GHG emissions reduction facility installation
- Business PC Upgrade

R&D and Marketing of New Products

- Development of products applying eco-friendly and advanced materials (Regen, Polyketone, Aramid, etc.) as well as upcycled products
- Marketing to expand consumer touchpoints (pop-up stores, festivals, etc.)
- Participation in domestic and international exhibitions to expand sales channels

Safety and Human Rights Enhancement

- Supplier safety enhancement activities (safety manager appointment, safety items, risk assessment consulting, incentives for suppliers with outstanding safety management)
- Human rights improvement through working environment enhancement (rest areas, heating and cooling system, cleaning vehicles, lighting, etc.)

Quality and Productivity Enhancement

- Facility improvement for quality and productivity enhancement of eco-friendly materials
- Testing equipment to improve quality reliability
- Reviewing the strategy to improve productivity through training at advanced overseas companies and providing equipment for the implementation (e.g., robotic welders)

Sustainability Education and Consulting

- Developing customized ESG indicators for suppliers and providing on-site training
- Selecting assignments by sector for enhancing response capabilities to customer demands and reviewing the improvement status
- Online ESG indicator education and webinars (for ethical management and human rights)

Local Community Agendas

Biodiversity conservation

- Marine forest creation and protection of winter migratory birds and mountain goats

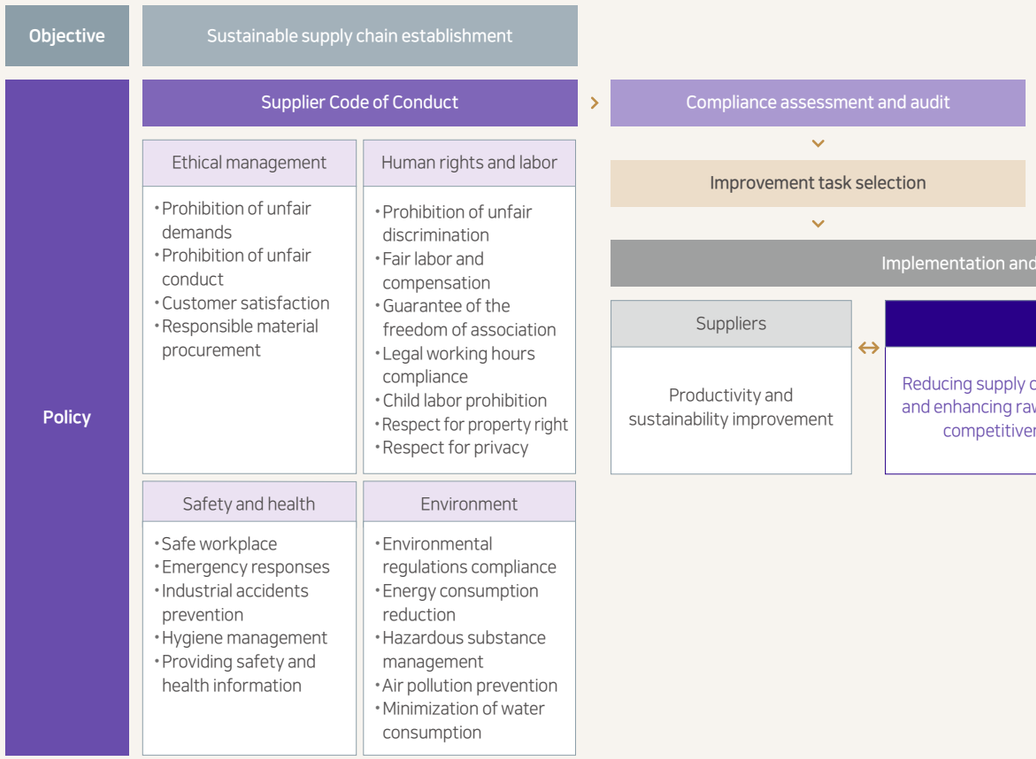
Local Community Development

- Purchasing local products(rice) and supporting eco-friendly products

Collaborative Partnership with Businesses across the Value chain and Communities

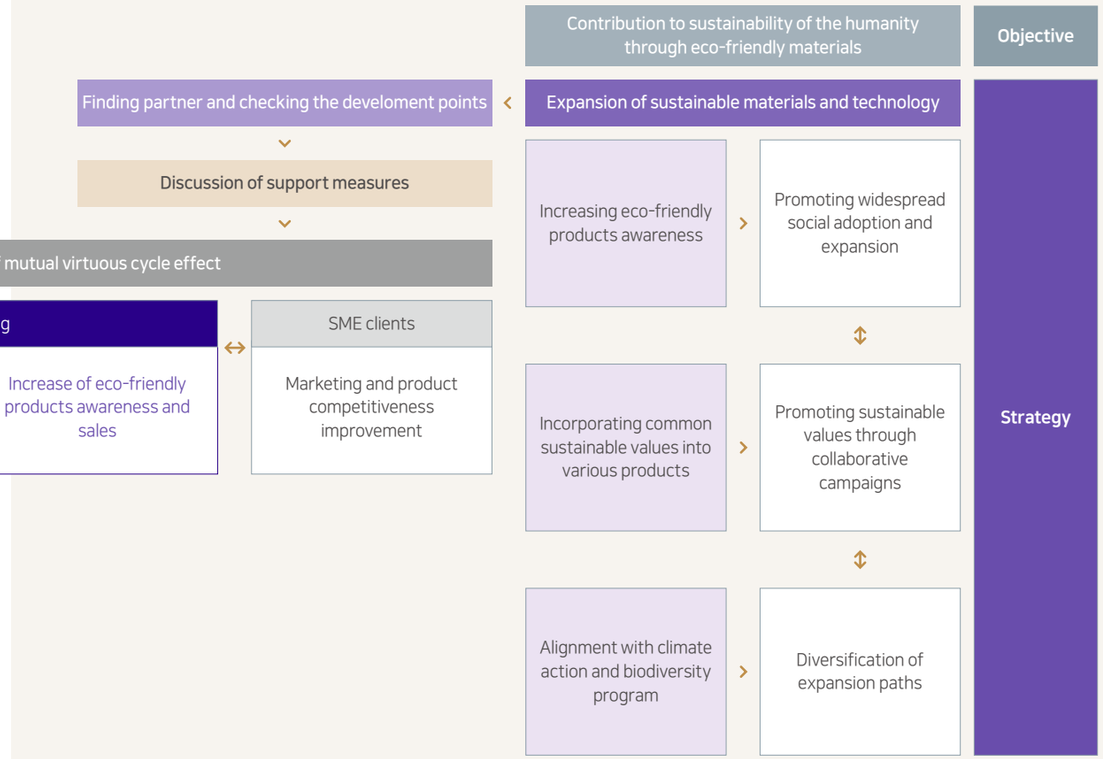
Collaborative Partnership across the Value Chain

Collaborative Partnership with Suppliers



Hyosung has established the supplier code of conduct to facilitate sustainable supply chain. Annually, when engaging in fair trade agreements, we secure a commitment from suppliers to adhere to the code of conduct. We perform regular evaluation of the suppliers and check their compliance through assessments by experts.
To address adverse impacts found through the assessment and remove risk factors, Hyosung establishes plans and reviews them through the Collaborative Partnership Deliberation Committee prior to their implementation. We conduct site inspection to check the improvement and manage follow-up actions.

Collaborative Partnership with SME Customers



Hyosung supports continuous growth of the SME clients by utilizing eco-friendly materials and technologies. We assist them producing and launching eco-friendly material items, as well as exhibiting and selling those at exhibitions and festivals.
Hyosung is also developing plans to support SME clients taking appropriate actions and conducting activities in the areas of climate change and biodiversity conservation.

Hyosung Corporation Supply Chain Sustainability Management

Hyosung Corporation's supply chain sustainability management is disclosed in its homepage. homepage

Hyosung Corporation Fair Trade Management

Hyosung Corporation's fair trade management is disclosed in its homepage. homepage

Collaborative Partnership with Businesses across the Value chain and Communities

2023 Collaborative Partnership Activities across the Value Chain

Signing and Supporting Fair Trade Agreements with Prominent Suppliers

Hyosung signs fair trade agreement with prominent suppliers selected through supplier screening each year, requiring their commitment to the supplier code of conduct. The agreement details compliance with the fair trade regulations and support measures such as the monetary payment, etc. for collaborative partnership. In particular, we contribute to improving supplier's cash flow by paying for the items within 10 days after transactions. This initiative resulted in an estimated interest reduction of about 6.9 billion KRW for Hyosung's suppliers compared to the legal payment date in 2023, as determined by Hyosung's average interest rate for 2023.

Number of Prominent Suppliers and Cash Payment for 2023

Classification	Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical	Total
Number of Suppliers Signed the Fair Trade Agreement	92	51	616	39	12	810
Cash Payment (KRW million)	24,956	23,512	951,435	8,341	2,395	1,010,638
Estimated Interest Reduction (KRW million)	181	155	6,452	55	16	6,859

Support for Sustainability Education and Consulting

Hyosung provides consulting and guidebook for suppliers as well as conduct job-specific training by area to achieve favorable outcomes in sustainable management. Also, through supplier assessment, we identify their weaknesses and provide guidance on improvement measures. In 2023, we conducted online education on ethical management, human rights management, ESG indicators to encourage more suppliers to practice sustainable management.

Number of Suppliers Provided with ESG Education and Consulting in 2023

Classifcation		Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical	Total
ESG Education	On-site	1	10	8	6	1	26
	Online	4	4	5	4	4	21
	Webinar	8	8	8	8	8	40
ESG Consulting		1	9	3	5	1	19

Workplace Improvement Support for In-house Sub-Contractors

In 2023, Hyosung supported 3 in-house sub-contractors by improving the factory lighting, installing cooling and heating equipments, and facilitating resting areas to provide their workers with pleasant working environment.

Providing Testing Equipment for Quality Improvement

In 2023, Hyosung assisted 5 suppliers by supplying advanced testing equipment, including voltage quality testers, abrasive wear testing machine, and ultrasonic acoustic cameras to improve the accuracy of the product quality testing.

Support for Business PC Upgrade

Hyosung supported 10 in-house subcontractors by upgrading 39 sets of equipment, including desktops for high-performance design, business laptops, and wide monitors to improve the operational efficiency. We aim to minimize waste resources and contribute to circular economy.

Other Support Activities for Suppliers

Energy Conservation Consulting and Facility Installation

- Insulation equipment installation for 1 supplier See details

Providing Safety Equipment

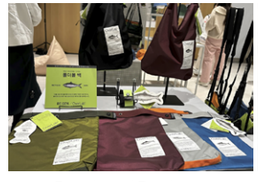
- Providing aerial work platforms, safety tools, etc. for 4 suppliers

Risk Assessment Consulting

- Support with safety hazard analysis, improvement plan development, etc. for 11 suppliers

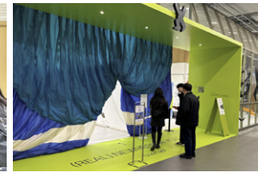
Development Support for Eco-friendly and Advanced Materials Application

Hyosung provides support for its SME clients to utilize advanced materials such as recycled fibers, aramid, and airbag fabric in developing products. Additionally, we assisted with brand development, homepage renewal, and promotional events.



Developed Products

Promotional Event



Promotional Event

Organizing ESG Fairs and Providing Assistance for Popup Stores

In December 2023, Hyosung hosted the ESG Fair in collaboration with the Social Innovation Research Institute. At the fair, SME clients supported by Hyosung showcased and sold products manufactured with eco-friendly materials. We also supported three of our SME clients by facilitating pop-up stores for them to sell eco-friendly products for 3 months.

ESG Fair

Collaborative Partnership with Businesses across the Value chain and Communities

Collaborative Partnership with Local Communities

Strategies for Collaborative Partnership with Local Communities

Hyosung has established and operates strategies for collaborative partnership with local communities to address adverse effects on local communities where our business sites are located, and to facilitate their growth and development. Additionally, we are involved in the resolution of issues in biologically significant regions.

Identification of affected regions	Business sites location
Identification of negative and positive impacts	Ecological impact
	Economic and social impact
Planning collaborative partnership activities	Consideration of measures to mitigate negative impact and proliferate positive impact
Implementation and effectiveness assessment	

Local communities	Hyosung
Biodiversity conservation and activation of local economy	Negative environmental impact mitigation and local presence expansion

Mid- to Long-term Goals for Collaborative partnership with Local Communities

Classification	Medium-term (~2027)	Long-term (~2030)
Goal	Expansion of positive ecological impact for local communities	
Ocean	Completion of Wando Marine Forest creation and establishment of local community management system	Marine forest creation in new regions
Sky	Maintenance of winter migratory bird populations in the Gimhae Hwapochen Wetland	Expansion of support areas for winter migratory birds
Goal	Expansion of eco-friendly product base and promotion of local culture	
Eco-friendly products	Support for 5 regions where business sites are located	Expansion and support for key business sites Diversification of eco-friendly products
Culture and sports	Construction of Ham-an Elementary School gymnasium and support for cultural activities for locals	Support for culture and sports events in new areas

2023 Collaborative Partnership Activities with Local Communities

Marine Forest Conservation Activities

In 2022 and 2023, Hyosung Corporation, Hyosung TNC, and Hyosung Heavy Industries collaborated with the Korea Fisheries Resources Agency and Geoje City to transplant 10,000 seagrass seedlings, known for their high carbon absorption capacity, across 0.44 hectares around the Dadae-Dapo Port area. The Korea Fisheries Resources Agency analyzed the ecological environment before and three years after the creation of the seagrass forest, confirming that the number of benthic organisms increased by 2.5 times, the number of species by 1.5 times, and the species diversity index by 1.2 times, demonstrating the effectiveness of seagrass forest in ensuring the health of the marine ecosystem. Additionally, from 2024 to 2027, Hyosung Corporation, Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials, and Hyosung Chemical, in cooperation with the Ministry of Oceans and Fisheries, the Korea Fisheries Resources Agency, and Wando County, plan to plant 40,000 seagrass plants and create a sea forest composed of seaweeds across approximately 159 hectares of tidal flats around Wando.

Clay attachment for seagrass planting

Mountain Goat Protection and Prevention of Damage to Farms

In the Ilyeon-myeon region of Yeongyang County, Hyosung erected protective fence for the endangered mountain goats in cooperation with the National Institute of Ecology and Yeongyang County. Prior to the fence's construction, mountain goats were occasionally killed, entangled in nets placed close to farms that bordered forests. Through this measure, Hyosung expects to prevent death of mountain goats and reduce crop damange caused by wild animals.

Feeding and Providing Medical Support for Winter Migratory Birds

Hyosung conducted feeding activities for endangered migratory species around the Hwapocheon Wetland region, such as whooper swans and vultures, during the winters of 2023 and 2024, in collaboration with Gimhae City. Additionally, Hyosung supported the treatment and release of the rescued eagle before its starvation to death. We plan on continuing the feeding and medical support of winter migratory birds.

• Number of residing birds: 8,161 in year 2022 → 8,876 in year 2023

Release of the rescued eagle

Feeding winter migratory birds

Support for Eco-friendly Products for Locals and Social Welfare Facilities

Eco-friendly products were supplied by Hyosung to community centers, schools, mother and child protection centers, and local children's centers in Haman, Gumi, and Wanju regions. Polyketone meal trays, solar power generation equipment, apparel and purses made from recycled fabrics, carbon fiber hiking poles, carbon fiber floor heating, and eco-friendly furniture were among the products.

Support for the Construction of a Gymnasium at Gunbuk Elementary School in Haman

Hyosung is financially supporting the construction of a gymnasium at Gunbuk Elementary School from 2023 to 2025 in order to improve the health of the local population and expand the availability of sports and cultural facilities in the Haman region.

Reinforcement of Workplace Health and Safety

Why So Important?

Employees at manufacturing plants and R&D labs and centers operated by Hyosung Corporation face high risk of exposure to safety accidents, which could also negatively impact the surrounding local communities. Furthermore, implementation of more stringent safety and health regulations may result in substantial financial losses, including operational shutdowns, in the event of a severe accident. Consequently, it is crucial to maintain the safety of business sites and ensure the health of workers in order to improve Hyosung Corporation's sustainability.

Our Approach

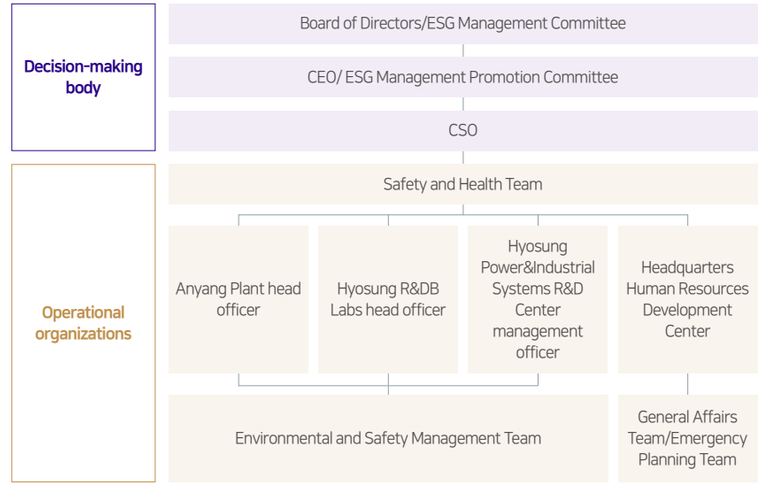
Hyosung Corporation established a mid- to long-term safety and health roadmap with the goal of achieving 'ZERO Serious injuries and industrial accidents.' This roadmap includes the most recent updates and amendments to safety and health regulations, as well as the enhancements that have been identified in the company's safety and health practices. We will enhance the level of safety and health at our business sites by strengthening on-site safety inspections based on established roadmaps and risk assessments and improving the found risk factors by 100%.

Our Achievement

- **0 Industrial accidents** at Hyosung Corporation
- Established the **2030 Safety and Health Roadmap**
- **Establishment and amendment of 7 Safety and Health Management Regulations** for Hyosung Corporation
- Conducted **risk assessment** of Anyang Plant, R&DB Labs, and Power&Industrial Systems R&D Center, including in-house subcontractors
- **Identified 712 non-compliance issues** through safety inspection of Hyosung Corporation, with **improvement rate of 100%**.

Safety and Health Governance

Hyosung Corporation manages and oversees the status and risks of safety and health management through the ESG Management Committee, which is under the direction of the Board of Directors and the ESG Management Promotion Committee, under the CEO. The ESG Management Promotion Committee receives reports from the CSO (Chief Safety Officer) regarding the safety and health status, as well as any significant issues. The safety and health administration of all business sites is supervised by the Safety and Health Team. General manager for safety and health is appointed for each operational site to establish prevention meansures for industrial accidents and perform safety and health duties. Anayang Plant, R&DB Labs and Power&Industrial Systems R&D Center operate Environmental Safety Team dedicated to safety, health, environment, and firework. In addition, each site facilitates a monthly Safety and Health Committee involving both labor and management and a monthly Safety and Health Council wherein sub-contractors participate, to receive labor and sub-contractor opinions. Through the monthly safety and health performance assessment meetings, safety and health status are reported to the CEO. Furthermore, at the group level, we hold Safety and Health Committee once a month to share safety and health performances and tasks.



2023 Safety and Health Agendas from the ESG Management Promotion Committee/Board of Directors

ESG Management Promotion Committee	Business sites safety inspection results (quarterly), Zero accident campaign promotion, CPR training plans and results, Enhancing capabilities for subcontractor risk assessment, risk assessment standard enactment and implementation history, audit results of the safety and health related law compliance
Board of Directors	2023 safety and health plans, safety accident status and safety inspection status

2030 Safety and Health Roadmap

Mid- to long-term goals	2023 Safety and Health Management System establishment	~2026 Self-discipline Prevention System establishment	~2028 Strengthening the Self-discipline Prevention System	~2030 Achieving global-level Safety and Health Management System
Major tasks	• Maintenance and compliance of related laws and regulations • Maintenance of the safety and health system certification (ISO 45001) • Promotion of zero-accident campaign at business sites • Focused management of high-risk facilities for major accidents	• Establishment of risk assessment operation system • Enhancing collaborative partnership through safety and health management system establishment of the in-house sub-contractors • Increasing employee participation through safety culture campaigns • Enhancing emergency response training and improving emergency medical response system	• Improving risk assessment execution capability through field-oriented training • Enhancing supervisor capabilities through training by professional institutions • Raising safety awareness and proliferating safety culture through engagement and cooperation	• Establishment of global business sites safety and management system and enhancing management • Enhancing collaborative partnership by supporting safety and health management system of external business partners • Incorporation of a global-level safey culture through voluntary participation of all workers
LTIFR	0.0	0.0	0.0	0.0

* LTIFR (Lost Time Injury Frequency Rate) = (Number of Lost Time Injuries * 1,000,000) / Total Employee Working Hours (Number of Lost Time Injuries per 1,000,000 working hours)

Promotion strategies					
	Awareness improvement	System improvement	Improvement of the operational site environment	Feedback gathering	Stakeholder safety management

see details

Reinforcement of Workplace Health and Safety

Enhancement of Safety and Health Management System

Enactment and Revision of 7 Safety and Health Management Regulations

- Enactment of Sub-contractor Safety and Health Management Guideline and receipt of safety management plans
- Safety and Health Management Regulation enactment for all operational sites (e.g., risk assessment incorporation)
- Revision of Regulations for the Occupational Safety and Health Committee Operation (established a provision to protect whistleblowers)
- Revision of Regulations for Safety and Health Education (e.g., reflection of on-site risk factors)
- Enactment and revision of Safety and Health Work Assessment Standards (e.g., changing assessment process and enlarging the scope of assessment subjects)
- Revision of the Serious Accident Response Manual (specification of training schedule)
- Revision of the Forklift and Electric Cart Operation Management Regulations (management enhancement)

Operational Site Risk Assessment and Improvement Activities

Operational site risk assessment is a process of identifying hazards and risk factors that could lead to injuries or diseases, as well as establishing and implementing action plans to prevent them. In 2023, we revised risk assessment process and conducted a total of 960 risk assessments (581 at Anayang Plant, 336 at Hyosung R&DB Labs, and 43 at Hyosung Power&Industrial Systems R&D Center) and improved 472 cases. We also share the improvements resulted from the risk assessments with our employees, keeping up with maintenance and management.

Incorporation of Safety and Health Performance Evaluation

To enhance the management responsibility for safety and health management, Hyosung reflects the safety and health related KPIs on the performance evaluation of executives, team leaders at business sites, management officers, supervisors, etc. The KPI has been revised to focus on activities and risk assessment instead of the number of accidents.

Improving Safety and Health Awareness and Enhancing Communication

Implementation of Safety and Health Education

Hyosung conducts the legally required training, which consists of semi-annual regular training for safety and health personnel and quarterly safety and health education for office workers. Furthermore, Hyosung offers job training in safety and health, covering subjects such as risk assessment and supervisory leadership. In 2023, a total of 2,141 workers completed this training.

Improving Safety and Health Awareness and Enhancing Communication

Campaign for Zero Accident at Business Sites

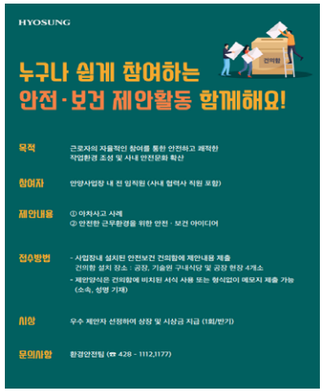
Hyosung Corporation initiated a zero-accident campaign in March 2023 to improve the safety awareness of employees and sub-contractors and to establish an accident-free work environment. Rewards are distributed to all employees and those who have made substantial contributions upon attaining the desired number of accident-free days.

8 Action Plans for Zero Accident

A worker's safety pledge	Enhancing risk assessment effectiveness
Zero-accident flag relay	Strengthening safety inspections supervised by responsible personnel
Safety greetings and near-miss accident case improvement	Promoting safety culture
Hazard prediction training	Communication activation

Promotion of Safety Communication

Hyosung Corporation collects safety-related improvement opinions from employees and business partners through the Occupational Safety and Health Committee and the Health and Safety Council. Furthermore, in 2023, we established the "Health and Safety Suggestion Box" at six locations within the Anyang Plant for all employees on the site, including those from sub-contractors, to suggest improvement opinions regarding safety and health at any time. Registered suggestions are evaluated for effectiveness and incorporated into improvement actions. In order to encourage the opinions and suggestions of employees and subcontractors, we included in the Occupational Safety and Health Committee's operational regulations a provision prohibiting disadvantages against proposers as well as awarding outstanding suggestions.



Classification	Number of approved agendas	Number of improvement
Occupational Safety and Health Committee	25	25
Health and Safety Council	100	100
In-house health and safety suggestions	319	319
Total	444	444

Strengthening Management of Workplace Environment

Safety Inspection Improvement Activities

Hyosung Corporation conducts daily inspections, themed inspections, detailed inspections, joint labor-management inspections, and sub-contractor inspections for safe operation of business sites. Non-conformities found during inspections are 100% corrected.

Classification	Cycle	Inspection details	Number of non-conformities	Improvement rate
Daily inspection	Daily	Inspection of checklist compliance	267	100%
Themed inspection (manager inspection)	Monthly	Pre-inspection items management, Comprehensive inspection during Patrol	587	100%
Detailed inspection	Monthly	Voluntary-inspection of direct and indirect production departments	38	100%
Joint labor-management inspection	Quarterly	Review of union and employee representative demands and inspection of corrective actions	25	100%
Sub-contractor inspection	Monthly	Sub-contractor safety management assessment	100	100%

Comprehensive Safety Inspection of Laboratories

During the 2023 regular and comprehensive safety inspections of laboratories, the Hyosung R&DB Labs was assessed. The evaluation revealed that 95% of its laboratories received a Grade 1 rating, indicating excellent safety standards, while the remaining 5% received a Grade 2 rating, indicating satisfactory safety standards. The laboratories at Hyosung Power&Industrial Systems R&D Center were all awarded a Grade 1 rating. All 30 identified concerns from the inspection have been completely fixed.

Classification	Laboratories	Grade 1	Grade 2	Identified issues
Hyosung R&DB Labs	59	56(95%)	3(5%)	22
Hyosung Power&Industrial Systems R&D Center	14	14	-	8

*Grade 1 : The laboratory safety environment is unaffected, and safety is maintained.
*Grade 2 :While some defects are identified in the laboratory safety environment and research facilities, they do not have a substantial impact on safety. Improvement is required.

Reinforcement of Workplace Health and Safety

Strengthening Management of Workplace Environment

Noise Exposure Management

From 2021 to 2022, five retirees at Hyosung Corporation's Anyang Plant experienced industrial accidents with noise-induced hearing loss. The 2023 working environment tests revealed that three operations exceeded the noise exposure threshold of 90dB established by the Occupational Safety and Health Act. Hyosung Corporation is taking action based on these results by offering earplugs for procedures that surpass 85 decibels and by implementing and maintaining soundproof rest spaces. In addition, we conduct yearly specialized health assessments and targeted management by providing monthly health consultations with an occupational nurse and semi-annual consultations with an occupational physician.

Posting of a sign requiring to wear earplugs


Soundproofing material installation in rest areas

Enhancing Emergency Response Capabilities

Hyosung Corporation has developed and implements response scenarios and manuals for significant industrial accidents and emergency events, including fires, typhoons, earthquakes, environmental catastrophes, and safety incidents. At the Anyang Plant, all workers and subcontractors get regular training in emergency manual implementation, as well as fire suppression and evacuation drills. The training program was delayed this year, resulting in improvements to the handbook by providing more specific details on the training plan.


Fire extinguisher training


Fire hydrant training

Forklift Safety Management Enhancement

Hyosung Corporation conducts safety inspections as well as establishes and implements forklift accident prevention measures to prevent forklift-related safety accidents.

Factor	Improvement	Details
Work	Revision of regulations for forklift and electric vehicle operation management	Standardization of entry and work permit procedures for external large forklifts, supplementation of safety work plans, implementation of contractor qualification screening, assignment of guides, changes to hand signal methods, etc.
	Safeguarding walkways and enhancing driving route visibility	Painting pedestrian pathways, lane barrier installation, and additional selection of speed bumps or stop areas
Equipment	Introduction of AI-powered human collision prevention devices	Introduction of detachable AI human collision prevention devicies for large forklifts accessing the premises
	Visibility enhancement of forklifts owned by Hyosung	Attachment of fluorescent stickers
	Safety inspection of forklifts owned by Hyosung	Regularization of equipment inspection/safety inspection (monthly) and upplementation of inspection items
Management	In-house traffic safety enhancement	Modification of the internal vehicle speed limit from 30km to 20km as well as implementation of compliance campaigns and forklift safety education

Management of Aging Buildings and Facilities

Hyosung Corporation's Anyang Plant is an aging building constructed in 1963 that requires continuous observation of risk factors and maintenance. In accordance with the 'Special Act on the Safety and Maintenance of Facilities,' 3 buildings have been assigned as management targets and underwent regular safety inspection on changes for facility and balance in the second half of 2023. The inspections revealed no problems. We perform continuous inspection and maintenance activities for accident prevention.

Major Activities for Stakeholder Safety Management

Enactment of the Sub-contractor Safety and Health Management Guideline

Hyosung Corporation enacted the Subcontractor Safety and Health Management Guidelines in 2023 to enhance the safety and health management of subcontractors. These guidelines include details on the responsibilities and rights of sub-contract business owners, preparation and approval of safety and health management plans, and sub-contractor assessment.

Safety and Health Assessment for Sub-contractors and Construction/Maintenance Companies

Hyosung Corporation mandates the submission of a safety and health management plan and a self-assessment checklist of the safety and health management system upon the selection of new non-resident construction/maintenance contractors. Contracts are executed in accordance with a more rigorous qualified contractor evaluation table that incorporates these safety standards. Furthermore, the results of safety and health evaluations conducted twice a year on resident sub contractors and construction/maintenance companies within the workplace are incorporated into the renewal of their contracts. The evaluation results determine the recognition of outstanding companies, while lower-performing companies are required to submit improvement plans and undergo regular monitoring to ensure their implementation.

Support for Safety and Health Management System Establishment

Hyosung Corporation has provided risk assessment consulting (e.g., processing and operation analysis, risk information identification, and implementation of mitigation measures) and training for subcontractors in order to assist their safety and health management system establishment. We also supported consulting services for safety and health management system assessment and certification.

Support for Safety Equipment and Improvement of Working Environment

Hyosung Corporation supported the replacement of old or broken tools and low-illumination lights, as well as safety items. We also implemented a project to install rest areas and heating and lighting systems in rest areas to guarantee workers' rights to rest and enhance their well-being.

Reinforcement of Sustainability Leadership and Risk Management

Why So Important?

Hyosung Corporation, the holding company of the Hyosung Group with 132 affiliates, has a substantial impact on a variety of enterprises through its decisions. Concurrently, the holding company is significantly impacted by the sustainability risks of its subsidiaries and associated companies. Furthermore, there is a significant surge in the demand for sustainable management from a variety of stakeholders, including investors. Given the increasing significance of sustainable management, it is imperative that the holding company exhibit leadership in this area. Clearly, Hyosung Corporation acknowledges that the integrated and systematic management of ESG risks across its subsidiaries and associates is essential in improving overall sustainability of the Hyosung Group.

Our Approach

With the growing importance of sustainability in business, Hyosung Corporation operates a sustainability management system led by the ESG Management Promotion Committee. We also strengthened supervisory functions by expanding the role and responsibility of of senior executives and the Board for sustainable management. Moreover, we promptly identify the ESG risks of our subsidiaries and associates, as well as categorize the management system and action plans by type. Using this approach, we conduct integrated and systematic ESG risk management at the group level.

Our Achievement

- Hyosung Corporation held **7** ESG Management Committee meetings and **4** ESG Management Promotion Committee meetings
- Established and revised **ESG policies**
- Improved the **human rights impact assessment** checklist
- Identified **biodiversity and water risks** of major business sites
- Established **Terminology Definition Book** and reorganized data collection standards to prepare for mandatory disclosures

2024 Goals

- **Key risk and potential risk** disclosure
- D**etailed sustainability risk assessment** for investment reviews
- Improving the **risk assessment criteria**

Sustainability and Risk Management System

Hyosung Corporation operates the sustainability management system with the ESG Management Promotion Committee as its center, chaired by the CEO, who also serves as the Chief Risk Officer.

Roles of the BOD and ESG Management Committee

Hyosung Corporation has appointed external directors who are experts in a variety of disciplines, including social, economic, financial, legal, technical, and environmental areas, to enhance the oversight of sustainable management and risk. Specifically, the Hyosung Group's highest decision-making body for sustainable management is the ESG Management Committee, an expansion of the Transparency Management Committee. It is tasked with establishing ESG policies and objectives, formulating and reviewing risk management strategies, and conducting prior evaluations of significant internal transactions under the Fair Trade Act.

ESG Management Committee Status

Key roles	• Establishment and deliberation of ESG policies, goals, and risk management strategies • Deliberation of investment and activity plans for response to environment, safety, and climate change issues • Deliberation on major management issues such as splits, mergers, and business transfers to protect shareholder rights • Deliberation on shareholder return policies such as dividends and share buybacks • Deliberation on other major ESG issues
2023 activities	• 7 sessions were held • Attendance rate of 100% for all members consisting of 1 internal director and 6 external directors • Key agendas: approval of large internal transactions, pre-deliberation of transactions between companies, pre-deliberation of dividends, ESG management status report, and approval of revisions to the code of ethics and practice guidelines

Roles of the ESG Management Promotion Committee

The ESG Management Promotion Committee is in charge of making practical decisions and overseeing the aspects including environment, safety and health, human rights, supply chain, compliance, security, social contribution, transparent management and governance. The committee is chaired by the CEO and the Chief Strategic Planning Officer, CFO, CMO, CCO, Plant Manager, Head of Hyosung R&DB Labs, Head of Power & Industrial Systems R&D Center, and CSO participates as members. Major agendas affecting overall corporate management within the agendas of the ESG Management Promotion Committee are reported to the ESG Management Committee for approval.

2023 Key agendas	
Environment and response to climate change	Environmental investment performances and plans Reporting eco-friendly technology and product research assignments Review of GHG emissions and emission allowances surplus or shortfall
Safety and health	Operational site safety inspection results, sub-contractor safety inspection results, and safety and health related legal risk inspection
Supply chain	Support for supplier energy consumption reduction and carbon emissions reduction, for capability improvement of customers and suppliers regarding eco-friendly business, for safety and health management and safety items, and for the supplier ESG management support (education and consulting)
Human rights	Human rights impact assessment
Social Contribution	Social contribution performances and plans
Other ESG issues	Materiality assessment, enactment and revision of the ESG management policies, and the ESG management education performances and plans

Reinforcement of Sustainability Leadership and Risk Management

Risk Management Process

Diagnosis	Responsible departments identify the organization's internal and external issues as well as stakeholder demands
Risk Identification	Potential risks that could impact our management system are identified based on SWOT analysis, 3C analysis, macroenvironmental analysis, and issue analysis.
Risk Assessment	We perform assessments based on the likelihood of occurrence and the impact of the identified risks. We categorize the likelihood of occurrence and impact into five levels, calculating the score either by multiplication or using other measures determined by the responsible department. We regularly conduct reviews to verify the validity of the evaluation criteria, making necessary revisions as needed.
Risk Mitigation	We establish detailed plans to manage the identified risks from assessments and periodically check their implementation. We classify the risk management actions into the elimination of factors as well as the modification of results or the likelihood of their occurrence, sharing, maintenance, acceptance, or avoidance
Monitoring	All departments review changes to the previously selected risks and detects new risks at least once a year.
Oversight of the Board/Senior Executives	ESG Management Promotion Committee members by division report the details and response measures of the high-priority risks to the ESG Management Promotion Committee, for which the ESG Management Committee under the Board supervises.

Grievance Mechanism

Hyosung Corporation operates a homepage reporting center for various stakeholders including shareholders and customers to raise expectations, demands, and concerns, related to sustainability. The subjects of reporting include violation of the code of ethics and regulations, transaction complaints and violation of fair trade, human rights violation and workplace harassment, as well as other grievances, illegal activities and improper conduct. The informants' confidentiality and personal information are guaranteed, and there will be no adverse consequences associated with the reporting process.

Key Risk Management by Type see details

2023 Major Activities

Enactment and Revision of Sustainability Policies

In 2023, Hyosung Corporation revised the existing "Code of Ethics," "Code of Ethics Practice Guidelines," and "Business Partner Code of Conduct," and established 12 new sustainability management policies. A total of 15 policies have been revealed on our homepage.

Environment	Environmental Management Policy, Anti-Deforestation Policy, Biodiversity Policy
Human Rights	Human Rights Policy, Diversity and Inclusion Policy, Policy to Support the Elimination of Forced Labor and Human Trafficking, Anti-Discrimination and Harassment Policy, Redress Manual for Human Rights Violations
Compliance	Code of Ethics, Code of Ethics Practice Guidelines, Anti-corruption Policy, Export Restrictions on Strategic Material
Supply Chain	Conflict and Responsible Minerals Policy, Partner Code of Conduct
Brand Marketing	Advertising and Marketing Ethics Policy

Identification of Biodiversity and Water Risks see details

Using tools from the WRI (World Resources Institute) and WWF (World Wide Fund for Nature), we have evaluated the biodiversity and water risk of 26 locations, including offices, production facilities, and vehicle repair shops, owned by Hyosung Corporation and its subsidiaries. The biodiversity risk was classified as below 'medium risk' for both physical and reputational hazards. Water risk for the TNS facility in Vietnam and the GST plant in Mexico was classified as 'extremely high.' We intend to implement risk prevention and management strategies in accordance with these discoveries.

Improvement of Human Rights Impact Assessment

In 2023, Hyosung Corporation analysed the previously used human rights impact assessment checklist and modified terms that were vague or difficult to understand. Additionally, we added indicators to the checklist to complement insufficiencies, such as human rights impact assessment process, human rights policy, prohibition of employment discrimination, and forced labor prevention action, increasing the number of indicators from 153 to 173. We also conducted education for the responsible personnels to enhance understanding and reliability of the human rights impact assessment.

2023 Commitment of the CEO for Ethical Management

The CEOs of Hyosung Corporation and 4 operating companies participated in 'B.E.S.T Forum CEO Pledging Ceremony' hosted by BEST ESG Forum under the Institute for industrial policy studies for 5 consecutive years, to declare their commitment for ethical management compliance.

Response to Global Sustainability Trends

Response to EU Climate Legislations

Hyosung Corporation has reviewed the risks and opportunities provided to Hyosung by the EU Fit for 55 laws and established response strategies.

Classification	Risks and Opportunities	Responses
CBAM	**Risk)** Potential for a decrease in the price competitiveness of our steel and petrochemical products exporting to Europe **Opportunity)** Increase in demands for low-carbon products	• Expanding the scope of LCA products • Conducting education on LCA and CBAM estimation of embedded emissions for responsible personnel
Plastic Consumption Reduction Guidelines	**Risk)** Decrease in sales of non-recyclable plastic products **Opportunity)** Increase of new material products	• R&D of PCR PP • R&D of biodegradable products
Automobile carbon emission regulation enhancement	**Opportunity)** Increased demands for high-strength and lightweight automotive materials, and sales expansion of battery pouches for electric vehicles	• Development of lightweight material products and marketing enhancement • Development of functional packaging and film with uni-material
Establishment of new infrastructure for alternative fuels	**Opportunity)** Increase in demands for power grids and transformers	• R&D for eco-friendly power equipment and stabilization solution of power grid

Preparation for Mandatory Sustainability Disclosures

In preparation for mandatory sustainability disclosure, Hyosung Corporation is expanding the scope of GHG emissions calculation. We calculated Scope 1 and 2 emissions for 18 subsidiaires in 2023 and plan on conducting third-party assurance for 2024 emissions and calculating Scope 3 emissions for major subsidiary manufacturers. Furthermore, we developed Terminology Definition Book based on the GRI Standards and improved the sustainability data collection standards in collaboration with relevant departments. We participated in the meeting to establish the disclosure standards and the government response system and shared our opinions.

Response to Enhanced Greenwashing Regulations

Hyosung Corporation has shared the green washing regulation trends with relevant departments, including the ESG Management Team, Brand Marketing Team, and Communication Office, to review in advance whether there are instances of noncompliance with the guidelines for eco-friendly phrase use. We also clarified the definitions of sustainable products and technologies to reflect in the sustainability report published this year. In 2024, we plan to conduct green washing-related education for all employees.

Governance and Economic Performance

Reporting Scope

The ESG Performance section in this report encompasses the subsidiary companies listed below, which collectively contribute to over 99% of Hyosung Corporation's consolidated revenue. The data for Hyosung Corporation and its subsidiaries are listed separately. Some items may not include data from certain subsidiaries, and in such cases, this is noted in the footnotes.

Subsidiaries	Country of operation
Hyosung USA Inc.	USA
Hyosung TNS Inc.	Korea
Nautilus Hyosung America Inc.	USA
Hyosung Holdings USA, Inc.	USA
Hyosung Financial System Vina Co. Ltd.	Vietnam
Hyosung Good Springs, Inc.	Korea
Forza Motors Korea Corp	Korea
HYOSUNG TNS RUS L.L.C	Russia
Hyosung Financial Systems (Huizhou) Co., Ltd.	China

Subsidiaries	Country of operation
Hyosung Solutions S. de R.L. de C.V	Mexico
NH Tech Co., Ltd.	Korea
NH CMS Co., Ltd.	Korea
Hyosung FMS. Co., Ltd.	Korea
GST Safety Textiles Mexico S. de R.L.	Mexico
Gongdeok Gyeongwoo Development Corporation	Korea
Hana Alternative Investmentlandchip 39th Real Estate Investment Trust Co., Ltd.	Korea
ATM plus Co., Ltd.	Korea
Hyosung RUS.	Russia

Data Reporting Notes

1. If an item is not applicable or cannot be applied, it is marked as 'N/A'. If the data was not investigated, it is marked as '-'. Other special cases are noted separately below the respective items.
2. Figures are rounded, so there may be slight differences between the actual sum of the individual figures and the totals listed.

Financial Statements (Consolidated)

((Unit: KRW million)

Balance Sheet	2021	2022	2023
Current assets	1,906,512	2,060,066	1,766,631
Non-current assets	3,348,910	3,207,219	3,322,227
Total assets	**5,255,422**	**5,267,285**	**5,088,858**
Current liabilities	1,561,239	1,811,857	1,708,893
Non-current liabilities	704,361	558,123	603,733
Total liabilities	**2,265,600**	**2,369,980**	**2,312,626**
Total equities	**2,989,822**	**2,897,305**	**2,776,232**

Comprehensive Income Statement	2021	2022	2023
Sales	3,536,523	3,719,326	3,436,688
Operating income	638,143	64,887	94,367
Net profit	540,584	24,807	(438)

Corporate Tax by Country[1]

Category		Unit	2021	2022	2023
Korea	Sales	KRW million	2,891,085	3,061,616	1,861,042
	Profit before tax	KRW million	627,550	35,172	50,905
	Corporate tax expense	KRW million	56,742	(1,856)	29,941
	Tax rate	%	24.2	23.2	23.1
	Effective tax rate	%	9	N/A	58.8
USA	Sales	KRW million	1,428,735	1,876,847	1,758,565
	Profit before tax	KRW million	32,221	7,509	(45,533)
	Corporate tax expense	KRW million	7,186	(256)	(13,191)
	Tax rate	%	22.00~24.00	22.00~24.00	22.00~24.00
	Effective tax rate	%	22.3	N/A	N/A
Mexico	Sales	KRW million	38,993	54,631	102,519
	Profit before tax	KRW million	(3,307)	1,502	7,565
	Corporate tax expense	KRW million	(382)	588	2,212
	Tax rate	%	30	30	30
	Effective tax rate	%	N/A	39.1	29.2
Brazil	Sales	KRW million	100	43	21
	Profit before tax	KRW million	(4)	(13)	(38)
	Corporate tax expense	KRW million	2	1	0
	Tax rate	%	34	34	34
	Effective tax rate	%	N/A	N/A	N/A
China	Sales	KRW million	256,157	210,876	71,722
	Profit before tax	KRW million	7,431	1,192	2,425
	Corporate tax expense	KRW million	1,807	602	473
	Tax rate	%	20	21	25
	Effective tax rate	%	24.3	50.5	19.5
Russia	Sales	KRW million	142,055	294,291	180,733
	Profit before tax	KRW million	1,791	(3,738)	743
	Corporate tax expense	KRW million	323	(484)	936
	Tax rate	%	20	20	20
	Effective tax rate	%	18	N/A	126
Vietnam[2] (Established in July 2020)	Sales	KRW million	N/A	112,377	269,824
	Profit before tax	KRW million	N/A	(8,948)	(5,801)
	Corporate tax expense	KRW million	N/A	0	49
	Tax rate	%	N/A	21	20
	Effective tax rate	%	N/A	N/A	N/A

1.Due to intercompany transactions and unrealized gains among consolidated companies, there are some differences between the figures in the consolidated financial statements. If a pre-tax loss occurs and the effective tax rate cannot be calculated, it is marked as "N/A."
2. Hyosung Financial System Vina Co. Ltd. in Vietnam was established as a corporation in July 2020, began operations in 2022, and generated profit and loss, therefore, did not pay corporate tax in 2021.

Governance and Economic Performance

Compliance with Ethics and Laws[1]

Category		Unit	Hyosung Corporation		Subsidiaries	
			2022	2023	2022	2023
Employee discrimination	Total No. of discrimination incidents	Case	0	0	1	1
	Reviewed incidents of discrimination	Case	0	0	1	2
Corruption	No. of reported incidents of corruption	Case	0	1	5	2
	No. of people dismissed or disciplined for corruption	person	0	3	1	10
Unfair transaction	No. of unfair transaction practices	Case	1	0	0	0
	Fine for unfair transaction practices	KRW million	200	0	0	0
Non-compliance with laws and regulations	Cases of fines-imposed[2]	Case	3	2	0	7
	Cases of non-monetary sanctions	Case	0	0	0	0
	No. of employees with records of investment-related investigations, customer complaints, lawsuits, or legal sanctions	Person	0	0	1	0
	No. of violations of legal and voluntary regulations regarding product and service information and labeling	Case	0	0	0	0
	No. of violations of legal and voluntary regulations regarding health and safety impact of products and services	Case	0	0	0	0
	No. of violations of legal and voluntary regulations regarding marketing communication such as advertising, promotion, and sponsorship	Case	0	0	0	0
	Total amount of fines[2]	KRW million	225	13	0	52
	Fines for violations of financial regulations, including insider trading, monopoly, and anticompetitive behaviors	KRW million	200	0	0	0
	Fines for violation of environmental regulations, such as pollutant emissions	KRW million	0	0	0	18
Percentage of employees that have received notification and training on anti-corruption policies and procedures		%	82.6	63	42	81.6
No. of the Board of Directors (governance body) members that have received notification and training on anti-corruption policies and procedures		Person	0	0	-	-
Percentage of the Board of Directors (governance body) members that have received notification and training on anti-corruption policies and procedures		%	0	0	-	-
Total No. of operations assessed for risks related to corruption[3]		Operation	-	5	-	73
Percentage of operations assessed for risks related to corruption[3]		%	-	100	-	79.3

1. Data on the status of compliance with ethics and law has been disclosed since 2022. Due to a tabulation error in 2022, the corruption data for Hyosung Corporation and the anti-corruption training data for its subsidiaries have been corrected.
2. The criteria for tabulating fines were expanded from 'fines' to include fines, penalties, and surcharges starting in 2023, resulting in a change to the 2022 data.
3. The number and percentage of operations assessed for risks related to corruption have been tabulated since 2023.

Social Performance

Employees[1]

Category			Unit	Hyosung Corporation			Subsidiaries[4]	
				2021	2022	2023	2022[5]	2023
Total No. of employees (Permanent + Temporary)			Person	668	655	656	4,263	4,202
Gender	Permanent	Male	Person	484	468	464	2,907	2,779
		Female	Person	136	137	142	638	506
		Subtotal	**Person**	**620**	**605**	**606**	**3,545**	**3,285**
	Temporary	Male	Person	26	28	26	493	678
		Female	Person	22	22	24	225	239
		Subtotal	**Person**	**48**	**50**	**50**	**718**	**917**
Age	Permanent	Under 30	Person	60	69	84	569	386
		30-50	Person	421	403	384	2,445	2,202
		51 and above	Person	139	133	138	531	697
	Temporary	Under 30	Person	17	22	25	469	548
		30-50	Person	8	6	3	194	320
		51 and above	Person	23	22	22	55	49
Employee category	Employee category based on permanent employees	Office	Person	560	550	551	2,004	1,990
		Technical	Person	60	55	55	1,541	1,295
	Permanent	Executive	Person	47	45	47	53	51
		Manager level or higher	Person	320	305	285	1,185	1,173
		Non-manager level	**Person**	**253**	**255**	**274**	**2,307**	**2,061**
	Temporary	Executive	Person	-	-	-	0	0
		Manager level or higher	Person	3	3	3	27	19
		Non-manager level	Person	45	47	47	691	898
Employee diversity[2]	Gender diversity in the Board of Directors	Male	Person	8	8	8	40	42
		Female	Person	1	1	1	1	2
		Subtotal	**Person**	**9**	**9**	**9**	**41**	**44**
	Age diversity in the Board of Directors	Under 30	Person	-	-	-	0	0
		30-50	Person	1	-	-	9	6
		51 and above	Person	8	9	9	32	38
	Employee diversity	Employees with disability	Person	15	16	16	71	62
		Veterans	Person	3	3	4	64	72
		Foreigner	Person	3	3	3	41	40
		Subtotal	**Person**	**21**	**22**	**23**	**176**	**174**
	Fostering female talent	Female employee ratio	%	24	24	25	20	18
		No. of Female at manager level (or higher)	Person	63	65	61	150	133
		No. of male at manager level (or higher)	Person	307	288	274	486	903
		Proportion of female at manager level(or higher)	%	17	18	18	24	13
Workers who are not employees[3]	Gender	Male	Person	135	154	167	719	729
		Female	Person	31	32	32	152	146
		Subtotal	**Person**	**166**	**186**	**199**	**871**	**875**
Percentage of local senior managements with the local nationality working on site			%	99	99.1	99.1	87.9	68.3

1. As of December 31, 2023. Manager level refers to positions of PM/Manager or higher. Senior management refers to positions of Team Leader, Department Head, Supervisor, or higher.
2. Hyosung Corporation Employee Diversity Goals: 16 people with disabilities and 169 women in 2024, 16 people with disabilities and 173 women in 2025.
3. Workers who are not employees: Dispatch, subcontract, and service personnel who work at our business sites but are classified as non-affiliated workers in the business report.
4. Data from subsidiaries were tabulated excluding GST Safety Textile Mexico S. de R.L.
5. The data has been revised by correcting the tabulation error for Hyosung Financial Systems (Huizhou) Co., Ltd. in 2022.

New Employee Hires[6]

Category		Unit	Hyosung Corporation			Subsidiaries[7]	
			2021	2022	2023	2022	2023
New hires (Permanent + Temporary)	New hires	Person	25	46	66	745	875
	Experienced new hires	Person	29	32	22	444	524
	Transferees from affiliated companies	Person	115	34	17	9	8
	Subtotal	**Person**	**169**	**112**	**105**	**1,198**	**1,407**
New hires by gender	Male	Person	99	81	70	875	1,064
	Female	Person	70	31	35	323	343
	Subtotal	**Person**	**169**	**112**	**105**	**1,198**	**1,407**
New hire rate by gender	Male	%	58.6	72.3	66.7	73	75.6
	Female	%	41.4	27.7	33.3	27	24.4
New hires by age	Under 30	Person	60	54	64	666	738
	30-50	Person	94	40	28	470	578
	51 and above	Person	15	18	13	62	91
New hire rate by age	Under 30	%	35.5	48.2	61	55.6	52.5
	30-50	%	55.6	35.7	26.7	39.2	41.1
	51 and above	%	8.9	16.1	12.4	5.2	6.5

6. The data for 2021 and 2022 has been revised due to expanding the scope of new hires to include experienced new hires and transferees from affiliated companies.
7. Data from subsidiaries were tabulated excluding GST Safety Textile Mexico S. de R.L.

Employee Turnover[8]

Category		Unit	Hyosung Corporation			Subsidiaries[10]	
			2021	2022	2023	2022	2023
No. of employee turnover	Voluntary turnover	Person	52	60	54	729	868
	Transfer to affiliated company	Person	40	45	22	5	4
	Involuntary turnover[9]	Person	36	20	28	385	250
	Subtotal	**Person**	**128**	**125**	**104**	**1,119**	**1,122**
Turnover rate	Voluntary turnover rate	%	7.8	9.2	8.2	17.1	20.7
	Total turnover rate	%	19.2	19.1	15.9	26.2	26.7
Employee turnover by gender	Male	Person	104	195	77	872	904
	Female	Person	24	30	27	247	218
	Subtotal	**Person**	**128**	**125**	**104**	**1,119**	**1,122**
Turnover rate by gender	Male	%	16	15	12	20	22
	Female	%	4	5	4	6	5
Employee turnover by age	Under 30	Person	22	24	27	545	465
	30-50	Person	76	65	52	517	492
	51 and above	Person	30	36	25	57	165
	Subtotal	**Person**	**128**	**125**	**104**	**1,119**	**1,122**
Turnover rate by age	Under 30	%	3.3	3.7	4.1	12.8	11.1
	30-50	%	11.4	9.9	7.9	12.1	11.7
	51 and above	%	4.5	5.5	3.8	1.3	3.9

8. The data for 2021 and 2022 has been revised due to expanding the scope of turnover statistics from voluntary turnover among permanent employees to include both voluntary and involuntary turnover of permanent and temporary employees, as well as transfer to affiliated companies.
9. Involuntary turnover: resignation upon recommendation, dismissal, death, etc.
10. Data from subsidiaries were tabulated excluding GST Safety Textile Mexico S. de R.L.

Social Performance

Employee Salary and Compensation[1]

Category		Unit	Hyosung Corporation			Subsidiaries[2]
			2021	2022	2023	2023
Average total annual compensation for entry-level employees[3]	Male	KRW million	88	71	65	36
	Female	KRW million	50	50	49	25
	Total	KRW million	72	66	60	34
Local annual average legal minimum wage		KRW million	22	23	24	18
Ratio of wages for new hires compared to the local legal minimum wage	Male	%	400.6	311.2	271.2	205.9
	Female	%	227.0	217.2	201.5	140.1
Average total compensation by employee category[3]	Male executive	KRW million	676	634	616	169
	Male at manager level (or higher)	KRW million	95	94	101	79
	Male at non-manager level	KRW million	64	58	59	38
	Female Executive	KRW million	193	206	253	374
	Female at manager level (or higher)	KRW million	85	83	93	63
	Female at non-manager level	KRW million	48	42	46	34
Ratio of total compensation for female to male[5]	Executive	%	28.5	32.6	41.0	106.4
	Manager level or higher	%	89.4	87.6	92.1	83.9
	Non-manager level	%	74.9	73.2	77.7	89.5
Average total annual compensation of all employees		KRW million	131	117	120	-[4]
Highest-paid individual	KRW million	KRW million	7,427	7,241	6,841	232
	Year-on-year increase in total compensation	%	160.0	97.5	94.5	87.8
Employees(excluding highest-paid individual)	Average total annual compensation	KRW million	117	105	109	57
	Median total annual compensation	KRW million	82	77	82	52
	Median total annual compensation increase year-on-year	%	118.9	94.7	105.7	111.4
Ratio of the total annual compensation for the organization's highest-paid individual to the median total annual compensation for all employees (excluding the highest-paid individual)		Time	90.9	93.6	83.6	4.5

1.The criteria for aggregating the total compensation of new hires has been expanded from permanent employees with a university degree to include permanent, temporary employees, experienced new hires, and transferees from affiliated companies. As a result, the data for 2021 and 2022 has been revised.
2. Data from Hyosung USA Inc., Hyosung Holdings USA, Inc., and GST Safety Textile Mexico S. de R.L. is excluded from the subsidiary data aggregation.
3. The average total compensation for subsidiaries is the arithmetic mean of the values of the individual subsidiaries.
4. It was excluded due to difficulties in calculation caused by missing or erroneous data from some subsidiaries.
5. For subsidiaries, the ratio was calculated by summing the total compensation for men and women by employee category for each entity (excluding entities with no female employees).

Minimum Notice Periods regarding Operational Changes

If there is a legal standard such as a notice of dismissal, it is notified in advance in accordance with the stipulated timeframes.

Maternity Leave and Parental Leave

Category		Unit	Hyosung Corporation			Subsidiaries[6]	
			2021	2022	2023	2022[7]	2023
Maternity leave (male)	No. of employees on maternity leave	Person	19	16	5	71	72
	Return rate after maternity leave	%	100	100	100	100	100
Maternity leave (female)	No. of employees on maternity leave	Person	7	7	3	43	35
	Return rate after maternity leave	%	100	100	100	97.7	100
Parental leave (male)	No. of employees entitled to parental leave	Person	189	163	122	1,662	1,468
	No. of employees on parental leave	Person	2	2	2	54	30
	No. of employees returning to work after parental leave	Person	2	1	2	49	34
	No. of employees with over 12 months of service after parental leave	Person	1	1	0	42	25
	Return rate after parental leave	%	50.0	100	50.0	94.2	89.5
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	25.0	50.0	0	85.7	51.0
Parental leave (female)	No. of employees entitled to parental leave	Person	37	34	38	1,072	923
	No. of employees on parental leave	Person	7	6	4	38	25
	No. of employees returning to work after parental leave	Person	9	5	9	36	16
	No. of employees with over 12 months of service after parental leave	Person	2	6	4	35	16
	Return rate after parental leave	%	88.9	80.0	100	97.3	100
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	66.7	66.7	80.0	97.2	44.4

6. Data from Hyosung USA Inc., Hyosung Holdings USA, Inc., and GST Safety Textile Mexico S. de R.L. is excluded from the subsidiary data aggregation (GST Safety Textile Mexico S. de R.L. is excluded only for 2023).
7. The data has been revised by correcting the tabulation errors for Hyosung Good Springs, Inc., NH Tech Co., Ltd., and Hyosung FMS Co., Ltd. in 2022.

Labor Union and Retirement Pension

Category		Unit	Hyosung Corporation			Subsidiaries[9]	
			2021	2022	2023	2022[10]	2023
Labor union	No. of employees covered by collective bargaining agreements[8]	Person	51	46	45	1,578	1,418
	Ratio of employees covered by collective bargaining agreements among total employees	%	7.6	7.0	6.9	37.0	33.7
	No. of union workers	Person	37	36	35	1,475	1,298
	Rate of enrollment to the union	%	72.5	78.3	77.8	93.5	91.5
Retirement pension	Total operation fund for retirement pensions (DB+DC)	KRW million	97,880	101,248	102,262	120,410	122,907
	Operation fund for DB pension	KRW million	91,441	100,405	101,484	116,368	120,156
	Operation fund for DC pension	KRW million	857	843	778	4,042	2,752
	Total No. of members	Person	684	670	672	1,906	1,971
	No. of DB pension members	Person	609	597	590	1,681	1,727
	No. of DC pension members	Person	75	73	82	225	244

8. The collective bargaining agreements at Hyosung Corporation applies to Grade 5 production workers.
9. Data from subsidiaries were tabulated excluding GST Safety Textile Mexico S. de R.L.
10. No. of employees covered by collective bargaining agreements has been corrected to fix Hyosung Good Springs, Inc.'s tabulation errors, and the data for retirement pension has been revised to correct tabulation errors made by NH Tech Co., Ltd.

Social Performance

Employee Training[1]

Category		Unit	Hyosung Corporation			Subsidiaries	
			2021	2022	2023	2022[4]	2023
No. of training participants (cumulative)		Person	14,097	13,368	9,755	32,557	76,155
Total training expenses		KRW million	166	286	283	1,705	1,826
Total training hours		Hour	32,533	36,704	31,188	180,041	212,421
Average training hours per employee (total training hours / No. of employees)		Hour	49	56	48	42	51
Average training expenses per employee (total training expense / No. of employees)		KRW thousand	249	437	432	400	434
Total training hours per employee by gender[2]	Male	Hour	-	-	48	-	53
	Female	Hour	-	-	47	-	39
Average training hours per employee by employee category[2]	Executive	Hour	-	-	14	-	152
	Manager level or higher	Hour	-	-	56	-	89
	Non-manager level	Hour	-	-	45	-	33
No. of participants in environmental training		Person	508	539	458	1,298	3,040
No. of participants in ethics and anti-corruption training		Person	525	541	413	1,789	3,427
No. of participants in fair trade training		Person	499	589	479	1,409	970
No. of participants in safety and health training		Person	6,426	4,486	2,141	7,848	8,929
No. of participants in human rights training (Sexual harassment prevention/disability awareness/discrimination prevention, etc.)		Person	1,888	2,485	2,349	7,063	7,576
No. of employees trained for information security		Person	98	688	663	2,226	11,706
Ratio of security personnel who have received formal training in human rights policies or specific procedures[3]		%	-	-	0	-	-
No. of participants in sustainability management training		Person	1,065	841	509	2,660	3,194
No. of participants in retiree training		Person	0	0	0	525	538

1. The aggregation criteria include new hire training, general/specialized job training, leadership training, globalization training, and sustainability management training for all employees, including permanent and temporary employees. The number of trainees is the cumulative number of participants per course.
2. The average training hours per employee by gender and employee category have been aggregated since 2023.
3. The ratio has been aggregated exclusively for Hyosung Corporation since 2023.
4. The data was revised in 2022 to correct aggregation errors for FMK and Hyosung Financial Systems (Huizhou) Co., Ltd.

Regular Performance Evaluation and Career Development Reviews

Category		Unit	Hyosung Corporation			Subsidiaries[5]
			2021	2022	2023	2023
No. of employees subject to performance evaluation		Person	620	605	606	3,193
Performance evaluation rate		%	92.8	92.4	92.4	76
Performance evaluation and career development review rate by gender	Male	%	94.9	94.4	94.7	80.4
	Female	%	86.1	86.2	85.5	67.9
Performance evaluation and career development review rate by employee category	Executive	%	100	100	100	100
	Manager level or higher	%	99.1	99	99	98.4
	Non-manager level	%	84.9	84.4	85.4	69.7

5. Data from GST Safety Textile Mexico S. de R.L. is excluded from the subsidiary data aggregation

Suppliers[6]

Category	Unit	Hyosung Corporation			Subsidiary[8]
		2021	2022	2023	2023
No. of suppliers	Company	492	408	404	395
Total purchase from suppliers	KRW million	53,083	56,952	59,783	572,801
Total purchase from local suppliers[7]	KRW million	40,129	42,429	37,081	362,995
Proportion of purchase from local suppliers	%	75.6	74.5	62	63.4

6. Previously, the number of suppliers and total purchase amounts excluded transactions between affiliates, but starting in 2023, these transactions are included in the aggregation. Accordingly, the data for 2021 and 2022 have been revised.
7. The total transaction amount with suppliers located in the local country at each business site, excluding the cost of imports.
8. Data from GST Safety Textile Mexico S. de R.L. is excluded from the subsidiary data aggregation

Social and Environmental Impact Assessment of the Supply Chain[9]

Category	Unit	Hyosung Corporation		Subsidiaries[10]
		2022	2023	2023
No. of new suppliers that conducted social/environmental impact assessment	Company	0	0	7
Percentage of new suppliers that conducted social/environmental impact assessment	%	N/A	N/A	13.5
No. of suppliers that conducted social/environmental impact assessment	Company	18	18	19
No. of suppliers having practical or/and potential negative impact	Company	0	0	0
Percentage of suppliers that agreed improvement based on the results of social/environmental impact assessment	%	N/A	N/A	N/A
Percentage of suppliers whose contracts were terminated based on the results of social/environmental impact assessment	%	N/A	N/A	N/A

9. This data has been disclosed by Hyosung Corporation since 2022 and aggregated for subsidiaries since 2023. In cases where the denominator is zero, making it impossible to calculate a ratio, it is marked as 'N/A'.
10. Data from GST Safety Textile Mexico S. de R.L. is excluded from the subsidiary data aggregation.

Business partners' Dissatisfaction / Safety and Health related Grievance Mechanism

Category	Unit	Hyosung Corporation		
		2021	2022	2023[11]
No. of dissatisfaction cases received from business partner	Case	43	44	100
No. of dissatisfaction cases processed from business partner	Case	43	44	100
Ratio of cases processed	%	100	100	100

11. In 2023, the activation of safety communication led to increased interest from business partners, resulting in a rise in the number of occupational health and safety complaints and cases handled.

Products and Services subject to Labeling and Safety/Health evaluations

Category	Unit	Hyosung Corporation & Subsidiaries		
		2021	2022	2023
Percentage of major products and services that have undergone evaluations related to information disclosure and labeling procedures.	%	100	100	100
Percentage of major products and services that have undergone evaluations for health and safety impacts.	%	100	100	100

Social Performance

Occupational Health and Safety Management System

Category	Unit	Hyosung Corporation	Subsidiary
		2023	2023
Total workers (No. of employees + No. of workers who are not employees)	Person	855	5,775
No. of workers working at business sites where the company's health and safety management system are operational	Person	855	5,707
	%	100	98.8
No. of workers working within the systems that undergo regular/irregular audits (or monitoring) of the company's health and safety management system	Person	855	4,872
	%	100	84.4
No. of workers working at business sites subject to customer audits or audits for external certification	Person	367	4,049
	%	42.9	70.1

Occupational Injuries and Ill-health

Category		Unit	Hyosung Corporation			Subsidiary	
			2021	2022	2023	2022	2023
Employees	No. of work-related injuries and ill health	Person	2	2[4]	0	8[5]	59
	Rate of work related injuries and ill health [1]	%	0.3	0.3	0	0.2	1.3
	No. of fatalities as a result of work-related injuries	Person	0	0	0	0	0
	Work-related fatality rate per ten thousand employees [2]		0	0	0	0	0
	No. of cases of work-related injuries and ill health	Case	2	2	0	8	59
	Lost Time Injury Frequency Rate (LTIFR)[3]	Cases per million hours	1.4	1.5	0	0.8	6
Workers who are not employees but whose work/ and or workplace is controlled by the organization	No. of work related injuries and ill health	Person	0	0	0	3	0
	Rate of work related injuries and ill health [1]	%	0	0	0	1.3	0
	No. of fatalities as a result of work-related injuries	Person	0	0	0	0	0
	Work-related fatality rate per ten thousand employees [2]		0	0	0	0	0
	No. of cases of work-related injuries and ill health	Case	0	0	0	3	0
	Lost Time Injury Frequency Rate (LTIFR)[3]	Cases per million hours	0	0	0	5.4	0

1. Total No. of individuals affected by work related injuries and ill health ÷ Total No. of workers x 100
2. No. of work-related fatalities ÷ Total No. of workers x 10,000
3. No. of work-related injuries and ill health ÷ Total work hours x 1,000,000
4. In the 2022 report, Hyosung Corporation disclosed the number of work-related injuries and ill health in 2022 as one. However, due to the approval of one occupational disease (noise-induced hearing loss) case from a former employee, this number has been revised to two.
5. The data for 2022 has been revised to correct the aggregation error for GST Safety Textile Mexico S. de R.L.

Safety and Quality Certification

Company	Business Site	PU/Business Division	Safety and Health Certification	Quality Certification
Hyosung Corporation	Headquarters	Interior		ISO 9001
	Anyang	Interior	ISO 45001	ISO 9001
				IATF 16949
Hyosung USA Inc.	Decatur	Interior	-	IATF 16949
	Decatur	Tire reinforcement	-	ISO 9001
Hyosung Good Springs, Inc.	Headquarters	Industrial pump	ISO 45001	ISO 9001
	Changwon	Industrial pump	ISO 45001	ISO 9001
GST Safety Textiles Mexico S. de R.L.	Torreon	Airbag	-	IATF 16949
Hyosung TNS	Headquarters/Gumi	IT	ISO 45001	ISO 9001
Hyosung Financial System Vina Co. Ltd.	Vina	IT	ISO 45001	ISO 9001

Social Contribution

Category	Unit	Hyosung Corporation			Subsidiary	
		2021	2022	2023	2022[8]	2023
Social contribution investment	KRW million	578	430	692	361	264
No. of social contribution programs	Program	21	26	33	32	28
No. of participants among employees[6]	Person	-	309	348	5,421	5,275
Total volunteer hours[6]	Hour	-	159	267	377	137
Amount of social value generated[7]	KRW million	-	-	895	57	52

6. The number of participants and total volunteer hours have been aggregated since 2022.
7. The amount of social value disclosed in the "Corporate Social Responsibility" section of the 2022 Sustainability Report is the total sum of the social value amounts calculated by Hyosung Corporation and its four operating companies. The social value amount for Hyosung Corporation has been aggregated since 2023. This includes direct donations such as support for national veterans, support for firefighters, disaster relief funds, construction of a kindergarten in Quang Nam Province, Vietnam, construction of a Girls' Room in Rwanda, and the value of goods donated to the Goodwill Store. It also includes the labor costs of employee volunteer activities and beneficiary wages.
8. The data for 2022 has been revised to correct the aggregation error for Hyosung USA Inc.

Customer Privacy Protection and Infringement of Local Community Rights

Category	Unit	Hyosung Corporation			Subsidiary	
		2021	2022	2023	2022	2023
Breaches of customer privacy	Case	0	0	0	0	0
Total No. of identified leaks, thefts, or losses of customer data	Case	0	0	0	0	0
Total No. of incidents of violations involving the rights of indigenous people	Case	0	0	0	0	0

Environmental Performance

*Greenhouse gas emissions and energy usage include all business sites of Hyosung Corporation. Other environmental data has been aggregated for the headquarters, Anyang plant, Suseo office, and Transworld, which have sales revenue.

Energy Consumption

Category		Unit	Hyosung Corporation				Subsidiaries	
			2021	2022	2023		2022[3]	2023
					Plan	Performance		
Direct energy consumption	Diesel	TJ	1.12	1.21	1.19	1.98	8.58	7.05
	Kerosene	TJ	0.10	0.11	0.11	0.11	0.11	0.15
	LNG	TJ	184.48	179.64	170.20	161.72	26.25	26.05
	NG	TJ	0	0	0	0	297.43	312.12
	Gasoline	TJ	4.18	4.35	4.34	3.94	134.07	149.94
	Propane	TJ	0.88	0.70	0.79	0.86	0.01	0.01
	LPG	TJ	0	0	0	0	3.46	3.83
	Subtotal	**TJ**	**190.75**	**186.00**	**176.63**	**168.62**	**469.90**	**499.13**
Indirect energy consumption	Electricity[1]	TJ	486.51	458.67	482.94	434.44	376.58	369.80
	Steam	TJ	8.87	10.05	10.05	9.66	0.02	0.42
	Subtotal	**TJ**	**495.38**	**468.71**	**492.98**	**444.09**	**376.60**	**370.22**
Total energy consumption		TJ	686.12	654.71	669.62	612.71	846.50	869.35
Energy intensity[2] (Total energy consumption/Sales)		TJ/KRW 100 million	0.07	0.09	0.13	0.11	0.02	0.02
Separate sales		KRW 100 million	10,531	7,500	5,332	5,332	36,424	36,663
Renewable energy consumption	Purchase (PPA/Green premium/REC)	TJ	0	0	0	0	0	0
	Own production	TJ	0	0	0	0	0	0
	Subtotal	**TJ**	**0**	**0**	**0**	**0**	**0**	**0**

1. The conversion coefficient for electricity energy consumption is 9.6 TJ/GWh for domestic use (based on the country's specific calorific value and emission coefficient for each fuel type) and 3.6 TJ/GWh for overseas use.
2. The intensity is calculated based on separate sales figures.
3. The energy consumption data for subsidiaries has been adjusted due to the addition of business sites. (Hyosung USA Inc., Hyosung TNS Inc., Nautilus Hyosung America Inc., Hyosung Holdings USA, Inc., Forza Motors Korea Corp, NH CMS Co., Ltd.)

Expected Amount of Energy Savings and Greenhouse Gas Reduction[4]

Business site	Energy type	Project	Introduction date	Investment (KRW million)	Expected energy savings (kWh/year)	Expected energy savings (TJ/year)	Expected greenhouse gas reduction (tCO_2eq/year)
Anyang	Electric power (scope2)	Reducing electricity costs by optimizing the operating load of the aeration tank	2022.01	0	78,840	0.76	36
		Maintenance of compressed air moisture discharge devices and leak elimination activities	2022.03	8	69,292	0.67	32
		Replacement of old chilled water pump motor for the chiller	2022.04	13	51,443	0.49	24
		Replacement of old cooling water pump motor for the chiller	2022.04	10	14,525	0.14	7
		20% Improvement in Compressed Air Production Efficiency (Introduction of New Air Compressor and Modification of Piping Line)	2022.08	350	2,610,480	25.06	1,199
		Reduction of compressed air operating pressure by 0.9 kg/cm²	2022.08	105	761,244	7.31	350
		30% reduction in electricity Costs due to Increased production from the Introduction of high-speed tufting machines	2022.11	495	105,120	1.01	48
		Reduction in Power Loss through Integrated Operation of Transformers (from 3 to 2 transformers)	2022.12	0	131,400	1.26	60
		Reduction in Power Loss in Wires by Adjusting the Secondary Voltage Tap of the Main Transformer (from 3.2kV to 3.4kV)	2023.05	0	61,613	0.59	28

4. The expected amounts of energy savings and greenhouse gas reduction are estimated values based on the capacity and efficiency of the equipment, as well as the operating hours, before and after the project.

GHG Emissions[5]

Category		Unit	Hyosung Corporation				Subsidiaries	
			2021	2022	2023		2022[6]	2023
					Plan	Performance		
Direct GHG emissions (Scope 1)	Stationary combustion	tCO_2eq	9,409	9,152	8,679	8,256	16,851	17,645
	Mobile combustion		357	377	375	401	9,900	10,865
	Waste disposal		0	0	0	13	0	0
	Other emissions		0	0	0	0	0.3	0.4
	Subtotal		**9,766**	**9,529**	**9,055**	**8,670**	**26,751**	**28,510**
Indirect GHG emissions (Scope 2)	Electricity	tCO_2eq	23,282	21,950	23,111	20,790	28,673	28,518
	Steam		319	374	374	346	1	15
	Subtotal		**23,601**	**22,324**	**23,485**	**21,136**	**28,674**	**28,533**
Total GHG emissions[7] (Scope 1&2)		tCO_2eq	33,367	31,853	32,540	29,807	55,426	57,042
GHG emissions intensity[8]	Scope1	tCO_2eq/ KRW 100 million	0.9	1.3	1.7	1.6	0.7	0.8
	Scope2		2.2	3.0	4.4	4.0	0.8	0.8
	Subtotal		**3.2**	**4.2**	**6.1**	**5.6**	**1.5**	**1.6**
Separate sales		KRW 100 million	10,531	7,500	5,332	5,332	36,424	36,663

5. This has been prepared based on the emission reporting and certification guidelines of the Emissions Trading Scheme and the Ministry of Environment's conformity assessment for the submission of emission allowances for the current year.
6. The greenhouse gas emissions of subsidiaries have been changed due to the addition of business sites (Hyosung USA Inc., Hyosung TNS Inc., Nautilus Hyosung America Inc., Hyosung Holdings USA, Inc., Forza Motors Korea Corp, and NH CMS Co., Ltd.).
7. Only CO_2, CH_4, and N_2O are being emitted as greenhouse gases, and the total greenhouse gas emissions above may differ from the emissions reported in the business report due to rounding off decimals by business site.
8. The intensity is calculated based on separate sales figures.

Air Pollutant Emissions[9]

Category	Sub-category	Unit	Hyosung Corporation			Subsidiaries	
			2021	2022	2023	2022	2023
General air pollutants	Nitrogen Oxides(NOx)	kg	1,116	3,183	4,545	0	0
	Sulfur Oxides (SOx)	kg	0	0	0	0	0
	Total Hydrocarbons (THC)	kg	915	485	412	3,743	3,233
	Total Suspended Particles (TSP)[10]	kg	330	39	331	465	241
	Zinc and its compounds	kg	0	0	0	2.2	0
Hazardous Air Pollutants (HAPs)	Hydrogen Chloride (HCl), etc.	kg	0.61	0.35	9.32	5.92	5.25
Volatile Organic Compounds (VOCs)	Ethylbenzene, Formaldehyde	kg	0	0	0	4.52	5.21
Ozone-Depleting Substances (ODS)[11]	CFC(R-11)	kg	0	0	0	0	0
	HCFC(R-123)	kg	0	0	0	0	0
	HCFC(R-22)	kg	0	0	0	0	0

9. Hyosung Corporation and its subsidiaries do not emit Persistent Organic Pollutants (POPs). Volatile Organic Compounds (VOCs) are also classified as Hazardous Air Pollutants (HAPs) and are included redundantly.
10. We have corrected the figures for Hyosung Corporation's dust emissions in 2021 and its subsidiaries' dust emissions in 2022 due to errors found in previous sustainability reports.
11. In the case of Ozone-Depleting Substances (ODS), the purchase amount has been considered as the emission amount and recorded accordingly.

Environmental Performance

Water Risks[1]

Category		Republic of Korea		Vietnam	Mexico	USA			Russia
		Seoul/Anyang /Changwon/Gumi[5]	Busan[6]	Bac Ninh Province[7]	State of Coahuila[8]	North Carolina[9]	Alabama[10]	Texas[11]	Moscow[12]
Water risk[2]		Low to Medium	Medium to High	Extremely High	Extremely High	Low to Medium	Low	Low to Medium	High
Water stress[3]	Baseline	Medium to High	Medium to High	Medium to High	Extremely High	High	Low	High	Extremely High
	2030 Outlook[4]	Medium to High	Medium to High	High	Extremely High	Extremely High	Low	High	Extremely High

1. The Water Resource Risk analysis tool (Aqueduct 4.0) from the World Resources Institute (WRI) was used.
2. A comprehensive indicator that aggregates quantity, quality, regulatory, and reputational risk indicators.
3. Water Stress: Total demand/available surface water and groundwater supply (low <10%, low to medium 10-20%, medium to high 20-40%, high 40-80%, Extremely High >80%)
4. BAU (Business as usual) scenario
5. Seoul: Headquarters offices of Hyosung Corporation, Hyosung Good Springs, Inc., Hyosung TNS Inc., Forza Motors Korea Corp, etc., and some Forza Motors Korea Corp auto repair shops (Seoul/Gyeonggi area)
   Anyang: Hyosung Corporation research institute and production plant, Changwon: The production plant of Hyosung Good Springs, Inc., Gumi: The production plant of Hyosung TNS Inc.
6. Busan auto repair shop of Forza Motors Korea Corp
7. The production plant of Hyosung Financial System Vina Co. Ltd.
8. The production plant of GST Safety Textiles Mexico S. de R.L.
9. Hyosung Holdings USA, Inc. / The office of Hyosung USA Inc.
10. The production plant of Hyosung USA Inc.
11. The office of Nautilus Hyosung America Inc.
12. The office of HYOSUNG TNS RUS L.L.C.

Water Management

Category	Sub-category	Unit	Hyosung Corporation				Subsidiaries[13]	
			2021	2022	2023		2022	2023
					Plan	Performance		
Water consumption by withdrawal source	Municipal water	Ton	118,187	134,315	126,251	130,508	265,020	280,091
	Industrial water	Ton	465,796	468,414	467,105	414,894	73,548	81,089
Total water consumption		Ton	583,983	602,729	593,356	545,402	338,568	361,180
Water consumption intensity (Total water consumption/sales)		Ton/KRW 100 million	55.5	80.4	111.3	102.3	13.7	14.4
Separate sales		KRW 100 million	10,531	7,500	5,332	5,332	24,798	25,153
Total reused water		Ton	0	0	0	0	0	0

13. The manufacturing subsidiary not included in the data aggregation is GST Safety Textiles Mexico S. de R.L. Additionally, Hyosung Holdings USA, Inc., Hyosung RUS LLC, Nautilus Hyosung America, Inc., Hyosung Financial Systems (Huizhou) Co., Ltd., Hyosung Solutions S. de R.L. de C.V., ATM Plus Co., Ltd., and Hyosung TNS RUS L.L.C. are office-based with minimal water usage, making their water usage insignificant and difficult to aggregate. These subsidiaries were also excluded from the calculation of the total separate sales and water usage intensity. The 2022 figures have been corrected due to changes in the data aggregation scope and error verification for subsidiaries.

Category		2021			2022			2023		
		Municipal water	Industrial water	Total	Municipal water	Industrial water	Total	Municipal water	Industrial water	Total
Hyosung Corporation	Anyang plant	81,410	465,796	547,206	88,730	468,414	557,144	82,971	414,894	497,865
	Other offices	36,777	0	36,777	45,585	0	45,585	47,537	0	47,537
	Subtotal	118,187	465,796	583,983	134,315	468,414	602,729	130,508	414,894	545,402

Treatment of Water and Effluents

Category	Sub-category	Unit	Hyosung Corporation			Subsidiary[16]	
			2021	2022	2023	2022	2023
Wastewater discharge by destination[15]	Wastewater treatment	Ton	62,856	77,095	118,537	67,385	65,968
	Direct discharge to river	Ton	0	0	0	32,613	46,650
	Outsourced treatment	Ton	0	0	0	0	0
Total Wastewater discharge		Ton	62,856	77,095	118,537	99,998	112,618
Biochemical Oxygen Demand (BOD)		Ton	0.08	0.10	0.09	0.03	0.03
Total Organic Carbon (TOC)[14]		Ton	N/A	0.18	0.25	0.05	2.20
Suspended Solids (SS)		Ton	0.98	0.76	1.56	1.35	2.39
Total Nitrogen (T-N)		Ton	0.38	0.37	0.92	0.00	2.07
Total Phosphorus (T-P)		Ton	0.01	0.01	0.00	0.07	0.11

14. We have reflected the change in organic material measurement indicators [from COD (Chemical Oxygen Demand) to TOC (Total Organic Carbon)] according to the amendment to the "Water Environment Conservation Act Enforcement Rules" (effective from October 17, 2019), and TOC has been measured since 2022.
15. In the previous report, the final discharge destination did not distinguish the direct discharge to river item, so the discharge amounts for direct discharge to river were combined with the wastewater treatment plant discharge amounts. However, starting in 2023, the final discharge destinations have been further categorized to include a separate item for direct discharge to river. Consequently, the 2022 data has also been revised.
16. Data from subsidiaries were tabulated excluding GST Safety Textile Mexico S. de R.L.

Waste Disposal

Category	Sub-category	Unit	Hyosung Corporation				Subsidiary[16]	
			2021	2022	2023		2022	2023
					Plan	Performance		
Non-hazardous waste (ordinary waste)-Outsourced treatment	Recycling	Ton	1,752	1,740	1,746	2,193	673	927
	Incineration	Ton	158	134	146	136	250	341
	Landfill	Ton	46	11	28	0.02	1,965	2,348
	Others	Ton	0	0	0	64	2	4
	Subtotal	**Ton**	**1,955**	**1,885**	**1,920**	**2,393**	**2,889**	**3,620**
Hazardous waste (designated waste)-Outsourced treatment	Recycling	Ton	103	125	114	76	32	19
	Incineration	Ton	1	0	1	0	133	214
	Landfill	Ton	0	0	0	0	0	2
	Others	Ton	0	0	0	0	0	1
	Subtotal	**Ton**	**104**	**125**	**114**	**76**	**166**	**236**
Construction waste-Outsourced treatment	Recycling	Ton	0	0	0	0	0	0
	Incineration	Ton	0	0	0	0	19	213
	Landfill	Ton	0	0	0	0	0	0
	Others	Ton	0	0	0	0	0	0
	Subtotal	**Ton**	**0**	**0**	**0**	**0**	**19**	**213**
Total waste generated		Ton	2,059	2,009	2,034	2,469	3,074	4,069
Total waste recycled		Ton	1,854	1,865	1,860	2,269	705	946
Total ratio of waste recycled		%	90.1	92.8	91.4	91.9	22.9	23.3

16. The manufacturing subsidiary not included in the data aggregation is GST Safety Textiles Mexico S. de R.L. Additionally, Hyosung Holdings USA, Inc., Hyosung RUS LLC, Nautilus Hyosung America, Inc., Hyosung Financial System (Huizhou) Co., Ltd., Hyosung Solutions S. de R.L. de C.V., ATM Plus Co., Ltd., and Hyosung TNS RUS L.L.C.) are office-based with minimal waste emissions, making their waste emissions insignificant and difficult to aggregate. Therefore, they were excluded. Due to changes in the data aggregation scope and error verification for subsidiaries, the 2022 figures have been corrected.

Environmental Performance

Biodiversity within the Areas Affected by Business Sites[1]

Country	Region	Characteristics of the locations of operation	Physical Risk	Reputation Risk	Risk indicators of the organization among physical risks			Endangered species	
					Ecosystem regulation service[2]		Biodiversity pressure	Nationally designated endangered species[3] (domestic)	I IUCN Red List[4] (overseas)
					Heat wave	Tropical cyclone (typhoon)	Pollutant emissions		
Republic of Korea	Seoul area	9 offices	2.5	2.5	3.5	4.5	2.88	1	-
		4 automobile repair shops	3.15	2.94	3.5	4.5	2.38	3	-
	Anyang	Production	3	2.66	3	4.5	4.38	0	-
	Changwon	Production	3.4	2.62	3	4.5	4.12	1	-
	Gumi	Production	2.3	2.56	3	4.5	4.12	7	-
	Busan	2 automobile repair shops	3.15	3.5	3.5	4.5	2.12	3	-
Vietnam	Bac Ninh Province	Production	2.56	2.55	4	4.5	4.25	N/A	52
Mexico	State of Coahuila	Production	3.17	3.25	2.5	4	3.38	N/A	10
USA	North Carolina	2 offices	2.5	2.5	4	4	2.12	N/A	22
	Alabama	Production	2.9	2.75	3.5	3.5	3.75	N/A	54
	Texas	Office	2.5	2.5	4	3	2.12	N/A	16
Russia	Moscow	2 offices	2.5	2.58	3	2.5	2.12	N/A	33

1. The impacts were identified using the WWF (World Wide Fund for Nature) Biodiversity Risk Filter.
2. Regulating Services: Ecosystem services refer to the goods and benefits that humans receive directly or indirectly from ecosystem functions. Among these, regulating services are those that maintain and regulate environmental balance through the various interactions among ecosystem components.
3. In accordance with the Wildlife Protection and Management Act, the species protected by the Ministry of Environment for effective wildlife protection were aggregated based on the major administrative regions in the nationwide distribution survey of endangered wildlife by the National Institute of Biological Resources.
4. Based on the IUCN Red List of Threatened Species, species categorized as Critically Endangered (CR), Endangered (EN), and Vulnerable (VU) within a 25 km radius of the business site were aggregated.

Raw Material Consumption and Renewable/Recycled Input Material Amounts

Category	Unit	Hyosung Corporation			Subsidiaries[8]	
		2021	2022	2023	2022	2023
Total raw material consumption[5]	Ton	15,308	15,368	21,042	42,303	57,463
Renewable material consumption[6]	Ton	33	120	10	1,619	1,185
Recycled input material consumption[7]	Ton	138	28	73	0	0
Percentage of recycled input material consumption	%	0.9	0.2	0.3	0	0

5. Until 2022, we aggregated raw materials and auxiliary materials managed by weight. Starting in 2023, raw materials managed by area were also converted to weight and included in the aggregation. Total raw material consumption includes the consumption of renewable materials and recycled input materials.
6. Renewable materials are substances that are quickly replenished by ecological cycles or agricultural processes. In the case of fibers, these include materials sourced from bamboo, hemp, and biochips.
7. Recycled input materials are substances that have undergone artificial recycling processes, such as recycled chips.
8. Data from subsidiaries were tabulated excluding GST Safety Textile Mexico S. de R.L.

Sold/Reclaimed Products and their Packaging Materials[9]

Category	Unit	Hyosung Corporation			Subsidiaries	
		2021	2022	2023	2022	2023
Total amount of products sold	Ton	17,597	17,650	22,378	40,208	51,804
Total amount of packaging materials sold	Ton	637	608	652	161	203
Total amount of reclaimed products	Ton	0	0	0	220	279
Total amount of reclaimed packaging materials	Ton	59	53	57	0	0
Percentage of reclaimed products and packaging materials	%	0.3	0.3	0.2	0.5	0.5

9. For products managed by area, we converted them using the unit weight of representative products. Packaging materials were aggregated only for items managed by weight (e.g., paper tubes, pallets). The type of packaging material collected is pallets. The subsidiaries Hyosung Good Springs, Inc. and GST Safety Textiles Mexico S. de R.L. were not included in the aggregation as the calculation methods are not yet prepared.

Environmental Management Certifications and Eco-Friendly Certifications

Company	Business Sites	PU/Business Division	Environmental Management	Hazardous Substances Process Management	Eco-Friendly Certification
Hyosung Corporation	Anyang	Interior	ISO 14001	-	GRS[10]
Gongdeok Gyeongwoo Development Corporation	Headquarters	-	-	-	Building Energy Efficiency Grade 1+
Hyosung USA Inc.	Decatur	Interior	ISO 14001	-	-
Hyosung Good Springs, Inc.	Headquarters/ Changwon	Industrial pump	ISO 14001	-	-
Hyosung TNS Inc.	Headquarters/Gumi	IT	ISO 14001	IECQ QC 080000 HSPM[11]	-
Hyosung Financial Systems (Huizhou) Co., Ltd.	Huizhou	IT	ISO 14001	-	-
Hyosung Financial System Vina Co. Ltd.	Vina	IT	ISO 14001	IECQ QC 080000 HSPM[11]	-

10. GRS (Global Recycled Standard: International Recycled Fiber Eco-Friendly Certification Mark)
11. IECQ QC 080000 HSPM (International Electrotechnical Commission Quality assessment system for electronic components- Hazadous Substance Process Management)

Chemical Substances Management

Category	Unit	Hyosung Corporation			Subsidiaries[12]	
		2021	2022	2023	2022	2023
Hazardous chemicals consumption	Ton	0	0	0	25.5	18.8
Hazardous chemicals consumption intensity	Ton / KRW 100 million	0	0	0	0.001	0.001
Sperate sales	KRW 100 million	10,531	7,500	5,332	38,621	36,663
Chemical substance emissions	Ton	13.0	14.7	13.2	16.5	1.9

12. The data for the subsidiary GST Safety Textiles Mexico S. de R.L. was not included. This subsidiary was also excluded from the calculation of total separate sales and hazardous chemicals consumption intensity.

Environmental Performance

Environmentally Friendly Investment

Category	Unit	Hyosung Corporation			Subsidiaries	
		2021	2022	2023	2022	2023
Environmentally friendly research cost	KRW million	15,198	14,458	11,647	0	0
Environmentally friendly equipment cost[1]	KRW million	1,079	1,456	1,133	0	0

1. This includes investments in equipment for manufacturing eco-friendly products, equipment for removing or reducing environmental pollution, and equipment for recycling and circular economy purposes. These investments are aggregated in accordance with Article 2 of the Act on the Promotion of Environment-Friendly Industrial Structure (also known as the Eco-Friendly Industry Act).

Environmentally Friendly Products and Services Sales and Purchases[2]

Category	Unit	Hyosung Corporation			Subsidiaries[4]	
		2021	2022	2023	2022	2023
Sales of environmentally friendly products and services	KRW million	2,596	3,402	6,084	3,483	1,974
Purchases of environmentally friendly products and services[3]	KRW million	348	341	160	7,297	9,310

2. According to internal standards, the following products and services are defined and aggregated as eco-friendly:
   - Products and installation services with higher energy efficiency than existing products, such as LED lighting and high-efficiency certified equipment.
   - Products with a lower carbon footprint than existing products, such as recycled chips and biochips.
   - Products that emit fewer hazardous chemicals or environmental pollutants than existing products.
3. The data for 2021 has been revised to include the previously omitted purchase records of biochips in the eco-friendly products and services purchase performance amount.
4. The data for the subsidiaries Hyosung USA Inc. and GST Safety Textiles Mexico S. de R.L. were not included.

Environmentally Friendly Vehicles[5]

Category	Sub-category	Unit	Hyosung Corporation			Subsidiaries[8]	
			2021	2022	2023	2022	2023
On-road vehicles[6]	Electric vehicle	Car	0	0	1	3	3
	Hydrogen fuel cell electric vehicle	Car	0	0	0	0	0
	Solar-powered vehicle	Car	0	0	0	0	0
Off-road vehicles[7]	Electric vehicle	Car	16	17	20	31	31
	Hydrogen fuel cell electric vehicle	Car	0	0	0	0	0
	Solar-powered vehicle	Car	0	0	0	0	0
Total no. of company vehicles		Car	58	58	68	494	489
Ratio of environmentally friendly vehicle ownership		%	27.6	29.3	30.9	6.9	7.0

5. The classification was applied according to the definitions in Article 2 of the Act on the Promotion of Development and Distribution of Environment-Friendly Motor Vehicles (also known as the Environment-Friendly Motor Vehicle Act).
6. Passenger cars, buses, trucks, special-purpose vehicles, motorcycles (excluding electric bicycles)
7. Including vehicles not regulated such as construction machinery, agricultural machinery (e.g., forklifts, tool cars, carts used at business sites)
8. The data for the subsidiary Nautilus Hyosung America Inc. was not included. For Hyosung USA Inc., the number of off-road vehicles (forklifts) was not included in the total number of vehicles owned.

Hyosung TNC

Innovation for a Better Tomorrow

Company Overview

Hyosung TNC Overview

Navigate to global business sites

Company name	Hyosung TNC Corporation
Date of establishment	June 4, 2018
CEO	Chi-Hyung Kim
Headquarters location	119 Mapo-daero, Mapo-gu, Seoul, Republic of Korea (Gongdeok-dong)
Domestic business sites	Seoul, Gumi, Ulsan, Daegu, etc.
Overseas business sites	China, Vietnam, India, Brazil, Türkiye, Japan, etc.

Production	Textile raw materials (e.g., PTMG) Textile yarns (e.g., Spandex, Nylon, Polyester, and Fabrics)
Brand	CREORA, regen
Business areas	Yarns and textiles (Spandex PU, Nylon Polyester PU, Fabric dyeing) Trade and others: Steel 1 · 2PU, Chemical PU, Sevit Business Unit
Key export regions	The Americas, Europe, Asia, etc.
Key business areas	Textiles, trade, etc.

Number of employees*
1,389 People

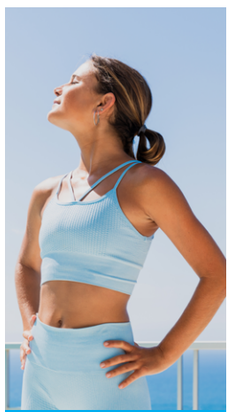
Sales revenue
KRW 7,526.9 billion

Operating profit
KRW 213.4 billion

*The number of employees is as of December 31, 2023.

Major Business Sectors

Navigate to detailed introduction of our business


Spandex


Nylon / Polyester


Fabrics / Dyeing


Steel 1 / Steel 2


Chemical

2023 Sustainability Highlights

2023 Key Sustainability Performances

- The proportion of sales revenue generated from sustainable solutions increased by **13%** compared to the previous year
  Navigate to sustainable solutions
- Greenhouse gas emissions were reduced by **146,862** tons compared to the base year (2018)
  * Based on domestic business sites
- Renewal of **GRS** and **RCS** certifications for recycled nylon and polyester products, and awarded **OBP** Certification for polyester
- Accidental injuries decreased from 3 cases to **2** compared to the previous year
- Renewal of ISO 45001 certification for the Gumi and Ulsan plants awarded **PSM** grade **S**, and renewal of the Family Friendly Management Certification
- Expanding collaborative partnership projects compared to the previous year, with a **3.5** times increase in the number of companies receiving support
- Joined the **Textile Exchange**, the leading sustainability initiative in the textile industry
- Collected approximately **27,300** used PET bottles through the regen Renewable Campaign.
- MSCI ESG Rating **AA**
  CDP Climate Change Score **A-**

2023 Global ESG Assessment

KCGS Rating	CDP Climate Change Score	MSCI Rating	Sustainalytics score
A	A-	AA	Low Risk

2023 Key Awards and Certification

Family Friendly Management Certification

CSR in the community

- 2023 The Management Grand Award (Innovative Product of the Year)
- Rural Area ESG Implementation Recognition Company Award
- The 25th Korea Disability Rights Award in the private enterprise category
- The 72nd Seoul Metropolitan City Cultural Award in the cultural and artistic sponsorship category

Sustainability Implementation Framework

Governance

Decision-making and Implementation Framework

Hyosung TNC's sustainability implementation framework is guided by the ESG Promotion Committee led by the CEO. This framework comprises the ESG Management Team, which is responsible for supervising all sustainability initiatives and departments dedicated to implementing sustainability efforts in their respective areas.
The ESG Promotion Committee, as the highest decision-making body, meets twice annually to deliberate and approve sustainability strategies and material issues. The ESG Management Team establishes sustainability strategies and detailed tasks through communication with stakeholders, including customers, investors, employees, and the government, and supports the departments implementing sustainability initiatives.

Board of Directors
- Deliberation of material sustainability issues
- Provided updates on sustainability management status

ESG Promotion Committee
- Reporting on sustainability management status to the Board
- Deliberation and approval of sustainability agendas
- Overseeing sustainability strategies and implementation
- Sustainability target setting

- **Chairperson: CEO**
- **Members (10 people)**
  - Spandex CMO
  - Nylon Polyester PU Chief
  - Chief Procurement Officer
  - Chief Financial Officer
  - Chief Communications Officer
  - Plant Managers by Site
  - Chief Management Support Officer
  - Chief Strategy Officer

ESG Management Team
- Management of the sustainability tasks implementation
- Monitoring and reporting sustainability risks and opportunities

Departments dedicated to sustainability implementation
- Task implementation

Energy/Greenhouse gas	Safe Environment	Social Responsibility	Governance
Production Support Team Utility Team	Health and Safety Team Environmental and Safety Management Team	Purchasing/Human Resources teams Sales/Marketing/ Advertising teams	Finance Department Legal Compliance Team

2023 Key Reports and Approvals

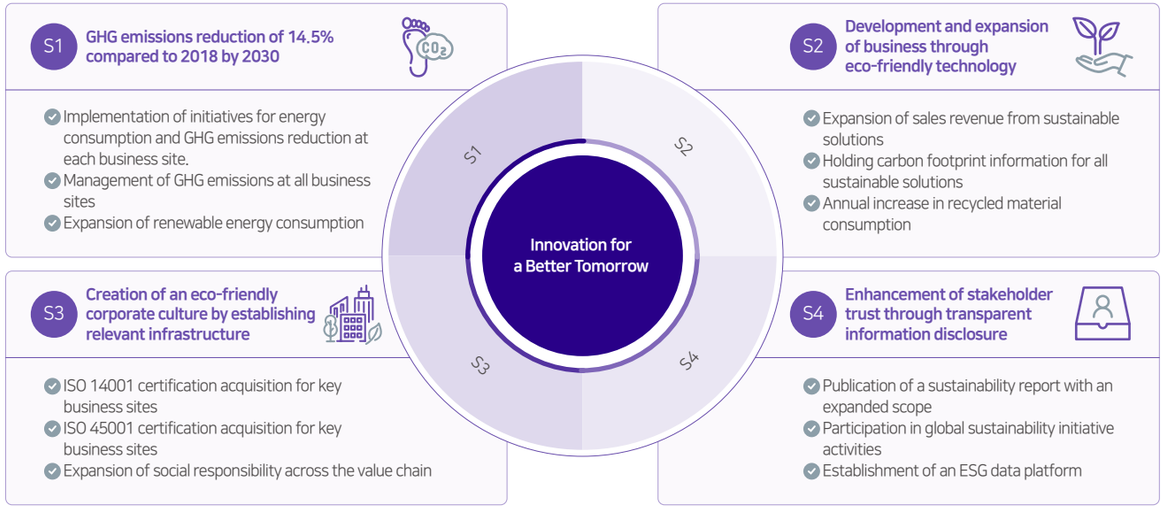
First Half of the Year
- Report on sustainability promotion activities
- Report on assessment framework revisions by ESG rating agencies
- Approval to establish dedicated sustainability departments in major overseas production subsidiaries

Second Half of the Year
- Report on ESG requirements of major customers
- Report on the performance and plans for supply chain management activities, social contribution activities, environmental management activities and human rights management evaluation
- Approval of the implementation plan to execute 2024 improvement tasks and collaborative partnership projects
- Approval of implementing the materiality assessment for the 2024 sustainability report
- Report on other key initiatives and assessment results

Implementation Strategies

With the vision of "Innovation for a Better Tomorrow," Hyosung TNC establishes and implements strategic tasks for sustainability based on Hyosung's Green Management 2030.

Sustainability Vision 2030



Implementation and Goals of Strategic Tasks for Sustainability

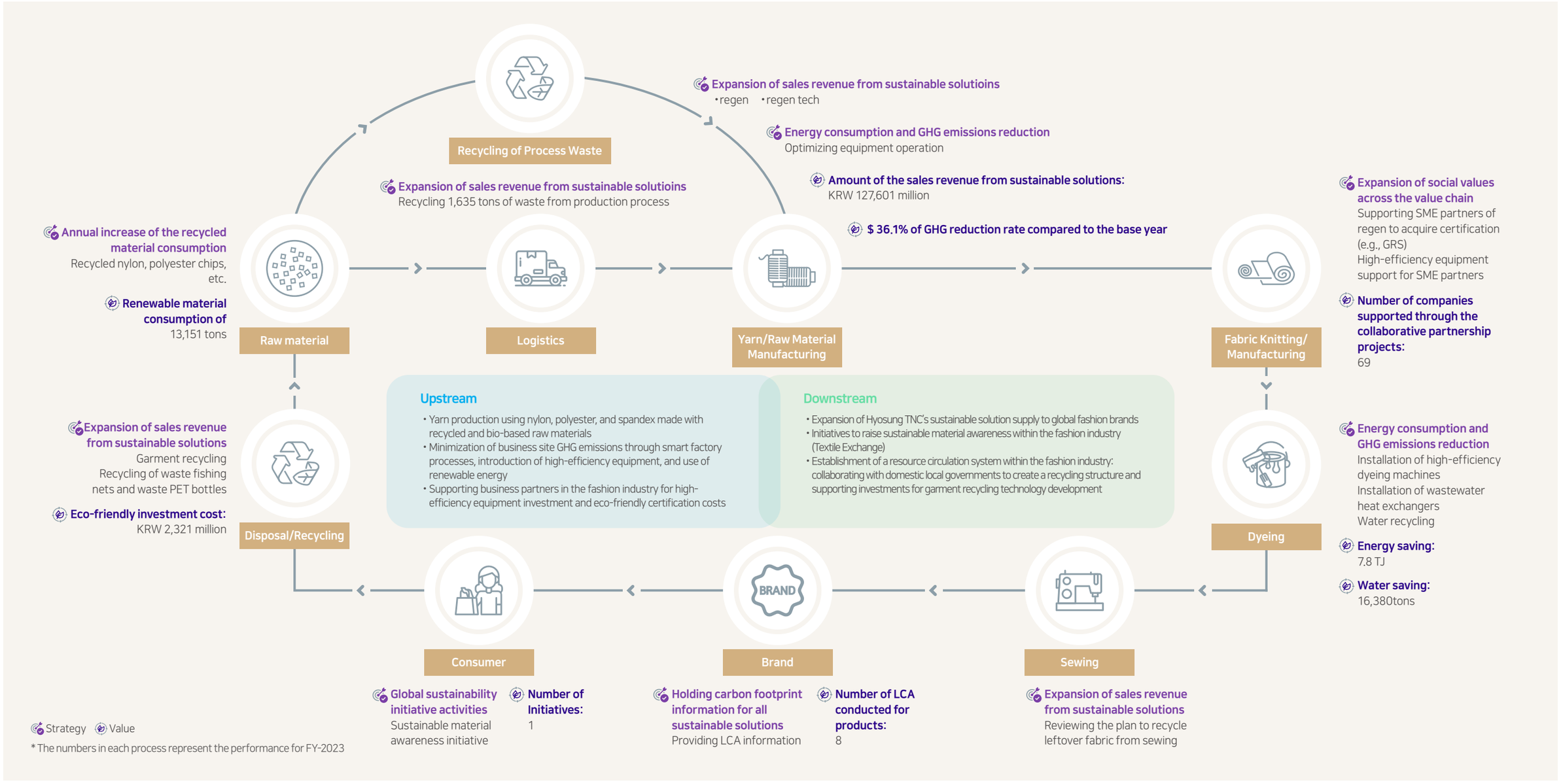
Area	Strategic tasks	KPI	2023 Performance	2030 Goals
Environment	GHG emissions reduction	Amount of the GHG emissions reduction (%)	36.1% reduction compared to 2018 (based on headquarters data)	14.5% reduction* compared to 2018 (based on headquarters data)
	Expansion of sales from sustainable solutions	Proportion of sustainability-related product sales (%)	5.2	16.0**
	Completion of ISO 14001 certification for key business sites***	Number of business sites	8 / 33	19 / 33
Social	Accomplished the goal of 'zero' serious accidents	Number of serious accidents (case)	2	0
	Completion of ISO 45001 certification for key business sites	Number of business sites	4 / 33	19 / 33

*2030 reduction goals pertains to domestic business sites.
**Sustainable solutions include the regen (recycle and bio) product line and regen tech (dope-dyed yarn) product line.
*** Key business sites refer to "manufacturers incorporating sustainable solutions" among the 33 consolidated companies reported in the 2023 annual business report.

Enhancement of Social Responsibility across the Value Chain

Sustainable Solutions Value Chain

Hyosung TNC is a global textile company producing spandex, nylon, and polyester yarns and fabrics, as well as providing dyeing services. As the No. 1 global producer of spandex by market share, we create sustainable value across the textile and clothing industry value chain.



Material Sustainability Topics and Stakeholder Engagement

Material Sustainability Topics

Material Topic Selection Process

Navigate to Stakeholder Engagement

Hyosung TNC selected material sustainability topics through a seven-step process. These topics are crucial as Hyosung TNC interacts with the economy, society (people), and the environment through them. They represent the key tasks to be managed on our path to elevated sustainable management. Hyosung TNC determined material sustainability topics through the engagement of various stakeholders. For key stakeholder demands, 14 customer demands received in 2023 through the ESG Management Team were analyzed. Investor opinions, gathered from corporate IR meetings, included topics such as GHG emissions reduction, sustainable product and technology development, and Board independence and diversity. Additionally, local community opinions were collected from feedback during meetings with regional public institutions. Internal stakeholder opinions, including employees and executives, were considered by analyzing focus group interviews with key department heads responsible for corporate sustainability and management reports.

Step1	Step2	Step3	Step4	Step5	Step6	Step7
Organize Sustainability Issue Pool (A total of 21 issues)	**Take stakeholder interests into account**	**Assess the relevance to business performance**	**Determine priorities through comprehensive analysis**	**Report to the executives and reflect their feedback**	**The Board review and approval**	**Incorporate the topics into sustainability strategies**
Reflection of global sustainability topics, global guidelines, industry issues, and 2023 key internal issues	**Internal** Conducted FGI * (2 sessions) Participation of team leaders (25 people) + **Analysis of reports to management** (78reports)	Conducted FGI Participation of finance and interests related department leaders + Production department leader	Comprehensive analysis of the Steps 1, 2, and 3 Performed by the ESG Management Team	Steps 1, 2, 3, and 4 reported to the ESG Promotion Committee for approval + Reflection of the committee feedback	The Board reviewed and approved Steps 1, 2, 3, 4, and 5 + Reflection of the Board feedback + Determined the material sustainability topics	Incorporated the topics into 2024 sustainability strategies and business plans + Disclosure of the materiali sustainability topic management on the sustainability report
E GHG, climate change, water resources, resource circulation, eco-friendly products, pollutants, chemicals	**External** **Analysis of communication resources by stakeholder** **(Investors)** IR material analysis **(Clients)** Review of the annually registered VOC **(Local Communities)** Review of the local government and industrial complex requirement review	**Review of the relevance of each topic to business performances** **(Environmental)** Eco-friendly products, GHG emissions reduction **(Social)** Expansion of social responsibility across the value chain **(Governance)** Response to laws and regulations	**Comprehensive analysis** Priority of topics selected in Steps 1, 2, and 3 + 2023 Sustainability performances + 2024 Sustainability plans			
S Employee capabilities, safety, diversity, social responsibility across the value chain, product quality, human rights management, local communities						
G Anti-corruption, laws/regulations, fair trade, initiatives, stakeholders, the Board						

*FGI : Focus Group Interview

Material Sustainability Topics and Stakeholder Engagement

Material Sustainability Topics

Material Topic Selection Results

Through the material sustainability selection process, the following 5 topics were selected: ①eco-friendly product and technology development, ②GHG emissions reduction, ③creation of a safe and healthy working environment, ④social responsibility across the value chain (suppliers), and ⑤response to global sustainability laws and regulations. These topics were reviewed in the second half of 2023 by the ESG Management Promotion Committee and received final approval from the Board of Directors in the 4th quarter of 2023.

Area	Material sustainability topic	Materiality analysis	Key stakeholder demands*	2023 Performance	2024 Implementation Plans	GRI Standards
Environmental	Eco-friendly products and technology development	Impact, Risk & Opportunity I Among approximately 92 million tons of clothing waste produced globally, only about 20% is recycled. As a textile company, it is important to take responsibility for resolving this issue. R Loss of market competitiveness and reduction in market share O Position as a leading company in the eco-friendly textile industry	C S Sustainable products and technology development	• 5.2% of sales revenue generation through sustainable solutions	• 7.8% of sales revenue generation through sustainable solutions	301
Environmental	GHG emissions reduction	Impact, Risk & Opportunity I Global fashion industry is responsible for 8-10% of global carbon emissions. As a company operating domestic and overseas manufacturing plants, it is important to take responsibility for carbon reduction. R Enhancement of carbon reduction regulations such as the Emission Trading Scheme and EU Carbon Border Adjustment Mechanism O Enhancement of response capabilities for low-carbon economy	C Disclosure of carbon emissions information and renewable energy use S CM GHG emissions management, RE 100 introduction, and implementation of carbon neutrality	• Reduction of GHG emissions by 146,862 tons compared to the base year (reduction rate of 36.1%) *Based on domestic business sites	• 40% reduction of GHG emissions compared to the base year	302 /305
Social	Creation of safe and healthy workplace	Impact, Risk & Opportunity I As a manufacturing company with a constant risk of safety accidents, taking responsibility for the safety and health of employees is important. R Exposure to the Serious Accident Punishment Act and increased costs for employee retention O Improved productivity and decreased safety accidents	C Acquisition of ISO 45001 Occupational Health and Safety Management System certification for all business sites. S ZERO serious accident	• Reduction of accidental injuries compared to the previous year • ISO 45001 certification renewal (Gumi and Ulsan) and acquisition of PMS Grade S • Implementation of various education and training in accordance with the safety and health legislations	• Operation of accident-free business sites • Establishment of mid- to long-term plans and goals for safety and health • Expansion of the in-house safety culture	403
Social	Promotion of social responsibility across the value chain	Impact, Risk & Opportunity I Demands for resolution of the human rights and environmental issues are increasing across the fashion industry value chain. As a global company, it is critical to take responsibility for cooperative partnership with suppliers in the value chain and fair operation of supply chain. R Confronting challenges such as quality degradation, disruptions in production and delivery, and obstacles to commerce O Improved procurement capabilities and enhanced market competitiveness	C Disclosure of the supply chain environment and human rights related information S Promotion of social responsibility across the value chain	• Establishment and revision of sustainable procurement policies and guidelines • Upgrade of the eco-friendly raw material performance management system • Implementation of the supply chain risk management education • Supplier risk management assessment and mitigation	• Revitalization of the sustainable product procurement system • Revitalization of supplier risk identification and mitigation process	308 / 414
Governance	Response to global sustainability laws and regulations	Impact, Risk & Opportunity I Responding to regulations that could significantly impact corporate value is critical. R Decline in corporate reputation and risk of legal disputes O Enhancement of global corporate value through measures such as risk mitigation and expansion of business opportunities	C Response to ESG evaluation S Composition of the Board with independence, diversity, and expertise	• Establishment of the risk mitigation implementation framework to respond to supply chain due diligence laws • Expansion of sustainable solutions to respond to environmental regulations in the textile industry	• Identification and implementation of improvement tasks to establish a world-leading sustainability management system	Non-GRI

*Key stakeholder classification: (C) stands for customers, (S) for shareholders, and (CM) for local communities

Eco-friendly Products and Technology Development

Why So Important?

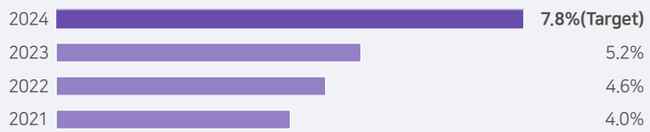
Hyosung TNC fully recognizes that the global fashion industry generates significant impact across the value chain. It is imperative to obtain sustainable raw materials, as raw materials are responsible for a substantial portion of the environmental impact of fashion and clothing brands. As a global company that supplies raw materials to the fashion and clothing industry, Hyosung TNC clearly recognizes the significance of providing certified sustainable raw materials.

Our Approach

Every year, Hyosung TNC creates new eco-friendly products and technology in an effort to increase the share of revenue from sustainable solutions to 16.0% of sales of all yarn products by 2030.

Our Achievement

• Proportion of the sales revenue from sustainable solutions



2023 Sustainable solution sales revenue increased by 13% compared to the year before

「Sustainable Solutions」

In order to convey the competitiveness of eco-friendly products to stakeholders in a clear and effective manner, Hyosung TNC described certain products as 「Sustainable Solutions」 based on the EU Taxonomy, K-Taxonomy, government eco-friendly certification, etc.

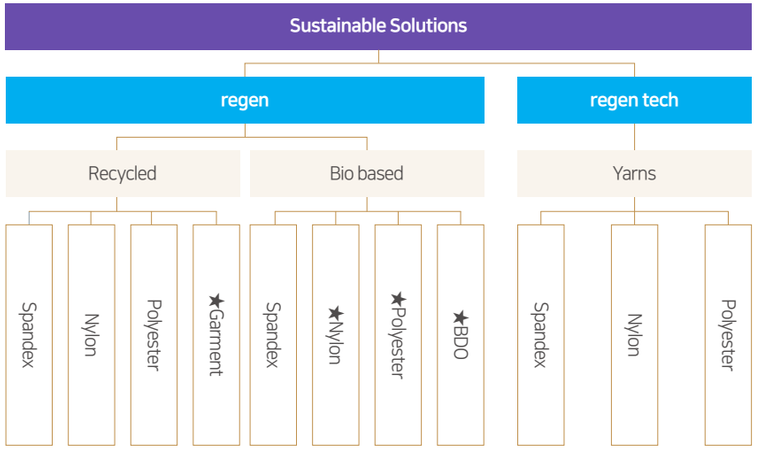
「Sustainable Solutions」 are classified into two product categories.

regen

regen is a group of manufactured products using recycled materials (recycling of waste PET and fishing nets, as well as waste from processing, etc.) or a group of manufactured products using renewable bio-based materials. The regen product category has been confirmed to reduce carbon emissions compared to conventional fossil-based products through Life Cycle Assessment (LCA).

regen tech

regen tech is a group of products that can contribute to reducing negative environmental impact through the reduction of carbon emissions, water consumption, etc. in the production process of our clients.



Items with ★ are sustainable solution products currently in development.

Governance

Decision-making and Implementation Framework

CEO	Decision-making on sustainable solutions sales strategies and related agendas
Business units (Marketing and Sales)	Establishment of strategic goals for sustainable solutions Reporting on sustainable solutions sales revenue

Navigate to R&D governance

2023 Key Decisions
• Expansion of the Zhuhai Plant production line and the establishment of new factories in Vietnam and Quzhou to increase the production of recycled products.
• Establishment of the sustainable solutions sales revenue target (Expansion by 16% of revenue from all yarn materials until 2030)

Strategies and Goals

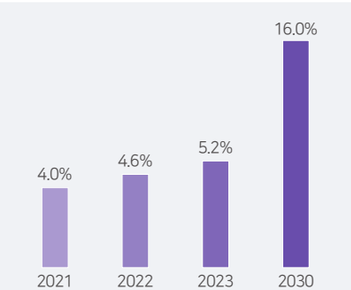
Implementation Strategy

Hyosung TNC plans to continuously expand sustainable solutions to minimize the environmental impact of the textile industry. Accordingly, we have established a goal for sustainable solutions, including recycling and bio-based products, to achieve 16% of sales revenue from total yarn production revenue. To accomplish this goal, we have adopted the following strategies: First, we have decided to construct additional overseas plants for recycled products. Starting in July, we expanded production at existing plants in China and began production of recycled products at the Quzhou and Vietnam plants. Second, we have expanded R&D to secure portfolios for sustainable solutions and implemented the development and commercialization of bio-based products which, like recycled products, contribute to minimizing environmental impact. Third, we have started the review process for technologies needed to commercialize products recycled from Textile to Textile, as circularity is the final goal of the sector.

Key Strategy

- Expanding overseas facilities for the production of recycled products.
- Expanding R&D to secure a portfolio of sustainable solutions.
- Promoting the development and commercialization of bio-based products using renewable materials.
- Initiating technical reviews for the commercialization of textile-to-textile recycling products.

KPIs



Eco-friendly Products and Technology Development

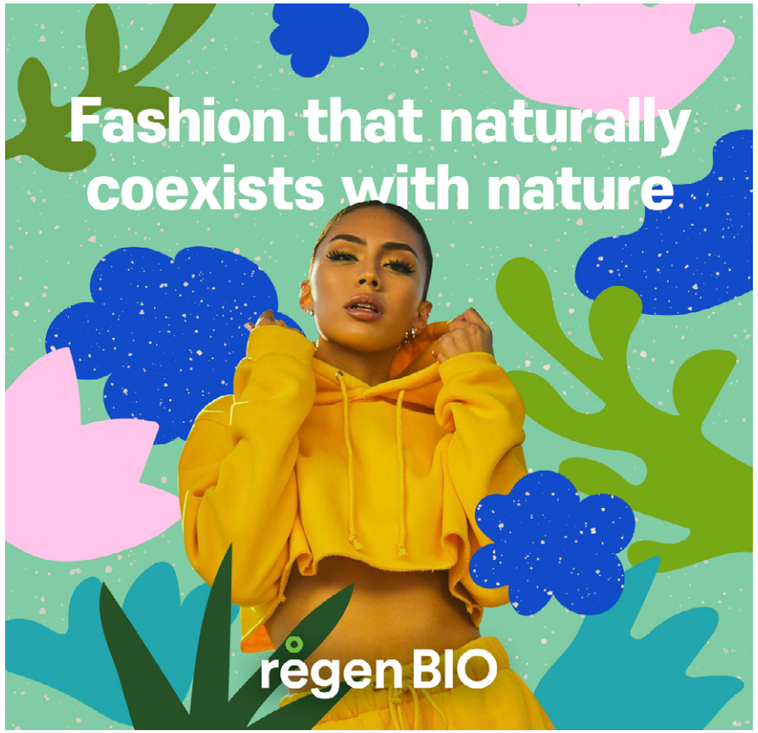
regen

regen Spandex Compsed of 100% Recycled Waste Generated During the Manufacturing Process

regen Spandex is a 100% recycled spandex product made from reclaimed waste from our manufacturing process. regen Spandex has achieved RCS (Recycle Claim Standard) certification, and third-party LCA assessment results indicate that it reduces carbon emissions by approximately 66% compared to manufacture of conventional spandex.

regn Bio Spandex Composed of Renewable Bio-based Materials

Conventional spandex manufactured from fossil fuels emits substantial GHG emissions during the raw material production. In 2022, Hyosung TNC introduced a solution to tackle this problem by launching a bio-based spandex incorporating 30% of its raw ingredients sourced from fermented sugars obtained from corn. In 2023, we expanded the range by launching a product that increased the proportion of these bio-based raw materials to over 70% of its total content, providing a sustainable solution.



According to a third-party LCA, regen Bio Spandex is capable of reducing carbon emissions by 20% compared to the manufacture of existing spandex. In appreciation of this performance, it was granted the SGS ECO-Product label in 2022, which is awarded to products that reduce environmental impact throughout their lifecycle.
The main raw material for spandex, PTMG (polytetramethylene glycol), is composed of BDO (butanediol), which Hyosung TNC has been acquiring from outside sources. In a significant move for the industry, Hyosung TNC intends to establish a bio-BDO production plant in Vietnam in 2026 as a proactive measure to cope with the global materials market's transition to eco-friendly products. With this approach, Hyosung TNC will establish the world's first and only integrated global spandex production system. We plan to start production with an annual capacity of 50,000 tons and expand it to 200,000 tons in the future.

‘regen Nylon’ Composed of Recycled Manufacturing Waste

Hyosung TNC has been recycling waste from textile processing to produce the eco-friendly yarn, ‘regen Nylon.’ According to LCA results, using manufacturing waste to make regen Nylon helps to reduce carbon emissions by 93% compared to existing nylon products.

‘regen Ocean Nylon’ Derived from Recycled Fishing Nets

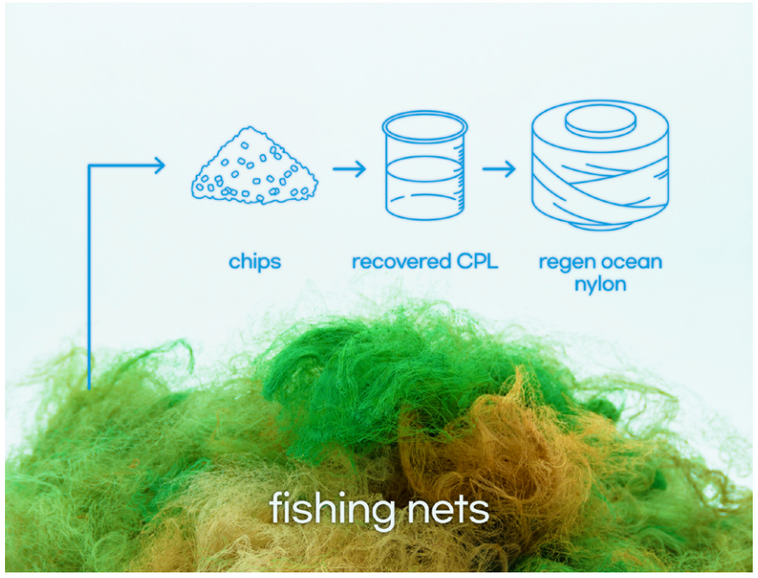
In 2007, Hyosung TNC developed regen Ocean Nylon as the first company in the world to offer post-consumer recycled nylon made from reclaimed fishing nets. Known as ‘ghost nets,’ these discarded nets are a major contributor to marine plastic pollution. Instead of incineration, these fishing nets underwent chemical recycling to be transformed into high-quality nylon yarn.
LCA results indicate that regen Ocean Nylon reduces carbon emissions by 73% compared to manufacture of existing nylon.

Eco-friendly Products and Technology Development

regen

‘regen Polyester’ and ‘regen Ocean Polyester’ Produced with Waste PET Yarns

regen Polyester is a 100% recycled polyester that has acquired GRS (Global Recycled Standard) certification, produced with collected waste PET bottles. LCA results have shown that regen Polyester reduces CO2 emissions by 67% per ton of production compared to production of standard polyester.
regen Ocean Polyester is an OBP (Ocean Bound Plastic)-certified product produced by waste PET bottles collected within 50km of the coast. This approach helps to minimize the amount of waste PET entering the ocean, thereby preventing damage to the marine ecosystem.



regen tech

Dope-dyed Yarn without the Need for Dyeing Process

Hyosung TNC developed a yarn that reduces water consumption in the textile-dyeing process, which traditionally requires a significant amount of water. The production of dope-dyed spandex, nylon, and polyester yarn with specific colors eliminates the need for a separate dyeing process. This contributes to reducing water consumption and minimizing wastewater from the process.

Clean Tech

Hyosung TNC is developing Clean Technology in two main directions: resource recycling technology and product development utilizing bio-based raw materials.

Resource recycling technology retrieves waste from end-users or upgrades the waste generated during manufacturing into polyester and nylon chip yarn. Regen Nylon, regen Ocean Nylon, regen Polyester, regen Ocean Polyester, etc., are representative products utilizing resource recycling technology.

Product development utilizing bio-based raw materials replaces chemicals derived from fossil fuels with plant-derived materials to develop eco-friendly textile yarn. This measure enables efficient and sustainable use of resources to reduce resource depletion and environmental pollution. A representative Hyosung TNC product is regen Bio-based Spandex.

Garment recycling is a technological process that involves gathering and sorting used garments and fabric remnants, depolymerizing and purifying the nylon and polyester materials, and reproducing them into new yarn.
regen Bio-based Nylon and Polyester are currently under development. These eco-friendly products reduce carbon emissions by using plant-based materials such as corn and sugar cane.

Bio-BDO is an eco-friendly product that substitutes the conventional fossil-derived elements in BDO with renewable bio-based materials sourced from plants, thereby reducing its environmental impact.

Hyosung TNC uses its exclusive technology to ferment raw sugar derived from sugarcane to produce this product. It is expected to be available for commercial purchase in early 2026. Bio-BDO is used as a raw material in PTMG (polytetramethylene glycol), TPU (thermoplastic polyurethane), and PBAT (polybutylene adipate terephthalate), which are essential for the production of spandex and other products
Hyosung TNC allocates annual investments towards R&D for the development of eco-friendly technologies. Major R&D achievements related to sustainable solutions are as follows:

Classification	Research performances
Spandex	• Development of bio-based spandex
Nylon/Polyester	• Development of high-blackness dope-dyed polyester yarn and nylon grey yarn • Development of high-strength solution-dyed nylon green yarn • Development of recycled flame-retardant polyester yarn • Development of nylon chemical recycling technology • Development of biodegradable recycled PET yarn • Development of 100% recycled raw material dope-dyed black and white yarn

GHG (Greenhouse Gas) Emissions Reduction

Why So Important?

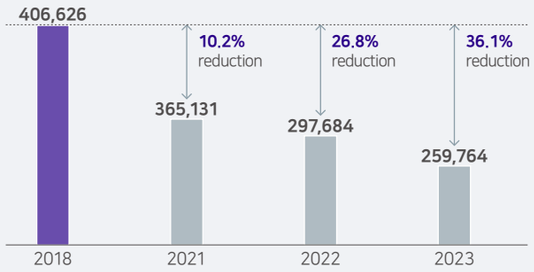
Currently, there is increasing demand for sustainable fashion due to issues such as resource shortages and the climate crisis. The fashion industry worldwide is accountable for 8–10% of global carbon emissions. Hyosung TNC therefore acknowledges the need to enhance measures for GHG reduction.

Our Approach

Hyosung TNC has been minimizing GHG emissions across corporate activities through 3 key implementation strategies in accordance with the Hyosung Group's common goal of 'GHG emissions reduction by more than 14.5% compared to 2018 by 2030.'

Our Achievement

- **Reduction rates over a three-year period in comparison to the baseline year (2018):**



Governance

Decision-making and Implementation Framework

Board of Directors	Final decision-making and approval of climate change agendas
ESG Management Promotion Committee	Deliberation and approval of agendas and inspection of implementation performances
Plant manager by business site	Agenda selection and discussion as well as approval of reduction investment (below KRW 50 million)
ESG Management Team	Establishment of reduction strategies and disclosure of reduction performances
Operational organizations	Development of reduction projects and implementation of reduction task improvement

Governance	Event Schedule				Members
	Q1	Q2	Q3	Q4	
Board	28 Apr.	28 Jul.	27 Oct.	31 Jan.	Independent Director (3), Inside Director (4)
ESG Management Promotion Committee	-	30 Jun.	-	28 Dec.	CEO (1) Members (10)
Report	Environmental policy promotion and enactment (Environmental management, deforestation prevention, and biodiversity)				
	Reporting the sales of remaining GHG allowances of 50,000 tons in 2022				
	Implementation of biodiversity (Seagrass forest) conservation activities and signing an MOU with the Ministry of Oceans and Fisheries for the "Blue Carbon Project to Preserve Marine Biodiversity"m				
	Report on 2023 environmental management performances (water quality, air, waste, water consumption, etc.) and 2024 plans for Gumi, Ulsan, and Daegu				
	Evaluation results from key ESG rating institutions inside and outside of the country and 2024 improvement tasks (a total of 44 tasks: 15 environmental, 14 social, and 15 governance tasks)				
	Report on key environmental issues related to climate change - Status and response plans for the Carbon Border Adjustment Mechanism : Obligation to submit quarterly reports during the transition period : Action plans (preparing reports through steel-importing companies)				
Approval	Scope of GHG emissions report for subsidiaries and establishing a dedicated department to oversee GHG emissions - Targeting subsidiaries that generate 92% of the total revenue - Assignment of GHG manager and identification of energy consumption by emission facility for GHG emissions calculation				

Strategies and Goals

GHG Reduction Strategies and Goals

In 2023, Hyosung TNC established 3 key implementation strategies to accomplish the GHG reduction goal of 'GHG emissions reduction by more than 14.5% compared to 2018 by 2030' which was established in 2021 under Hyosung Green Management 2030.

- Establishment of a company-wide GHG management system
- Promotion of GHG reduction initiatives at business sites
- Expansion of renewable energy consumption

Hyosung TNC plans to establish a GHG management system for domestic business sites and overseas subsidiaries worldwide. This includes setting global reduction targets and developing a mid- to long-term roadmap for achieving those targets. We recognize the challenges in reducing GHG emissions across Hyosung TNC solely through energy-saving activities at business sites. Therefore, Hyosung TNC intends to explore a variety of direct emission reduction strategies, including the transition to eco-friendly fuels and the purchase of eco-friendly vehicles. For electricity consumption, which accounts for more than 70% of GHG emissions, we will promote the expansion of renewable energy use through various transition measures such as the Power Purchase Agreement (PPA) and the Renewable Energy Certificate (REC).

GHG Reduction KPI

Hyosung TNC has incorporated sustainability management KPI into the performance plans of employees. Accordingly, employees in departments related to GHG, including C-Level executives, team leaders, and team members, set annual KPIs and receive financial incentives based on the results.

Relevant departments	sustainability KPIs
Business Management Team	GHG emissions and reduction management and response to carbon emissions-related assessments (CDP, TCFD)
Environmental and Safety Management Team	Number of environmental regulation violations and metrics for the management of environmental impact reduction (Amount of waste, waste recycling proportion, water/air pollutant emissions, etc.)
Production Support Team, Technology and Utility Team	Energy consumption and reduction amount management
ESG Management Team	Publication of Sustainability Report, Response to ESG grading institutions (KCGS), and holding meetings of the ESG Management Promotion Committee (quarterly)

GHG (Greenhouse Gas) Emissions Reduction

Establishment of a Company-wide GHG emissions Management System

Domestic GHG Emissions Management

Hyosung TNC was designated as a target company for the Korean Emissions Trading System in 2018. We have been providing the government with annual reports on Scope 1 and 2 emissions as well as energy consumption of our domestic business sites after third-party assessment.
Since 2022, domestic Scope 3 emissions have also been calculated, externally assured, and disclosed for 7 out of 15 categories. Our future plans involve expanding the range of Scope 3 emission calculations by obtaining activity data for the remaining 8 categories and implementing confirmed procedures.

Overseas GHG Emissions Management

Since 2023, Hyosung TNC has established organizations to manage ESG data in overseas subsidiaries within the scope of our sustainability report to calculate Scope 1 and 2 GHG emissions by overseas subsidiaries.
To enhance the reliability of the data, Hyosung TNC plans to provide GHG calculation education for responsible personnel in subsidiaries and gradually implement third-party assessment for the collected data.
We plan to establish an autonomous GHG management capability for each overseas business site in the long term.

Classification		2021	2022	2023
Scope1	Domestic	94,746	84,199	70,923
	Overseas	-	188,786	232,411
Scope2	Domestic	270,385	213,485	188,841
	Overseas	-	744,392	883,681
Total		**365,131**	**1,230,862**	**1,375,856**
Scope3*		**-**	**1,610,264**	**1,121,529**

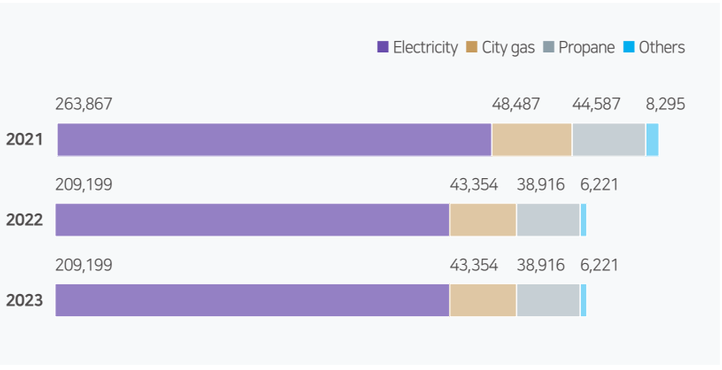
*Scope 3 emissions are calculated for only 7 out of 15 categories, with the calculation scope limited to domestic business sites.

Promotion of Business Site GHG Emissions Reduction Initiatives

Hyosung TNC establishes and implements annual investment plans for the introduction of high-efficiency energy equipment to reduce energy consumption and GHG emissions at business sites, monitoring the implementation performance.

Classification	2021	2022	2023
Investment cost (KRW million)	99	293	636

Hyosung TNC is committed to continuous GHG reduction by investing in low-power equipment, enhancing the efficacy of process and utility facilities and maintaining equipment to minimize energy waste.



[Energy Reduction Case]
By replacing the low-pressure compressor that supplies compressed air for the yarn chip transport process at the Gumi Plant with new equipment, we can achieve annual power savings of 880 MW. This reduction is accomplished by cutting down on power consumption, replacing the old air compressor, which had reduced compressed air output capacity from extended operation, with new equipment.

Unit consumption and flow rate before and after replacement

Classification	Unit	Before replacement	After replacement	Difference
Unit consumption	KW/Nm^3	0.104	0.095	▲0.009
Flow rate	Nm^3/hr	10,000	11,159	1,159

* Power consumption reduction: 11,159Nm^3 x (0.014 - 0.095)KW/Nm3 x 24HR x 365 Days = 880MW/Year

Renewable Energy Use

Hyosung TNC obtains waste incineration heat, categorized by domestic standards as renewable energy, from a nearby municipal waste incineration plant. We reduced GHG emissions by 405 tons in 2023 through using this waste heat instead of the previously used LNG.
Hyosung TNC will promote the transition to renewable energy for the power consumption that accounts for over 70% of GHG emissions, by exploring various renewable energy transition measures such as PPA and REC.

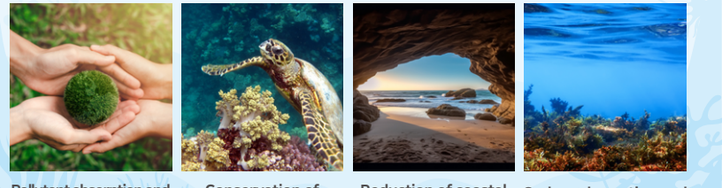
LCA Implementation

Hyosung TNC aspires to produce sustainable solutions by assessing the environmental impact of products throughout their entire lifecycle. We conduct Life Cycle Assessment (LCA) to analyze the environmental impact of each phase. Hyosung TNC implemented LCA for a total of 8 products, including traditional, recycled, and bio-based spandex, nylon, or polyester products and received the third-party assurance upon the LCA results. According to the certified results, production of recycled and bio-based products has a greater impact on reducing GHG emissions than conventional products.

Conservation Activities for Marine Forest, a Carbon Sink

Hyosung TNC established a fund for the recovery of marine ecosystems that are damaged by climate crisis and marine pollution. In 2023, we collaborated with the Ministry of Environment and the Korea Fisheries Resources Agency to protect the marine forest that serves as a carbon sink and to plant seagrass.
The 2023 annual activity report states that 1.43 tons of carbon were fixed annually as a result of the climate activities. Hyosung TNC plans to promote seegrass planting activities involving employee participation every year.

The functions of seagrass as an underwater carbon purifier



GHG (Greenhouse Gas) Emissions Reduction

Climate Change Risk Management

Navigate to participation in global initiatives for response to climate change

Climate Change Risks and Opportunities

Hyosung TNC proactively manages climate change risks by identifying internal and external risk factors and promptly responding to them. Climate change risks include transition risks and physical risks.

Risk type			Period	Financial impact	Action plan
Transition risks	Policy and legal	Enhanced GHG-related laws and regulations	Mid- to long-term	• Increase in costs for emission allowances • Increase in costs associated with GHG emissions liabilities • Increase in the amount of carbon tax	• Implementing energy saving and performance monitoring at business sites • Establishing GHG reduction targets and monitoring performances (GHG reduction of more than 14.5% by 2030 compared to 2018)
	Technology	Eco-friendly technologies for GHG emissions reduction	Mid- to long-term	• Increased R&D expenses for eco-friendly technology development	• Development of eco-friendly material- based textile technologies
	Market	Increased demands for GHG emissions reduction by clients	Mid- to long-term	• Decrease in sales revenue of products and services due to unfulfilled customer demands	• Development and expansion of eco-friendly products incorporating low-carbon technologies • Establishment of mid- to long-term strategies for eco-friendly products Raising the proportion of eco-friendly products to 16.0% among all textile yarns by 2030)
	Reputation	Increased investor interest in efforts to respond to climate change	Mid-term	• Decrease in investment due to lower ESG ratings	• Expanding the disclosure of internal and external sustainability information (activities and performances) • Acquisition of official certifications (GRS, OBP, ISO, etc.)
Physical risks	Acute	Heatwaves, typhoons, hurricanes	Long-term	• Increased power consumption for production facilities due to temperature rise • Decrease in product quality due to flooding and leakage	• Reducing power consumption through the efficiency-improvement of manufacturing facilities • Supplementary investments in preparation of abnormal weather conditions
	Chronic	Rise of average temperatures	Long-term		

Climate Change Scenarios

Scenario type	Scenario analysis scope	Temperature change applied to scenarios	Analysis details
Revision of Korea's 2030 NDC and 2040 Carbon Neutrality Scenario	Corporate-wide	1.6ºC – 2ºC	Hyosung TNC analyzed Korea's 2030 NDC and 2050 Carbon Neutrality Scenario. According to the scenario, energy demands in 2050 in the sector where Hyosung TNC belongs are expected to be 139.3 million TOE, which is similar to 148.7 million TOE in 2018. Furthermore, a total amount of GHG emissions is expected to be 51.1 million tons, which is a reduction of 80.4% compared to 260.5 million tons in 2018. This reduction is expected due to the replacement of a considerable amount of fossil fuels with electricity among the final energy sources in the sector, as part of the carbon neutrality implementation process. Hyosung TNC conducted regression analysis of energy consumption, sales trends, and economic growth rates to forecast the absolute amount in the future. Accordingly, we primarily set the corporate-wide goal of a 14.5% GHG reduction by 2030 compared to 2018, which aligns with the sector target provided by the 2030 NDC. We plan to accomplish the 2050 carbon neutrality scenario's sector goal through additional scenario analysis and the establishment of transition plans.
High-carbon Scenario (RCP 8.5*) provided by the Korea Meteorological Administration	Corporate-wide	4.7℃ (based on the Korean Peninsula in the year 2100)	The extreme climate change predicted in RCP 8.5 can cause various accidents and issues such as property damage and human suffering, product loss and degradation, and deterioration of product quality in Hyosung TNC's business areas. In particular, quality issues such as dyeing changes induced by flooding and leakage could result in financial impacts, given the characteristics of the 'yarn' products we produce. Therefore, an active response based on scenario analysis is required. We acknowledge climate change as a significant concern and have established a goal to reduce greenhouse gas emissions by 14.5% by 2030 compared to 2018 levels, contributing to the reduction of global warming to mitigate expected damage under the RCP 8.5 scenario. We will implement reduction targets for 2030–2050, continuously monitoring national reduction scenarios and GHG emissions, and actively participate in international efforts to reduce GHG emissions.

* RCP 8.5 (Representative Concentration Pathways) is a scenario in which GHG emissions persist at their existing rate.

Healthy and Safe Workplace

Why So Important?

Access to health and safety are fundamental human rights and are essential rights of workers. Hyosung TNC is accountable for the safety and health of workers as a company operating manufacturing facilities where employees and various partner companies work together.

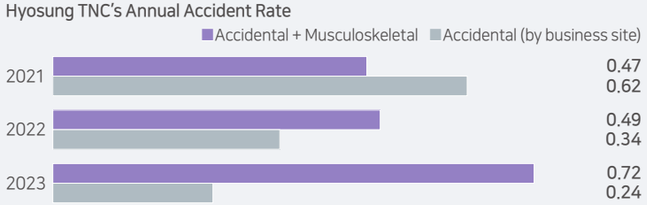
Our Approach

Hyosung TNC has established a safety management vision of "creating a workplace where accidents are impossible" and developed the 'Safety, Health, and Environmental Management Guidelines.' We have also set specific goals and strategies for implementation and actively practice them.

Our Achievement

- Safety and health certification acquisition and renewal for Gumi and Ulsan plants
  :ISO 45001 renewal and acquisition of PMS S Grade
- 100% implementation of legal education and training for safety and health
- Improvement of obligatory safety and health-related regulations implementation rate
  : 65% (first half of 2022) → 84%(second half of 2023)

Hyosung TNC's Annual Accident Rate



*Accident Rate: (Number of Injured Workers / Average Number of Workers per Year) X 100

Governance

Decision-making and Implementation Framework

Hyosung TNC has designated a CSO (Chief Safety Officer) under the direct supervision of the CEO and organized a dedicated safety and health department. The Board receives reports on safety and health-related policies and gives approval. The CEO oversees safety and health matters at Hyosung TNC and reports relevant plans to the Board. The CSO, directly under the CEO, is the chief safety officer. The Safety and Health Team, directly accountable to the CSO, is dedicated to safety and health issues and oversees related tasks. The chief of each business site's safety and health is responsible for the overall safety and health of the respective site. Relevant departments, such as the Environmental Safety Team, are responsible for the establishment, operation, and management of safety and health plans at each business site.

2023 Board Safety and Health Agendas
- 2023 Safety and health plans
- Safety accident and inspection status

Strategies and Goals

Implementation Strategies

Hyosung TNC operates a mid- to long-term road map to establish and accomplish safety and health vision and goals. Additionally, we have established the 'Safety, Health, and Environmental Management Guidelines' to prioritize safety, health, and the environment as critical values of corporate activities.

Vision	Creating a workplace where accidents are impossible			
Goals	ZERO serious industrial accidents	Organizational culture of "No work without safety"	Establishing an advanced autonomous safety and health management system across all business sites	Enhancing responsibility and emergency response capabilities by business site

2030 Safety and Health Roadmap

The goal of Hyosung TNC's mid- to long-term safety and health roadmap is to gradually lower the integrated frequency rate among our employees and those of our partner companies. It also aims to detect and improve hazardous aspects through the voluntary participation of all members, ultimately incorporating global-level safety and health awareness.

Year	~2023	~2024	~2026	~2030
Major task	• Establishment of a safety and health management system in compliance with legal requirements • Maintaining and managing safety and health system certifications (ISO 14001/45001) • Improvement of risk assessment levels • Operation of collaborative partnership projects	• Self-regulatory prevention system establishment → TBM* activities for hazardous risk factors • Enhancement of risk assessment contents → Specialized training for supervisors • Expansion and support of collaborative partnership projects → Support for hazard and risk assessment and identification of risks for In-house sub-contractors and construction companies	• Embedding a self-regulatory prevention system • Establishment of a global safety and health consultation body (including overseas subsidiaries) • Supporting safety and health management improvement for in-house sub-contractors and construction companies	• Incorporation of a global-level safety management awareness • Establishment of a safety management system for overseas subsidiaries • Enhancing the safety and health management system through the autonomous participation of all employees and partner company members.

*TBM: Tool Box Meeting
**Integrated frequency rate: Integrated standard for all employees and partner company members (Number of incidents/Total annual working hours x 1,000,000)

Healthy and Safe Workplace

Safety and Health System Enhancement

Incorporation of Safety and Health KPI into Human Resources System

Hyosung TNC aligns the performance evaluation results for safety and health personnel with the human resources system. The performance indicators for supervisors and the chief officer of safety and health reflect a 15% weight of the diligence in performing safety and health tasks.

Safety and Health Certification

Hyosung TNC operates safety and health management system for industrial accident prevention and compliance with safety and health laws. Additionally, we undergo yearly external audits to uphold our certification.

2023 Certification Status

Gumi Plant Nylon-Polyester Business Site
Gumi Plant Spandex Business Site
Ulsan Plant Nylon-Polyester Business Site

ISO 45001: Under maintenance
PSM Grade: S

Health Promotion System

Hyosung TNC operates a variety of health systems to promote the health of our employees and the employees of partner companies working at our business sites.

Health promotion program
- Brain and cerebrovascular disease prevention program
- Operation of health funds for obesity, smoking, and serious diseases

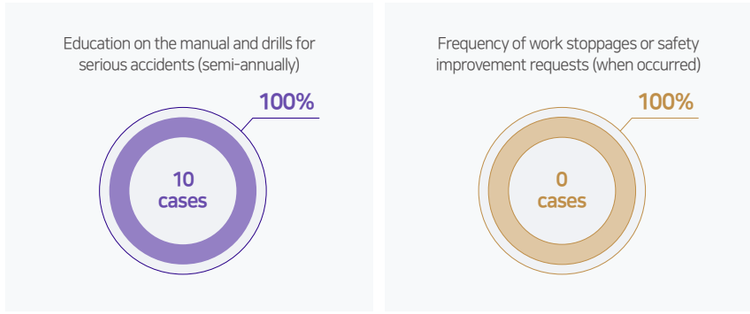
Worker health checkup
- Operation of health management room
- Special, temporary, and occasional health check-ups

Workplace management
- Musculoskeletal disease management program
- Confined space work management
- Auditory preservation program

Right to Safety First Work (Worker's Right to Stop Work)

Hyosung TNC implements a system that prioritizes workers' rights to safety. All employees and in-house partner company workers working in high-risk operational sites can exercise their right to stop work and request safety improvements.

Performance vs Plan



Safety and Health Awareness Improvement

Safety and Health Education and Training

In addition to legal safety education, Hyosung TNC provides a diverse range of safety and health education and training.

Classification	Details
Legal safety education	• Regular semi-annual safety education (6 hours for office workers and 12 hours for non-office workers) • Training provided when job description changes (2 hours) • Onboarding training for new employees (8 hours) • Supervisor education (annual 16 hours) • Special education (16 hours)
Employee safety and health education and training (other than legal education)	• Emergency response training • In-house firefighting training • Education on safety management for chemical substances and hazardous materials • CPR training for managers
Other safety education	• Risk assessment education • Joint public-private training (e.g., fire department joint drills)

Safety Promotion Activities

Hyosung TNC implements varied safety promotion activities to support a safety culture among workers.

PSM booklet	Production of a PMS booklet based on the 'Safety, Health and Environmental Management Guidelines' and distribution
Risk information distribution manual	Distribution of a manual for business partners within the Gumi Plant in charge of construction on hazards information within the plant
Safety campaign	Promotion of safety principles through measures such as chanting safety slogans carried out by team leaders, office workers, section leaders, and the partner company CEOs
Safety and health resolution meeting	Safety pledge and discussion of risk improvement for Zero serious industrial accidents
Reward system for gaining safety-related qualification	Rewarding and providing educational cost for members who acquired certification related to environment and safety (7 certifications acquired by 6 people in 2023)

Healthy and Safe Workplace

Workplace Environment Improvement

Safety Inspection Activities

Hyosung TNC mitigates potential risks through different levels of safety inspection activities.

Activity title	Cycle	Details	Number of detected risks (case)	Improvement rate (%)
Joint Safety and Health Inspection (Top Patrol)	Quarterly	Safety and health inspection and improvement of plants and sub-contractor working areas	57	100
SNS Safety Reporting (Safety Inspector)	Occasional	Environmental Safety Team directly requests corrective actions from the pertinent department when on-site workers report hazardous risk factors directly via SNS	19	100
Environmental Safety Patrol	Daily	The Environmental Safety Team conducts daily patrols to ensure the safety of the environment, fire protection, chemical substances, etc.	291	100
Autonomous Team Inspection	Monthly	Under the supervision of each team leader, safety and health inspections and the identification and enhancement of issues in the area are conducted.	449	100

Safety Improvement Activities

To address safety accidents detected through safety inspections, Hyosung TNC performs improvement activities. We conduct risk assessments and establish and implement mitigation measures to identify hazardous risk factors in the workplace. In 2023, the Gumi Plant identified 45 significant risk factors and achieved a 100% improvement rate. Furthermore, we consistently evaluate risks and disseminate these evaluations to the field through process TBM* activities.

*TBM (Tool Box Meeting): A pre-work gathering led by the team leader wherein employees congregate close to the site to discuss the day's assignments and safe work practices.

Attending to Business Site Feedbacks

Hyosung TNC convenes quarterly Industrial Safety and Health Committee meetings for business sites with more than 100 full-time employees to gather on-site feedbacks. For workplaces with fewer than 100 full-time employees, we conduct monthly internal feedback sessions. Additionally, we operate a monthly safety and health consultative body for partner companies, which collects and addresses partner company employees' needs across all business sites. Improvements based on feedback from the field in 2023 included the addition of items to health examinations, notification and encouragement of missed checkups, and advice for preventing fires and cold-related illnesses in the winter.

Expansion of Smart Safety Management System Application

Hyosung TNC has been continuously introducing and increasing advanced safety equipment to prevent safety accidents at plants. We have added more safety features such as fence lights, blue lights, and forklift line beams, to prevent collisions. Additionally, mobile CCTVs have been deployed to monitor dangerous areas.

Enhancement of Fire Safety Activities

Hyosung TNC has been actively conducting fire prevention and safety activities to protect safety of workers.

Activity title	Inspection details
Firefighting Facility Improvement	Installation of fire-monitoring CCTVs, enhancement of fire alarm system integration, supplementation of fire resistance in HVAC ducts, enhancement of automatic fire detection system function, etc.
Diagnosis by Professional Fire Safety Agency	Inspection through specialized companies for fire operation and comprehensive functioning and implementation of improvement measures following the inspection results (In 2023, Gumi Plant received and implemented 163 improvement recommendations, achieving a 100% improvement rate.)
Training by Fire Consultant	Education for fire prevention and suppression through various fire accident cases
Fire Drills	Joint training with the local fire station and the in-house fire brigade, based on fire scenarios, conducted at the hazardous materials outdoor tank storage area of the polyester polymer recovery building.

Safety Management for In-house Partner Companies

Operation of Safety and Health Consultative Body

Hyosung TNC conduct a monthly in-house partner company consultative body in compliance with Clause 1 of Article 64 (Preventive Measures for Industrial Accidents due to Subcontracting) of the "Industrial Safety and Health Act." This facilitates the efficient operation of our partner companies and the exchange legal information regarding environmental, safety, health, and fire protection.

Safety and Health Mentoring System

Hyosung TNC implement a safety and health mentoring system that designates safety management personnel to each in-house partner company to provide guidance on safety-related matters.

Collaborative Partnership Program with SME Partner Companies

Hyosung TNC provide support programs for SME partner companies to foster mutual development and co-prosperity. In 2023, we provided financial assistance to 17 partner companies within our workplace community to cover the costs of their safety and health management agencies.

Safety and Health Ideas and Best Practices Contest

Hyosung TNC solicit safety and health ideas, as well as "near miss" incident occurrences and prevention cases, to establish a safety culture focused on voluntary communication and on-site participation. These ideas are then incorporated into improvement activities.

Award for Outstanding Safety and Health Partner Companies

Hyosung TNC present awards at the end of the year to outstanding partner companies for safety and health on a quarterly and semi-annual basis. Additionally, we annually acknowledge exceptional in-house subcontractors and construction companies that have significantly contributed to the prevention of safety incidents to foster a voluntary safety and health culture.

Outstanding Partner Awards for FY 2023

Gumi Plant	• 15 In-house sub-contractors and 7 construction companies
Ulsan Plant	• 11 In-house sub-contractors and 16 construction companies

Promotion of Social Responsibility across the Value Chain

(Expansion of Collaborative Partnership and Supplier Sustainability)

Why So Important?

Companies generate social and environmental impact throughout their value chains, and improving supply chain sustainability is essential for all companies pursuing sustainability. As a global company working with 1,205 domestic and international suppliers, it is crucial for Hyosung TNC to promote socially responsible management practices throughout the entire value chain, including the supply chain, on its path to sustainability.

Our Approach

Hyosung TNC implements shared value, fair trade, and collaborative partnership programs to promote social responsibility across the value chain. Additionally, we conduct ESG risk assessments and management to prevent ESG risks and proliferate sustainability within the value chain.

Our Achievement

·2023 Hyosung TNC Collaborative Partnership Activities

Value chain - Supported 69 SME partner companies

Local communities - Supported 6 regions

·2023 Supplier Sustainability Expansion Activities

- 86 companies underwent ESG risk assessments, and 26 were required to take corrective actions.

  Navigate to collaborative partnership with local communities
- 51 Companies signed the Fair-Trade Agreement.
- 23 companies newly signed the Supplier Code of Conduct
- Established the supplier ESG risk assessment and management process.
- Established a performance management system for supplier eco-friendly purchases.

Collaborative Partnership Governance

Decision-making and Implementation Framework

Navigate to Collaborative Partnership Process

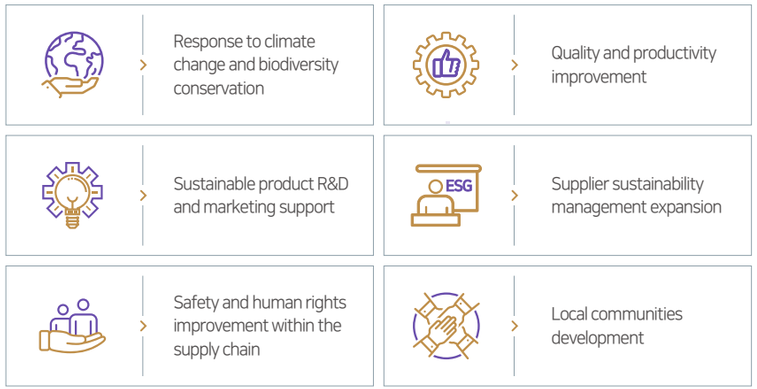
Hyosung TNC is shaping a sustainable value chain through collaboration with SME partner companies. We identify the needs of partner companies and continuously support projects to realize collaborative partnerships. Furthermore, the monthly Collaborative Partnership Deliberation Committee reviews the feasibility of business agendas and reports deliberation results to quarterly Board meetings.

Navigate to 2023 Deliberated agendas

Collaborative Partnership Strategies and Goals

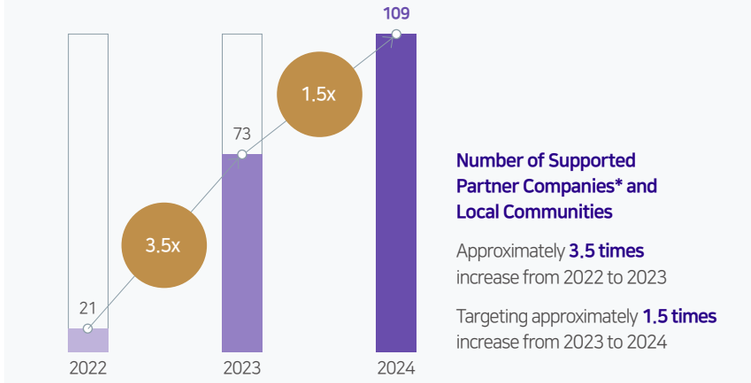
Promotion Strategies

Collaborative partnership strategies and goals are in line with Hyosung's overall strategies



Navigate to Hyosung's collaborative partnership across the value chain

2023 Collaborative Partnership Performances



In 2022, Hyosung TNC implemented a collaborative partnership support project that focused on 21 critical partner companies. The support initiative was expanded in 2023 to encompass 69 partner companies and 6 local communities, covering a broader range of themes and participants. We intend to review the characteristics and feasibility of projects by topic to further categorize collaborative partnership support projects in 2024.

We plan to expand our support for the number of partner companies by 1.5 times compared to the previous year and promote collaborative partnership activities centered around the local communities near our business sites.

* This is a cumulative number of companies that participated in the collaborative partnership support project.

Stakeholders	Business topic	Details
Value chain (Suppliers, SMEs, and partner companies)	Response to climate change and biodiversity conservation	- Support for regen partner companies to obtain official certifications (GRS, ISO certifications, etc.) - Support for partner companies to extend the lifespan of obsolete PCs - Marine forest conservation activities in collaboration with the Korea Fisheries Resources Agency - Support for the mountain goat protection and prevention of damage to farms
	Support for sustainable product R&D and marketing	- Support for product R&D and marketing of partner companies utilizing sustainable materials - Support for partner company capabilities related to sustainable materials
	Supplier safety and human rights improvement	- Support for safety manager appointment for in-house subcontractors and construction companies - Human rights improvement through enhancement of the partner companies' workplace environment (to be performed in 2024)
	Quality and productivity improvement	- Support for partner company quality inspection equipment and quality improving facilities
	Spread of supplier sustainability	- Support for ESG education and consulting for suppliers to mitigate supply chain risks
Local communities	Local communities development	- Providing regen material clothing and bags for rural and fishing areas

Navigate to collaborative partnership across the value chain

Navigate to collaborative partnership with local communities

Promotion of Social Responsibility across the Value Chain

Establishing a Circular System across the Fashion Industry Value Chain

Hyosung TNC endeavors to improve sustainability across the entire fashion industry through investment and collaboration based on sustainable solutions in textiles, our key business.

Supporting Capability Enhancement of Domestic Recycled Raw Material Partners

We have supported facilities required for resource circulation targeting domestic recycled raw material partner companies, strengthening their product quality and competitiveness.

- Supported a pre-treatment plant for waste fishing nets for a partner company in Busan
- Supported a Dry Vacuum Pump plant for a partner company in Yongin
- Supported facilities for a waste PET bottle cleaning line for a partner company in Gumi

Supporting regen Partner Companies Obtaining Official Certifications (GRS, ISO certifications, etc.)

In 2023, Hyosung TNC provided support for GRS certification and the safety and health ISO certification costs for 21 regen partner companies in the supply chain. In 2024, we plan to expand the number of partner companies by 1.5 times compared to the previous year to enhance the recycled material use cycle structure in the fashion industry.

Supporting Domestic Recycled Fabric Partner Companies in Expanding Overseas Markets

Hyosung TNC provided financial support for partner companies that use regen textiles to participate in overseas exhibitions to assist them in expanding into global markets. In 2024, we plan to increase the number of supporting companies and participation in overseas exhibitions by more than double to support the growth of SME partner companies and the expansion of the fashion industry's virtuous resource cycle system.

Supporting Product R&D and Marketing of Partner Companies Utilizing Sustainable Materials

Hyosung TNC supported product R&D utilizing sustainable materials and marketing activities for 10 domestic SME partner companies in the fashion industry.

regen Fabric-up Project

Hyosung TNC entered into an agreement with the Korea Value Fashion Research Institute to donate discarded fabric from its Daegu facility to upcycling fashion startups operated by young entrepreneurs. This initiative contributes to the resource virtuous cycle in the fashion industry and reduces factory waste.

Wando County Waste PET Bottle Circular Economy Project

In 2023, an MOU was signed by Hyosung TNC, Jeollanam-do, and Wando County to establish a resource circular economy system. Wando County collects waste PET bottles, Hyosung TNC produces recycled polyester, and Jeollanam-do purchases products made from this fiber.

Sustainability Expansion Activities within the Value Chain

Navigate to detailed activities

ESG Education and Consulting Support

- Conducted offline education for 10 suppliers
- Conducted online/webinar education for 12 suppliers
- Provided consulting for 9 suppliers

Support for Partner Company Safety and Quality Improvement

- Assigned Safety managers for 12 in-house sub-contractors and construction companies
- Supported test equipment and production facilities for 3 partner companies
- Improved human rights by enhancing partner company working environments

Support for the Life Span Extension of Obsolete PCs

- Supported upgrading 10 obsolete PCs for 4 partner companies

Sustainability Awareness Improvement Activities

regen Renewable Campaign

Since 2021, Hyosung TNC has encouraged employees to use tumblers to practice environmental protection in their daily lives. Additionally, since 2022, we have conducted the regen Renewable Campaign by collecting discarded PET bottles to use as raw material for regen Polyester, commercialized through domestic SME fashion companies. We recycled a total of 8,831 waste PET bottles in 2022 and 22,425 in 2023.

Participation in the 'Zero Seoul Enterprise Action Group' Operated by Seoul

Hyosung TNC is a member of the 'Zero Seoul Enterprise Action Group', a public-private cooperation network for climate crisis response organized by Seoul City. We manufacture regen textile yarn through the recycling of used PET bottles collected in Seoul.

Collaborative Partnership Activities with Local Communities

In 2023, Hyosung TNC conducted collaborative partnership activities in 6 regions. We plan to expand these activities focusing on nearby local communities in 2024.

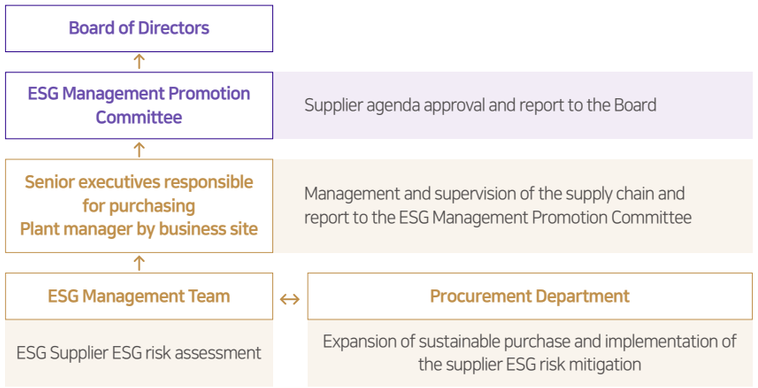
Yeosu, Jeollanam-do	Marine forest conservation
Yeongyang, Gyeongsangbuk-do	Support for steel fences to protect mountain goats and prevent farm damage
Gimhae, Gyeongsangnam-do	Feeding winter migratory birds around Hwapo Wetland
Gumi, Gyeongsangbuk-do (near the business site)	Support for clothing and bags made of regen materials
Ulsan (near the business site)	Support for clothing and bags made of regen materials
Haman, Gyeongsangbuk-do	Construction of a gym for Gunbuk Elementary School

Navigate toe detailed activities
Navigate to mid-to long-term collaborate partnership goals with local communities

Promotion of Social Responsibility across the Value Chain

Supply Chain Governance

Decision-making and Implementation Framework



Hyosung TNC is systematically implementing supply chain management to proliferate sustainability management across the value chain. The Procurement Department makes purchases in accordance with the Sustainable Procurement Policy. They also assess and manage the supplier's ESG risks in collaboration with the ESG Management Team. The senior executive responsible for procurement reports the supply chain management status to the ESG Promotion Committee and deliberates tasks for risk improvement, finally reporting to the Board.

2023 Report on Supply Chain
- Establishment of the supply chain policies in 2022
- Supplier ESG risk assessment and management process
- 2023 supply chain activities and plans and 2024 plans

Supply Chain Strategies and Goals

Promotion Strategies

In 2023, Hyosung TNC established the "Sustainable Procurement Policy" to enhance sustainability within the supply chain. We intend to use this policy as a stepping stone to setting mid- to long-term goals and detailed strategies by 2030.

Enhancement of Supply Chain Management Governance

Strengthening Sustainable Procurement Policies

Hyosung TNC implemented a "Sustainable Purchasing Policy" in 2022, integrating environmental and human rights aspects into the supplier management process. In 2023, we added three policies and corresponding action plans to our purchasing policy: increasing the use of eco-friendly raw materials, improving purchasing competitiveness, and sustainable supply chain management. Additionally, we enhanced our sustainable buying strategy by including ESG compliance terms in the internal standard purchase contract.

Expansion of eco-friendly raw materials and components proportion	• Establishment of the in-house eco-friendly raw materials and components standard and certification management system • Increase in procurement proportion of eco-friendly raw materials and components (such as low-carbon, recycled, and bio-based products)
Sustainable supply chain management	• Establishment and implementation of ESG assessment policies targeting suppliers and risk mitigation implementation • Selection and support of outstanding partner companies
Procurement competency enhancement	• Discovery of new suppliers aligning with the "Sustainable Procurement Policy" • Enhancement of procurement competency through the establishment of a global integrated procurement process

Expansion of Eco-friendly Raw Materials and Components Proportion

Hyosung TNC has been purchasing raw materials and services for eco-friendly products* in accordance with the "Green Procurement Policy." Specifically, we are increasing the purchase of eco-friendly materials such as low-carbon, recycled and bio-based products for core materials and components used for manufacturing regen products

Navigate to Green Procurement Policy

*Eco-friendly products: raw materials used in Hyosung TNC's regen products, or products with national green certifications,, international environmental certifications or labels, or environmental standard certifications such as ISO 14021 and ISO 14024.

Suppler Risk Assessment and Management Policy Establishment

In 2022, Hyosung TNC established the "Supplier ESG Evaluation Policy." In 2023, revisions were made to incorporate additional detailed internal assessment standards for the identification of negative impacts related to human rights and the environment.

Navigate to supplier ESG risk assessment and management policies

Supply Chain Management Activity Enhancement

Supply Chain ESG Risk Assessment and Mitigation Activities

In 2023, Hyosung TNC implemented ESG risk assessments for 68 suppliers who account for 80% of our yearly purchase amount. 58 companies in need of risk mitigation were provided with ESG education, consulting, and notifications through risk management initiatives. Among them, 11 companies received ESG education and consulting. CEOs of suppliers that received notification declared their commitments to autonomous legal compliance and conducted compliance education for the entire company. Furthermore, in 2023, Hyosung TNC stopped transactions with suppliers in regions of human rights concerns to mitigate risks across the supply chain.

Supplier Code of Conduct Compliance Pledge

To establish a transparent and equitable trading relationship, Hyosung TNC receives a Supplier Code of Conduct Compliance Pledge from its suppliers. A total of 140 suppliers have committed to adhering to the Code of Conduct, with 23 new suppliers joining the existing 117.

Navigate to Supplier Code of Conduct

Implementation of Supplier ESG Education and Consulting

In accordance with the findings of the "Supplier ESG Risk Assessment/Management Policy," Hyosung TNC provided customized ESG education and consulting to each supplier in need of mitigation measures to facilitate risk mitigation activities.

Navigate to customized ESG education and consulting

Enhancement of Supply Chain Management System

Upgrading Performance Management System for Eco-friendly Raw Material Procurement

In 2023, Hyosung TNC upgraded the internal procurement system, SAP, for accurate aggregation of eco-friendly material procurement performances.

Conducting Supply Chain Risk Management Education

In 2023, Hyosung TNC provided the purchasing department with external professional education regarding supply chain risks to improve the sustainable purchasing and management capabilities of operational staff.

Response to Global Sustainability Laws and Regulations

Why So Important?

As a global corporation trading with multinational companies worldwide, Hyosung TNC must proactively respond to changes in global laws and regulations for effective corporate operation.
In particular, policies requiring sustainable management of the environment and society are expanding in the EU and the US. Hyosung TNC is deeply aware of how these changes significantly impact corporate operation and entry into the global markets.

Our Approach

Hyosung TNC promptly detects modifications in global laws and regulations relevant to sustainability and implements a rapid response system focused on the ESG Management Team to ensure necessary responses are implemented. Furthermore, the Compliance Support Team and pertinent departments collaborate through the integrated risk management system to implement risk prevention activities for issues that entail potential legal risks.

Our Achievement

- **EU environmental regulation on textile and fashion sectors**
  - Launched bio-based spandex products
  - Diversified portfolio of recycled products
- **EU Corporate Sustainability Due Diligence Directive**
  - Established internal risk mitigation standards and implementation system
- **Enhancement of Industrial Accident Response Capabilities**
  - Establishment of mid- to long-term safety and health goals
  - Performance of safety assessments for partner companies

Global Sustainability Laws and Regulations

Major Regulatory and Response Activities

Navigate to sustainability leadership and risk management

Classification	Regulation	Risks	Response Activities
EU Strategy for Sustainable and Circular Textiles announcement and environmental regulations	• Prohibition of arbitrary destruction of unsold products • Introduction of digital product passport to trace product raw materials and production • Prevention of greenwashing for promoting corporate products • Promotion of recycling for textile and clothing product waste • Application of eco-design principles	• Sales reduction of the existing textiles and yarn • Sales reduction for products lacking supply material traceability • Exposure to reputation risk due to greenwashing	• Expansion of sustainable solutions sales • Promotion of circular textile technologies (garment and recycling) • Autonomous monitoring and employee education implementation to prevent green washing
EU Corporate Sustainability Due Diligence Directive (CSDDD)	• Application of due diligence and improvement measures across the value chain regarding negative impacts on human rights and the environment. (For companies over a certain size that produce and trade products within the EU area)	• Exposure to direct and indirect due diligence requests from EU clients following the implementation of the Supply Chain Due Diligence Directive • Expansion of reputation risk and client loss due to supply chain risks	• Incorporation of sustainability aspects within the procurement policy and implementation • Establishment and implementation of supplier risk assessment and due diligence policies • Providing education on the regulation details and expansion of the internal awareness
EU Carbon Border Adjustment Mechanism (CBAM)	• Levying carbon taxes on the items imported to the EU. (Products with high carbon emissions compared to productions in the EU)	• Weakened competitiveness of EU steel exports in the trade sector. • While textile and yarn products are not current regulation targets, they can be exposed to risks if future regulations are expanded	• Implementation of LCA for textile products • Operating a supply chain capable of providing carbon information in the trade sector • Providing education on the regulation details and expansion of the internal awareness
Mandatory ESG information disclosure	• Global disclosure standards announcement by the EU and the US • Expansion of mandatory adoption of IFRS-based international financial sustainability standards by country	• Penalty for non-compliance with disclosure regulations • Decrease in the long-term corporate value due to reduced investment attractiveness	• Enhancement of governance responsibility for sustainability • Improvement of ESG information management level
Enhancement of laws related to industrial accidents	• Increased importance of safety due to changed awareness of industrial accidents	• Casualties occurring due to near-miss accidents • Exposure to reputation risk due to increased social safety demands	• Establishment of the mid-to long-term goals for safety and health • Accomplishment of ZERO industrial accidents at business sites by strengthening capabilities to ensure workplace safety and health

Governance and Economic Performance

Reporting Scope

This ESG Performance report includes the following subsidiaries, which account for more than 92% of Hyosung TNC's consolidated revenue. The data for Hyosung Corporation and its subsidiaries are listed separately, and the data for the subsidiaries are provided starting from 2022. Some items may not include data from certain subsidiaries, and in such cases, this is noted in the footnotes.

Subsidiaries	Country of operation
Hyosung Spandex (Jiaxing) Co., Ltd.	China
Hyosung Spandex (Quzhou) Co., Ltd.	
Hyosung Spandex (GuangDong) Co., Ltd.	
Hyosung Spandex (Zhuhai) Co., Ltd.	
Hyosung Spandex (Ningxia) Co., Ltd.	
Hyosung International Trade (Jiaxing) Co., Ltd.	

Subsidiaries	Country of operation
Hyosung Chemicals (Jiaxing) Co., Ltd.	China
Hyosung DongNai Co., Ltd.	Vietnam
Hyosung Dong Nai Nylon Co., Ltd.	
Hyosung India Pvt. Ltd.	India
Hyosung Brasil industria e comericio de fibras LTDA	Brazil
Hyosung Istanbul TEKSTIL LTD.STI	Türkiye

Data Reporting Notes

1. If an item is not applicable or cannot be applied, it is marked as 'N/A'. If the data was not investigated, it is marked as '-'. Other special cases are noted separately below the respective items.
2. Figures are rounded, so there may be slight differences between the actual sum of the individual figures and the totals listed.

Financial Statements (Consolidated)

Balance Sheet	Unit	2021	2022	2023
Current assets	KRW million	2,605,431	2,143,068	1,856,067
Non-current assets		1,921,038	2,176,811	2,214,405
Total assets		**4,526,469**	**4,319,879**	**4,070,471**
Current liabilities		2,249,513	2,184,964	1,881,749
Non-current liabilities		513,360	619,391	619,980
Total liabilities		**2,762,873**	**2,804,356**	**2,501,729**
Total equities		**1,763,597**	**1,515,524**	**1,568,743**

Comprehensive Income Statement

Balance Sheet	Unit	2021	2022	2023
Sales	KRW million	8,596,030	8,882,730	7,526,919
Operating income		1,423,651	123,594	213,393
Net profit		1,007,903	19,183	98,706

Corporate Tax by Country[1]

Category	Sub-category	Unit	2021	2022	2023
Korea	Sales	KRW million	4,560,799	5,364,506	4,453,045
	Profit before tax	KRW million	382,683	303,616	109,733
	Corporate tax expense	KRW million	106,696	13,910	13,777
	Tax rate	%	24.2	27.5	23.1
	Effective tax rate	%	27.9	4.6	12.6
China	Sales	KRW million	3,703,984	2,957,361	2,570,293
	Profit before tax	KRW million	505,482	(112,607)	12,295
	Corporate tax expense	KRW million	124,857	(40,318)	1,440
	Tax rate	%	25.0	25.0	25.0
	Effective tax rate	%	24.7	35.8	11.7
Vietnam	Sales	KRW million	1,742,871	1,653,364	1,280,925
	Profit before tax	KRW million	347,050	138,070	66,776
	Corporate tax expense	KRW million	19,066	12,589	4,551
	Tax rate	%	5.0	5.0	5.0
	Effective tax rate	%	5.5	9.1	6.8
India	Sales	KRW million	250,474	200,060	192,552
	Profit before tax	KRW million	87,202	(37,171)	(17,302)
	Corporate tax expense	KRW million	15,409	(3,963)	(3,609)
	Tax rate	%	25.2	25.2	25.2
	Effective tax rate	%	17.7	10.7	20.9
Türkiye	Sales	KRW million	389,641	322,244	238,965
	Profit before tax	KRW million	248,225	111,493	(13,460)
	Corporate tax expense	KRW million	59,420	21,147	(3,279)
	Tax rate	%	25.0	23.0	25.0
	Effective tax rate	%	23.9	19.0	24.4
Brazil	Sales	KRW million	211,326	216,827	147,073
	Profit before tax	KRW million	62,964	13,763	7,342
	Corporate tax expense	KRW million	16,396	1,968	(11,574)
	Tax rate	%	34.0	34.0	34.0
	Effective tax rate	%	26.0	14.3	(157.6)
Japan	Sales	KRW million	565,683	705,525	635,672
	Profit before tax	KRW million	5,270	5,139	3,842
	Corporate tax expense	KRW million	1,830	1,974	1,232
	Tax rate	%	34.6	30.6	30.6
	Effective tax rate	%	34.7	38.4	32.1

1. Singapore has been excluded from the report as it does not generate any sales, and corporations were established in Indonesia in 2022 and in Spain in 2023.

Governance and Economic Performance

Corporate Tax by Country

Category	Sub-category	Unit	2021	2022	2023
Taiwan	Sales	KRW million	2,297	3,073	2,338
	Profit before tax	KRW million	3	551	194
	Corporate tax expense	KRW million	26	141	78
	Tax rate	%	20.0	20.0	20.0
	Effective tax rate	%	751.7	25.5	40.2
Italy	Sales	KRW million	69,015	97,132	81,772
	Profit before tax	KRW million	2,793	2,564	2,106
	Corporate tax expense	KRW million	789	782	676
	Tax rate	%	27.9	27.9	27.9
	Effective tax rate	%	28.2	30.5	32.1
Indonesia	Sales	KRW million	0	16,080	26,214
	Profit before tax	KRW million	0	(7,078)	766
	Corporate tax expense	KRW million	0	0	0
	Tax rate	%	0	22	22
	Effective tax rate	%	0	0	0
Hong Kong	Sales	KRW million	41,024	16,324	16,033
	Profit before tax	KRW million	2,602	269	123
	Corporate tax expense	KRW million	(430)	121	1,008
	Tax rate	%	16.5	8.3	8.3
	Effective tax rate	%	(16.5)	45.1	819.5
Mexico	Sales	KRW million	1,835	1,848	1,913
	Profit before tax	KRW million	496	173	(380)
	Corporate tax expense	KRW million	118	52	(227)
	Tax rate	%	30.0	30.0	30.0
	Effective tax rate	%	23.8	30.0	59.7
Spain	Sales	KRW million	0	0	3,917
	Profit before tax	KRW million	0	0	149
	Corporate tax expense	KRW million	0	0	0
	Tax rate	%	0	0	25
	Effective tax rate	%	0	0	0

Compliance with Ethics and Laws

Category		Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
Employee discrimination	Total No. of discrimination incidents	Case	0	0	0	0	0
	Reviewed incidents of discrimination	Case	0	0	0	0	0
Unfair transaction	No. of unfair transaction practices [1]	Case	0	0	1	0	0
	Fine for unfair transaction practices	KRW million	0	0	0	0	0
Non-compliance with laws and regulations	Total amount of fines	KRW million	701	16	1	15	65
	Cases of fines-imposed	Case	4	3	1	18	16
	Fines for violation of environmental regulations [2]	KRW million	701	6	1	0	7
	Cases of non-monetary sanctions (administrative guidance, warnings, etc.)	Case	1	2	1	0	0
	No. of violations of legal and voluntary regulations regarding product and service information and labeling	Case	-	0	0	0	0
	No. of violations of legal and voluntary regulations regarding health and safety impact of products and services	Case	-	0	0	0	0
	No. of violations of legal and voluntary regulations regarding marketing communication	Case	-	0	0	0	0
Anti-corruption	No. of reported incidents of corruption	Case	1	2	2	1	1
	No. of people dismissed or disciplined for corruption	Person	5	0	3	1	1
	Total No. of operations assessed for risks related to corruption	Operation	3	6	1	-	-
	No. of the Board of Directors (governance body) members that have received notification and training on anti-corruption policies and procedures	Person	2	1	0	-	-
	Percentage of the Board of Directors (governance body) members that have received notification and training on anti-corruption policies and procedures	%	40	25	0	-	-
	No. of employees that have received notification and training on anti-corruption policies and procedures	Person	1,028	1,343	1,357	2,906	3,587
	Percentage of employees that have received notification and training on anti-corruption policies and procedures	%	68.0	94.0	98.0	53.3	60.1

1. The number of unfair transaction practices includes cases that are currently in litigation, and fines are the sum of fines, penalties, and surcharges.
2. The amount of fines for violation of environmental regulations in 2021 was not included in last year's report because the amount was not finalized due to administrative appeals and litigation following the imposition of penalties.

Social performance

Employees[1]

Category	Sub-category		Unit	Hyosung TNC			Subsidiaries	
				2021	2022	2023	2022	2023
Total No. of employees (Permanent + Temporary))			Person	1,501	1,435	1,389	5,455	5,823
Gender[2]	Permanent	Male	Person	1,188	1,106	1,068	3,875	4,125
		Female	Person	252	256	243	1,491	1,607
		Subtotal	**Person**	**1,440**	**1,362**	**1,311**	**5,366**	**5,732**
	Temporary	Male	Person	43	44	42	65	66
		Female	Person	18	29	36	24	25
		Subtotal	**Person**	**61**	**73**	**78**	**89**	**91**
Age[2]	Permanent	Under 30	Person	197	186	169	2,289	2,409
		30-50	Person	774	778	749	2,937	3,159
		51 and above	Person	469	398	393	140	164
		Subtotal	**Person**	**1,440**	**1,362**	**1,311**	**5,366**	**5,732**
	Temporary	Under 30	Person	28	15	20	40	33
		30-50	Person	14	14	10	41	51
		51 and above	Person	19	44	48	8	7
		Subtotal	**Person**	**61**	**73**	**78**	**89**	**91**
Employee category	Employee category based on permanent employees	Office	Person	743	760	805	1,317	1,403
		Technical	Person	697	602	584	4,049	4,329
Employee diversity[3]	Gender diversity in the Board of Directors	Male	Person	5	6	6	51	61
		Female	Person	0	0	0	2	2
		Subtotal	**Person**	**5**	**6**	**6**	**53**	**63**
	Age diversity in the Board of Directors	Under 30	Person	0	0	0	0	0
		30-50	Person	0	0	0	30	26
		51 and above	Person	5	6	6	23	37
		Subtotal	**Person**	**5**	**6**	**6**	**53**	**63**
	Employee diversity	Female	Person	270	285	279	1,515	1,629
		Employees with disability[4]	Person	38	34	33	25	30
		Veterans	Person	19	17	14	0	0
		Foreigner	Person	2	4	5	89	99
		Subtotal	**Person**	**329**	**340**	**331**	**1,629**	**1,758**
	Fostering female talent	Female employee ratio	%	18.0	19.9	20.1	27.8	28.0
		No. of Female at manager level (or higher)[5]	Person	41	46	43	104	126
		No. of male at manager level (or higher)[5]	Person	297	301	300	288	325
		Proportion of female at manager level(manager and above)[5]	%	12.1	13.3	12.5	26.5	27.9
Workers who are not employees[6]	Gender	Male	Person	545	463	416	27	70
		Female	Person	294	142	141	14	18
		Subtotal	**Person**	**839**	**605**	**557**	**41**	**88**
Senior management[7]	Total	No. of senior managements	Person	95	99	93	437	475
	Local senior managements with the local nationality working on site	No. of senior managements	Person	95	99	93	104	116
		Percentage of senior managements	%	100	100	100	23.8	24.4

New Employee Hires[8]

Category		Sub-category	Unit	Hyosung TNC			Subsidiaries	
				2021	2022	2023	2022	2023
New hires		New hires	Person	96	119	104	1,086	947
		Experienced new hires	Person	48	86	72	842	645
		Transferees from affiliated companies	Person	18	19	7	92	14
		Subtotal	**Person**	**162**	**224**	**183**	**2,020**	**1,606**
Gender	No. of new hires	Male	Person	116	144	118	1,517	1,226
		Female	Person	46	80	65	503	380
		Subtotal	**Person**	**162**	**224**	**183**	**2,020**	**1,606**
	New hire rate	Male	%	71.6	64.3	64.5	75.1	76.3
		Female	%	28.4	35.7	35.5	24.9	23.7
Age	No. of new hires	Under 30[9]	Person	83	129	92	1,398	1,079
		30-50[9]	Person	63	77	74	614	519
		51 and above	Person	16	18	17	8	8
		Subtotal	**Person**	**162**	**224**	**183**	**2,020**	**1,606**
	New hire rate	Under 30	%	51.2	57.6	50.3	69.2	67.2
		30-50	%	38.9	34.4	40.4	30.4	32.3
		51 and above	%	9.9	8.0	9.3	0.4	0.5

1. As of December 31, 2023. Some 2022 data has been corrected due to aggregation errors in certain subsidiaries.
2. The data has been revised to exclude part-time employees within the temporary employee category.
3. Hyosung TNC's 2024 employee diversity goals: 31 disabled persons, 339 female employees.
4. In accordance with the 「Act on the Promotion of Employment for Disabled Persons」, the employment of one severely disabled person is recognized as two employees. However, Hyosung TNC has revised the data to count one severely disabled person as one employee.
5. Manager level refers to positions at the PM/Manager level and above. The data has been corrected due to an error in calculating the ratio of female managerial positions in 2022.
6. These are the contracted workers among the 'affiliated non-employees' reported in the business report.
7. Senior management refers to positions of Team Leader, Department Head, Supervisor, or higher.
8. The scope of new hires has been expanded from college graduate hires to include all newly hired permanent/temporary employees, experienced new hires, and transferees from affiliated companies. Accordingly, the data for 2021 and 2022 has been revised.
9. The data for new hires by age in 2022 has been corrected due to a counting error.

Social performance

Employee Turnover[1, 2]

Category	Sub-category	Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022[3]	2023
No. of employee turnover	Voluntary turnover	Person	123	169	140	1,422	1,138
	Transfer to affiliated company	Person	21	26	27	320	24
	Involuntary turnover (resignation, dismissal, death, etc.)	Person	45	98	57	311	373
	Sub total	**Person**	**189**	**293**	**224**	**2,053**	**1,535**
	Voluntary turnover rate	%	8.2	11.8	10.1	26.1	19.5
	Total turnover rate	%	12.6	20.4	16.1	37.6	26.3
Employee turnover by gender	Male	Person	121	229	153	1,584	1,230
	Female	Person	68	64	71	469	305
	Subtotal	**Person**	**189**	**293**	**224**	**2,053**	**1,535**
Turnover rate by gender	Male	%	8.1	16.0	11.0	29.0	21.1
	Female	%	4.5	4.5	5.1	8.6	5.2
Employee turnover by age	Under 30	Person	77	82	65	1,286	997
	30-50	Person	64	101	103	743	522
	51 and above	Person	48	110	56	24	17
	Subtotal	**Person**	**189**	**293**	**224**	**2,053**	**1,535**
Turnover rate by age	Under 30	%	5.1	5.7	4.7	23.6	17.1
	30-50	%	4.3	7.0	7.4	13.6	8.9
	51 and above	%	3.2	7.7	4.0	0.4	0.3

1. The scope of counting the number of employee turnover has been expanded to include voluntary turnover (including temporary employees), transfers to affiliated companies, and involuntary turnover. Accordingly, the data for 2021 and 2022 has been revised.
2. The ratios in the turnover status data were calculated based on the total number of employees.
3. The data has been corrected due to aggregation errors in certain subsidiaries.

Employee Salary and Compensation

Category	Sub-category	Unit	Hyosung TNC			Subsidiaries[4]	
			2021	2022	2023	2022[4]	2023
Average total annual compensation for entry-level employees		KRW million	51	47	48	10	10
Ratio of wages for new hires compared to the local legal minimum wage	Male	%	202.4	175.6	221.0	223.6	219.2
	Female	%	202.4	175.6	163.6	229.0	216.8
Ratio of total compensation for female to male	Executive	%	101.8	71.4	75.7	12.7	11.5
	Manager level or higher	%	90.8	89.9	92.0	32.5	48.5
	Non-manager level	%	65.7	65.2	69.4	70.7	94.0
Average total annual compensation of all employees		KRW million	76	69	73	16	14

4. The data was calculated by applying weights according to the total number of employees in each subsidiary, and the 2022 data has been corrected due to aggregation errors in certain subsidiaries.

Category	Sub-category	Unit	Hyosung TNC			Subsidiaries[5]	
			2021	2022	2023	2022	2023
Highest-paid individual[6]	Total annual compensation	KRW million	348	320	301	94	171
	Year-on-year increase in total compensation[7]	%	0.48	(8.12)	(5.74)	-	81.5
Employees (excluding highest paid individual)	Average total annual compensation	KRW million	75	68	73	14	20
	Median total annual compensation	KRW million	76	68	73	14	15
	Median total annual compensation increase year-on-year[7]	%	20.78	(10.46)	7.67	-	0.5
Ratio of the total annual compensation for the organization's highest-paid individual to the median total annual compensation for all employees (excluding the highest-paid individual)		Time	4.6	4.7	4.1	15.1	11.4

5. The data was calculated by applying weights according to the total number of employees in each subsidiary, and the 2022 data has been corrected due to aggregation errors in certain subsidiaries.
6. Due to the change in criteria from 'C-level executives' to 'highest-paid individual,' we have revised the data to reflect the total compensation of the highest-paid individual as reported in the business report.
7. Due to the inability to verify data for some subsidiaries, the reports on the 'Year-on-year increase in total compensation of the highest-paid individual' and the 'Median total annual compensation growth rate year-over-year for employees (excluding the highest-paid individual)' for 2022 are omitted.

Minimum Notice Periods regarding Operational Changes

If there is a legal standard such as a notice of dismissal, it is notified in advance in accordance with the stipulated timeframes.

Social performance

Maternity Leave and Parental Leave

Category	Sub-category	Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022[1]	2023
Maternity leave (male)	No. of employees on maternity leave	Person	24	27	27	168	202
	Return rate after maternity leave	%	100	100	100	72.8	73.0
Maternity leave (female)	No. of employees on maternity leave	Person	6	9	9	100	90
	Return rate after maternity leave	%	100	100	100	62.0	68.0
Parental leave (male)	No. of employees entitled to parental leave[2]	Person	162	140	155	-	-
	No. of employees on parental leave	Person	2	2	8	210	229
	No. of employees returning to work after parental leave	Person	4	0	8	208	228
	No. of employees with over 12 months of service after parental leave	Person	0	3	0	203	206
	Return rate after parental leave	%	100	0	100	99.0	99.6
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	0	75.0	0	97.6	90.4
Parental leave (female)	No. of employees entitled to parental leave [2]	Person	28	26	25	-	-
	No. of employees on parental leave	Person	10	9	10	131	142
	No. of employees returning to work after parental leave	Person	13	7	10	125	142
	No. of employees with over 12 months of service after parental leave	Person	12	8	5	120	129
	Return rate after parental leave	%	93.0	88.0	90.9	95.4	100
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	92.0	57.0	55.6	96.0	90.8

1. Due to aggregation errors in some subsidiaries, the 2022 data has been revised.
2. The number of employees eligible for parental leave in subsidiaries is omitted due to differing local laws in each country.

Labor Union

Category	Unit	Hyosung TNC[3]			Subsidiaries	
		2021	2022	2023	2022[4]	2023
No. of employees covered by collective bargaining agreements	Person	579	493	469	4,670	4,870
Ratio of employees covered by collective bargaining agreements among total employees	%	38.6	34.4	33.8	85.6	83.7
No. of union workers	Person	520	438	413	3,652	4,248
Rate of enrollment to the union	%	89.8	88.8	88.1	78.2	87.2

3. The number of employees covered by collective bargaining agreements at Hyosung TNC includes Grade 5 skilled workers in Ulsan and Gumi. This also includes expatriates and employees dispatched overseas.
4. Due to aggregation errors in some subsidiaries, the 2022 data has been revised.

Retirement Pension

Category	Unit	Hyosung TNC			Subsidiaries[5]	
		2021	2022	2023	2022	2023
Total operation fund for retirement pensions (DB+DC)[6]	KRW million	100,037	100,394	95,627	137	142
Operation fund for DB pension	KRW million	97,828	95,227	91,099	136	141
Operation fund for DC pension	KRW million	2,209	5,167	4,528	1	1
Total No. of members[7]	Person	1,659	1,587	1,566	2,065	2,119
No. of DB pension members	Person	1,330	1,284	1,254	2,063	2,113
No. of DC pension members	Person	329	303	312	2	6

5. We have only aggregated data from subsidiaries in countries with retirement pension. Due to aggregation errors in some subsidiaries, the 2022 data has been revised
6. Due to aggregation errors in the total amount of retirement pension, the 2021 and 2022 data have been revised.
7. This includes the number of expatriates in subsidiaries of Hyosung TNC.

Regular Performance and Career Development Reviews

Category	Sub-category	Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022[8]	2023
No. of employees subject to performance evaluation		Person	1,440	1,362	1,311	4,626	5,289
Performance evaluation rate[9]		%	95.9	94.9	94.38	93.3	97.4
Performance evaluation and career development review rate by gender	Male	%	96.5	96.2	96.2	96.5	97.1
	Female	%	93.3	89.8	87.1	96.3	97.6
Performance evaluation and career development review rate by employee category	Executive[10]	%	85.7	79.2	82.6	98.4	93.0
	Manager level(PM) or higher	%	100	100	99.7	95.3	97.7
	Non-manager level (Pro or lower)	%	95.7	94.6	92.7	93.2	93.7

8. Due to aggregation errors in some subsidiaries, the 2022 data has been revised.
9. The performance evaluation rate is based on the total number of employees.
10. The data has been revised by changing the aggregation method to exclude advisory positions.

Social performance

Employee Training [1]

Category	Sub-category	Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022[2]	2023
No. of training participants (cumulative)		Person	23,931	20,066	22,019	18,436	22,009
Total training expenses		KRW million	773	833	917	208	263
Total training hours		Hour	59,609	57,933	82,901	107,295	104,505
Average training hours per employee		Hour	40	40	60	20	18
Average training expenses per employee		KRW	515,003	580,200	660,470	38,043	45,095
Total training hours per employee by gender	Male	Hour	39	39	59	20	19
	Female	Hour	27	47	62	21	17
Average training hours per employee by employee category	Executive	Hour	42	25	29	9	8
	Manager level (PM) or higher	Hour	38	62	56	15	18
	Non-manager level (Pro or lower)	Hour	36	34	61	23	18
No. of participants in environmental training		Person	1,238	1,350	2,097	1,030	1,015
No. of participants in ethics and anti-corruption training		Person	1,028	1,343	1,426	3,148	3,084
No. of participants in fair trade training		Person	773	1,412	1,378	152	777
No. of participants in safety and health training		Person	8,201	3,156	3,618	5,498	6,506
No. of participants in human rights training (Sexual harassment prevention/ disability awareness/discrimination prevention, etc.)		Person	4,224	5,829	5,885	1,330	1,342
Ratio of security personnel who have received formal training in human rights policies or specific procedures [3]		%	-	-	-	-	12.6
Total No. of employees trained in information/physical security [4]		Person	512	1,941	2,067	4,462	4,631
No. of participants in sustainability management training		Person	1,417	1,119	1,411	794	3,311
No. of participants in retiree training		명	40	54	4	231	231

1. The number of trainees is the cumulative number of participants per course.
2. Due to aggregation errors in some subsidiaries, the 2022 data has been revised.
3. The average training hours per employee by gender/employee category, and the ratio of security personnel who have received formal training in human rights policies or specific procedures, have been aggregated starting from the 2023 data.
4. Until 2022, the data was reported as 'participants in security training' in an integrated manner. However, from 2023 onwards, the total number of employees trained in information/physical security will be reported.

Occupational Health and Safety Management System

Category	Unit	Hyosung TNC			Subsidiaries	
		2021	2022	2023	2022[5]	2023
Total workers (No. of employees + No. of workers who are not employees)	Person	2,215	2,081	1,936	5,658	6,049
No. of workers working at business sites where the company's health and safety management system are operational	Person	2,215	2,081	1,936	5,658	6,049
	%	100	100	100	100	100
No. of workers working within the systems that undergo regular/irregular audits (or monitoring) of the company's health and safety management system	Person	2,215	2,081	1,936	5,658	6,049
	%	100	100	100	100	100
No. of workers working at business sites subject to customer audits or audits for external certification	Person	2,215	2,081	1,936	5,658	6,049
	%	100	100	100	100	100

5. Due to aggregation errors in some subsidiaries, the 2022 data has been revised.

Occupational Injuries and Ill-health

Category	Sub-category	Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
Employees	No. of work-related injuries and ill health	Person	7	7	10	22	16
	Rate of work-related injuries and ill health [6]	%	0.47	0.49	0.72	0.40	0.27
	No. of fatalities as a result of work-related injuries	Person	0	0	0	0	0
	Work-related fatality rate per ten thousand employees [7]	Per 10,000 people	0	0	0	0	0
	No. of cases of work-related injuries and ill health	Case	7	8	10	23	16
	Frequency rate [8]	Cases per million hours	2.23	2.67	3.45	2.02	1.32
Workers who are not employees but whose work/and or workplace is controlled by the organization	No. of work related injuries and ill health	Person	1	1	1	0	0
	Rate of work related injuries and ill health [6]	%	0.14	0.15	0.18	0	0
	No. of fatalities as a result of work-related injuries	Per 10,000 people	0	0	0	0	0
	Work-related fatality rate per ten thousand employees [7]	만인율	0	0	0	0	0
	No. of cases of work-related injuries and ill health	Case	1	1	1	0	0
	Frequency rate [8]	Cases per million hours	0.67	0.74	0.88	0	0

6. Total No. of individuals affected by work related injuries and ill health ÷ Total no. of workers x 100
7. No. of work-related fatalities ÷ Total No. of workers x 10,000
8. (No. of work-related injuries and ill health ÷ Total work hours) x1,000,000 hours

Infringement of Local Community Rights

Category	Unit	Hyosung TNC			Subsidiaries	
		2021	2022	2023	2022	2023
Total No. of incidents of violations involving the rights of indigenous people	Case	0	0	0	0	0

Social performance

Suppliers 1

Category	Unit	Hyosung TNC			Subsidiaries	
		2021	2022	2023	2022	2023
No. of suppliers	Company	212	245	291	835	914
Total purchase from suppliers	KRW million	661,257	838,463	704,481	2,875,922	1,993,374
Total purchase from local suppliers	KRW million	571,767	604,607	397,013	1,561,701	968,805
Proportion of purchase from local suppliers	%	86.5	72.1	56.4	54.3	48.6

1. The data has been aggregated for suppliers of products, semi-finished products, raw materials, auxiliary materials, and packaging materials. Due to aggregation errors in the 2022 data for the proportion of local suppliers in subsidiaries, the data has been revised

ESG Impact Assessment of the Supply Chain [2]

Category	Unit	Hyosung TNC		
		2021	2022	2023
No. of new suppliers	Case	-	17	8
No. of new suppliers that conducted ESG impact assessment	Case	-	2	2
percentage' of new suppliers that conducted ESG impact assessment	%	-	11.8	25.0
No. of suppliers under focused management	Case	-	22	68
No. of suppliers that conducted ESG impact assessment [3]	Case	-	13	68
No. of suppliers having practical or/and potential negative impact	Case	-	8	58
percentage' of suppliers that agreed improvement based on the results of ESG impact assessment [4]	%	-	46.2	22.1
percentage' of suppliers whose contracts were terminated based on the results of ESG impact assessment	%	-	0.0	0.0

2. The ESG Impact Assessment of the Supply Chain is an integrated management item of Hyosung TNC and has been disclosed starting from the 2022 data.
3. Due to changes in the criteria for ESG impact assessment targets, the 2022 data has been revised.
4. No. of suppliers who agreed to improvements (such as ESG training and consulting, official document issuance, etc.) / No. of suppliers that conducted ESG impact assessment

Complaint Handling Process for Suppliers [5]

Category	Sub-category	Unit	Hyosung TNC		
			2021	2022	2023
Complaints from suppliers	Cases received	Case	-	1	1
	Cases processed	Case	-	1	1
	Ratio of cases processed	%	-	100	100

5. This is an integrated management item of Hyosung TNC, and does not apply to subsidiaries

Social Contribution

Category	Unit	Hyosung TNC			Subsidiaries	
		2021	2022	2023	2022[6]	2023
Social contribution investment	KRW million	413	785	862	143	273
No. of social contribution programs	Program	27	36	39	14	30
No. of participants among employees [7]	Person	-	551	608	56	88
Total volunteer hours [7]	Hour	-	1,108	1,156	245	385
Amount of social value generated [8]	KRW million	-	-	1,893	143	273

6. The data has been revised due to aggregation errors in some subsidiaries in 2022.
7. The number of participants among employees and total volunteer hours have been aggregated starting from 2022.
8. The amount of social value disclosed in the "Corporate Social Responsibility" section of the 2022 Sustainability Management Report is the total sum of the social value amounts calculated by Hyosung Corporation and its four operating companies. The social value amount for Hyosung TNC has been aggregated since 2023. This is the total amount, which includes the principal, the value of donated goods, volunteer labor costs, and beneficiary wages.

Products and Services subject to Labeling and Safety/Health evaluations [9]

Category	Sub-category	Unit	Hyosung TNC		
			2021	2022	2023
Percentage of major products and services that have undergone evaluations related to information disclosure and labeling procedures.	Total	%	-	36.0	48.0
	Spandex products [10]	%	-	13.3	67.0
Percentage of major products and services that have undergone evaluations related to information disclosure and labeling procedures.	Nylon and polyester products	%	-	46.0	40.5

9. This is the combined figure for the production of Hyosung TNC and its subsidiaries.
10. The aggregation method has been changed starting from 2023.

Customer Privacy Protection

Category	Unit	Hyosung TNC			Subsidiaries	
		2021	2022	2023	2022	2023
Breaches of customer privacy	Case	0	0	0	0	0
Total No. of identified leaks, thefts, or losses of customer data	Case	0	0	0	0	0

Initiative membership

Company	Initiative	Year of joining
Hyosung TNC	Textile Exchange [11]	2024

11. Textile Exchange is an initiative with global goals, mission, and vision in the fashion industry.

Environmental Performance

GHG Emissions [1~6]

Category		Unit	Hyosung TNC				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Direct GHG emissions (Scope 1)	Stationary combustion	tCO2eq	93,803	83,012	81,885	70,166	173,226	188,666
	Mobile combustion		437	361	308	264	1,070	1,731
	Waste disposal		506	826	575	493	0	0
	Other emissions		0	0	0	0	14,490	42,014
	Subtotal		**94,746**	**84,199**	**82,768**	**70,923**	**188,786**	**232,411**
Indirect GHG emissions (Scope 2))	Electricity	tCO2eq	263,867	209,199	217,451	186,331	634,020	720,221
	Steam		6,518	4,286	2,965	2,510	110,372	163,460
	Subtotal		**270,385**	**213,485**	**220,416**	**188,841**	**744,392**	**883,681**
Total GHG emissions		**tCO2eq**	**365,131**	**297,684**	**303,184**	**259,764**	**933,178**	**1,116,092**
GHG emissions intensity	Scope1	tCO2eq/ KRW 100 million	5.7	5.2	6.9	5.9	8.4	8.6
	Scope2		16.4	13.3	18.3	15.7	33.3	32.8
	Subtotal		**22.1**	**18.5**	**25.2**	**21.6**	**41.7**	**41.5**
	Sales	KRW 100 million	16,514	16,063	12,036	12,036	22,355	26,924

1. The domestic emissions for 2021-2022 and the emissions from subsidiaries for 2022 have been revised due to aggregation errors.
2. The scope of greenhouse gas emissions calculation covers all domestic business sites (15 sites based on the statement), and subsidiaries with over 92% sales coverage (11 subsidiaries).
3. The sales figures apply to the textile segment sales, excluding trade sales from the total separate sales.
4. The types of greenhouse gas emissions for Hyosung TNC include CO2, CH4, and N2O. The domestic greenhouse gas emissions apply the emission factors and GWP specified in the Emissions Trading Scheme guidelines, while the overseas greenhouse gas emissions apply the IPCC 2006 emission factors and GWP.
5. For subsidiaries other than Brazil, the 2022 emission factors were applied for electricity emission factors due to the absence of 2023 emission factors. The emission factors from documents published by each subsidiary were applied. (e.g., China – the 2022 average emission factor published by the Ministry of Ecology and Environment).
6. Other emissions from subsidiaries refer to the emissions from anthracite, coal (briquette), and wood chips.

Other Greenhouse Gas (Scope 3) Emissions [7~9]

No.	Category	Unit	2021	2022	2023
1	Purchased goods and services	tCO2eq	-	1,522,236	1,044,368
2	Capital goods		-	19	19
3	Fuel and energy-related activities (not included in Scope 1 or Scope 2)		-	41,187	36,382
4	Upstream transportation and distribution		-	16,634	19,812
5	Waste generated in operations		-	1,011	648
6	Business travel		-	646	1,063
7	Downstream transportation and logistics		-	28,531	19,237
Total GHG emissions (Scope 3)		**tCO2eq**	**-**	**1,610,264**	**1,121,529**

7. Scope 3 emissions have been calculated starting from 2022.
8. Scope 3 emissions were calculated only domestically and do not include overseas subsidiaries.
9. Overall emissions decreased due to a 20% reduction in production performance in 2023 compared to 2022 and a reduction in polymerization operations.

Energy Consumption [10~12]

Category		Unit	Hyosung TNC				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Direct energy	LNG	TJ	952.71	828.71	762.05	653	1,805.60	1,478.32
	Gasoline		1.39	1.34	1.57	1.35	3.33	15.65
	Diesel		4.09	2.88	1.92	1.63	5.91	8.79
	LPG		0.96	1.17	1.19	1.02	15.55	3.67
	Propane		766.81	670.8	735.06	629.87	0	0
	Kerosene		0.34	0.37	0.34	0.29	0	0
	B-C oil		11.08	8.47	2.61	2.24	0	0
	Biogas		36.28	23.67	38.00	32.56	0	0
	Hard coal		0	0	0	0	840.24	1,171.14
	Others		0	0	0	0	813.09	1,111.51
	Subtotal		**1,773.66**	**1,537.41**	**1,542.74**	**1,321.96**	**3,483.72**	**3,789.08**
Indirect energy	Electricity	TJ	5,513.85	4,373.50	4,546.24	3,895.62	3,972.66	4,670.73
	Steam		783.22	525.75	462.76	396.54	3,289.44	2,813.74
	Heat from incinerating waste		332.03	405.64	404.72	346.79	0	0
	Subtotal		**6,629.10**	**5,304.89**	**5,413.72**	**4,638.95**	**7,262.10**	**7,484.47**
Total energy consumption		**TJ**	**8,402.76**	**6,842.30**	**6,956.46**	**5,960.91**	**10,745.82**	**11,273.55**
Energy intensity		TJ/ KRW 100 million	0.51	0.43	0.58	0.50	0.48	0.42
Sales		KRW 100 million	16,514	16,063	12,036	12,036	22,355	26,924

Category		Unit	Hyosung TNC				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Non-renewable energy		TJ	8,034.45	6,412.99	6,513.74	5,581.56	10,745.82	11,273.55
Renewable energy	Heat from incinerating waste		332.03	405.64	404.72	346.79	0	0
	Biogas		36.28	23.67	38.00	32.56	0	0
	Subtotal		**368.31**	**429.31**	**442.72**	**379.35**	**0**	**0**
Total		**TJ**	**8,402.76**	**6,842.30**	**6,956.46**	**5,960.91**	**10,745.82**	**11,273.55**
Renewable energy consumption rate		**%**	**4.4**	**6.3**	**6.4**	**6.4**	**0**	**0**

10. The domestic energy consumption for 2021-2022 and the 2022 energy consumption for subsidiaries have been revised due to aggregation errors.
11. The scope of energy consumption calculation includes all domestic business sites (15 sites based on the statement) and subsidiaries with over 92% sales coverage (11 subsidiaries).
12. Hyosung TNC's (domestic) electricity energy consumption applies a total heating value of 9.6 TJ/GWh based on the statement preparation guidelines, while the electricity energy consumption for subsidiaries (overseas) applies a total heating value of 3.6 TJ/GWh.

Environmental Performance

Waste Disposal [1~2]

Category			Unit	Hyosung TNC				Subsidiaries	
				2021	2022	2023		2022	2023
						plan	performance		
Non-hazardous waste (ordinary waste)	Outsourced treatment	Recycling (①)	Ton	13,023	11,649	10,913	9,650	9,397	10,287
		Incineration		1,604	1,235	1,171	1,017	3,693	3,551
		Landfill		461	519	406	242	1,545	288
	Subtotal			15,088	13,403	12,490	10,909	14,635	14,126
Hazardous waste (designated waste)	Self-treatment (Recycling) (②)		Ton	598	439	56	56	0	0
	Outsourced treatment	Recycling (③)		486	308	290	445	123	627
		Incineration		1,631	1,623	1,603	1,699	11,162	11,676
		Landfill		0	0	1	0	42	0
		Others		0	0	1	1	0	1,427
	Subtotal			2,715	2,370	1,951	2,201	11,327	13,730
Total waste generated			Ton	17,803	15,773	14,441	13,110	25,962	27,856
Total waste recycled (①+②+③)			Ton	14,107	12,396	11,259	10,151	9,520	10,914
Total ratio of waste recycled			%	79.2	78.6	78.0	77.4	36.7	39.2

1. The domestic waste disposal status for 2021-2022 has been revised due to the expansion of the data calculation scope (from excluding to including headquarters waste).
2. The scope of waste disposal calculation includes the domestic headquarters and manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites)."

Air Pollutant Emissions [3~5]

Category		Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
General air pollutants	Nitrogen Oxides (NOx)	Ton	59.1	60.4	47.1	164.4	222.4
	Sulfur Oxides (SOx)		3.4	6.5	3.2	82.7	26.3
	Particulate matter (PM)		4.5	3.9	3.6	84.6	40.5
	Total Hydrocarbons (THC)		-	-	1.6	-	-
Volatile Organic Compounds (VOCs)		Ton	0.1	0.02	0.2	54.6	51.0
Hazardous Air Pollutants (HAPs)	Hydrochloric Acid (HCl)	Ton	-	-	0.4	-	-
	Carbon Monoxide (CO)		-	-	5.5	-	-
Ozone-depleting substances	CFD(R-11)	Ton	0.3	0.2	0	0	0
	HCFC(R-123)		0	0	0	0	0
	HCFC(R-22)		0	0	0	0	0

3. The emissions of air pollutants for domestic (2021-2022) and subsidiaries (2022) have been revised due to aggregation errors.
4. Hyosung TNC does not emit Persistent Organic Pollutants (POPs).
5. The scope of air pollutant emissions calculation includes domestic manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites).

Water Management [6~9]

Category		Unit	Hyosung TNC			
			2021	2022	2023	
					plan	performance
Seoul	Municipal water	Ton	5,087	5,623	5,500	5,070
Ulsan	Industrial water	Ton	4,307,103	4,591,409	4,514,385	4,500,183
Daegu	Municipal water	Ton	5,472	5,397	6,000	6,565
	Industrial water		587,942	574,098	580,000	551,323
	Subtotal		**593,414**	**579,495**	**586,000**	**557,888**
Gumi	Domestic water	Ton	75,089	64,083	63,912	62,199
	Industrial water		744,268	771,408	765,720	749,687
	Reused sewage treatment water		1,114,863	1,084,076	1,045,140	1,013,108
	Subtotal		1,934,220	1,919,567	1,874,772	1,824,994
Total water consumption		Ton	6,839,824	7,096,094	6,980,657	6,888,135
Total reused water (Ulsan)		Ton	3,383,350	3,826,899	3,478,640	3,747,425
Percentage of water consumption		%	49.5	53.9	49.8	54.4

Category	Unit	Subsidiaries	
		2022	2023
Municipal water	Ton	2,630,542	2,628,563
Groundwater	Ton	632,457	635,387
Industrial water	Ton	2,584,296	2,725,326
Total water consumption	**Ton**	**5,847,295**	**5,989,276**
Total reused water	**Ton**	**127,913**	**95,937**
Percentage of water consumption	**%**	**2.2**	**1.6**

6. The domestic water management data for 2021-2022 has been revised due to the expansion of the data calculation scope (from excluding to including headquarters waste). The 2022 water resource management data for subsidiaries has been revised due to aggregation errors.
7. The scope of water resource management calculation includes the domestic headquarters and manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites).
8. The Ulsan plant only aggregates industrial water consumption, as it purifies industrial water through water treatment facilities for use in the cafeteria.
9. The total reused water for subsidiaries decreased compared to 2022 due to a breakdown of the reclaimed water recovery facility in the Guangdong subsidiary (non-operational for a year).

Treatment of Water and Effluents [10~12]

Category		Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
Wastewater discharge by destination	Wastewater treatment	Ton	1,259,440	1,387,108	1,191,095	933,716	1,367,772
	Outsourced treatment		0	0	0	263,204	385,560
Total Wastewater discharge		**Ton**	**1,259,440**	**1,387,108**	**1,191,095**	**1,196,920**	**1,751,332**
Biochemical Oxygen Demand (BOD)		Ton	6.3	7.6	4.5	22.4	25.9
Total Organic Carbon (TOC)			N/A	20.7	17.9	-	-
Suspended Solids (SS)			10.5	13.6	9.4	40.9	73.4
Total Nitrogen (T-N)			19.4	20.5	10.2	26.1	50.6
Total Phosphorus (T-P)			0.6	0.4	0.3	0.2	0.6

10. The domestic water and effluent treatment data for 2021-2022 has been revised due to aggregation errors.
11. The scope of treatment of water and effluents includes domestic manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites).
12. Domestically, COD was measured in 2021-2022, but starting from 2022, TOC is measured in accordance with the amendment to the Water Environment Conservation Act.

Environmental Performance

Environmentally Friendly Products and Services Sales and Purchases [1~2]

Category		Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
Sale	Sales of environmentally friendly products	KRW million	86,819	73,035	53,266	59,729	74,335
	Total sales	KRW million	1,651,400	1,606,300	1,203,600	2,235,500	2,692,400
	Proportion of environmentally friendly product sales	%	5.3	4.5	4.4	2.7	2.8
Purchase	Purchases of environmentally friendly products	KRW million	16,403	28,800	16,081	9,342	8,790
	Total product purchase amount	KRW million	720,833	838,463	740,758	1,815,300	614,789
	Proportion of environmentally friendly product purchases to total Product purchase amount	%	2.3	3.4	2.2	0.5	1.4

1. 2021-2022년 국내 및 2022년 종속법인 친환경 제품 판매실적은 친환경 제품 (지속가능한 솔루션)정의가 변경됨에 따라 실적도 변경합니다.
2. 종속법인 총 제품 구매 실적은 생산량 감소 및 원자재 평균단가 하락(40%)으로 전년대비 감소하였습니다.

Raw Material Consumption and Renewable/Recycled Input Material Amounts [3~4]

Category		Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
Raw material consumption	Renewable material consumption (①)	Ton	6,816	11,894	13,151	6,060	5,453
	Recycled input materials consumption(②)	Ton	30,822	27,291	16,818	358,425	457,897
	Non-renewable material consumption (③)	Ton	643,405	548,905	494,113	840,077	976,260
	Total (①+③)	Ton	650,221	560,799	507,264	846,137	981,713
Percentage of renewable material consumption		%	1.0	2.1	2.6	0.7	0.6
Percentage of recycled input material consumption		%	4.7	4.9	3.3	42.4	46.6

3. The domestic raw material consumption and renewable/recycled input material amounts for 2021-2022 have been revised due to aggregation errors.
4. The scope of raw material consumption and renewable/recycled input material amounts includes domestic manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites).

Reclaimed Packaging Materials[5~6]

Category		Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
Packaging Materials	Total amount of packaging materials sold	Ton	2,300	2,456	2,422	-	-
	Total amount of reclaimed packaging materials	Ton	1,980	2,094	2,080	-	-
	Reclamation rate	Ton	86.1	85.3	85.9	-	-

5. The reclaimed packaging material amount currently aggregates the pallets and pads reclaimed at the domestic manufacturing site (Gumi plant).
6. The packaging materials are aggregated by quantity, not by weight, and the reclaimed amount is calculated using the median weight of each item type (pallets and pads).

Environmental Costs and Investments[7]

Category	Unit	Hyosung TNC			Subsidiaries	
		2021	2022	2023	2022	2023
Waste disposal costs and environmental remediation costs	KRW million	1,749	2,617	2,476	5,085	10,447
Environmental pollution prevention and environmental management costs		1,406	374	628	507	1,632
Facility investments for environmental improvement		527	960	735	2,707	517
Investment in environmental technology		-	606	2,321	-	-
Total		3,682	4,557	6,160	8,299	12,596

7. The scope of environmental costs and investments calculation includes domestic manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites).

Chemical Substances Management [8~9]

Category	Unit	Hyosung TNC			Subsidiaries
		2021	2022	2023	2023
Hazardous chemicals consumption	Ton	7,619	7,174	5,783	166,310
Hazardous chemicals consumption Intensity	Ton / KRW 100 million	0.46	0.45	0.48	6.18
Sales	KRW 100 million	16,514	16,063	12,036	26,924
Chemical substance emissions	Ton	0.3	0.2	0.3	2.2

8. The scope of hazardous chemicals consumption and emissions calculation includes domestic manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites).
9. The 2022 data for hazardous chemicals emissions and consumption for subsidiaries has been excluded due to insufficient information.

Environmentally Friendly Vehicles [10]

Category		Unit	Hyosung TNC			Subsidiaries	
			2021	2022	2023	2022	2023
Off-road vehicles	Electric vehicle	Car	74	66	57	26	29
Total No. of company vehicles		Car	145	137	126	124	127
Ratio of environmentally friendly vehicle ownership		%	51.0	48.2	45.2	21.0	22.8

10. The scope of environmentally friendly vehicles calculation includes domestic manufacturing sites (Gumi plant, Ulsan plant, Daegu plant) and the manufacturing sites of subsidiaries (10 sites).

Environmental Performance

Expected Amount of Energy Savings and Greenhouse Gas Reduction [1]

Hyosung TNC	Energy type	Project	Introduction date	Investment (KRW million)	Expected energy savings (TJ/year)	Expected greenhouse gas reduction (tCO_2eq/year)
Gumi	Electric power (scope2)	Q6-2 lower fruit pump inverter replacement savings	2021.9	9	0.13	6
		Energy (electricity cost) savings through air pressure optimization for STA	2021.12	90	12.1	575
		Energy savings through the integration of Q6+Q7 Hot Oil Boiler	2022.12	31	19.3	926
		Energy savings through the integration of Q6-2+Q7 chiller lines	2023.2	20	11.2	537
		Energy savings through hardware pump type change	2023.4	50	1.8	85
		Energy savings through load adjustment operation by installing an inverter	2023.5	30	3.8	181
		Air compressor replacement (optimization of supply pressure)	2023.7	370	11.1	530
		Reduction in chiller load by increasing the spandex cold water management temperature from 7℃ to 8℃	2023.5	0	5.1	243
		Lowering the discharge pressure of the spandex fruit pump (9→7 kgf/㎠)	2023.5	0	4.4	209
Daegu	LNG (Scope 1)	Increasing the efficiency of the waste heat recovery system - Installation of inverters for wastewater raw water pumps, replacement of heat meters, and pipe cleaning	2022.1	2	1.2	69
		Installation of a new waste heat recovery system for pre-treatment - Dismantling the existing outdated Benninger waste heat recovery system and installing a new waste heat recovery system in the pre-treatment process (for two Benninger boil-offs)	2023.5	156	2.6	146
Ulsan	Electric power (Scope 2)	Improvement of recovered cooling water distribution efficiency - Replacing malfunctioning valves in the cooling tower and increasing the efficiency of recovered cooling water distribution to shut down one cooling tower	2022.1	6	3.8	182
		Reduction of air loss through dryer equipment improvement - Preventing air loss by replacing the existing purge-type dryer with a non-purge-type dryer	2022.8	210	5.1	245
		Improvement of backwashing cycles by replacing the sand filter	2022.1	50	0.3	12
		Reduction of electricity costs through integrated operation of compressors - Reducing pump and cooling tower electricity costs by shutting down the B District compressor room	2023.8	-	8.9	427
	Steam (Scope 2)	Shutting down one pipeline supplying the boiler steam header	2023.9	10	3.9	10.9

Subsidiaries	Energy type	Project	Expected energy savings (TJ/year)	Expected greenhouse gas reduction (tCO_2eq/year)
Hyosung Chemicals (Jiaxing)	Electric power (Scope 2)	Solar power generation	0.48	76
Hyosung Spandex (GuangDong)		Replacement of filler material for cooling tower #D	0.26	41
Hyosung Spandex (Ningxia)		Stopped operation of 26 air compressors in power distribution room due to winter outdoor air intake	2.02	320
		Replace with LED lighting	0.002	0.3
		Turn off office/power room lights	0.29	45
Hyosung India		Install natural evaporator	0.76	152
Hyosung Spandex (GuangDong)	LNG (Scope 1)	Operate the standby hot oil boiler at a reduced temperature from 250℃ to 190℃	2.01	103
Hyosung Spandex (GuangDong)	Steam (Scope 2)	Change in water type for radiation washing line (room temperature pure water → 90℃ steam cooling water)	0.31	18

1. The expected amount of energy savings and greenhouse gas reduction is an estimated figure based on the equipment capacity and efficiency, and operating hours before and after the energy-saving project.

Biodiversity within the Areas Affected by Business Sites [2~5]

Country	Business Site by region	Characteristics of the locations of operation	Physical Risk	Reputation Risk	Risk indicators of the organization among physical risks			Endangered species	
					Heat wave	Tropical cyclone	Pollutant emissions	Nationally designated endangered species (domestic)	I IUCN Red List (overseas)
Republic of Korea	Seoul (Headquarters)	Office	2.5	2.5	3.5	4.5	2.9	0	.
	Ulsan plant	Production	3.2	3.3	3.0	4.5	4.1	1	91
	Gumi plant	Production	2.6	2.7	3.5	4.5	4.1	3	24
	Daegu plant	Production	2.5	3.1	3.0	4.5	4.1	7	25
Vietnam	Hyosung Dong Nai Nylon	Production	3.3	3.0	3.5	3.5	4.0	N/A	219
China	Hyosung Spandex (Jiaxing)	Production	3.3	3.1	4.0	4.5	4.3		33
	Hyosung Chemicals (Jiaxing)	Production	3.2	3.1	4.0	4.5	4.3		34
	Hyosung Spandex (GuangDong)	Production	3.2	3.1	3.5	4.5	4.3		156
	Hyosung Spandex (Zhuhai)	Production	3.2	3.1	3.5	4.5	4.3		155
	Hyosung Spandex (Ningxia)	Production	3.0	3.1	3.0	3.0	4.4		14
	Hyosung Spandex (Quzhou)	Production	3.0	3.4	3.5	4.5	4.3		37
Brazil		Production	2.9	3.4	3.5	2.5	3.6		133
India		Production	3.5	3.3	3.5	3.5	4.6		29
Türkiye		Production	3.0	2.9	3.0	2.5	4.1		34

2. The impacts were identified using the WWF (World Wide Fund for Nature) Biodiversity Risk F2.
3. The magnitude of the impact of risks is as follows. Among the physical risks, the organization's risk indicators have selected items (heat wave, tropical cyclones, pollutant emissions) that correspond to seven or more instances of High Risk and Very High Risk.
   Very Low Risk : $1.0 \leq x \geq 1.8$, Low Risk: $1.8 < x \geq 2.6$, Medium Risk : $2.6 < x \geq 3.4$, High Risk : $3.4 < x \geq 4.2$, Very High Risk : $4.2 < x \geq 5.0$
4. In accordance with the Wildlife Protection and Management Act, the species protected by the Ministry of Environment for effective wildlife protection were aggregated based on the major administrative regions in the nationwide distribution survey of endangered wildlife by the National Institute of Biological Resources.
5. Based on the IUCN Red List of Threatened Species, species categorized as Critically Endangered (CR), Endangered (EN), and Vulnerable (VU) within a 25 km radius of the business site were aggregated.

Water Risks [6~8]

Country	Business Site by region	Water risk	Physical risk	Water stress			Water depletion	Drought risk	Riverine flood risk	Regulatory and reputational risk
				baseline	30 Outlook	50 Outlook				
Republic of Korea	Seoul (Headquarters)	L - M	M - H	M - H	M - H	M - H	L - M	L - M	L	L
	Ulsan plant	M - H	H	M - H	M - H	M - H	L - M	M	E-H	M - H
	Gumi plant	L - M	M - H	M - H	M - H	M - H	L - M	M	L - M	L
	Daegu plant	L - M	M - H	M - H	M - H	M - H	L - M	M	L - M	L
Vietnam	Hyosung Dong Nai Nylon	H	H	L - M	L - M	L - M	L	M	E-H	H
China	Hyosung Spandex (Jiaxing)	H	E- H	E-H	H	H	L - M	M - H	H	M - H
	Hyosung Chemicals (Jiaxing)	H	E-H	H	H	H	L - M	M - H	E-H	M - H
	Hyosung Spandex (GuangDong)	M - H	L - M	L	L	L	L	M - H	M	M - H
	Hyosung Spandex (Zhuhai)	H	H	H	H	H	L - M	M	M - H	M - H
	Hyosung Spandex (Ningxia)	H	H	M - H	H	H	L - M	M - H	H	H
	Hyosung Spandex (Quzhou)	H	H	H	H	H	L - M	M	M - H	M - H
Brazil		L - M	L - M	L	L	L	L	M	E-H	H
India		E-H	E-H	E-H	E-H	E-H	E-H	H	M - H	H
Türkiye		M - H	H	M - H	M - H	H	L - M	M - H	L	L - M

6. The Water Resource Risk analysis tool (Aqueduct 4.0) from the World Resources Institute (WRI) was used.
7. Water risk is a comprehensive indicator that aggregates quantity, quality, regulatory, and reputational risk indicators.
8. Water stress is the ratio of total demand to available surface and groundwater supply, with the magnitude of impact categorized as follows: Low <10%, Low to Medium 10-20%, Medium to High 20-40%, High 40-80%, and Very High >80%. The categories are denoted as L for Low, M for Medium, H for High, and E-H for Extremely High.

Hyosung Heavy Industries

Total Energy Solution Leader for Tomorrow

Total Energy Solution Leader for Tomorrow

Company name	Hyosung Heavy Industries Corporation
Date of establishment	June 4, 2018
CEO	Tae-Hee Woo
Number of employees	3,291 People (As of December 2023, separate basis)
Headquarters location	119 Mapodaero, Mapo-gu, Seoul, Republic of Korea (Gongdeok-dong)
Key locations	(Domestic) Seoul, Changwon (Overseas) USA, Vietnam, India, and China

Sales revenue
KRW 4.3 trillion

Operating profit
KRW 257.8 billion

Power & Industrial Systems Division

Hyosung Heavy Industries is bolstering and expanding its business by integrating IT-based technologies with its power transmission and distribution equipment business, which includes ESS, STATCOM, and power facility asset management solutions (ARMOUR). Furthermore, it offers sustainable solutions, including environmentally conscious power facilities, hydrogen fueling stations, and solar power plants.

Hyosung Heavy Industries Changwon Plant

Construction Division

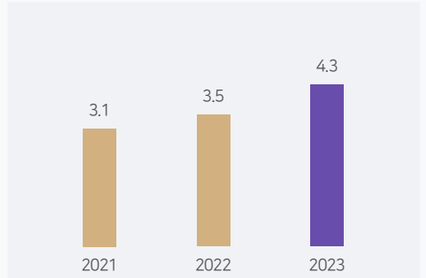
Hyosung Heavy Industries' Construction Division is committed to the establishment of a spatial culture in which technology and nature coexist harmoniously. Specifically, it is enhancing its primary competency in green smart building technology by fostering the advancement of sustainable material technologies.

Harrington Place Sinheung

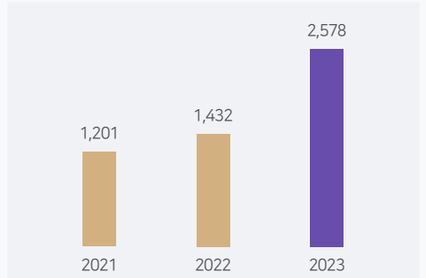
Financial Performances

Hyosung Heavy Industries' consolidated sales for 2023 are KRW 4.3 trillion, and operating profit is KRW 257.8 billion. Sales and operating profit for both the Power & Industrial Systems division and construction division increased, with a 79.99% growth rate in operating profit compared to the previous year.

Sales Revenue Trends (Unit: KRW trillion)



Operating Profit Trends (Unit: KRW 100 million)



* Consolidated Financial Performance for 2023

Key Business Areas

Power Systems PU

- Power facilities, power systems, digital solutions, etc.
- 70% production of the key facilities for domestic power supply
- Operation of the overseas production bases in the USA, India, and China

Industry Machinery PU

- Motors, generators, industrial machinery, gear solutions, etc.
- Operation of system engineering business based on a variety of industrial product lineup
- Domestic No. 1 motor manufacturing and sales company

Wind Energy Business Division

- Wind turbines (5MW, 2MW, 750kW)
- First to develop 750kW / 2MW / 5MW level wind turbine systems in Korea
- Providing total wind power solutions, including key wind components, wind turbines, EPC, and O&M

Construction PU

- Housing area/Architecture area/Civil engineering area/Industrial area
- Introduction of the first high-end residential villas in Korea
- Participation in diverse areas of construction such as apartments and office buildings

Hyosung Heavy Industries' Sustainable Business Model

Next-generation power grid systems and green building drive sustainable growth

Highly efficient generational facilities for eco-friendly vessels

We provide Shaft Generator Motor System, a vessel energy solution for generating spare power of the main engine.

World's first commercialization of the hydrogen engine generators

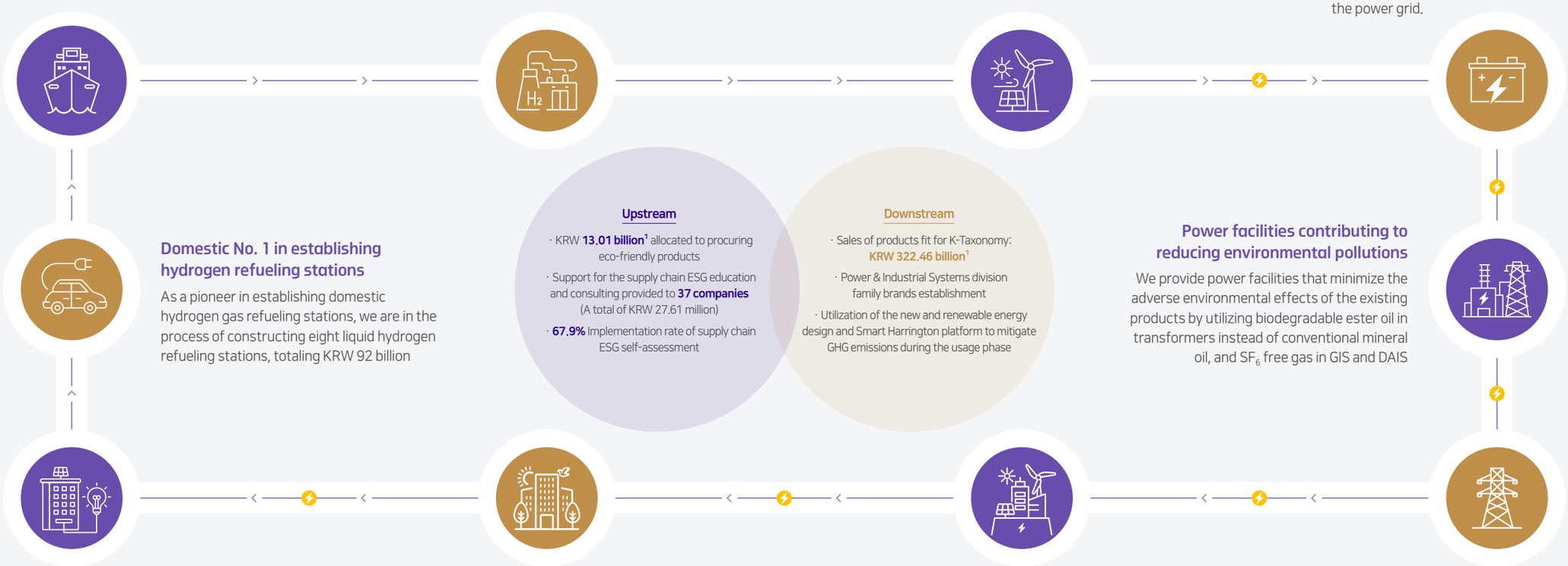
At the Hyosung Chemical Yongyeon Plant, we are commercializing hydrogen engine generators that use 100% by-product hydrogen.

Providing renewable energy generation and solutions

We offer solutions from solar power plant construction to the use of solar inverters. Also, as a leading domestic wind power company, we have started building the repowering EPC of the largest onshore wind farm in Korea with a capacity of 90MW.

Renewable energy grids stabilization solution

We offer power grid stabilization solutions for renewable energy systems that utilize Energy Storage Systems (ESS) and STATCOM, which supply reactive power to improve the stability of the power grid.



Domestic No. 1 in establishing hydrogen refueling stations

As a pioneer in establishing domestic hydrogen gas refueling stations, we are in the process of constructing eight liquid hydrogen refueling stations, totaling KRW 92 billion

Upstream

- KRW **13.01 billion**[1] allocated to procuring eco-friendly products
- Support for the supply chain ESG education and consulting provided to **37 companies** (A total of KRW 27.61 million)
- **67.9%** Implementation rate of supply chain ESG self-assessment

Downstream

- Sales of products fit for K-Taxonomy: **KRW 322.46 billion**[1]
- Power & Industrial Systems division family brands establishment
- Utilization of the new and renewable energy design and Smart Harrington platform to mitigate GHG emissions during the usage phase

Power facilities contributing to reducing environmental pollutions

We provide power facilities that minimize the adverse environmental effects of the existing products by utilizing biodegradable ester oil in transformers instead of conventional mineral oil, and SF_6 free gas in GIS and DAIS

Structures optimized for renewable energy sources

We are implementing new and renewable energy designs in buildings, such as installing solar power on roofs and exterior walls, as well as subterranean fuel cell rooms.

Construction of infrastructure that allows coexistence of humanity and nature

We are establishing biotopes in residential complexes to facilitate the coexistence of wild animals and plants. Biotopes serve as intermediaries that facilitate the integration of ecosystems that are fragmented.

Microgrid solutions

We are establishing independent power infrastructures and providing microgrid solutions through the use of solar power, wind power, and ESS to island areas where power supply is not feasible

High-efficiency direct current (DC) transmission system

We have created direct current (DC) transmission and distribution systems that are compatible with all voltage levels, including ultra-high voltage (HV) and low voltage (LV). These DC transmission and distribution systems facilitate the more efficient utilization of energy by minimizing power loss.

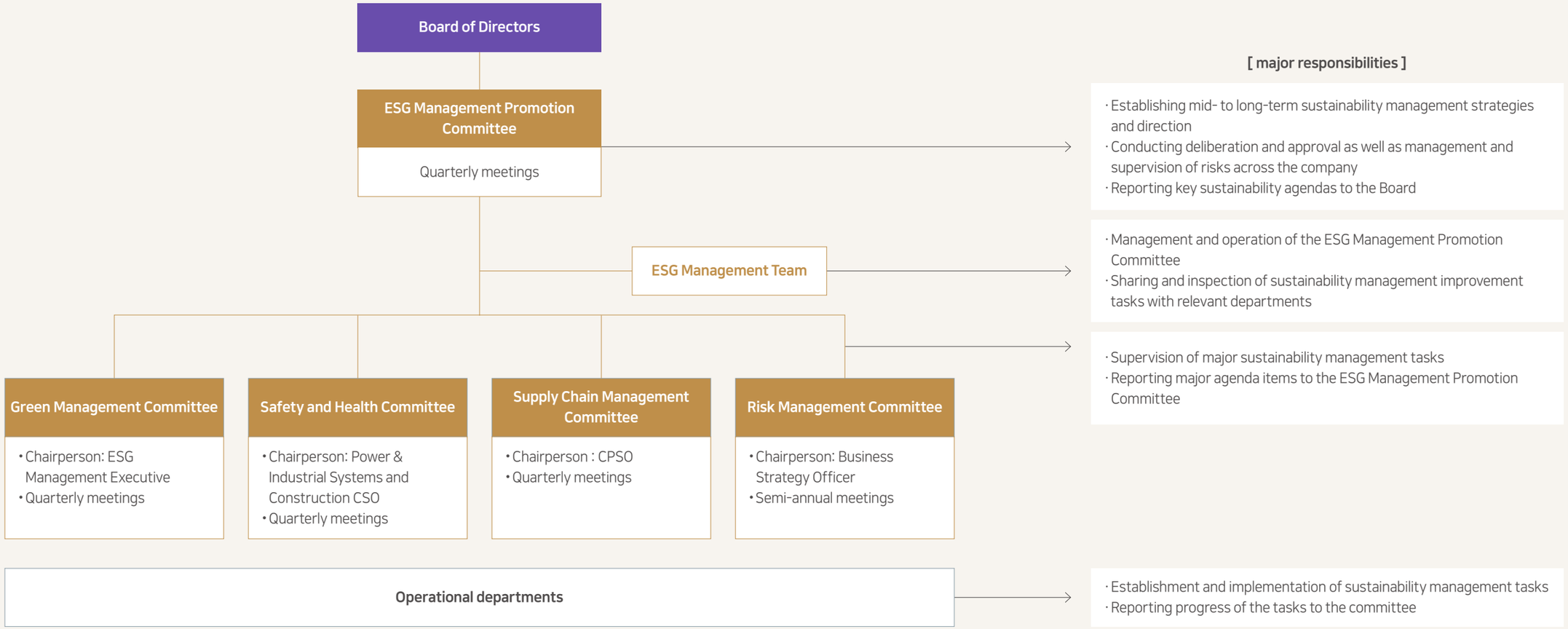
1. Based on Hyosung Heavy Industries Corporation

Hyosung Heavy Industries Sustainability Management Framework

Governance

Decision-making and Implementation Framework

Hyosung Heavy Industries' Sustainability Management Framework is composed of the ESG Management Promotion Committee under the supervision of the CEO and 4 subcommittees under the ESG Management Promotion Committee.
The Green Management Committee, Safety and Health Committee, Supply Chain Management Committee, and Risk Management Committee, all under the ESG Management Promotion Committee, manage and supervise sustainability goal setting and implementation, as well as reporting key agendas to the ESG Management Promotion Committee. The ESG Management Promotion Committee, which is the highest decision-making body regarding Hyosung Heavy Industries' sustainability management, deliberates and approves key agendas.



Materiality Assessment Process

Materiality Topic Identification Process

Identification of Material Topics

Hyosung Heavy Industries identifies material sustainability topics in the processes of establishing sustainability strategies and priority tasks, and of preparing sustainability reports. We executed a total of 7 steps in determining materiality topics to publish this report.

[Step 1] We composed a pool of 30 issues across environmental, social, and governance (ESG) areas by identifying 10 issues for each area. This was accomplished by exploration of global guidelines on sustainable management, industry-specific issues, global benchmarking companies, and company-related issues.

[Step 2] We evaluated the extent of interest among internal and external stakeholders regarding the issue pool. To gather internal stakeholders' opinions, we conducted a survey among employees, and to assess the management's level of interest, we analyzed internal meetings and reports. The interest of external stakeholders was determined by conducting a survey of 250 partner companies and examining ESG-related requests from consumers and investors.

[Step 3] We conducted FGI (Focused Group Interview) for relevant departments to analyze the relationship between each issue and our business. The business relevance is the degree to which each issue affects the operations of Hyosung Heavy Industries. Furthermore, we assessed the frequency and intensity of each issue in order to determine its financial impact.

[Step 4] We prioritized the issues based on the comprehensive analysis of steps 1 to 3 and reviewed the 2023 sustainability performance and 2024 plans for each issue.

[Steps 5 and 6] Selected sustainability issues were reviewed by the executives and finally approved by the Board of Directors.

[Step 7] Hyosung Heavy Industries has been integrating material topics into sustainable management strategy, objectives, and business direction for 2024. We disclose our progress in addressing these sustainability concerns in the sustainability report.

① Environmentally conscious products and solutions
② Response to climate crisis
③ Enhancement of workplace health and safety
④ Sustainable supply chain
⑤ Customer obsession

Navigate to Stakeholder Engagement

	Step1	Step2	Step3	Step4	Step5	Step6	Step7
	Organize Sustainability Issue Pool	Take stakeholder interests into account	Assess the relevance to business performance and financial impact	Determine priorities through comprehensive analysis	Report to the executives and reflect their feedback	Board makes decisions	Reflect on sustainability management strategies/ goals and disclose them in the report
Internal	Consideration of industry-specific sustainability issues, global sustainability issues, and global guidelines. Identification of business-related issues through meetings with the planning and management teams of each business division.	**Employees** Conducted survey for employees at Level 1 and above. **Executives** Analyzed 2023 CM report and ESG Management Promotion Committee agendas.	Implementing FGI for relevant departments by issue + Financial materiality assessment by issue	Comprehensive analysis of steps 1, 2, and 3	Reporting steps 1, 2, 3, and 4 to executives	Reporting steps 1, 2, 3, 4, and 5 and determination of material topics	Reflect 2024 sustainability strategies/ goals/business projects + Disclose material topic management status in the sustainability report
External	Composed of a total of 30 issues: 10 environmental, 10 social, and 10 governance and other issues.	**Business partners** A survey with 250 partner companies **Customers** ESG-related customer requests analysis and utilization of the self-assessment and evaluation tools **Investors** Requests analysis	Assessment results of analysis on business relevance and financial impact by issue	**Comprehensive analysis** Prioritization of issues determined through steps 1, 2, and 3. + 2023 sustainability performances + 2024 ESG implementation plans	Incorporation of executive feedback and preparation of the Board report	Incorporation of the Board directors' feedback and determination of material topics	

Determined Material Topics and Management Plans

Material Topics Management Plans

Area	Topic	Business relevance	Financial impact	Key external stakeholders' demands	2023 Performances	2024 Plans	GRI Indicators	2022 Material sustainability issues
Environmental	**Environmentally conscious products and solutions**	High	High	**Customer** • (Power & Industrial Systems) Demand for eco-friendly certifications and LCA related to products • (Construction) Increased demand for eco-friendly products such as eco-friendly flooring **Local community** • (Construction) Positive evaluation of biotopes by local communities	• Established an R&D center in the Netherlands for the next generation power equipment, including SF_6 free GIS • Developed and supplied 72.5kV GIS applying 'VI + dry air' • Signed an ESS supply contract with Verdant Bidco in the UK • Appointed an operator for the establishment and operation of an KRW 80 billion liquefied hydrogen fueling station • Research and development of high-efficiency and GHG reducing power equipment, such as shaft generator motor system and hydrogen engine generators	• Expand the R&D for next generation power equipment such as SF_6 free GIS • Strengthen Hyosung Heavy Industries' hydrogen value chain → Expand the construction of liquefied hydrogen fueling station and commercialize hydrogen engine generators at the Hyosung Chemical Yongyeon Plant • Broaden the scope of green building certification and biotopes	-	●
Environmental	**Response to climate crisis**	Medium	Medium	**Customer** • Demand for GHG emissions reduction • (Power & Industrial Systems) Demand for the development of high-efficiency equipment • (Construction) Demand for the renewable energy utilization • (Construction) Demand for the use of eco-friendly materials	• Reduced GHG emissions by 35.5% compared to 2018, and by 7.6% compared to 2022 • Changwon Plants 1, 2, and 4 have installed and self-generated solar power facilities with a total capacity of 182.4kW.	• Raise the GHG emissions reduction target and establish the roadmap (Current target: reduce Scope 1 and 2 emissions by 14.5% by 2030 compared to 2018) • Increase the capacity of solar power facilities at Changwon Plants 1, 2, and 3 to approximately 936 kW.	201 302 305	●
Social	**Enhancement of workplace health and safety**	High	High	**Customer** • Demand for the information disclosure regarding industrial accidents **Local community** • Increased social interests in workplace safety	• Maintained ISO 45001 and KOSHA-MAS certifications • (Power & Industrial Systems) Newly acquired ISO 45001 certification subsequent to the registration of the Anyang Plant in 2023 • (Power & Industrial Systems) Published and distributed the safety inspection white paper and guidebook • (Construction) Achieved the zero serious accidents for 2 consecutive years • (Construction) Established the integrated control system and operated the HSS (Hyosung Smart Safety) system operation	• Renew 45001 certification • (Power & Industrial Systems) Strengthen the screening process for qualified suppliers • (Power & Industrial Systems) Introduce the International SOS for overseas safety management • (Construction) Achieve Zero serious accidents for 3 consecutive years • (Construction) Conduct 90 safety training sessions under supervision of the CSO and the safety and health team leader (120% increase compared to the previous year)	403	●
Social	**Sustainable supply chain**	High	High	**Customer** • Demand for the disclosure of responsible raw materials sourcing policies • Demand for the improvement in the level of supply chain sustainability management **Partner company** • Expectation of monetary support for small enterprises	• Achieved the highest rating in winwin growth evaluation of KOFCA • Provided quality inspection and human resources support for 95 partner companies • Provided support of sustainability management education and consulting for 37 companies (including online education and webinars) • Purchase of eco-friendly products and services amounting to KRW 13.01 billion • Fair-trade agreement signed with 616 companies	• Strengthen verification of legal compliance in labor, human rights, safety, and environmental sectors of partner companies to prepare for supply chain due diligence • Increase support for partner companies in climate crisis response, quality, and productivity improvement by 10% compared to the previous year • Expand the support for sustainability management education and consulting by 10% compared to the previous year • Expand the application of the interlocking system for cost of goods delivered	308 414	●
Social	**Customer obsession**	High	Medium	**Customer** • Increasing customer expectations on brand value **Local community** • Increased importance of consumer satisfaction due to improved accessibility and ease of information sharing	• Collected 19,282 VOCs in 2023 • (Power & Industrial Systems) Family brand development • (Power & Industrial Systems) VOC Performance] Secured a large-scale transmission network construction project in Australia • (Construction) Customer Love Brand Award • (Construction) Korea Consumer Award for Best Brand of the Year	• Improve and strengthen the VOC reward system • (Power & Industrial Systems) Enhance promotional efforts such as family brand video production	-	●

Environmentally Conscious Products and Solutions

Why So Important?

Hyosung Heavy Industries, as a company that produces industrial power facilities and constructs residential buildings, is aware that our products and services have a significant long-term impact on the environment during their use. We are committed to minimizing the negative environmental impact of our production and operation processes, as well as the usage phase by our customers.

Our Approach

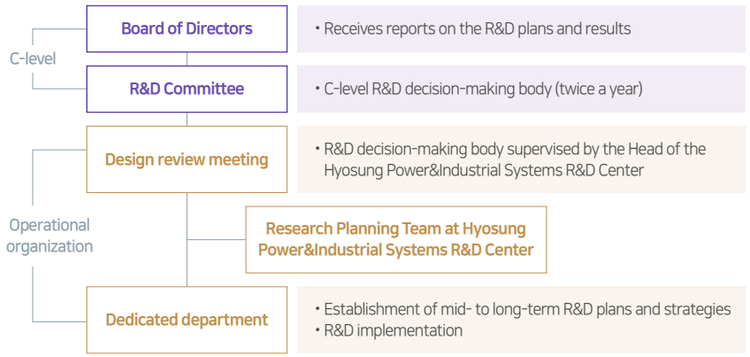
The Power & Industrial Systems division that produces industrial power facilities provides essential solutions for transition to decarbonized economy and renewable energy through means such as expanding equipment production for next generation grid construction.
In our construction division, which includes apartments and other residential buildings, we enhance energy efficiency from the design phase and minimize environmental pollution during construction to create homes and buildings that harmonize well with the surrounding natural environment. Additionally, we apply green building certification and renewable energy generation to shape a sustainable infrastructure.

Our Achievement

- Achieved the first order for DAIS in the North American market.
- Established an R&D center in the Netherlands in 2023: Conducted R&D for SF_6 free GIS
- Commercialized hydrogen engine generators for the first time in the world
- Green building certification: 3 final certifications, and 5 preliminary certifications

R&D Governance

Decision-making and Implementation Framework



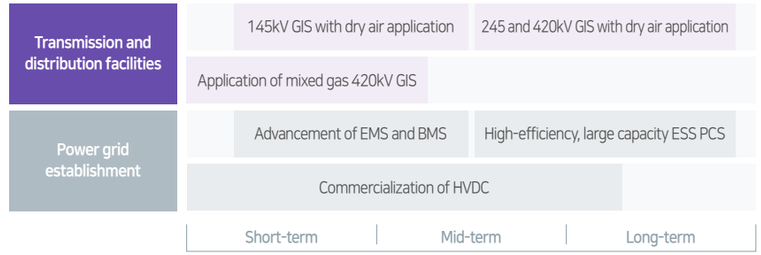
Hyosung Heavy Industries has been developing products and solutions that incorporate Clean Tech, utilizing the R&D decision-making and implementation framework.
The dedicated R&D department annually establishes mid-to long-term R&D plans and strategies, including Clean Tech. The Research Planning Team at the Hyosung Power&Industrial Systems R&D Center reviews them and conducts design review meetings (with the head of the center and the executives of the business division) before initiating the projects. The R&D Committee reviews the initiated R&D strategies and projects twice a year, and reports its findings in meetings of the Board of Directors, the highest decision-making body.

Strategic Direction

Hyosung Heavy Industries has established the mission of, 'Total Energy Solution Leader for Tomorrow,' and the following implementation strategies.

Performances and Plans

TOTAL ENERGY SOLUTION



TOTAL ENERGY SOLUTION 2030 Roadmap

Expansion of Supply for Biodegradable Ester Oil Transformers

Hyosung Heavy Industries offers biodegradable ester oil transformers, which can serve as an alternative to the mineral oil that is typically employed as an insulating medium in transformers. Ester oil is non-toxic, permeates the soil more slowly, and is biodegradable in comparison to mineral oil. Consequently, the environmental impact of oil leakage from the transformer is less severe than that of mineral oil, even in the event of an unexpected incident. Furthermore, biodegradable ester oil transformers can mitigate the fire risk as they have a high flash point of 300°C and exceptional fire safety performance, which is attributed to their self-extinguishing properties.
Hyosung Heavy Industries acquired a significant number of orders for ester oil/vegetable oil transformers in 2023 and intends to continue expanding its order volume in both domestic and global markets in 2024.

Biodegradable ester oil transformer

2023 Business Performances
• Accomplished cumulative orders of over 280 ester oil transformers, including 400Kv class, targeted for the UK market
• Achieved an order for 154kV vegetable oil transformers from Korea Electric Power Corporation (KEPCO)

Environmentally Conscious Products and Solutions

GIS with Alternative Gas to SF_6

Compared to other insulating media, the SF_6 gas used in Gas Insulated Switchgear (GIS) has an enormously greater Global Warming Potential (GWP), around 23,900 times more than that of carbon dioxide. In 2021, an evaluation of the carbon footprint of a 132kV 40kA GIS product over its entire lifecycle demonstrated that the emission of SF_6 gas is substantially high during both the pre-manufacturing and usage phases.
In 2023, Hyosung Heavy Industries developed a 72.5kV GIS using a Vacuum Interrupter (VI) and dry air, replacing SF_6 gas and eliminating GHG emissions.

Commencement of Supplying DAIS to the North American Market

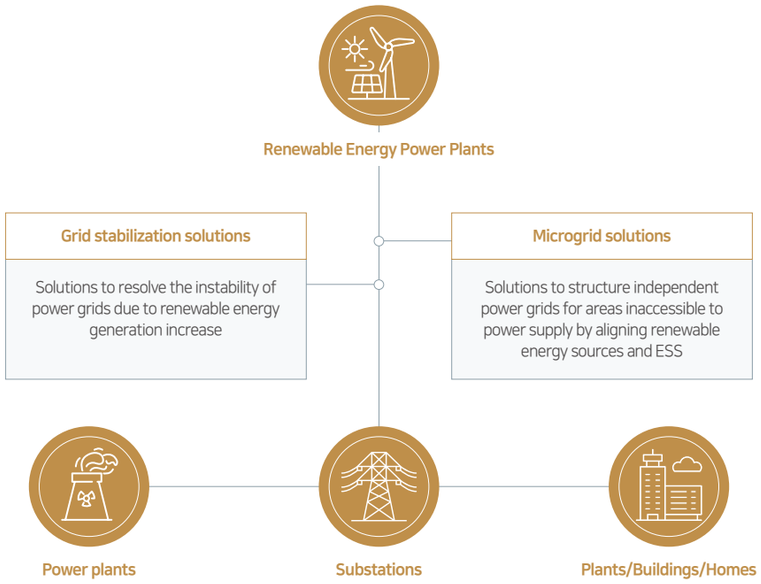
DAIS (Dry Air Insulated Switchgear) is a gas-insulated switchgear that uses dry air to replace SF_6 gas, which has a high global warming potential among GHGs. Dry air has a global warming potential of 0, which enables DAIS to significantly reduce GHG emissions in comparison to conventional products. Hyosung Heavy Industries developed a 25.8kV 25kA 630A/2000A DAIS model in 2023 that complies with the standards of the Korea Electric Power Corporation and has begun supplying it to the North American market.

170kV 50kA GIS with Novec mixture gas

2023 Business performances
• Achieved contract for 72.5kV 31.5kA GIS applying 'VI + dry air'
• Achieved contract for 170kV 50kA GIS with Novec mixture gas
• DAIS's successful entrance into the North American market

Renewable Energy Integration Solutions Utilizing ESS and STATCOM

ESS (Energy Storage System) is an energy storage system that stores power in times of low demand and releases it when required. Hyosung Heavy Industries utilizes ESS to improve energy efficiency, while producing and providing grid stabilization solutions and microgrid solutions to contribute to stable energy supply.



STATCOM is a power device that controls the instability of transmission and distribution networks and maximizes transmission capacity, which is essential to maintaining the grid stability of renewable energy sources. Hyosung Heavy Industries autonomously produces converters and controllers that are core components of STATCOM based on autonomous grid analysis and engineering capabilities. We also provide comprehensive solutions, including STATCOM system design, installation, and commissioning.

2023 Business Performances
• Currently implementing BESS construction for the state-owned power company of South Africa (to be completed in 2024)
• Executed an ESS supply contract with Verdant Bidco in the UK
• Supplied Taiwan Power Company with its first 200Mvar STATCOM
• Supplied STATCOM PJT to three North American countries

GREEN ENERGY TECHNOLOGY

2030 Hyosung Heavy Industries Hydrogen Value Chain 2030 Roadmap

Leading the Onshore and Offshore Wind Power Generation System Industry

Hyosung Heavy Industries succeeded in developing wind power generation systems of 750 kW and 2 MW as the first company in Korea, leading the domestic wind power generation system industry. Currently, we are promoting the EPC project to repower Korea's largest onshore wind power complex with a scale of 90MW. We are also engaged in creating a joint company establishment for domestic production of wind power turbines and planning to create and supply a large scale offshore wind power generation system that is tailored to low wind speeds and typhoon conditions in Korea.

Jeju Kimnyeong National Wind Power Demonstration Research Complex

Environmentally Conscious Products and Solutions

Enhancement of Hydrogen Value Chain, from Generation to Utilization

Hyosung Heavy Industries has established 8 liquid hydrogen charging stations with a scale of KRW 92 billion, selected as an operator for commercial vehicle liquid hydrogen fueling stations (as of April 2024). In 2024, we will complete the construction of liquid hydrogen fueling stations in Gwangyang and Jeonju and initiate commercial operations. Liquid hydrogen production will begin in the third quarter of 2024 in the liquid hydrogen generation subsidiary, which was established in collaboration with Linde, a global chemical company. We plan to supply liquid hydrogen for semiconductors to identify additional needs for industrial hydrogen.

Establishment of High-efficiency and GHG Emissions Reduction Power Equipment

Premium Efficiency Motor

Hyosung Heavy Industries manufactures high-efficiency motors that surpass the minimum energy efficiency requirement of IE3 (premium efficiency). We aim to increase the minimum energy efficiency standard for all motor capacities to IE4 (super premium efficiency) by 2026.

Shaft Generator Motor (SGM)

The shaft generator motor system is a rotating device that generates power needed for ship propulsion by utilizing the rotational power of the engine shaft. The system increases fuel efficiency and minimizes CO_2 and Methane emissions. Hyosung Heavy Industries co-developed the 2MW shaft generator motor system with Hanwha Ocean, and will start supplying shaft generator motor system, Drive, and SI Package from 2024.

Hydrogen Engine Generator

Hydrogen engine generator reduces GHG emissions by utilizing hydrogen and natural gas as fuel.
Hyosung Heavy Industries commercializes the 100% hydrogen engine generator at the Hyosung Chemical Yongyeon Plant in 2024, utilizing by-product hydrogen and enabling the generation of carbon-free electricity.

2023 business performances
• 2023 Sales of KRW 14.6 billion achieved through shaft generator motor system
• Initiating commercialization of hydrogen engine generators at Hyosung Chemical Yongyeon Plant

GREEN CONSTRUCTION

Vision		Comply with the ISO environmental and quality management system, and promote sustainable constructions through increase of green building certification
Strategic tasks	Short-term	Extensive application of green building certification (G-SEED)
	Mid-term	Review the acquisition of zero energy building certification Expand the application of renewable energy design and landscaping
	Long-term	Implement higher grades of Zero Energy Building Certification Promote the energy self-sufficiency rate improvement

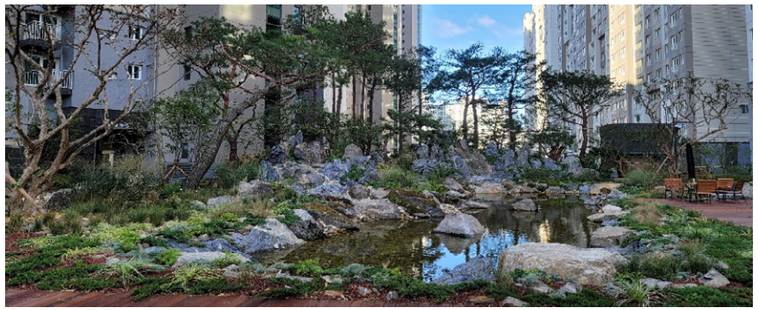
GREEN CONSTRUCTION 2030 Roadmap

Environmental Pollution Reduction across Construction Process through G-SEED

Hyosung Heavy Industries have acquired green building certification (G-SEED) to reduce negative environmental effects throughout the entire process of architectural design, construction, maintenance, and management. In 2023, we obtained Excellent and General grades of G-SEED for 3 constructions, and preliminary certification for 5 sites.

Biotope Creation within the Complexes for Biodiversity Conservation

Hyosung Heavy Industries is creating terrestrial and aquatic biotopes, which are artificial habitats for living organisms, in residential complexes to facilitate coexistence between humans and nature in urban areas. In 2023, we installed biotopes at 3 sites.



Aquatic Biotope at the Taereung Harrington Place site

New and Renewable Energy Design and 'Smart Harrington' Platform Application

Hyosung Heavy Industries is incorporating new and renewable energy designs on the interior and exterior of buildings and offering a Home IoT platform to assist residents in reducing their energy consumption during their use of the buildings. Solar power is implemented on portions of the roofs and exterior walls of communal housing, and the electricity produced can be utilized in communal areas of the building, including elevators. Furthermore, the housing is equipped with an underground fuel cell chamber that is utilized to store hot water and electric energy. These resources are subsequently utilized in the building's common areas and community.

Harrington Place rooftop landscaping with solar power generation

The windows within the residences are equipped with a daylighting louver system that features high-function panels made of aluminum material with high solar reflectivity. This enables residents to regulate the intensity of natural lighting for the purpose of generating interior lighting energy. The Smart Harrington mobile app, a Home IoT platform, also allows residents to monitor and control the illumination, heating, elevator calls, and standby power cutoff within their units. Starting with the Taereung and Hongje areas of Seoul, the Smart Harrington IoT platform has been implemented at eight sites as of 2023.

Total potential generation capacity from new and renewable energy design

Solar power generation (5 sites)	784.76kW
Fuel cell (1 site)	10kW

Response to Climate Crisis

Why So Important?

Hyosung Heavy Industries is a global company mainly focused on the production of electrical machinery and construction of building, both directly related to production, saving, transmission, management, and usage of power, which is the primary contributor to GHG emissions. We are aware of the environmental impact of the products, services, and construction we produce, and recognize our responsibility to address the climate crises.

Our Approach

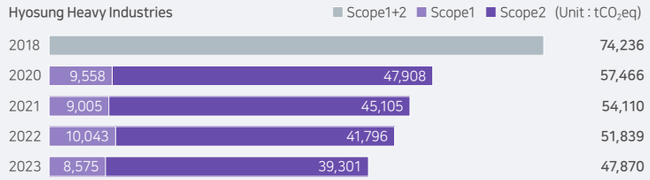
Hyosung Heavy Industries supports the policies of the international society and the government for carbon neutrality and participates in the resolution and response to the climate crises. We have established decarbonization management system reflecting the TCFD recommendations and transparently disclose carbon information through CDP. Additionally, we set targets that surpass Korea's GHG reduction goals and is expanding and managing carbon emissions management scope. We are also actively catering to demands of major customers and investors to reduce GHG emissions and expand the use of renewable energy as we respond to climate crisis in collaboration with our stakeholders.

Our Achievement

- 2023 GHG emissions reduction compared to 2018 (base year) and 2022

Compared to 2018 **GHG 35.5%** ↓ | Compared to 2022 **GHG 7.6%** ↓

Hyosung Heavy Industries' 2023 GHG emissions amount decreased by 35.5% compared to 2018 and 7.6% compared to 2022.



- Solar power generation facility installation on the Changwon Plant rooftop

182.4kW ↑

Solar power generation facilities of a total capacity of 182.4kW have been established at Changwon 1, 2, and 4 plants. (In operation since November 2023, with all of the generated power utilized for plants operation)

2024 Goals

- Plan to raise GHG reduction target and establish a roadmap
  (Current goal: reduce the Scope 1 and 2 emissions by 14.5% by 2030 compared to 2018)

Governance for Response to Climate Crisis

Board of Directors
- Managing and supervising the management of sustainability matters such as climate crisis
- ESG risk management
- Quarterly meetings

ESG Management Promotion Committee
- Highest decision-making body regarding sustainability management
- Management of sustainability related goals, strategies, and risks
- Quarterly meetings

Green Management Committee

Monitoring of climate crisis strategy implementation (Quarterly)

ESG Management Team | Business Management Team | Changwon Plant Environment/Production Department | Construction Site Environment Management Department

Top Executives - Board of Directors and ESG Management Promotion Committee

The Board is provided with quarterly reports on climate crisis-related risks, risk response efforts, and related investment plans, taking responsibility in managing and overseeing them. The ESG Management Promotion Committee under supervision of the CEO is the highest decision-making body regarding Hyosung Heavy Industries' sustainability management. The committee reviews and approves agendas related to environmental management and business goals and strategies, reporting the results to the Board every quarter.

Dedicated Organizations - Green Management Committee

The Green Management Committee, chaired by an ESG management executive, receives reports on GHG reduction activity results, strategic plans, etc. to inspect the implementation results and promote performance improvement. Furthermore, on a quarterly basis, the Green Management Committee reports to the ESG Management Promotion Committee on key issues identified by working-level organizations.

Working-level Organizations - ESG Management Team, Business Management Team, and Environmental Department at Changwon Plant and Construction Sites

The ESG Management Team is responsible for establishment of climate crisis response strategies, management of implementation and performance, and information disclosure. The Business Management Team takes accountability of identifying any excess or deficit in GHG emissions credits. The environmental management department of Changwon Plant and construction sites are in charge of energy consumption reduction and GHG emissions reduction tasks.

Agendas Reported to the Board of Directors in 2023

Classification	Key agendas
March, 2023	Report on the revision of existing policies and new policy establishment plans related to ESG management
	2022 environmental investment report on GHG emissions
October, 2023	Report on major global clients' requirements on ESG management and response plans
	Report on anticipated GHG emissions in 2023

Response to Climate Crisis

Climate Crisis Response Strategy

Hyosung Heavy Industries have established climate action strategies in the sectors of power device production and construction to implement sustainability management, continuously monitoring the results. In particular, we analyze the impact, financial opportunities and crisis to facilitate management and response measures.

Climate Action Strategy

STEP 1 — Risk management and opportunity analysis

- Establish a 4-step process of identification, assessment, implementation, and monitoring.
- Manage risks following industry transition, key environmental issues, and communication with stakeholders, etc.
- Establish and implement response strategies through analysis of risk severity.

The climate-related key risks are reported to the Board and the ESG Management Promotion Committee. We specify action plans through identification of risk management status and improvement tasks each year.

STEP 2 — Raise the GHG emissions reduction goal and establish a roadmap

- Annual average GHG emissions reduction by approximately 8% over the past 5 years
- Discover and diversify new reduction measures.
- Analyze climate action scenarios.
- Enhance and broaden the scope of GHG emissions management to include major subsidiaries

We have raised the GHG emissions reduction target in accordance with Hyosung Green Management Vision 2030 and established the mid- to long-term roadmap for its implementation. We aim to accomplish substantial GHG emissions reduction through expansion of the management scope and enhancement of the level to accomplish substantial GHG emissions.

STEP 3 — R&D Monitoring of the reduction target accomplishment, target accomplishment assessment, and clean technologies

- Monitor and evaluate reduction targets by plant and business site.
- Report the reduction target achievement status to the Board and ESG Management Promotion Committee on a regular basis.
- Conduct the R&D for development of eco-friendly products

We monitor and assess the implementation of reduction targets by plant and business site to facilitate effective GHG emissions reduction, regularly reporting the target achievement status to the Board and the ESG Management Promotion Committee. We intend to continue our research and development of eco-friendly products and technology directly related to GHG emissions reduction, such as biodegradable ester oil transformers and SF_6 free GIS.

Response to Climate Crisis

Climate Crisis Risk Management and Opportunity Analysis

Classification		Definition	Period	Financial Impact		Response strategies
Transition risk	Policy/ regulation	• Emissions Trading System • Global carbon emissions regulation enhancement	Mid-to long-term	●	√ Increased costs for compliance with policy regulations √ Increased costs for emissions credit purchase due to expansion of paid allocation proportion √ Weakening of the price competitiveness due to increased product costs from regulatory compliance	√ Identify domestic and overseas climate crisis policies and regulations trends and establish response strategies √ Establish and implement reduction measures in accordance with the national 2030 NDC reduction targets √ Develop and implement response strategy for the internal carbon pricing system √ Utilization of the carbon asset system since 2011 > systematic management of GHG regulations
	Market	• Increase in energy costs	Mid-to long-term	●	√ Increased costs due to REC purchase and rise in electricity costs √ Increased costs due to changes in the supply chain	√ Energy assessment consulting: insulation treatment, replacement of obsolete equipment, waste heat recovery, and steam pipe replacement √ Replace with high-efficiency LEDs and install ceiling fans for air circulation. √ Replace high-efficiency heating and cooling systems. √ Install solar power generation facilities √ Recycle waste heat from incineration.
	Technology	• Transition to clean technologies	Mid-to long-term	●	√ Increased investment costs for GHG reduction facilities and high-efficiency equipment technology	√ Develop technologies to establish sustainable power grid (ESS, SF_6 free GIS, STATCOM, HVDC, etc.) √ Establish a hydrogen value chain (build liquid hydrogen plants, install hydrogen engine generators and refueling stations, etc.) √ Obtain G-SEED
	Reputation	• Demands of stakeholders including customers and investors for response to climate change and information disclosure	Mid-term	●	√ Trade or investment suspension if not addressed √ Increased expenditures for investment procurement and financial interest	√ Reinforce ESG information disclosure for stakeholders, including publication of sustainability reports √ Disclose response strategies for external ESG assessments and climate change √ Proactively respond to GHG reduction and climate action disclosures through TCFD, CDP, etc.
Physical risk	Acute	• Increase in frequency and severity of extreme weather such as typhoons, floods, and wildfires	Short-term	●	√ Loss and delay of manufacturing facilities √ Potential damage due to loss of finished products	√ Invest in facility renovations to prepare for extreme weather occurrences (prepare flood barriers and pumps, etc.) √ Conduct continuous safety inspections of business sites and prepare accident manuals √ Conduct emergency drills
	Chronict	• Long-term changes in weather patterns such as a rise in sea-level and increase in the average temperature	Long-term	●	√ Rise in cooling and heating costs for the maintenance of product quality and working environment √ Operational halt due to workplace flooding	√ Implement risk mitigation activities such as adjusting logistics locations by identifying monthly climate change factors √ Preemptively identify and respond to logistics delays caused by climate change
Oppor tunity	Energy source	• Expansion of the hydrogen market in accordance with the national policy promotion on hydrogen economy • Increased needs for clean energy due to RE100 and carbon neutrality	Mid-to long-term	●	√ Increased revenue due to promotion of new hydrogen business by aligning businesses within the group √ Anticipation of reduced costs for investment or financial sourcing due to policy subsidiaries and incentives √ Increased demand for power grid stability system in accordance with the increase in renewable energy	√ Respond to the increased demand on eco-friendly energy through achievement of technological self-sufficiency in hydrogen production and storage as well as business portfolio expansion √ Reduce operational costs through energy resource efficiency √ Develop technologies for sustainable power grid establishment (ESS. STATCOM, etc.)
	Product/ Service	• Expansion of the eco-friendly product market	Short-term/ Long-term	●	√ Increased revenue following accelerated growth of the ESS market √ Expansion of the market SF_6 free GIS development √ Increased demand for ester oil transformers	√ Increase in revenue and acquisition of potential customers through enhanced market competitiveness √ Secure competitive advantage by reducing product carbon footprint √ Ensure stable product supply by avoiding risks
		• Increased needs for high-efficiency products	Long-term	●	√ Expansion of the market for high-efficiency transformers and motors	√ Continue investing in R&D for product efficiency enhancement
	Market	• Surplus revenue generation through participation in emissions trading system	Short-term	●	√ Profit generation from sales accompanied by emission reduction.	√ Continue with GHG emissions reduction activities √ Implement strategies to minimize the emissions purchase cost and create profits from surplus credits

* Short-term (1~3 years), Mid-term (3~5 years), Long-term (5~10 years)
** Financial impact: High (●) More than KRW 1 billion/year, Medium (●) KRW 500 million/year ~ KRW 1 billion/year, Low(●) Less than KRW 500 million/year

Climate Crisis Response Initiatives

Energy Efficiency and Renewable Energy Consumption Expansion

Hyosung Heavy Industries establishes and implements facility investment plans each year. The immediate objective is to enhance energy efficiency at business sites, while the long-term objective is to achieve GHG reduction targets by directly producing renewable energy.

1 Short-term) Energy-efficiency

- Reduced power consumption through replacement of obsolete heating and cooling equipment and low-efficiency equipment at the Changwon Plant
- In 2023, reduced GHG emissions of 134tCO_2eq through annual power consumption reduction of 292MWh

2 Long-term) Renewable energy production

- Established and operating a solar power generation facility of the scale of 182.4kW within the Changwon 1, 2, and 3 plants since November 2023
- Plan to increase the capacity of solar facilities at Changwon Plants 1, 2, and 3 by approximately 936 kW in 2024.

Participating in Global Climate Crisis Response Initiatives

Hyosung Heavy Industries participates in reliable global initiatives for systematic response to climate crisis.

1 Disclosure of climate-related financial information TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

- Declared support for TCFD in 2022
- Published sustainability reports in accordance with the TCFD recommendations since 2020

2 Climate Action Assessment CDP DRIVING SUSTAINABLE ECONOMIES

- Hyosung Heavy Industries acquired CDP A- grade in 2022 and 2023
- Awarded Sector Honors in 2022

Enhancement of workplace health and safety

Why So Important?

Safety and health management is critical for Hyosung Heavy Industries on account of the manufacturing and construction business characteristics. Events of serious accidents and injuries can significantly affect the overall business operations and the strengthening of regulations and requirements for safety and health management is a rapidly increasing trend. Additionally, it is imperative to protect the safety and health of employees in order to enhance the satisfaction of all employees and preserve the company's reputation, in addition to enhancing productivity and quality.

Our Approach

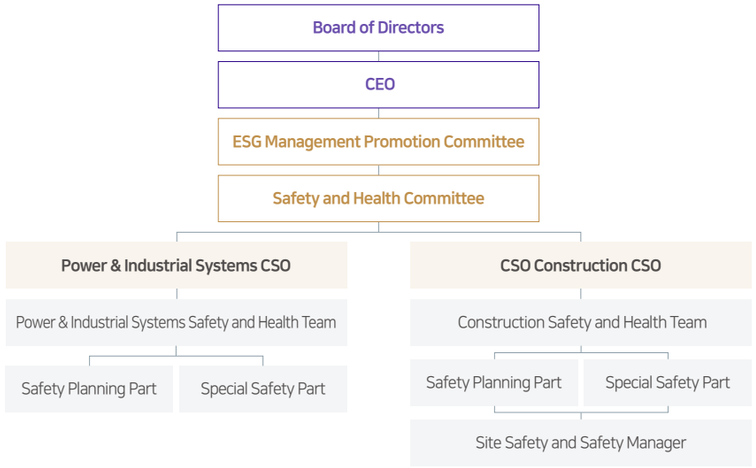
Power & Industrial Systems Division has established the goal of 'ZERO Serious Accidents and Injuries' under the vision of 'Safety and Health Management Prioritizing Lives and Safety.' In order to realize this, we are practicing safety management system operation, business site safety management, and safety capability enhancement activities. Construction Division has set the vision of 'Establish a Disaster-Free Workplace through Safety-Centered Management Involving Everyone.' We intend to improve safety management capabilities and cultivate a culture of autonomous safety and health through implementation of initiatives such as 'Routine Risk Assessment Involving Workers' and the 'All-Employee Safety Education Certification System' to achieve the goal of 'ZERO Serious Accidents' for 3 consecutive years.

Our Achievement

- Construction division's accomplishment of ZERO serious accidents and injuries for 2 consecutive years
- Maintenance of the safety and health certifications of ISO 45001, and KOSHA- MS

Governance

Decision-making and Implementation Framework



Hyosung Heavy Industries has appointed the Chief Safety and Health Officer (CSO) and operates Safety and Health Team by division under the supervision of the CSO. The safety and health teams conduct semi-annual Safety and Health Workshops and quarterly Safety and Health Committee meetings to monitor the status of safety incidents and budget execution, assess safety and health activities, and annually report the safety and health plans to the Board.

Safety and Health Policies, Strategies and Goals

Hyosung Heavy Industries prioritizes safety and health as the core value to realize safety and health management. Hyosung Heavy Industries has established the safety and health vision by division and established the management indicators for its accomplishment. By 2030, Hyosung Heavy Industries will enhance the safety and health management standards and create construction sites without accidents.

	2023	2026	2028	2030
Power & Industrial Systems	LTIR 1.61	LTIR 1.0	LTIR 0.5	LTIR 0.3
Construction	Fatality rate of 0.16	Fatality rate of 0	Fatality rate of 0	Fatality rate of 0

*23 Fatality rate of 0.16: Estimated figure reflecting 7% share of non-supervised sites (to be confirmed in July)

Power & Industrial Systems Division Strategy Construction Division Strategy

Safety and Health Management System Certification

Hyosung Heavy Industries have acquired KOSHA-MS certification for Safety and Health Management System, maintaining the qualification for renewal audits each year.

Strengthening Safety and Health Management System and Risk Management

Safety and Health Council Operation

Hyosung Heavy Industries is strengthening and expanding safety and health activities to prevent industrial accidents through the Safety and Health Council, discussing the implementation regarding the Serious Accidents Punishment Act and the status of safety and health management system operation.

Power & Industrial Systems	Construction	Common
• Occupational Safety and Health Committee • CSO-led business partner meetings • Safety and Health Council for partner companies and construction companies	• Safety and Health Management Committee • Labor-management Council	• Safety and Health Workshop

Risk Assessment and Risk Factor Improvement

Hyosung Heavy Industries conducts risk assessments to identify hazardous and risk factors, assessing the risk levels of these factors and taking measures to lower the risks. The risk level is determined by the frequency (possibility) times intensity (materiality) of accidents and categorized into five grades. Risk factors of high grades are mandated to be improved, and risks that require mid- to long-term measures are reflected in the annual safety and health management plan.

Safety and Health KPI Establishment

At each business site, the Power & Industrial Systems division implements responsible safety management and integrates safety management KPIs into the performance evaluations of safety and health responsible officers and team leaders to prevent accidents. The Construction division reflects the safety and health performance evaluations results for site managers, supervisors, and partner company managers in the site safety and health assessments.

Education for Safety and Health Capabilities Enhancement

Hyosung Heavy Industries implements various safety and health education to enhance the safety and health capabilities of the employees.

Classification	Power & Industrial Systems	Construction
Mandatory safety education	• Semi-annual occupational safety education (6 hrs for office workers and 12 hrs for non-office workers) • Training in response to the job modifications (2 hrs)	• Onboarding education (8 hrs) • Supervisory training (annual 16 hrs) • Special training (16 hrs)
Others	• Special safety education for technicians • Safety leadership course for supervisors • Accident Investigation Expert Course • Practical Risk Assessment (CTA) course • Advanced safety and health expert course • Practical course on emergency response and safety culture • Safety instructor training course	• Safety education led by the Construction CSO • Safety education certification program • New safety and health manager competency enhancement training

Enhancement of Workplace Health and Safety

Business Site Management and Operational System Improvement

On-site Safety Inspection Led by the CEO and the CSO

The Power & Industrial systems division regularly conducts on-site safety inspection to identify and improve risk factors led by the CEO and the CSO. Dangerous work environments are promptly discontinued, and precautionary measures are implemented to prevent their recurrence. Work is resumed upon approval. A total of 182 risk factors were identified and enhanced in 2023.
The Construction division conducts on-site safety inspections supervised by the CEO and the CSO on a monthly basis. The CEO receives reports on safety and health issues at the sites, plans for managing and conducting high-risk tasks, and directs improvements. In 2023, 78 risk factors were identified and improved.

Major Improvements

Changwon Plant	• Repaired the 400-ton crane swivel at the high-voltage shipping yard [Prevention of falling] • Implemented safety laser beams on 11 forklifts to facilitate nighttime operations. [Prevention of collision and entrapment]
Anyang Plant	• Installed interlock structure and safety barriers for welding robots [Prevention of collision]]
Installation site	• Established scaffolding installation plans for switchgears prior to off-site installation [Prevention of falling]
Construction site	• Secured safety pins on excavator attachments and visibility bands for improved visibility • Secured safety hooks for workers at high altitudes and improved guardrails, stair landings, and safety railings • Installed debris prevention netting for material lifts and protective shelves at entrances

Establishment of TBM (Tool Box Meeting) System at Sites

At internal and external work sites, safety management is implemented through TBM (Tool Box Meeting). Before commencing work, workers evaluate specifics of tasks, identify risk factors, and verify safe work procedures. The Power & Industrial systems division trained a total of 93 TBM leaders in 2023.

QR Code Introduction for Near Miss Incidents [Power & Industrial Systems]

In Power & Industrial systems division, near miss incidents can be reported through the QR code system. This system shortens the process from identification of safety accident and actions, activates the reporting and preliminary response, and enhances ongoing site improvement.
In 2023, the QR code system helped to restore damaged walkways in factories, complete construction in leak-prone areas, and address collision and entrapment risks in the casting/wood storage areas.

Integrated Control System Establishment and Mobile CCTV Operation [Construction]

The Construction division established the integrated control system and introduced mobile CCTV to monitor tasks involving high risks and works conducted in blind spots. We identify risk factors prior to work through the real-time information sharing between head office and sites and establish measures. In case unsafe behaviors, lack of safety facilities, or other risk factors are identified, the integrated control office immediately takes a step and gives direction to the site manager, following up on the actions.

HSS (Hyosung Smart Safety) System Operation [Construction]

The HSS system has been implemented to standardize, record, preserve, and manage the legal documents related to safety and health that are mandated by the Occupational Safety and Health Act. At Hyosung business sites, HSS is accessible to all individuals vial mobile devices, allowing them to check site risk assessment results, work plans, etc. Field workers can exercise their right to cease work by employing the safety reporting channel.

Distribution of HSE Guidebook and Publication of Safety Inspection White Paper [Power & Industrial Systems]

The Power & Industrial systems division has produced and distributed the HSE Guidebook to provide knowledge and information necessary for the safety management at business sites. The guidebook assists in the search for safety regulations, acquisition of safety education information, and identification of the site risk factors.
In 2024, a 'Safety Inspection White Paper' will be produced and distributed to supervisors.

Health Promotion System

Program	Major details
Health promotion program	• Operation of exercise therapy room • Providing follow-up management for individuals with identified conditions, and respiratory disease management • Operation of brain and cardiovascular disease prevention program • Consultation and campaigns related to obesity, smoking cessation, and musculoskeletal disorders
Employee health check-ups	• Operation of health management office • Special, temporary, and occasional health check-ups
Working environment management	• Hearing preservation program • Working environment measurement • Musculoskeletal disorder and confined space work management program
Infection prevention activities	• Establishment and company-wide notification of infectious disease guidelines

Major Activities for Safety Management

Listening to Feedback from Partner Companies Led by the CEO

The Power & Industrial systems division holds quarterly meetings with partner companies led by the CSO to listen to safety related feedback for improvement. In 2023, 22 opinions were collected and marked a 100% improvement. The Construction division conducts labor-management councils at all sites. Furthermore, the HSS system's safety reporting system collects and incorporates partner companies' and employees' perspectives on safety and health into the enhancement initiatives. In 2023, 514 opinions (99.8%) were addressed out of 515 opinions collected (One opinion was rejected due to worker safety concerns)

Awarding Outstanding Partner Companies

The Power & Industrial systems division evaluates partner companies' safety and health management levels semi-annually through inspection of safety and health document and sites, as well as counseling of business owners. The assessment results are categorized into 5 grades from S to A, and safety items are provided to companies that are given S grade. In 2023, we provided 11 companies with a total of KRW 93 million worth of safety equipment and facilities, including AI forklift black boxes, portable air conditioners, and ice vests. The Construction division selects partner companies with outstanding safety and health management once a year. In 2023, the division awarded 5 partner companies with sites evaluated for outstanding safety management that achieved zero accidents.

Providing Partner Company Education Program

Hyosung Heavy Industries enhances partner companies' safety and health capabilities by providing a range of safety and health education programs.

The Power & Industrial systems division	Construction
• Education to support safety and health system establishment • Special safety education for forklift drivers • Safety education for partner company CEOs	• Safety education for partner companies with high-risk work • Safety education for partner company CEOs

Serious Accidents Punishment Act Compliance Certification System (SCC) for Partner Companies [Construction]

The Construction division has implemented a certification system for compliance with the Serious Accidents Punishment Act in collaboration with a law firm. It supports safety and health related consulting and certification for SME partners with weak safety and health management. In 2023, 48 construction companies acquired certification, renewing the certification semi-annually.

Sustainable Supply Chain

Why So Important?

As of 2023, Hyosung Heavy Industries operates business with 1,997 primary partner companies. Consequently, it is imperative that we establish and maintain dependable and consistent partnerships with these organizations in order to facilitate the growth and development of our businesses. In addition, managing and improving the sustainability of our supply chain is critical to the sustainability of Hyosung Heavy Industries, as adverse impacts on the environment and society arising in the supply chain directly affect the business.

Our Approach

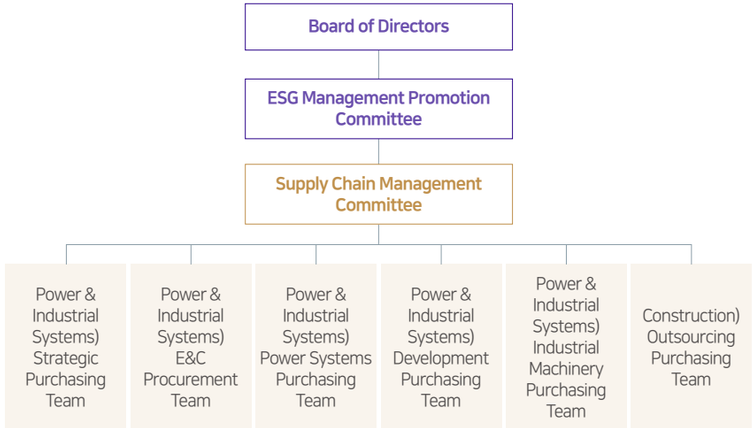
Hyosung Heavy Industries enhances both the supply chain sustainability and business competitiveness based on the strategic partnership with partner companies. For this approach, we manage the supply chain systematically, including fair trade and mutual growth principles and establishing supply chain management promotion system. Also, to prevent and eliminate potential supply chain risks, we operate the supply chain diagnosis system and actively collect the partner company feedback to continue with the supply chain improvement initiatives.

Our Achievement

- Achieved the highest rating in the winwin growth evaluation of KOFCA
- Quality inspection and support at 95 partner companies
- ESG education and consulting support for 21 companies (including online education and webinar)
- Cost of KRW 13.01 billion for the purchase of eco-friendly products and services
- Signed fair trade agreement and partner company code of conduct with 616 companies

Governance

Decision-making Implementation Framework



Hyosung Heavy Industries' Supply Chain Management Committee is responsible for discovering and registering new partner companies, deliberating preliminary and post deliberation, conducting regular supply chain assessments and other supply chain risk management tasks, reporting key agendas to the ESG Management Promotion Committee which is the highest decision-making body. The ESG Management Promotion Committee sets, manages, and supervises the mid- to long-term strategies and direction of the supply chain, reporting key agendas to the Board of Directors.

2023 ESG Management Promotion Committee Agendas

Classification	Key Agendas
March 2023	Preparation for subcontract payment disclosure
	Support for outstanding partner companies in 2023
October 2023	Implementation of autonomous supply chain ESG assessment and partner company ESG assessment
	Implementation of an interlocking system for cost of goods delivered

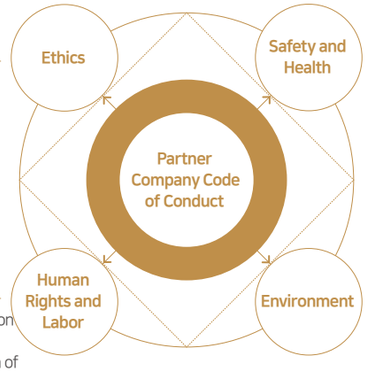
Supply Chain Management Strategies and Goals

Hyosung Heavy Industries secures business competitiveness through sustainable supply chain operation and operates a variety of programs to maintain fair trade with partner companies.

Operation of a mutual growth program to establish sound supply chain	• Cash payment ratio expansion • Support for partner company competitiveness enhancement • Establishment of durable corporate ecosystem
Enactment of the 4 fair trade practices and procurement code of ethics	• Introduction and compliance with the 4 fair trade practices • Compliance with the procurement code of ethics
Promotion of supply chain sustainability	• Periodical and systematic supply chain inspection • Proliferation of ESG value across the value chain • Activities to improve purchasing environment

Sustainable Supply Chain Management Policy

Hyosung Heavy Industries enacted the Partner Company Code of Conduct in 2012. The Code of Conduct includes details for each sector, including ethics, safety and health, human rights and labor, and the environment. Partner companies are required to submit the commitment of compliance with the Code of Conduct. Through this process, Hyosung Heavy Industries prevents major sustainability risks that could potential across within the supply chain.



- Prohibition of unfair demands and inequitable conduct
- Customer satisfaction
- Prohibition of the use of conflict minerals

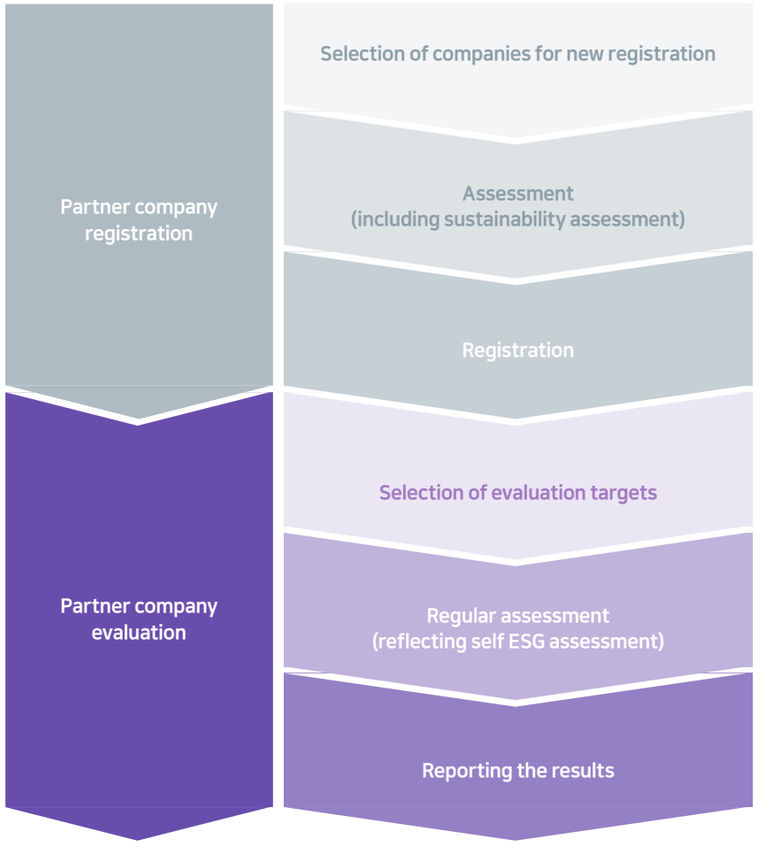
- Creation of a comfortable working environment
- Response by emergency
- Prevention of occupational accidents and injuries
- Hygiene management
- Provision of safety and health information

- Prohibition of discrimination
- Fair compensation
- Guarantee of the freedom of association
- Guarantee of working hours
- Provision of regular paid leave
- Adherence to the minimum employment age and the prohibition of forced labor
- Respect for property rights
- Respect for privacy

- Compliance with regulations
- Efforts to reduce the consumption of resource and energy
- Management of hazardous substances
- Prevention of air pollution
- Minimization of water consumption and discharge within standards

Sustainable Supply Chain

Sustainable Supply Chain Operation



Assessment of Partner Companies for Registration

Hyosung Heavy Industries clearly discloses the sustainability requirements and recommendation standards required for bid participation on the website. We assess the candidate company's sustainability, including environment, safety, human rights, and labor, on top of quality, delivery, price, and management performance, when conducting screening to register new partner companies in the e-procurement system.

2023 Partner Companies with Self-assessment and Code of Conduct Pledges

Classification (Unit: Company)	ESG Self-assessment		Mutual growth agreement and partner company code of conduct pledges
	Target companies	Assessed companies	Contracted companies
Power & Industrial Systems	439	285	298
Construction	2,530	1,730	318
Total	2,969	2,015	616

Periodical Assessment of Partner Companies

Hyosung Heavy Industries selects partner companies through fair and reasonable processes and manages supply chain risks by conducting partner company assessments twice a year. We categorize the potential supply chain risks into quality/delivery and ESG (labor/human rights, safety, and environment). Furthermore, partner companies can conduct self-assessment for each ESG division on the e-procurement system, and partner companies in position of external ESG assessment grades can obtain extra points.

Hyosung Heavy Industries signs mutual growth agreement with outstanding partner companies each year. Target companies are selected based on the autonomous assessment of the Supply Chain Management Committee, and the candidates that have obtained higher grades are prioritized in the selection process. Benefits provided to the selected mutual growth partners include 3 payments a month, cash payment within 10 days after issuance of the invoices.

Pre- and Post- Deliberation System

Hyosung Heavy Industries has introduced and operated the pre- and post- deliberation system for the instances of transactions with partner companies since 2019. We conduct self-monitoring, using this system, to identify any legal violations and unfair practices. By operating the deliberation system, we were able to prevent legal violations in advance, detect prospective violations early for improvement, and prevent potential risks that could occur from unfair transactions.

Deliberation agenda submission → Preliminary review committee → Contract → Post-review committee

Enhancement of Communication with Partner Companies (Operation of Grievance Handling Center)

Hyosung Heavy Industries operates an unfair practice reporting center (hotline) and a partner company suggestion board for effective communication with the partners. Also, we engage in a variety of communication strategies to establish trusting relationship, including visiting partner companies to listen to their difficulties and feedback.

Customer Obsession

Why So Important?

Since 2017, Hyosung Heavy Industries has highlighted customer obsession activities through the group management policies. Enhancing brand value through interaction with customers and increasing customer satisfaction are critical to securing corporate competitiveness and reputation management. Accurate identification of customer needs and the development of products and services that reflect these contribute to the company's stable revenue production and enable corporate sustainability growth. Customer obsession is a strategy necessary for not just the customers but for the long-term success of a company.

Our Approach

Hyosung Heavy Industries has practiced customer obsession centered around C-Cube activities since 2019. In line with our goal to "enhance brand value based on top quality and customer trust," we are implementing business strategies that are based on the VOC, promoting company-wide activities to enhance brand value, and improving customer satisfaction through the provision of top-quality products and services in order to enhance brand value.

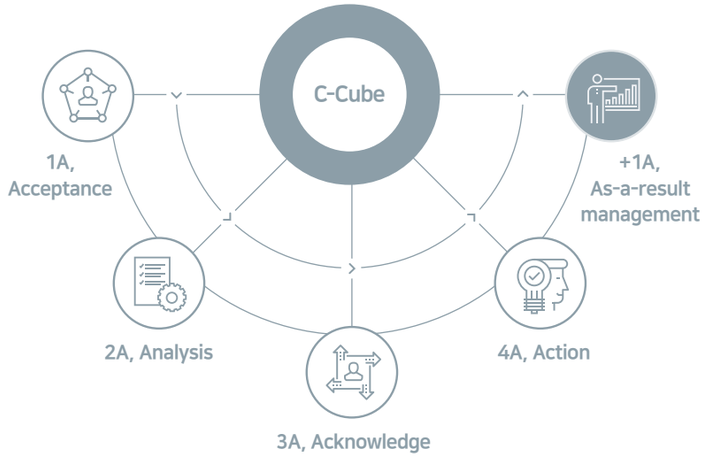
Our Achievement

- Collected 19,282 VOC in 2023
- Development of Heavy Industries Family Brand in the Power & Industrial systems division
- VOC performance in the Power & Industrial systems division: obtained a large-scale Australian transmission network construction project
- Construction division received the 2023 Customer Love Brand Best Award (JoongAng Ilbo Brand Apartment Category)
- Construction division received the 2023 Korea Customer Award for the Best Brand of the Year (Korea Customer Association)

Realization of Customer Obsession

VOC Implementation Framework

Hyosung Heavy Industries implements C-Cube activities through the process of 4A+1A. The 4A+1A process and C-Cube focus on the analysis of Real VOC based on the collected multifaceted information from the Voice of Customer, Customer's Customer, and Competitor. It is implemented in the 5-step process of ①Collection, ②Classification and analysis, ③ Sharing and DB formation, ④Establishment and implementation of strategies, and ⑤Result management. We align the collected VOC with the businesses to identify areas for improvement and business opportunities.



Real VOC, Communication with Customers

Expansion of Product Development and Services Reflecting Customer Demands

Winning a Large-scale Power Transmission Network Construction Project in Australia

In 2023, Hyosung Heavy Industries acquired a large-scale transmission network construction project in Australia. Hyosung Heavy Industries shared the collected VOC with managers and working-level employees from various departments to identify the needs of our customers. In times of COVID-19, we identified concerns of client companies regarding supply chain, shipping, and geopolitical crisis. To address these issues, Hyosung Heavy Industries formed a mid- to long-term partnership with client companies and offered reasonable price to sign contracts. This performance was achieved through the process of listening to one another and establishing a shared understanding amidst the industrial crisis.

Development of Differentiation Item for Harrington Place

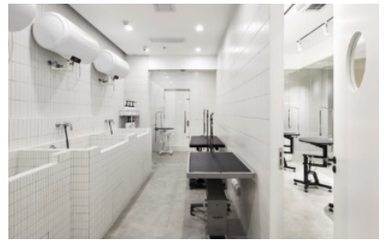
해링턴 플레이스 Harrington Place

The Construction division integrates customer feedback and the latest trends into the development of materials, building exteriors (painting, gate and stone), and interior materials (furniture). Community facilities such as the pet care zone and Smart Harrington (home IoT platform) are examples of representative differentiating items.

Smart Harrington: A mobile application-based home IoT platform that enables residents to monitor and control lighting, heating, elevator calls, and standby power

Pet care zone and unmanned laundry room: A pet care zone designed in consideration of the trend of living with pets, as well as an unmanned laundry room for the convenience of residents

Sky Community: A sky lounge located on the upper levels of the apartment, reflecting the trend of advancing the community facilities


Pet care zone


Sky Community

Securing Various Communication Channels

The Power & Industrial systems division operates a YouTube channel, titled 'Hyosung Heavy Industries' to introduce products and share the company news.
The Construction division operates a YouTube channel, 'Harrington Tube' to introduce and promote residential sales products. Furthermore, we operate various SNS channels such as Hyosung Heavy Industries LinkedIn to actively communicate with our customers.

Branding Activities

Development and Promotion of Power & Industrial Systems Division Family Brand

We have developed a family brand to establish the product brand identity and secure brand value. In 2024, we intend to promote the brand internally and externally through storytelling, video production, brand book creation, trademark registration, and the operation of YouTube channels.

Governance and Economic Performance

Reporting Scope

This report on ESG Performance includes the following subsidiaries, which together account for over 99% of the consolidated sales of Hyosung Heavy Industries. The data for Hyosung Heavy Industries and its subsidiaries are presented separately, with subsidiary data provided from 2022 onwards. Some items may not include data from certain subsidiaries, and in such cases, the relevant details are noted as footnotes.

Subsidiaries	Country of operation
Jinheung Enterprise.co., Ltd.	Korea
Nantong Hyosung Transformer Co., Ltd.	China
HYOSUNG T&D INDIA Pvt Ltd	India
Hyosung HICO, Ltd.	USA
HICO America Sales&Tech, Inc.	
Hyosung Vina Industrial Machinery Co., Ltd.	Vietnam

Data Reporting Notes

1. If an item is not applicable or cannot be applied, it is marked as 'N/A'. If the data was not investigated, it is marked as '-'. Other special cases are noted separately below the respective items.
2. Figures are rounded, so there may be slight differences between the actual sum of the individual figures and the totals listed.

Financial Statements (Consolidated)

(Unit: KRW million)

Balance Sheet	2021	2022	2023
Current assets	1,561,558	2,221,500	2,351,430
Non-current assets	2,461,143	2,471,971	2,409,871
Total assets	**4,022,701**	**4,693,471**	**4,761,301**
Current liabilities	1,944,011	2,504,911	2,811,485
Non-current liabilities	1,041,548	1,085,349	725,656
Total liabilities	**2,985,559**	**3,590,260**	**3,537,141**
Total equities	**1,037,142**	**1,103,211**	**1,224,160**

Comprehensive Income Statement	2021	2022	2023
Sales	3,094,699	3,510,144	4,300,572
Operating income	120,066	143,249	257,837
Net profit	76,517	29,130	131,922

Corporate Tax by Country[1]

Category		Unit	2021	2022	2023
Korea	Sales	KRW million	2,822,339	3,241,315	3,879,996
	Profit before tax	KRW million	161,005	115,815	146,744
	Corporate tax expense	KRW million	26,209	33,023	34,434
	Tax rate	%	24.2	24.2	23.1
	Effective tax rate	%	20.0	28.5	23.5
China	Sales	KRW million	107,934	162,823	200,084
	Profit before tax	KRW million	18	5,569	19,254
	Corporate tax expense	KRW million	0	0	0
	Tax rate	%	25.0	25.0	25.0
	Effective tax rate	%	0	0	0
India	Sales	KRW million	82,740	61,136	133,688
	Profit before tax	KRW million	(1,925)	(5,203)	5,349
	Corporate tax expense	KRW million	234	0	0
	Tax rate	%	33.0	25.2	25.2
	Effective tax rate	%	N/A	0	0
Vietnam	Sales	KRW million	35,477	50,660	60,801
	Profit before tax	KRW million	1,323	2,592	2,663
	Corporate tax expense	KRW million	284	483	620
	Tax rate	%	20.0	20.0	20.0
	Effective tax rate	%	20.0	18.6	23.3
USA	Sales	KRW million	223,641	311,420	547,047
	Profit before tax	KRW million	(28,785)	(47,611)	6,790
	Corporate tax expense	KRW million	(2,996)	3,314	4,116
	Tax rate	%	26.0	21.0	21.0
	Effective tax rate	%	10.0	N/A	60.6
Republic of South Africa	Sales	KRW million	758	1,066	1,227
	Profit before tax	KRW million	24	32	226
	Corporate tax expense	KRW million	14	32	11
	Tax rate	%	28.0	28.0	28.0
	Effective tax rate	%	60.0	101.4	4.8

1. Due to intercompany transactions and unrealized gains among consolidated companies, there are some differences between the figures in the consolidated financial statements. If a pre-tax loss occurs and the effective tax rate cannot be calculated, it is marked as "N/A."

Governance and Economic Performance

Compliance with Ethics and Laws

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
Employee discrimination	Total No. of discrimination incidents	Case	0	0	0	2	0
	Reviewed incidents of discrimination	Case	0	0	0	2	0
Unfair transaction	No. of unfair transaction practices	Case	0	0	0	0	0
	Fine for unfair transaction practices	KRW million	0	0	0	0	0
Non-compliance with laws and regulations	Total amount of fines	KRW million	161	8	25	0	0
	Cases of fines-imposed[1]	Case	20	8	10	0	0
	Fines for violations of financial regulations (insider trading, monopoly, and anticompetitive behaviors, etc.)	KRW million	0	0	0	0	0
	Fines for violation of environmental regulations[1]	KRW million	6	8	5	0	0
	Cases of non-monetary sanctions (administrative guidance, warnings, etc.)	Case	0	0	0	0	0
	No. of employees with records of investment-related investigations, customer complaints, lawsuits, or legal sanctions	Person	0	0	0	0	0
	No. of violations of legal and voluntary regulations regarding product and service information and labeling	Case	0	0	0	0	0
	No. of violations of legal and voluntary regulations regarding health and safety impact of products and services	Case	0	0	0	0	0
	No. of violations of legal and voluntary regulations regarding marketing communication	Case	0	0	0	0	0
Anti-corruption	No. of reported incidents of corruption	Case	6	1	0	0	0
	No. of people dismissed or disciplined for corruption	Person	0	0	0	0	0
	Percentage of operations assessed for risks related to corruption	%	100	50.0	0	16.7	0
	Percentage of the Board of Directors (governance body) members that have received notification and training on anti-corruption policies and procedures	%	0	0	0	0	0
	Percentage of employees that have received notification and training on anti-corruption policies and procedures	%	36.3	81.5	57.5	51.4	42.5

1. Due to an error in the 2022 data, the existing data has been revised.

Association Membership

Association Membership in Relation to Sustainable Management

Category	Association
Hyosung Heavy Industries	TCFD
	CDP
	Korea Hydrogen Industry Association
	Construction Safety Practitioners Association
	Construction Safety Executives Association
	Construction Safety Association
	Seoul Bar Association
	Hydrogen Convergence Alliance
	Energy Alliance
	Changwon Industrial Complex Plant Managers' Association
	Korea Hydropower Industry Association
	Korea Smart Grid Association
	Korea Atomic Industrial Forum
	Korean Nuclear Society
	Korea Wind Energy Industry Association
	Korea Offshore Grid Association

Social performance

Employees [1,2]

Category			Unit	Hyosung Heavy Industries			Subsidiaries	
				2021	2022	2023	2022	2023
Total No. of employees			Person	3,125	3,192	3,291	2,058	2,419
Gender	Permanent	Male	Person	2,708	2,689	2,767	1,423	1,688
		Female	Person	213	219	228	242	280
		Subtotal	**Person**	**2,921**	**2,908**	**2,995**	**1,665**	**1,968**
	Temporary	Male	Person	101	129	125	361	409
		Female	Person	103	155	171	32	42
		Subtotal	**Person**	**204**	**284**	**296**	**393**	**451**
Age	Permanent	Under 30	Person	138	180	275	418	499
		30-50	Person	2,122	2,040	2,014	974	1,180
		51 and above	Person	661	688	706	273	289
	Temporary	Under 30	Person	84	121	124	179	226
		30-50	Person	72	111	102	135	154
		51 and above	Person	48	52	70	79	71
Employee category	Employee category based on permanent employees	Office	Person	2,228	2,251	2,368	786	950
		Technical	Person	693	657	627	882	1,023
	Permanent	Executive	Person	57	61	62	25	22
		Manager level or higher	Person	1,447	1,435	1,381	335	352
		Non-manager level	Person	1,417	1,412	1,552	1,305	1,594
	Temporary	Executive	Person	0	0	0	1	1
		Manager level or higher	Person	7	19	15	54	36
		Non-manager level	Person	197	265	281	338	414
Workers who are not employees[3]	Gender	Male	Person	945	962	1,077	1,408	2,711
		Female	Person	264	294	330	45	190
		Subtotal	**Person**	**1,209**	**1,256**	**1,407**	**1,453**	**2,901**

1. Manager level refers to positions of PM(Manager) or higher. Senior management refers to positions of Team Leader, Department Head, Supervisor, or higher.
2. Starting in 2024, we will disclose the status of employees by gender, age, and employee category, divided into permanent and temporary employees.
3. Workers who are not employees are subcontractors and dispatched personnel who work at our business sites but are classified as non-affiliated workers in the business report.

Employee Diversity

Category			Unit	Hyosung Heavy Industries			Subsidiaries	
				2021	2022	2023	2022	2023
Employee diversity	Gender diversity in the Board of Directors	Male	Person	5	7	7	24	25
		Female	Person	0	1	1	0	0
		Subtotal	**Person**	**5**	**8**	**8**	**24**	**25**
	Age diversity in the Board of Directors	Under 30	Person	0	0	0	0	0
		30-50	Person	0	0	0	5	1
		51 and above	Person	5	8	8	19	24
		Subtotal	**Person**	**5**	**8**	**8**	**24**	**25**
	Employee diversity	Employees with disability	Person	90	96	90	36	45
		Veterans	Person	66	67	58	6	13
		Foreigner	Person	16	19	17	33	35
		Subtotal	**Person**	**172**	**182**	**165**	**75**	**93**
	Fostering female talent	Female employee ratio	%	10.1	11.7	12.1	13.3	13.3
		No. of Female at manager level (or higher)	Person	99	103	105	23	29
		No. of male at manager level (or higher)	Person	1,355	1,351	1291	366	359
		Proportion of female at manager level (manager and above)	%	6.8	7.1	7.5	5.9	7.5
	Local management	Percentage of local senior managements with the local nationality working on site	%	96.4	97.1	99.0	84.2	85.2

Employee Diversity Performance and Targets

Category	Unit	Performance				Target	
		2021	2022	2023(Target)	2023	2024	2025
Employees with disability	Person	90	96	96	90	100	100
Female	Person	316	374	390	399	430	440

Social performance

New Employee Hires [1]

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
New hires	New hires	Person	176	374	442	261	287
	Experienced new hires	Person	127	140	149	442	426
	Transferees from affiliated companies	Person	43	28	17	1	4
	Subtotal	**Person**	**346**	**542**	**608**	**704**	**717**
No. of new hires by gender	Male	Person	258	398	475	605	619
	Female	Person	88	144	133	99	98
	Subtotal	**Person**	**346**	**542**	**608**	**704**	**717**
New hire rate by gender	Male	%	74.6	73.4	78.1	85.9	86.3
	Female	%	25.4	26.6	21.9	14.1	13.7
No. of new hires by age	Under 30	Person	91	213	312	315	319
	30-50	Person	171	232	225	314	314
	51 and above	Person	84	97	71	75	84
New hire rate by age	Under 30	%	26.3	39.3	51.3	91.0	92.2
	30-50	%	49.4	42.8	37.0	90.8	90.8
	51 and above	%	24.3	17.9	11.7	21.7	24.3

1. Due to the expansion of the criteria for counting new hires to include transferees from affiliated companies and those assigned concurrent positions in affiliated companies, the data for 2021 and 2022 has been revised.

No. of Human Rights-Related Grievances Received[2]

Category	Unit	Hyosung Heavy Industries	
		2022	2023
No. of human rights-related grievances received	Case	0	0
No. of human rights-related grievances processed	Case	0	0
Percentage of human rights-related grievances processed	%	0	0

2. No. of human rights-related grievances received and processed through the HR Counseling Center (for employees) and the whistleblowing center on website.

Employee Turnover[3,4]

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
No. of employee turnover	Voluntary turnover	Person	104	152	123	408	344
	Transfer to affiliated company	Person	44	17	14	2	3
	Involuntary turnover[4]	Person	93	68	81	81	93
	Subtotal	**Person**	**241**	**237**	**218**	**491**	**440**
Turnover rate	Voluntary turnover rate	%	3.3	4.8	3.7	19.8	14.2
	Total turnover rate	%	7.7	7.4	6.6	23.9	18.2
Employee turnover by gender	Male	Person	236	210	196	430	370
	Female	Person	5	27	22	61	70
	Subtotal	**Person**	**241**	**237**	**218**	**491**	**440**
Turnover rate by gender	Male	%	7.6	6.6	6.0	20.9	15.3
	Female	%	0.2	0.8	0.7	3.0	2.9
Employee turnover by age	Under 30	Person	12	26	40	211	174
	30-50	Person	145	137	107	224	192
	51 and above	Person	84	74	71	56	74
	Subtotal	**Person**	**241**	**237**	**218**	**491**	**440**
Turnover rate by age	Under 30	%	0.4	0.8	1.2	10.3	7.2
	30-50	%	4.6	4.3	3.3	10.9	7.9
	51 and above	%	2.7	2.3	2.2	2.7	3.1

3. The data for 2021 and 2022 has been revised due to expanding the scope of turnover statistics from voluntary turnover among permanent employees to include both voluntary and involuntary turnover of permanent and temporary employees, as well as transfer to affiliated companies.
4. Involuntary turnover: resignation upon recommendation, dismissal, death, etc.

Social performance

Employee Salary and Compensation[1,2]

Category		Unit	Hyosung Heavy Industries			Subsidiaries[2]	
			2021	2022	2023	2022	2023
Average total annual compensation for entry-level employees	Male	KRW million	53	65	51	56	59
	Female	KRW million	32	34	35	42	39
	Total	KRW million	48	56	50	53	56
Local annual average legal minimum wage		KRW million	25	27	28	13	13
Ratio of wages for new hires compared to the local legal minimum wage	Male	%	206.7	244.3	183.2	425.2	444.1
	Female	%	124.4	128.7	123.6	317.3	288.7
Average total compensation by employee category	Male executive	KRW million	220	191	205	183	172
	Male at manager level (or higher)	KRW million	79	90	99	96	98
	Male at non-manager level	KRW million	55	59	60	50	55
	Female Executive	KRW million	218	185	193	52	58
	Female at manager level (or higher)	KRW million	64	72	83	43	47
	Female at non-manager level	KRW million	32	31	33	37	41
Ratio of total compensation for female to male	Executive	%	99.1	96.8	94.4	28.2	33.6
	Manager level or higher	%	81.1	79.7	83.6	45.4	48.5
	Non-manager level	%	58.4	53.4	54.8	74.8	74.9
Average total annual compensation of all employees		KRW million	67	74	78	158	101
Highest-paid individual	Total compensation	KRW million	376	380	419	297	293
	Year-on-year increase in total compensation	%	125.4	101.1	110.2	100.7	117.0
Employees (excluding highest-paid individual)	Average total annual compensation	KRW million	66.6	73.6	77.8	59.3	64.2
	Median total annual compensation	KRW million	67.9	75.3	80.8	57.5	63.9
	Median total annual compensation increase year-on-year	%	110.2	110.8	107.4	100.8	100
Ratio of the total annual compensation for the organization's highest-paid individual to the median total annual compensation for all employees (excluding the highest-paid individual)		Time	5.5	5.1	5.2	5.2	4.6

1.The criteria for aggregating the total compensation of new hires has been expanded from permanent employees with a university degree to include permanent, temporary employees, experienced new hires, and transferees from affiliated companies. As a result, the data for 2021 and 2022 has been revised.
2. The average total compensation for subsidiaries is the arithmetic mean of the values of the individual subsidiaries.

Minimum Notice Periods regarding Operational Changes

If there is a legal standard such as a notice of dismissal, it is notified in advance in accordance with the stipulated timeframes.

Maternity Leave and Parental Leave

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
Maternity leave (male)	No. of employees on maternity leave	Person	77	58	51	26	21
	Return rate after maternity leave	%	100	100	100	100	96.15
Maternity leave(female)	No. of employees on maternity leave	Person	19	14	11	5	3
	Return rate after maternity leave	%	89.0	93.0	91.0	100	100
Parental leave (male)	No. of employees entitled to parental leave	Person	627	587	619	231	321
	No. of employees on parental leave	Person	64	56	43	17	8
	No. of employees returning to work after parental leave	Person	59	48	45	17	8
	No. of employees with over 12 months of service after parental leave	Person	55	56	43	11	11
	Return rate after parental leave	%	100	92.3	93.8	100	100
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	100	94.9	100	100	64.71
Parental leave (female)	No. of employees entitled to parental leave	Person	27	22	38	61	97
	No. of employees on parental leave	Person	19	15	11	10	2
	No. of employees returning to work after parental leave	Person	14	17	4	11	2
	No. of employees with over 12 months of service after parental leave	Person	14	12	10	8	7
	Return rate after parental leave	%	89.0	94.4	68.8	100	100
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	87.5	85.7	100	100	63.64

Labor Union and Retirement Pension

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
Labor union	No. of employees covered by collective bargaining agreements[3]	Person	693	660	600	1,127	1,191
	Ratio of employees covered by collective bargaining agreements[3] among total employees	%	22.2	20.7	18.2	54.8	49.2
	No. of union workers	Person	657	628	584	1,005	1,042
	Rate of enrollment to the union	%	94.8	95.2	97.3	89.2	87.5
Retirement pension	Total operation fund for retirement pensions (DB+DC)	KRW million	189,752	195,734	210,029	8,127	14,409
	Operation fund for DB pension	KRW million	150,689	163,933	176,712	8,057	8,957
	Operation fund for DC pension	KRW million	39,063	31,800	33,317	70	5,452
	Total No. of members	Person	3,083	3,279	3,249	843	1,158
	No. of DB pension members	Person	2,404	2,486	2,565	707	1,002
	No. of DC pension members	Person	679	793	684	136	156

3. The collective bargaining agreements at Hyosung Heavy Industries apply to Grade 5 production workers.

Social performance

Employee Training[1,2]

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
No. of training participants (cumulative)		Person	117,002	111,480	103,893	11,567	11,797
Total training expenses		KRW million	1,434	1,878	2,521	132	133
Total training hours		Hour	169,968	177,385	188,562	33,715	39,755
Average training hours per employee (total training hours / No. of employees)		Hour	54	56	59	14	17
Average training expenses per employee (total training expense / No. of employees)		KRW	458,997	588,239	789,980	63,204	48,944
Total training hours per employee by gender	Male	Hour	56	57	55	16	17
	Female	Hour	37	48	46	16	13
Average training hours per employee by employee category	Executive	Hour	38	15	9	9	6
	Manager level or higher	Hour	44	47	55	26	24
	Non-manager level	Hour	57	59	45	13	14
No. of participants in environmental training		Person	1,931	1,773	1,822	1,425	1,107
No. of participants in ethics and anti-corruption training		Person	1,134	2,601	1,893	1,057	1,027
No. of participants in fair trade training		Person	1,099	1,327	1,888	454	18
No. of participants in safety and health training		Person	44,942	46,548	43,282	2,078	1,802
No. of participants in human rights training (Sexual harassment prevention/ disability awareness/discrimination prevention, etc.)		Person	6,796	7,923	6,721	929	1,099
No. of employees trained for information security		Person	481	1,661	1,923	921	787
Ratio of security personnel who have received formal training in human rights policies or specific procedures		%	0	0	0	4.0	3.3
No. of participants in sustainability management training		Person	2,975	3,335	1,791	563	836
No. of participants in retiree training		Person	0	12	0	70	64

1. The No. of trainees is the cumulative No. of participants per course and the criteria for counting include all employees, both permanent and temporary.
2. The total No. of training participants, expenses, and hours includes training for new hires, general/professional job training, leadership training, globalization training, and sustainability training.

Regular Performance and Career Development Reviews[3]

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
No. of employees subject to performance evaluation		Person	2,921	2,908	2,995	1,665	1,968
Performance evaluation rate		%	93.5	91.1	91.0	80.9	81.4
Performance evaluation and career development review rate by gender	Male	%	96.4	95.4	95.7	79.8	80.5
	Female	%	67.4	58.6	57.1	88.3	87.0
Performance evaluation and career development review rate by employee category	Executive	%	100	100	100	96.2	95.7
	Manager level or higher	%	99.5	98.7	98.9	86.1	90.7
	Non-manager level	%	87.8	84.2	84.7	79.4	79.4

3. The targets of performance reviews are permanent employees at Levels 1, 2, and 3.

Suppliers

Category	Unit	Hyosung Heavy Industries			Subsidiaries	
		2021	2022	2023	2022	2023
No. of suppliers	Company	2,371	3,585	4,065	1,422	1,703
Total purchase from suppliers	KRW million	7,900,457	2,119,258	2,297,355	897,291	762,780
Total purchase from local suppliers	KRW million	6,991	806,212	961,473	723,408	464,827
Proportion of purchase from local suppliers	%	0.1	38.0	41.9	80.6	60.9

Social and Environmental Impact Assessment of the Supply Chain[4]

Category	Unit	Hyosung Heavy Industries		Subsidiaries
		2022	2023	2023
No. of new suppliers that conducted social/environmental impact assessment	Company	26	265	13
Percentage of new suppliers that conducted social/environmental impact assessment	%	9.3	52.2	6.2
No. of suppliers that conducted social/environmental impact assessment	Company	428	2,236	122
No. of suppliers having practical or/and potential negative impact	Company	7	34	0
Percentage of suppliers that agreed improvement based on the results of social/ environmental impact assessment	%	1.6	3.1	15.6
Percentage of suppliers whose contracts were terminated based on the results of social/ environmental impact assessment	%	0	0	0

4. This data has been disclosed by Hyosung Heavy Industries since 2022 and aggregated for subsidiaries since 2023.

Business partners' Dissatisfaction / Safety and Health related Grievance Mechanism

Category	Unit	Hyosung Heavy Industries		
		2021	2022	2023
No. of dissatisfaction cases received from business partner	Case	9	429	540
No. of dissatisfaction cases processed from business partner	Case	9	418	532
Ratio of cases processed	%	100	97.0	99.0

Social performance

Occupational Health and Safety Management System

Category	Unit	Hyosung Heavy Industries			Subsidiaries	
		2021	2022	2023	2022	2023
No. of employees + No. of workers who are not employees	Person	4,334	4,448	4,698	3,511	5,320
No. of workers working at business sites where the company's health and safety management system are operational	Person	4,334	4,448	4,698	3,511	5,320
	%	100	100	100	100	100
No. of workers working within the systems that undergo regular/irregular audits (or monitoring) of the company's health and safety management system	Person	4,334	4,448	4,698	3,511	5,320
	%	100	100	100	100	100
No. of workers working at business sites subject to customer audits or audits for external certification	Person	4,334	4,448	4,698	2,951	4,535
	%	100	100	100	84.1	85.2

Occupational Injuries and Ill-health

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
Employees	No. of work-related injuries and ill health	Person	17	17	15	4	6
	Rate of work-related injuries and ill health[1]	%	0.54	0.53	0.46	0.19	0.25
	No. of fatalities as a result of work-related injuries	Person	1	0	1	0	0
	Work-related fatality rate per ten thousand employees[3]	fatality rate	3.20	0	3.04	0	0
	No. of cases of work-related injuries and ill health[2]	Case	13	13	11	4	6
	Lost Time Injury Frequency Rate (LTIFR)[4]	Cases per million hours	1.99	1.95	1.60	0.93	1.19
Workers who are not employees but whose work/ and or workplace is controlled by the organization	No. of work-related injuries and ill health	Person	53	55	59	17	18
	Rate of work-related injuries and ill health[1]	%	4.38	4.38	4.19	1.17	0.62
	No. of fatalities as a result of work-related injuries	Person	0.6	0.07	0.07	0	0
	Work-related fatality rate per ten thousand employees[3]	fatality rate	4.96	0.56	0.50	0	0
	No. of cases of work-related injuries and ill health[2]	Case	53	54	59	17	18
	Lost Time Injury Frequency Rate (LTIFR)[4]	Cases per million hours	21.00	20.59	20.08	5.60	2.97

1. Total No. of individuals affected by work related injuries and ill health ÷ Total No. of workers x 100
2. The No. of accidents requiring more than 3 days of medical treatment
3. No. of work-related fatalities ÷ Total No. of workers x 10,000
4. No. of work-related injuries and ill health ÷ Total work hours x 1,000,000

Safety / Quality / Information Security Certification

Category		Business Sites	
Health and safety	ISO 45001	Hyosung Heavy Industries	Headquarters (Mapo), Hoehyeon AK Tower, Changwon plants 1, 2, 3, 4, Anyang plant
		Subsidiaries	Jinheung Enterprise, Pune plant in India, Nantong plant in China
	KOSHA-MS	Hyosung Heavy Industries	Headquarters (Mapo)
Quality	ISO 9001	Hyosung Heavy Industries	Headquarters (Mapo), Hoehyeon AK Tower, Changwon plants 1, 2, 3, 4
		Subsidiaries	Memphis plant in the USA, Vina industrial machinery plant in Vietnam, Pune plant in India, Nantong plant in China, South Africa corporation, Jinheung Enterprise
	ISO 3834 / KOLAS / KEPIC-EN	Hyosung Heavy Industries	Changwon plants 1, 2, 3, 4
	ISO 17025	Subsidiaries	Nantong plant in China
Information security	ISO 27001	Hyosung Heavy Industries	Headquarters (Mapo), Changwon plants 1, 3, 4
		Subsidiaries	Pittsburgh corporation in the USA

Social Contribution

Category	Unit	Hyosung Heavy Industries			Subsidiaries	
		2021	2022	2023	2022	2023
Social contribution investment	KRW million	560	612	887	24	74
No. of social contribution programs	Program	19	33	42	5	8
No. of participants among employees[5]	Person	-	1,298	1,626	66	62
Total volunteer hours[5]	Hour	-	437	647	176	179
Amount of social value generated[6]	KRW million	-	-	2,759	-	75

5. The No. of participants and total volunteer hours have been aggregated since 2022.
6. The social value amount for Hyosung Heavy Industries has been aggregated since 2023.

Customer Privacy Protection and Infringement of Local Community Rights

Category	Unit	Hyosung Heavy Industries			Subsidiaries	
		2021	2022	2023	2022	2023
Breaches of customer privacy	Case	0	0	0	0	0
Total No. of identified leaks, thefts, or losses of customer data	Case	0	0	0	0	0
Total No. of incidents of violations involving the rights of indigenous people	Case	0	0	0	0	0

Products and Services subject to Labeling and Safety/Health evaluations

Category	Unit	Hyosung Heavy Industries & Subsidiaries		
		2021	2022	2023
Percentage of major products and services that have undergone evaluations related to information disclosure and labeling procedures.	%	100	100	100
Percentage of major products and services that have undergone evaluations for health and safety impacts.	%	100	100	100

Environmental Performance

*Greenhouse gas and energy usage data include all business sites of Hyosung Heavy Industries. Other environmental data categorized under Hyosung Heavy Industries are aggregated for the Headquarters, Hoehyeon AK Tower, Changwon plants, construction sites, and Wellington Country Club. For subsidiaries, the data in 2022 was aggregated for domestic (Jinheung Enterprise), USA (Memphis), China (Nantong), Vietnam (Dong Nai), and India (Pune) subsidiaries. In 2023, the USA (Pittsburgh) subsidiary was added, bringing the total to five subsidiaries for which environmental data is aggregated.

Energy Consumption

Category		Unit	Hyosung Heavy Industries				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Direct energy consumption	Diesel	TJ	9.54	9.32	10.23	9.40	9.80	11.51
	Kerosene		21.68	33.93	23.19	21.09	36.99	22.29
	LNG		94.12	97.10	114.73	105.11	0.12	0.90
	NG		0	0	0	0	26.83[3]	36.43
	Gasoline		2.31	2.66	2.96	2.91	2.04	4.35
	Propane		5.51	7.19	6.47	6.44	0.05	0
	Anthracite		0.46	2.83	0	0	0	0
	Other solid fuels		7.28	10.33	4.82	4.38	13.82	9.55
	LPG		0.50	0.68	0.65	0.62	1.03	1.53
	Subtotal		**141.39**	**164.03**	**163.06**	**149.95**	**90.68**	**86.57**
Indirect energy consumption	Electricity[1]	TJ	928.67	873.39	886.77	821.00	188.17	229.34
	Steam		17.60	0	0.36	0.33	71.08	65.66
	Heat from waste incineration		51.50	53.06	50.09	45.54	0	0
	Subtotal		**997.78**	**926.45**	**937.23**	**866.86**	**259.25**	**295.00**
Total energy consumption		**TJ**	1,139.17	1,090.48	1,100.29	1,016.82	349.92	381.57
Energy intensity[2]		TJ/KRW 100 million	0.05	0.04	0.04	0.03	0.03	0.02
Separate sales		KRW 100 million	23,555	25,898	30,964	30,964	11,925	16,970
Renewable energy consumption	Purchase (PPA/ REC/Green premium)	TJ	0	0	0	0	0	0
	Purchase (Heat from waste incineration)	TJ	51.50	53.06	50.09	45.54	0	0
	Own production(Solar energy)	TJ	0	0	0.06	0.06	0	0
	Subtotal	**TJ**	**51.50**	**53.06**	**50.15**	**45.60**	**0**	**0**

1. The conversion coefficient for electricity energy consumption is 9.6 TJ/GWh for domestic use (based on the country's specific calorific value and emission coefficient for each fuel type) and 3.6 TJ/GWh for overseas use.
2. The intensity is calculated based on separate sales figures.
3. The NG values for the subsidiaries were recalculated after identifying an error in unit conversion during the 2022 assessment.

Expected Amount of Energy Savings and Greenhouse Gas Reduction[4]

Expected greenhouse gas reduction	Energy type	Project	Introduction date	Investment (KRW million)	Hyosung Heavy Industries	
					Expected energy savings (kWh/year)	Expected greenhouse gas reduction (tCO_2eq/year)
Changwon	Electric power (scope2)	Installation of solar power generation facilities	2023. 11	225	209,603	96
Changwon		Replacement of high-efficiency heating and cooling systems	2023. 12	869	291,679	134
Changwon		Installation of high-efficiency lighting (LED)	2023. 10	190	49,870	23

4. The expected amounts of energy savings and greenhouse gas reduction are estimated values based on the capacity and efficiency of the equipment, as well as the operating hours, before and after the project.

GHG Emissions[5]

Category		Separate sales	KRW 100 million				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Direct GHG emissions (Scope 1)	Stationary combustion	tCO_2eq	7,177	8,638	8,134	7,468	4,916[11]	4,190
	Mobile combustion		772	840	902	844	815	1,105
	Processing emissions[6]		614	196	0	0	0	0
	Waste disposal		46	41	58	53	0	0
	Other emissions[7,8]		397	329	232	211	0	0
	Subtotal		**9,005**	**10,043**	**9,326**	**8,576**	**5,731**	**5,295**
Indirect GHG emissions (Scope 2)	Electricity	tCO_2eq	44,442	41,796	42,157	39,289	16,307	19,064
	Steam		663	0	14	12	7,819	7,223
	Subtotal		**45,105**	**41,796**	**42,170**	**39,301**	**24,125**	**26,286**
Total GHG emissions[9] (Scope 1&2)		tCO_2eq	54,110	51,839	51,497	47,877	29,856[11]	31,581
GHG emissions intensity[10]	Scope 1	tCO_2eq/ KRW 100 million	0.4	0.4	0.3	0.3	0.5	0.3
	Scope 2		1.9	1.6	1.4	1.3	2.0	1.5
	Subtotal		**2.3**	**2.0**	**1.7**	**1.5**	**2.5**	**1.9**
Separate sales		**KRW 100 million**	**23,555**	**25,898**	**30,964**	**30,964**	**11,925**	**16,970**

5. This has been prepared based on the emission reporting and certification guidelines of the Emissions Trading Scheme and the Ministry of Environment's conformity assessment for the submission of emission allowances for the current year.
6. Due to the closure of the electric arc furnace facility at the Changwon plant, there has been no crude steel production, resulting in no process emissions since 2023.
7. Starting in 2023, we have separately disclosed the "Other Emissions" category, which was not previously reported separately. As a result, we have corrected the waste treatment emissions for 2021 and the process emissions for 2022. The subtotal for Scope 1 remains unchanged.
8. The scope of other emissions includes emissions from the use of acetylene and carbon dioxide welding equipment at the Changwon plant.
9. Only CO_2, CH_4, and N_2O are being emitted as greenhouse gases, and the total greenhouse gas emissions above may differ from the emissions reported in the business report due to rounding off decimals by business site.
10. The intensity is calculated based on separate sales figures.
11. Due to the correction of unit conversion errors in the NG emissions of subsidiaries, the stationary combustion emissions for 2022 have been recalculated.

Air Pollutant Emissions

Category		Unit	Hyosung Heavy Industries				Subsidiaries
			2021	2022	2023		2023
					Plan	Performance	
General air pollutants	Nitrogen Oxides(NOx)[12]	kg	1,322.8	990.3	3,100	2,552.8	4,594
	Sulfur Oxides(SOx)[13]		-	-	1,100	19.8	63
	Total Hydrocarbons(THC)[13]		N/A	N/A	35,400	26,090.4	131
	Particulate Matter(PM)		5,801.1	4,190.6	3,300	2,460.5	6,944
	Volatile Organic Compounds(VOCs)[14]	Ton	N/A	N/A	120	105.8	0
	Hazardous Air Pollutants(HAPs)		N/A	N/A	200	184.9	0
Ozone-Depleting Substances (ODS)[15]	HFC(R410A)	kg	60	160	100	0	0
	HCFC(R-22Volatility)		1,260	1,100	1,300	1,250	0

12. Due to the installation of RTOs (Regenerative Thermal Oxidizers) at Changwon Plant 1 and Plant 3, Nitrogen Oxide (NOx) emissions have increased.
13. Sulfur Oxides (SOx) were not disclosed in 2021 and 2022, so they are indicated with a '-'. Total Hydrocarbons (THC) are reported starting in 2023, and therefore are marked as 'N/A' for previous years.
14. VOCs and HAPs have been reported starting in 2023. Hyosung Heavy Industries does not emit Persistent Organic Pollutants (POPs).
15. For ozone-depleting substances (ODS), the purchased amount has been considered as the emission amount. Starting with the 2023 Sustainability Report, data from 2021 to 2023 have been measured and reported.

Environmental Performance

Water Management

Category		Unit	Hyosung Heavy Industries				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance	Performance	Performance
Water consumption by withdrawal source	Municipal water	Ton	157,968	100,415	128,931	120,367	172,650	230,637
	Groundwater		0	0	0	11,093	36,844	19,578
	Industrial water		361,867	406,955	495,000	374,671	21,316	35,894
	Reused sewage treatment water		0	0	0	0	0	0
	River water		0	0	0	0	0	0
Total water consumption		Ton	519,835	507,370	623,931	506,131	230,810	286,109
Water consumption intensity		Ton/ KRW 100 million	22.1	19.6	20.2	16.4	19.4	16.9
Separate sales		KRW 100 million	23,555	25,898	30,964	30,964	11,925	16,970
Total reused water		Ton	0	0	0	0	0	0
Total water withdrawal		Ton	519,835	507,370	623,931	506,131	230,810	286,109

Category		Unit	2023 Performance by business site				
			Gongdeok Headquarters	Hoehyeon AK Building	Changwon plant	Construction Site	Wellington CC
Water consumption by withdrawal source	Municipal water	Ton	7,856	7,413	0	85,643	19,455
	Groundwater		0	0	0	11,093	0
	Industrial water [1]		0	0	374,671	0	0
	Reused sewage treatment water		0	0	0	0	0
	River water		0	0	0	0	0

1. Changwon plant receives industrial process water and utilizes it as industrial water.

Treatment of Water and Effluents

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
Wastewater discharge by destination	Wastewater treatment	Ton	0	0	5,195	119,172	106,428
	Direct discharge to ocean		0	0	0	0	0
	Outsourced treatment		8,880	7,774	3,111	34,090	44,688
Total Wastewater discharge		Ton	8,880	7,774	8,307	153,262	151,116
Biochemical Oxygen Demand (BOD)		Ton	0.03	0.02	0.00	Information unavailable	8
Chemical Oxygen Demand (COD)			0.25	0.50	0		33
Total Organic Carbon(TOC) [2]			N/A	0.29	0.02		0
Suspended Solids(SS)			0.01	0.13	0.04		4
Total Nitrogen(T-N)			0.04	0.07	0.01		3
Total Phosphorus (T-P)			0.02	0.01	0.02		0.2

2. Total Organic Carbon (TOC) has been measured since 2022. When measuring wastewater pollutants in 2023, the concentration was relatively low because the wastewater from the wet painting facility, which has a high pollution load, did not flow in.

Water Risks [3]

Category		Republic of Korea		China	Vietnam	USA		India
		Seoul[7]/ Gyeonggi[7]	Changwon[8]	Jiangsu Province[8]	Dong Nai[8]	Tennessee[8]	Pennsylvania[7]	Maharashtra[8]
Water risk[4]		Low to Medium	Low	High	High	Low	Low	Extremely High
Water stress[5]	Baseline	Medium to High	Low	Medium to High	Low to Medium	Low	Low	Extremely High
	2030 Outlook[6]	Medium to High	Low	Medium to High	Low to Medium	Low	Low	Extremely High

3. The Water Resource Risk analysis tool (Aqueduct 4.0) from the World Resources Institute (WRI) was used.
4. A comprehensive indicator that aggregates quantity, quality, regulatory, and reputational risk indicators.
5. Water Stress: Total demand/available surface water and groundwater supply (low <10%, low to medium 10-20%, medium to high 20-40%, high 40-80%, Extremely High >80%)
6. BAU (Business as usual) scenario
7. Offices: Hyosung Heavy Industries Headquarters and Hoehyeon AK Tower, Wellington CC (Seoul/Gyeonggi area), Pittsburgh Office.
8. Plants: Changwon, South Korea; Nantong, China; Dong Nai, Vietnam; Memphis, USA; Pune, India.

Waste Disposal

Category			Unit	Hyosung Heavy Industries				Subsidiaries	
				2021	2022	2023		2022	2023
						Plan	Performance	Performance	Performance
Non-hazardous waste (ordinary waste)	Self-treatment		Ton	0	0	0	0	0	155
	Outsourced treatment	Recycling		5,037	4,120	7,478	7,231	2,873	4,617
		Incineration		148	0	207	207	0	41
		Landfill		278	301	600	489	0	264
		Others		0	0	0	0	0	0
	Subtotal			5,463	4,422	8,285	7,927	2,873	5,077
Hazardous waste (designated waste)	Self-treatment		Ton	0	0	0	0	0	0
	Outsourced treatment	Recycling		216	297	400	263	64	227
		Incineration		125	215	260	196	0.1	107
		Landfill		5	1	15	11	0.5	0.5
		Others		0	0	20	16	53	24
	Subtotal			347	513	695	486	117	358
Construction waste-Outsourced treatment	Self-treatment		Ton	0	0	0	0	0	0
	Outsourced treatment	Recycling		2,987	3,433	4,200	4,062	7,885	2,052
		Incineration		0	0	0	0	0	0
		Landfill		0	0	0	0	30,858	0
		Others		185,465	78,596	130,000	126,119	5,114	32,222
	Subtotal			188,452	82,028	134,200	130,181	43,857	34,275
Total waste generated			Ton	194,261	86,962	143,180	138,594	46,848	39,710
Total waste recycled			Ton	8,240	7,850	12,078	11,556	10,821	7,051
Total ratio of waste recycled			%	4.2	9.0	8.4	8.3	23.1	17.8

Environmental Performance

Chemical Substances Management

Category	Unit	Hyosung Heavy Industries				Subsidiaries	
		2021	2022	2023		2022	2023
				Plan	Performance	Performance	Performance
Hazardous chemicals consumption[1]	kg	21,409	9,309	11,000	20,905.6	138,690	208,651
Hazardous chemicals consumption intensity	kg / KRW 100 million	0.91	0.36	0.36	0.68	11.63	12.30
Sperate sales	KRW 100 million	23,555	25,898	30,964	30,964	11,925	16,970
Chemical substance emissions	kg	30,465.7	29,218.9	21,000	18,997.7	2,230	1,970.1

1. Hazardous chemicals consumptions for the years 2021 and 2022 have been revised based on the performance reports in accordance with the Chemical Substances Control Act.

Environmentally Friendly Products and Services Sales and Purchases

Category	Unit	Hyosung Heavy Industries			Subsidiaries
		2021	2022	2023	2023
Sales[2] of environmentally friendly products and services	KRW 10 million	22,496	32,363	32,246	510
Sales[2] ratio of environmentally friendly products and services	%	9.6	12.5	10.4	0.3
Purchases[3] of environmentally friendly products and services	KRW 10 million	1,282	2,472	1,301	1,141
Total purchase amount	KRW 10 million	176,597	210,734	229,735	76,278
Purchase[3] ratio of environmentally friendly products and services	%	0.7	1.2	0.6	1.5

2. Hyosung Heavy Industries redefined its 'environmentally friendly products and services' as those that 1) have received third-party certification or conform to global standards, and 2) fall under the K-Taxonomy green economic activity classification. Accordingly, the existing data has been updated.
3. Hyosung Heavy Industries Co., Ltd. has defined and aggregated the following products and services as environmentally friendly according to internal standards:
   - Power & Industrial Systems division: Plant-based insulating oil, Construction division: Ready-mixed concrete, insulation materials, waterproofing sheets, and other eco-label certified materials
   - Subsidiaries: Spray booth catalytic combustion equipment and other eco-label certified materials

Cleantech related Investment[4]

Category	Unit	Hyosung Heavy Industries		
		2021	2022	2023
Environmentally friendly research cost	KRW million	16,774	20,427	20,352

4. R&D expenses for environmentally friendly products and services according to internal standards, as well as research related to technologies that mitigate negative environmental impacts, have been aggregated. The existing data has been updated to reflect the redefinition of environmentally friendly products and services.

Raw Material Consumption and Renewable/Recycled Input Material Amounts[5,6,7]

Category		Unit	Hyosung Heavy Industries		
			2021	2022	2023
Material Consumption	Total raw material consumption[6]	Ton	-	-	66,625
	Renewable material consumption	Ton	-	-	0
	Recycled input material consumption	Ton	-	-	0

5. The total consumption includes major materials (reinforcing bars, electrical steel sheets, steel structures, copper materials).
6. The data for subsidiaries in 2021, 2022, and 2023 is incomplete and therefore has not been disclosed.
7. Due to errors in the 2021 and 2022 data, it is not disclosed.

Biodiversity within the Areas Affected by Business Sites[8,9,10,11,12]

Country	Region	Characteristics of the locations of operation	Physical Risk	Reputation Risk	Risk indicators of the organization among physical risks				Endangered species	
					Provisioning services[8]	Ecosystem regulation service[9]		Biodiversity pressure	Nationally designated endangered species[10] (domestic)	I IUCN Red List[11] (over seas)
					Limited wild flora & fauna availability	Heat wave	Tropical cyclone (typhoon)	Pollutant emissions		
Republic of Korea	Seoul area	Office	2.5	2.5		3.5	4.5	2.88	0	N/A
		Office	2.5	2.5		3.5	4.5	2.88	0	N/A
	Icheon	Office	3.4	2.62	4	3	4.5	4.12	1	N/A
	Changwon	Plant	3.3	2.81	2	4	4.5	2.38	3	N/A
China	Jiangsu Province	Plant	3.73	2.95	4	4	4.5	4.5	N/A	31
Vietnam	Dong Nai	Plant	3.38	2.8	4	3.5	3.5	4	N/A	223
USA	Tennessee	Plant	3.33	2.69	4	3.5	3.5	3.75	N/A	35
	Pennsylvania	Office	2.5	2.5		3.5	3.5	2.25	N/A	31
India	Maharashtra	Plant	3.5	3.12	4	3.5	3.5	4.62	N/A	54

8. The impacts were identified using the WWF (World Wide Fund for Nature) Biodiversity Risk Filter.
9. Provisioning services: Material benefits provided by ecosystems, including the supply of goods necessary for humans such as food, timber, genetic resources, and pharmaceuticals.
10. Regulating Services: Ecosystem services refer to the goods and benefits that humans receive directly or indirectly from ecosystem functions. Among these, regulating services are those that maintain and regulate environmental balance through the various interactions among ecosystem components.
11. In accordance with the Wildlife Protection and Management Act, the species protected by the Ministry of Environment for effective wildlife protection were aggregated based on the major administrative regions in the nationwide distribution survey of endangered wildlife by the National Institute of Biological Resources.
12. Based on the IUCN Red List of Threatened Species, species categorized as Critically Endangered (CR), Endangered (EN), and Vulnerable (VU) within a 25 km radius of the business site were aggregated.

Environmental Management Certifications and Eco-Friendly Certifications

Hoehyeon AK Tower		Business Sites	
Environmental management certification	ISO 14001	Hyosung Heavy Industries	Headquarters (Mapo), Hoehyeon AK Tower, Changwon plants 1, 2, 3, 4, Anyang plant
		Subsidiaries	Jinheung Enterprise, Pune plant (India), Nantong plant (China)
Eco-friendly certification	Green Building Certification (G-SEED)	Hyosung Heavy Industries	Hoehyeon AK Tower

Environmentally Friendly Vehicles[13,14]

Category		Unit	Hyosung Heavy Industries			Subsidiaries	
			2021	2022	2023	2022	2023
On-road vehicles	Electric vehicle	Car	1	0	10	0	0
	Hydrogen fuel cell electric vehicle	Car	1	0	1	0	0
	Solar-powered vehicle	Car	0	0	0	0	0
Off-road vehicles	Electric vehicle	Car	165	163	165	38	39
	Hydrogen fuel cell electric vehicle	Car	0	0	0	0	0
	Solar-powered vehicle	Car	0	0	0	0	0
Total No. of company vehicles		Car		332	411	74	72
Ratio of environmentally friendly vehicle ownership		%		49.1	42.82	51.35	54.17

13. The scope of environmentally friendly vehicle aggregation includes domestic business sites (headquarters, Hoehyeon AK Tower, Changwon plant, Wellington CC) and five subsidiaries.
14. The total No. of vehicles in 2021 is indicated as '-' because this information was not disclosed at that time.

Hyosung Advanced Materials

New Safety & New Comfort through Future Materials

Company Overview

General Status

Company name	Hyosung Advanced Materials Corporation
Date of establishment	June 4, 2018
CEO	Yongsoo Cho
Headquarters location	119 Mapodaero, Mapo-gu, Seoul, Republic of Korea
Business sites in Korea	Seoul, Daejeon, Ulsan, Jeonju, etc.

Overseas business sites	Vietnam, China, Germany, Romania, South Africa, Mexico, etc.
Products	Technical yarn and fabric with high tenacity, steel wire materials, etc.
Key export countries	Vietnam, USA, Romania, Luxemburg, etc.
Key businesses	Chemical fibers and textiles, etc.

Number of employees
Korea 981 Persons
Overseas 10,542 Persons

Sales revenue
KRW 3 Tril. 202.3 Bil.

Operating profit
KRW 172.4 Bil.

Global Network

Plants	Technical Centers	Key suppliers	Employees[1)]
16	3	160	11,523

Europe
Germany
Luxembourg
Romania (2)

Asia
Vietnam (3)
China (4)

Republic of Korea
Headquarters
Ulsan Plant
Jeonju Plant
Daejeon Plant

Americas
Mexico

Middle East/Africa
South Africa

1) The number of employees is as of December 31, 2023. This figure includes 1,329 employees from overseas subsidiaries in countries such as Germany and Mexico, which are not included in the scope of this report.

Vision and Core Value

Vision

Human Safety & Comfort Solution Provider

We will contribute in building a happy future with clean and safe environment through solutions optimized to customer needs.

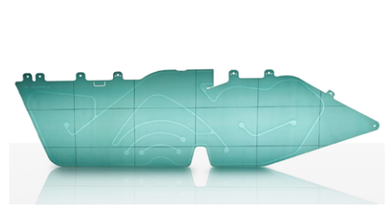
Core Value

- Solutions that enhance customer values
- Leading the world to a better place
- A material technology specialist

Key Products

Tire & industrial reinforcements

We hold the global No.1 market share in producing polyester tire cords, steel cords, bead wires, etc.



Airbag fabric and cushions

With the Global No. 1 market share, we produce airbag textiles, including airbag cushions and OPW (One Piece Woven).

Carbon fiber(TANSOME®)

Carbon fiber is an eco-friendly new material that is 10 times stronger than steel and weighs only 1/4 of steel. HAMC succeeded in the autonomous development of carbon fiber as the first in Korea.

Technical yarn

We produce technical yarns made of polyester and nylon for various uses, including those for airbag and seatbelt.

Carpet

We are the only carpet expert company in Asia, with the autonomous manufacturing facilities for every step from yarn to finished products.

Aramid(ALKEX®)

Aramid yarn is utilized for various purposes, including bulletproof vests and helmets, as well as 5G optical cable reinforcements and automotive components.

Sustainability Implementation Framework

Sustainability Strategy

HAMC has established 4 sustainability implementation strategies to realize a happy future by creating a clean and safe environment that can enhance the sustainability of humanity.

'We will make a better future by creating a clean and safe environment that will enhance the sustainability of mankind.'

Zero Fatality	Zero Emission	Zero Waste	Zero Impact
Solutions that enable user safety and comfort	Products & technologies that contribute to reducing GHG emissions	Sustainable use of resources that preserves the ecosystem	Activities that minimize harmful impacts to stakeholders

Sustainability Governance

HAMC's Sustainability Steering Committee deliberates and decides on sustainability strategies and directions, while reporting major issues to the BoD. The subcommittees under the Sustainability Steering Committee are chaired by C-level executives from each sector, and the Sustainability Management Secretariat supports the operation and decision-making of each committee.

2023 Sustainability Highlights

Key Sustainability Performances

- Member of Dow Jones Sustainability Indices Powered by the S&P Global CSA — **First in the Hyosung Group** to become a member of Dow Jones Sustainability Indices powered by the S&P Global CSA
- Calculation of the **LCA** for all key products
- Acquired the world's first FSC[1] certification for **Lyocell tire cord**
- **6.4%** of revenue from eco-friendly products
- **Set SBT and submitted to SBTi** for all global sites
- First in Korea to apply the commercialized **recycle PET**, successfully applying it to electric vehicle tires
- Participation in the 2023~2024 **Sector Adaptation Council**
- Increased the rate of ISO 50001 certifications from 9 to **18%**
- Renewable energy generation increase of **201%**

1) FSC (Forest Stewardship Council)

Global ESG Assessment Results

EcoVadis Rating			CDP Climate Change Score	CDP Water Security Score	
GOLD 2023 ecovadis Sustainability Rating	S&P Global CSA Score 2023: 60 /100	Low Risk 15.3	B	B	MSCI A / 한국ESG기준원 A

Key Awards and Certifications

- A company recognized for funding endangered species conservation (National Institute of Ecology / 2023)
- Family-friendly Management Certification (Ministry of Gender Equality and Family / Since 2018)
- A company recognized for rural area ESG implementation (Korea Foundation for Cooperation of Large & Small Business, Rural Affairs / 2023)
  Rural Area ESG Implementation Recognition Company (KOFCA (Korea Foundation for Cooperation of Large&Small Business, Rural Affairs) / 2023)
- A company recognized for local community contribution (Ministry of Health and Welfare / Selected for 5 consecutive years since 2019)
- 2023 CDP Water Security Special Award
  2023 Top 150 Leading Sustainable Companies in Korea
- 2023 Seoul Social Contribution Grand Prize Seoul Metropolitan Council Chairman's Award

ESG Value Chain

HAMC is striving to enhance our sustainability as well as that of stakeholders, society and the environment across the entire value chain. Particularly, in order to achieve “Zero Impact” that aims in minimizing the negative impact throughout the value chain, we identify improvement tasks for each step of the value chain through diagnosing the status and disclosing the execution results.

Raw material

Social value
- Supporting supplier ESG capabilities enhancement (23 companies)
- Supporting supplier product quality & safety improvement (28 companies)
- Corporate partnership (39 companies)

Environmental value
- Supporting suppliers’ emissions reduction capabilities (11 companies)
- Use of recycled and bio-based raw materials

Manufacturing

Economic value
- Salaries and benefits (KRW 8.5 Bil.)

Social value
- Workplace safety & health enhancement
- Maintain Family-friendly Management Certification for 6 consecutive years
- Proactive quality management through smart factories

Environmental value
- Eco-friendly product sales proportion (6.4%)
- Development of recycle products
- GHG Scope 1 and 2 emissions (1.13 Mil. tons)
- Investment in energy, health & environment (KRW 15 Bil.)
- Endangered species conservation project (planted 2,000 Jeonju pogostemons)

Distribution

Social value
- Safeguarding end-users (drivers), through our seatbelt, tire cord, and airbag

Economic value created in 2023*

KRW 3,212.1 Bil.

Dividends	Corporate taxes, etc.	Social contributions
KRW 97.7 Bil.	KRW 25.0 Bil.	KRW 1.1 Bil.

* 2023 Sales (Consolidated) + Other Income

Customer use

Social value
- Protecting the safety of drivers and pedestrians
- Safeguarding the lives of safety clothing (e.g., firefighter suits, bulletproof vests) users
- Minimizing casualties in the incident of hydrogen tank damage

Environmental value
- High-performance (high-tenacity) products contributing to increase product lifespan during the usage stage

Customer use

Social value
- Product quality & safety inspection
- Providing instructions for safe use of products

Environmental value
- Offering pre-colored products in correspondence to customer requirements
- Products contributing to reduction of raw material consumption during customer processing (with identical performance as conventional products)

Disposal

Economic value
- Waste disposal charges and package recycling contributions (KRW 27 Mil.)

Environmental value
- Recyclable automotive carpets
- Development of high-tenacity products that can extend tire lifespan

Materiality Assessment

HAMC conducts an annual materiality assessment to objectively identify and manage the Impact, Risk, and Opportunity (IRO) of material topics and sub-topics that are considered significant by stakeholders. In 2023, we came up with standards for impact materiality and financial materiality to implement the concept of double materiality from both global sustainability reporting guidelines, GRI Standards and the ESRS. We conducted an in-depth panel debate to assess materiality based on these standards. As a result, HAMC identified six material topics, and the BoD voted on the material topics and its management plans, reflecting the feedback from the directors.

HAMC Materiality Assessment Process: 2023 HAMC SR p.24-25

Understanding Context › Understanding affected stakeholders › IRO identification › Impact materiality assessment › Financial materiality assessment › Determination of material topics › SSC reporting › BoD reporting & voting

Actions & Plans by Material Topic

Qualitative and quantitative impact and action of HAMC's material topics: 2023 HAMC SR p.26-29

Area	Material Topic	Our Context	Plan & Approach	Indicators and Goals	Relevant GRI
Environment	Climate change response	The demand for carbon neutrality in the automobile industry, where the HAMC's major products are applied, is growing, and climate change regulations like CBAM are expanding. Consequently, HAMC needs to achieve efficiency for the manufacturing processes, decarbonize our energy sources, and strengthen supply chain management skills that climate change response capabilities for our suppliers.	• Establish GHG emissions management system at all global sites • Expand the renewable energy use • Conduct LCA and voluntary third-party verification of major products • Establish and implement product LCA reduction roadmap	• Reduce Scope 1+2 emissions by 42% and Scope 3 Category 1+3 emissions by 25% by 2030 • Expand the scope of CDP Climate Change to 100% from FY2024 • Conduct product LCA and voluntary third-party verification	GRI201, GRI302, GRI305
Environment	Eco-friendly product & technology	The chemical industry is required for fundamental change of business model in accordance with the rise in the cost of carbon emissions. With the increase in demands for products with excellent eco-friendliness across the entire life cycle of products, including the phases of production, consumption, and disposal, reorganization into new businesses with eco-friendly high-added value is necessary.	• Expand the development of products utilizing recycled raw materials. • Promotion of development and commercialization of recyclable automobile carpets. • Develop green technologies in consideration of LCA and achieving certifications • Identify and invest in suppliers of low-carbon materials	• Transition to sustainable raw materials: - PET tire cord 100% (~2050) - PET technical yarn 40% (~2040)	GRI201, GRI301
Economy	New growth engine	As a global leader in high-strength industrial materials, we provide our products and services with various industries including automobiles, construction, energy, sports, and aviation. However, maturation of the industries of our key businesses poses limits to our growth. We need to facilitate future growth foundation by securing new material commercialization technologies while increasing profits through exploration of new markets.	• Develop technology to maintain market competitiveness of the existing business and expanding capacity. • Expand development of products using bio-base raw materials • Investment for securing technology for bio-base material production	• Expand the annual production capabilities of carbon fiber to 24,000 tonnes (~2028) • Secure a production base in India • Expand the applications of carbon fiber and aramid	Non-GRI
Social	Occupational safety & health	As the chemical industry is characterized by its technology-intensive processes that utilize large-scale facilities, where even a single accident can cause enormous damage to human and material assets. In particular, occupational safety management have become crucial due to the strengthening of the Serious Accidents Punishment Act.	• Increase ISO 45001 acquisition rate • Increase investment in safety & health • Conduct emergency response training and education • Eliminate potential risk factors through risk assessment	• Accomplishing an LTIFR (Lost Time Injury Frequency Rate) of 0.42 (~2030) • Achieving a safety performance score of 96 (~2030) • Voluntarily discovering and improving risk factors • Proliferation of a culture promoting safety & health	GRI403
Social	Supply chain	As an intermediate goods company, we must build mutually cooperative and organic relationships with our major raw material suppliers. Small and medium-sized businesses, in particular, struggle to improve their capabilities in response to rapid changes in the external environment, including ESG. Therefore, it is necessary to establish support programs for them. With the enactment of environmental and social due diligence responsibilities for supply chains, especially in the EU, we need to create a system and various activities to manage the ESG aspects of our supply chain.	• Restructure purchasing strategy • Suppliers' GHG emissions reduction management • Identify and remediate potential ESG risks within supply chain, by reorganizing supply chain management system • Support suppliers to improve identified supplier ESG risks	• Achieve 100% ESG risk rate for major suppliers (~2030) • Secure 100% of data for major raw material GHG emissions (~2030) • Establish on-site due diligence system for ESG-related sites • Preparation of supplier due diligence report for public release	GRI204, GRI308, GRI 407~409, GRI 414
Social	Customer value	As a company specializing in industrial materials, we must provide safe and comfortable products to end users by accurately achieving the physical properties required by customers. High quality, including safety, is essential. Furthermore, as customer demand evolves from satisfaction to happiness, it is important to understand future quality requirements and needs.'	• Developing VOC activities • Expanding customer contact points and communication • Integrated management of global technologies and standardization of product quality. • Providing products reflecting customer needs	• Increasing the listening rate of VOC with high ranking by 15% (~2030) • Subdividing conducting unit for product LCA (~2025) - Product average → (Future) Evaluation by specification	GRI 416~417

Climate Change Response

Why So Important?

Climate change response activities, such as GHG reduction and the transition to a decarbonized economy, are being emphasized around the world. Regulations related to climate change response, such as the EU's Carbon Border Adjustment System and California's Climate Corporate Data Accountability Act, are also rapidly strengthening. In the automotive industry, where HAMC's main products and services are applied, there are increasing demands for carbon neutrality, future mobility using renewable energy, and the transition to decarbonization. HAMC seeks to actively participate in climate change response efforts to create a sustainable society, going beyond merely complying with various climate change-related regulations

Our Approach

HAMC seeks to reduce factors that negatively impact climate change to ensure a sustainable daily life for future generations. HAMC works with partners to minimize negative environmental impacts throughout the entire value chain. In 2023, we set a GHG emissions reduction target in accordance with SBTi guidelines, and it is scheduled to be validated by 2024.

Our Achievement

Key Performances

- **14.8 k tonnes** of surplus carbon credit sales in 2023
- **201%** increase in renewable energy generation in 2023 compared to 2022

Major plans

- Planned investment of **USD 9.8 Mil.** in 2024 for energy consumption improvement
  (Installation of facilities for transition to renewable energy, ESS establishment, facility establishment to improve energy efficiency, etc.)

Governance and Strategy

The highest decision-making body in charge of issues related to climate change response is the BoD, which meets quarterly and is chaired by the CEO, who is a registered director. Matters that need to be reflected in the management plan, such as company-wide research and development strategies, investment in technology & equipment, and other policies, are reviewed by the SSC and finally approved by the BoD. Additionally, at the monthly meeting with PU Presidents, issues for each business division, such as climate change response and environmental safety, are shared. Major issues related to climate change are deliberated at the GMC. Important issues requiring decision-making are submitted to the SSC and BoD. In 2023, the BoD received reports on the SBT setting plan and the biodiversity activity promotion plan. The BoD made resolutions on participation in CDP Water Security and SBT setting.

Climate Change Response Strategy

Contribute to limiting the global warming within 1.5℃

Green Plant	Green Solution	Green Chain
• Process efficiency • Sustainable energy use	• Product development and production considering LCA • New market creation	• Engagement in the value chain (Upstream, Downstream)

HAMC Climate action strategy

Risk Management

2023 Major Changes and Issues

Demands for disclosure of GHG emissions information for major products and the use of renewable energy are increasing. To respond to the changing requirements of stakeholders, transparent disclosure of relevant information is required, and we need to develop low-carbon products. HAMC is utilizing various opportunities, including public policy incentives, to invest in transition to renewable energy and to conduct product LCAs and voluntary third-party verification.

Energy Management System Certification (ISO 50001)

HAMC has increased the acquisition rate of ISO 50001 to establish energy use targets and facilitate processes for energy reduction and efficiency improvement as well as systematic management. Germany and Jiaxing have acquired and maintained the certification, and the Luxembourg achieved the certification for the first time in January 2024.

The Luxembourg Certification of ISO 50001

Peak Power Management

HAMC implements peak power reduction initiatives annually from July to September to mitigate the rapidly increasing energy consumption due to the concentration of energy consumption during daylight hours. HAMC endeavors to optimize energy consumption by conducting these peak power reduction initiatives. In 2023, we implemented three themes which led to a decrease of 27,219 kWh.

Increase of Renewable Energy Consumption

HAMC has been reducing external non-renewable energy purchase through the installation of solar or hydroelectric facilities. In 2023, solar power facilities were installed in Jiaxing and Qingdao, leading to an approximate 201% increase in renewable energy generation compared to 2022. In 2024, we are reviewing the investment plan to install solar power facilities in the Luxembourg, Vietnam, and Quang Nam.

Support for Supply Chain GHG Emissions Reduction

To ensure that suppliers' GHG emissions reduction activities are conducted systematically, HAMC provides 'GHG emissions reduction consultation', which supports energy efficiency improvements and carbon reduction technology consultation. Furthermore, we provide assistance in the replacement of existing equipment with high-efficiency and GHG emissions reduction equipment, as parts of subsequent projects. In 2023, we provided consultation to 2 suppliers, identifying a total of 7 improvement items and confirming a GHG emissions reduction potential of 52tCO_2eq/year. Also, we supported the purchase of equipment that contribute to GHG emissions reduction for 2 other suppliers.

HAMC supply chain capability development: 2023 HAMC SR p.93

Metrics & Targets

HAMC has set a progressive climate action goal to contribute to limiting the rise of global temperature within 1.5°C and specified an implementation roadmap. In 2023, we expanded the target scope and level for Vision 2030 (GHG emissions reduction of 24.9% by 2030 compared to 2017 GHG emissions in Korea) and set a near-term SBT at all global sites.

HAMC's SBT

~2030 Scope 1+2	~2030 Scope 3 Cat. 1+3
42% reduction compared to 2021	25% reduction compared to 2021

HAMC climate action target

Occupational Safety & Health

Why So Important?

Safety is more than just regulatory compliance; it is a corporate social responsibility and an essential management element. The implementation of the Serious Accident Punishment Act and the EU CSDDD (Supply Chain Due Diligence Directive) has reinforced the CEO's responsibility for safety & health management and resulted in stricter safety & health management regulations for the company, in-house contractors, and construction companies. Safety & health management should be recognized as a necessary element of corporate management, and continuous efforts to create a safe workplace are required.

Our Approach

HAMC considers the safety & health of its employees as the highest priority. We have established and is operating the safety & health management system at all global business sites. In response to the reinforcement of safety & health regulations, we have developed a mid- to long-term safety & health roadmap, aiming to enhancing the safety & health management standards at all our business sites.

Our Achievement

- **Zero cases** of serious accidents
- **100%** implementation of education and trainings on safety & health laws
- Institutionalization and operation of safety & health **KPIs**
- **14** global safety inspection activities
- **89%** improvement rate of global safety inspection activities

Governance and Strategy

HAMC has appointed a Chief Safety Officer (CSO) directly under the CEO and established a dedicated safety & health department.
The CEO provides the committee with the report on safety & health operational performance, plans for the upcoming year, management policies, composition and roles of the management organization, budget, and facility status. The agendas deliberated by the committee are approved in the main BoD meetings.
The SHE Committee, led by the CSO, comprises of safety & health managers and officers from all business sites worldwide. The SHE Committee is responsible for assessing the safety management level at each site, continuously identifying and sharing of risk factors, and implementing proactive safety management and site- specific safety enhancement activities. Furthermore, safety & health performance indicators are integrated into the KPIs of all safety & health managers and supervisors to reinforce their respective responsibilities.

HAMC Safety & Health Governance HAMC Global SHE Policy, Safety & Health Guidelines

Risk Management

2023 Major Changes and Issues

HAMC has established the mid-to long-term Safety & Health goals for all business sites worldwide, implemented a systematic performance management to achieve these goals. Additionally, we manage the occupational safety management indicators of the suppliers to strengthen their safety & health management system and strive to apply global safety & health standards by enhancing safety & health management at overseas sites.

HAMC Safety & Health Management System: 2023 HAMC SR p.80

Enhancement of the Safety & Health Inspection System

HAMC complies with the safety & health related laws and operates risk assessment and safety inspection system to manage direct and indirect risk factors that could possibly occur in business sites. We identify potential risks during the processes and operations at sites, categorize the inspection factors for each type, discovering and improving the key risk factors. In 2023, a total of 834 risk factors were discovered as a result of the safety assessment, of which 734 cases were remedied, and 91 cases are currently being addressed.

HAMC Safety & Health Risk Management: 2023 HAMC SR p.83

Safety Activities and Accident Prevention Activities

HAMC has established and operated emergency response scenarios for prompt response in the event of natural disasters or other emergencies.
We conduct regular emergency drills to identify areas for improvement implementing a special inspection for domestic and overseas sites in areas with high risks additionally, we provide education and operate autonomously developed programs to enhance safety awareness of our employees. We also aim to improve the working environment through labor-management communication that includes in-house subcontractors and construction companies.

HAMC Safety & Health Activities: 2023 HAMC SR p.82~83

Occupational Health Management

HAMC operates occupational disease prevention activities and health promotion welfare programs for all employees, including part time workers. We conduct health check-up result analyses, assess workplace environments at each site, investigate musculoskeletal risk factors, and employ an extensive management system for high-risk employees. Additionally, we listen to employees' opinions annually to improve health support welfare programs, including the expansion of psychological counseling programs to address employees' mental health.

HAMC Employee Health Management: 2023 HAMC SR p.85

Safety & Health System Establishment for In-house Subcontractors and Construction Companies

HAMC has established regulations for safety management standards for in-house subcontractors and construction companies, operates a safety management support and evaluation system. For new in-house subcontractors, we assess their safety & health management level and provide mentoring support from subcontractors with excellent safety & health implementation. Periodically, we conduct comprehensive assessments for in-house subcontractors and construction companies recognizing exceptional performance with awards. Regular implementation reviews and the development of improvement plans are mandatory for companies with lower ratings. They are required to establish improvement plans and conduct regular implementation reviews. Additionally, we provide safety & health consulting, education, as well as safety facilities and equipment for the in-house subcontractors and construction companies to enhance their safety & health management capabilities.

HAMC Supply Chain Safety & Health Management: 2023 HAMC SR p.93

Metrics & Targets

HAMC has established a goal to incorporate safety & health culture through voluntary participation of the employees. This includes maintaining zero serious accidents and achieving a LTIFR (Lost Time Injury Frequency Rate) of 0.42 or below by 2030, to create safe & healthy working environment.

2030 HAMC's Goals for Safety & Health Management

Enhancement of Safety Capabilities by 2023	Expansion of Global Management by 2027	Voluntary Participation by 2030
Global LTIFR[1] 2.00 Safety performance[2] 68	Global LTIFR 0.80 Safety performance 83	Global LTIFR 0.42 Safety performance 96

1) Lost Time Injury Frequency Rate : Number of injured employees ÷ Total working hours × 1,000,000
2) Safety Performance : Quantitative measurement of workplace accidents, safety status, safety commitment, etc.

Supply Chain Management

Why So Important?

For the past few years, importance of managing environmental and human rights issues across the supply chain has been increasing, with supply chain management regulations being reinforced, centered around the USA and the EU. Also, supply chain sustainability should be enhanced for HAMC's sustainable management. In this regard, it is critical to identify and manage ESG risks within the supply chain.

Our Approach

HAMC is taking a step further from the traditional supply chain management approach that used to prioritize quality and technological capabilities. We are implementing sustainable supply chain management activities that pose zero impact on society, environment, and economy. For the realization of zero impact, we are refurbishing the supply chain management system to achieve zero impact, proactively identifying ESG risks related to environmental, human rights, and safety issues, and establishing and implementing improvement plans.

Our Achievement

- Supply chain ESG risk diagnosis rate of **96%**
- Code of conduct pledge rate of **100%** by key suppliers
- **10%** transaction through local suppliers
- **100%** completion of sustainable supply chain management education by procurement officers

Governance and Strategy

HAMC operates the Supply Chain Management Committee (SCMC), chaired by the CPO (Chief Procurement Officer) and composed of procurement officers from headquarters and global sites. The SCMC implements ESG risk management within the supply chain and global regulatory monitoring related to supply chain, as well as competitive procuring activities. In 2024, with the EU CSDDD taking effect in 2024, reorganization and implementation of the supply chain ESG due diligence system have become focus tasks. These tasks are reviewed in the monthly SCMC. According to 3 procurement strategies (minimizing negative environmental impact, completing social responsibilities, and ensuring competitive qualities and technological capabilities) established for the enhancement of sustainable supply chain management, we aim to conduct procurement activities that minimize negative economic, social, and environmental impact.

HAMC Supply Chain Management Governance HAMC Sustainable Supply Chain Management Policy

Risk Management

2023 Major Changes and Issues

Stricter supply chain management laws on human rights, environmental concerns, and climate change are enforced, such as the US UFLPA (Uyghur Forced Labor Prevention Act) and the EU CSDDD. In response, HAMC is establishing a sustainable supply chain management system by identifying and mitigating ESG risks within our supply chain.

Strengthening Supplier Code of Conduct

HAMC revised the Supplier Code of Conduct to address workers' human rights issues, including forced labor and child labor, and strengthen the response to climate change (e.g., GHG emissions management and reduction, LCA implementation, etc.). The revised code of conduct has been produced in Korean, English, Chinese, and Vietnamese and distributed to suppliers who signed for compliance. Through a continuous review of procurement practices and risks, HAMC has been revising the code of conduct, announcing the revision details on our homepage.

HAMC Supplier Code of Conduct

Enhancement of the Supply Chain ESG Risk Assessment system

HAMC conducts annual ESG risk assessments of our key suppliers, developing action plans and providing support for improvement initiatives. To enhance the accuracy of our ESG risk assessment, we updated our supply chain ESG metrics in 2024, aligning them with the latest global supply chain management standards. This addresses the limitations of previous self-assessment indicators, which struggled to identify specific ESG risks.

HAMC Supply Chain ESG Risk Assessment System: 2023 HAMC SR p.89

Whistleblowing Channel Operation

Suppliers can provide their opinions on the HAMC's unfair demands or regulatory violations at any time through the online reporting channel on homepage and the whistleblower hot line, etc. Specifically, the online reporting channel is produced in languages of countries where our suppliers are located, so global suppliers can easily access and report their grievances. Confidentiality of the whistleblower and the reported details is guaranteed, and retaliatory actions are prohibited according to relevant regulations. In 2023, a total of 4 reports were received and all of them were addressed.

HAMC Grievance Handling Channel Hyosung Whistleblower Hot line

Support for Supplier Capability Enhancement

HAMC operates various programs to support capacity-building for corporate partnership with suppliers.
We offer consulting services on topics requested by suppliers, including general business and ESG management. Similarly, we offer safety facilities, equipment, and consulting services in the safety domain. Especially with the increase in climate change-related demands, we are continuing to support GHG emissions reduction consultation and related facilities to improve suppliers' abilities regarding climate change response. In 2023, we supported the LCA for products that are supplied to our company.

HAMC Supply Chain Support Program

Metrics & Targets

We intend to continuously perform activities to manage and improve ESG risks identified within supply chain, for the realization of the Zero Impact. In that regard, we have established the 2030 supply chain management goals by sector, including environment, society and competitiveness enhancement.

2030 HAMC's Goals for Supply Chain Management

Proportion of Key Supplier ESG Risk Assessment	Securing Key Materials GHG Emission Data
100%	100%

Customer Value

Why So Important?

Meeting customer demands and expectations while providing safe and high-quality products are essential requirement of business operations. Nevertheless, this is insufficient to set a company apart from another. A company should be able to provide reasons for why customers cannot help but choose our products and services.

Our Approach

HAMC considers the creation of customer value crucial to strengthen the business competitiveness and improve brand value. The base of HAMC's customer value creation is VOC activities. VOC activity means collecting information from customers, competitors, and even the customers' customers, analyzing it to understand the real need of customers comprehensively. We aim to create customer value by representing the optimized quality based on the customer needs identified through this process.

Our Achievement

- **9,959** collection of VOC
- **100%** maintenance of quality management system certifications rate (ISO 9001, IATF 16949)
- World's first acquisition of **FSC** certification for lyocell tire cord
- Carbon fiber customer satisfaction score of **42** (out of 50)

Governance and Strategy

HAMC's 2023 management policy highlighted the 'Customer value creation through customer obsession.' HAMC's employees aim to clearly identify and fulfill the needs of customers in addition to achieve quality control and product safety, realizing the customer satisfaction and our sustainable growth. All departments within HAMC, spanning from headquarters, R&D center, to global sites including sales, production, quality, development, and purchasing, practice VOC (Voice of Customer) activities through systematic communication and organic cooperation. We have established a VOC TFT to ensure effective collaboration and facilitate efficient exchange between departments. Additionally, the VOC Committee is operated by each business unit to swiftly apply VOC insights into practical operations. Key VOC activities and outcomes are regularly reported to the C-suite.

HAMC Quality Management HAMC Quality Policy

Risk and Opportunity Management

Global Quality Management

Risk It is essential to represent the physical properties of technical yarn and textile in accordance with customer demands

Product quality is particularly important for HAMC, as we produce materials that improve the safety of final products. HAMC has adopted and operated a global quality management system to standardize product quality across all global production sites. Each site has acquired quality management system certifications – ISO 9001, IATF 16949, KS Q 9100 – that fit our business characteristics. We also operate a globally integrated technology department to ensure the identical high-quality maintenance across all business sites. In April 2024, a TFT has been organized at the newly established Jiangsu plant in China, implementing the tasks to ensure that the same quality management system and quality uniformity are maintained and implemented as at existing business sites.

Expansion of Product Safety Certification

Risk HAMC is expanding our acquisition of relevant certifications to ensure the safety of products that can directly impact end consumers. ALKEX®, used as a material for bulletproof and flame-resistant clothing, maintains and renews the OEKO-TEX®certification for product safety recognition. Additionally, commercial carpets used in hotels, offices, and other spaces have received Korea Eco-label, ensuring products that reduce energy and resource consumption from production to disposal, along with minimizing the generation of pollutants.

Increasing Customer Touchpoints

Opportunity HAMC publishes a Monthly Newsletter as a regular communication channel with customers. The newsletter provides updates on HAMC product introductions and application effects, R&D results, business operations status, and raw material price and volume, serving as a mean for opportunity to discover new customers and expand sales. HAMC consistently participates in relevant industry exhibitions to expand customer touchpoints for product promotion and VOC collection. In 2023, HAMC participated in global composite & advanced materials exhibitions (e.g. JEC World 2023, China Composites Expo, CAMX, Carbon Korea), defense & military industry exhibitions (e.g. Millipol Paris), hydrogen industry specialized exhibitions (e.g. H2 MEET), and the 28th Conference of the Parties to the UN Framework Convention on Climate Change (COP 28) Korea Pavilion.

Successful VOC Activity Case

Opportunity 2022, global tire manufacture company 'A' was importing aramid tire cord from another player. HAMC's Tire & Industrial Reinforcements PU discovered that Company A was experiencing limited profitability due to high tariffs (15%). To resolve this VOC, we proposed a solution involving a local processing company, to suggest importing aramid yarn at a lower tariff rate (2%) and then producing the tire cords locally for delivery. This solution enabled the customer to overcome low profitability and simplify the import process, while HAMC secured a new supply contract with the customer.

Metrics & Targets

HAMC regularly conducts customer satisfaction surveys to understand customers' perceptions of how well our business activities meet their needs. Our carbon fiber business unit has conducted satisfaction surveys since 2021 targeting key customers by application categories. The results of the 2023 satisfaction survey, which concentrated on three areas—quality & pricing, delivery, and customer service—resulted in a score of 42, which was a slight improvement from the 2022 score of 41. Furthermore, HAMC strictly adheres to national regulations regarding product and service information and labeling, with no regulatory violations reported in 2023.

Eco-friendly Product & Technology

Why So Important?

Demands for eco-friendly and low-carbon products are increasing, along with the demands on related regulations and information disclosure. HAMC acknowledges the risks associated with these trends, such as increased costs associated with the use of eco-friendly materials, decreased competitiveness that may result from failing to respond to the expanding market for low-carbon and eco-friendly products, and the potential damage to corporate reputation due to green washing. HAMC recognizes the significance of proactively addressing these market fluctuations.

Our Approach

HAMC has established the Global SHE Policy and implemented various environmental management activities, such as minimization of negative environmental impact, efficient use of resources, eco-friendly process design and product development. We also have established the Sustainable Supply Chain Policy to increase eco-friendly material purchase for products that reduce hazardous chemicals, waste, resource consumption, or for products transitioning to recycled or bio-based materials.

HAMC Global SHE Policy HAMC Sustainable Supply Chain Management Policy

Our Achievement

- Sales of eco-friendly product: **KRW 204,910 Mil.**
- Investment for eco-friendly R&D: **KRW 3,293 Mil.**

Governance and Strategy

HAMC's R&D regarding eco-friendly products and technology are conducted through the R&D Committee. The R&D Committee consisting of the R&DB Labs, the Steel Wire Technical Center, and the Production Technology Center, conducts a comprehensive evaluation of VOC and input from relevant departments in order to develop R&D technologies. In case additional investment is needed during the commercialization phase, decisions are made through investment process.

R&D investment process

Identification of stakeholder needs through communication channels
↓
R&D request
↓
Decision on commercialization
↓
Investment approval

Risk and Opportunity Management

Eco-friendly product criteria & monitoring

Risk Transparent and consistent management standards are required for eco-friendly products information disclosure, with the reinforcement of ESG risk information disclosure standards. HAMC has newly established the internal management standards for objective demonstration of eco-friendliness of these products through comparison with the existing products. HAMC's management of eco-friendly products takes into account resources and energy consumption, pollutant emissions, and change to ecosystem to minimize the negative impact of our products on the environment throughout their lifecycle. We implement this approach by using recycled and bio-base materials at the raw materials phase and produce products with enhanced recyclability in the disposal phase. HAMC also objectively measures environmental impact reduction effects through the product LCA.

Minimization of environmental impact at usage phase

Opportunity HAMC has developed and produced colored yarn products for reduction of chemical material use, water consumption, and waste occurring during the textile dyeing process. Customers can purchase our products and use them without additional dyeing process.

Transition to sustainable materials

Risk Many customers of HAMC demand reuse and recycle of fossil-fuel based products and transition to bio-base materials.
Failure to fulfill these customer needs would pose difficulties in growth and development of the company. Accordingly, HAMC is expanding the use of recycle materials and bio-base materials. Additionally, we are developing new technologies and optimizing our manufacturing processes to expand the use of sustainable materials.

Product lightweighting

Opportunity Lightweight products improving fuel efficiency in the automotive industry has high added value. HAMC's 'TANSOME' is a carbon fiber material that weighs only one-fourth of steel but 10 times stronger. It is specifically utilized in automotive CNG and hydrogen high-pressure vessels, reducing vehicle weight and contributing to reduce GHG emissions reduction in the usage phase. Moreover, we have developed ultra tensile steel cord that are highly durable and capable of reducing the weight of automobile tires. The application of ultra tensile steel cord results in a reduction in tire weight, which enhances fuel efficiency and contributes to a tangible decrease in GHG emissions.

Expansion of Eco-friendly Certifications

Opportunity Eco-friendly technologies can secure objectivity and transparency of eco-friendly products through acquisition of certificates from public organizations or recognized organizations. In 2022, HAMC acquired the ISCC PLUS certification, an international eco-friendly material certification, for the process to produce tire cord using Bio-PET as raw materials, and has maintained the certification since then. Also, technical yarn products made of recycled materials have achieved GRS certification, establishing a foundation for the growth of product sales.

Metrics & Targets

HAMC has established objectives to convert the materials of its top sellers, tire reinforcements and technical yarns, to sustainable materials. We employ the amount expended on sustainable materials as a critical indicator to track progress.

Recycle/Bio-base PET Tire Cord Transition Rate (~2050)	Recycle/Bio-base Technical Yarn Transition Rate (~2030)
100%	40%

New Growth Engine

Why So Important?

HAMC's petrified-based technical yarn & textile is primarily applied in automobile safety components such as tire cord, seatbelt, and airbag. With the increasing demand for decarbonization, the automotive industry has begun transitioning towards future mobility (e.g. electric vehicles). In response to the paradigm shifts, we must execute strategies to secure new growth engines and diversify our business for sustainable growth and profitability.

Our Approach

We are analyzing the present and future risks of our industry and business model, securing a new growth engine to turn risks into opportunities. On the one hand, we are discovering new markets, such as the Indian market, and new customers for stable expansion of the existing business. Furthermore, we are expanding the application of new materials such as carbon fiber and aramid. We are also striving to acquire raw material technology that suits the transition to a decarbonized economy.

Our Achievement

- Maintained global market share **No. 1** for PET tire cord, automotive seatbelt yarn, and airbag fabric
- Annual carbon fiber production capacity of **9,000 tonnes**
- **21 LCA** completion

Governance and Strategy

HAMC's business operations are managed independently by the PU Presidents and Overseas Subsidiary Heads under the responsibility of the CEO. Major operational issues are shared and discussed during monthly CEO-led executive meetings. Business investments are managed in accordance with Investment Management Regulation, and the planning and performance management of investments are overseen by the Corporate Strategy Office in coordination with the planning and management departments of each business unit. Agendas concerning investments of 1 KRW Bil. or more undergo primary deliberation by the Investment Committee and secondary deliberation by the Management Committee under the BoD.
In March 2024, we augmented the existing organization expanding it to the Future Growth Strategy Office, which is led by a C-Level executive, to concentrate corporate capabilities on the identification and incubation of new growth drivers.

HAMC New Growth Engine Strategy

Risk and Opportunity Management

Risk Management Process

HAMC distinguishes between risks that are expected and risks that have occurred, and effectively addresses risks with high probability of occurrence and significant impacts. In particular, we identify not only existing risks such as market conditions, customer demands, and regulatory changes but also potential risks that could have a significant impact on future business, which are taken into account in business strategies. Additionally, we strive to identify risks through regular management diagnostics and external environmental reviews, aiming to convert them into opportunities.

Tapping into New Markets

Risk HAMC's key products such as tire cord, automotive seatbelt yarns, and airbag fabrics, have entered a mature stage, making it difficult to expect accelerated growth in the future.

Opportunity In accordance with market growth rates, HAMC is increasing the manufacturing scale of its current operations in China and Vietnam, while India as a potential new global production base. At the 2024 World Economic Forum, HAMC's top management announced our plan to expand tire cord production facilities in India. We expect the Indian market to become a new opportunity as the demand for automobiles is rising in line with the economic and industrial development in the country.

Development & Launch of New Products

In line with new mobility and circular economy trends, HAMC commercialized the "iON" tire, a tire specifically designed for electric vehicles, using recycle PET tire cord through collaboration with SK Chemicals and Hankook Tire & Technology. The iON tire is the first case in Korea where chemically recycled PET tire cord have been commercialized into final tire product. HAMC has developed chemical recycle PET tire cord with lightweight and high-durability for iON, that can withstand the weight of a battery weighing over 400 kg.

Expansion of the New Materials Business & Manufacturing Facilities

Risk Carbon fiber and aramid from HAMC are ultra-lightweight and with high-tenacity materials applied for various industries, including high pressure vessels, cable cores, and bullet proof and flame- resistant clothing. Nevertheless, there is currently a need to expand their applications to high-value-added industries like electric vehicles and aircraft, and to expand the market share as a latecomer.

Opportunity HAMC is researching to expand the applications of products, while conducting active sales activities to explore and expand into new markets for existing applications. Also, we are increasing the new manufacturing facilities to support these activities. The newly developed H3065 is a special carbon fiber with ultra-high-strength that is 14 times that of steel. H3065 can be applied in aerospace & defense industries, including aircraft fuselages and satellites. Also, we are continuing expansion of our annual carbon fiber production capacity from 9,000 tonnes as 2023 year-end, to 24,000 tonnes by 2028.

De-carbonization

Risk HAMC's core businesses PET & Nylon, which are based on petrochemicals, are facing the risk of contraction due to the accelerated climate crisis and the increasing demand for transition from petrochemicals.

Opportunity We continue to seek investment opportunities in de-carbonization-related businesses that are aligned with our existing businesses, such as acquiring bio-based materials technologies. In 2022, we made an equity investment in Trillium Renewable Chemicals, a US-based company that developed bio-AN technology and is in the course of mass production.

Metrics & Targets

HAMC is expanding the existing businesses and promoting new de-carbonization businesses for continuous revenue generation. Maintaining the top global market share in our major products, as well as growing the applications and production scale of new materials like carbon fiber and aramid for use in electric vehicles and aerospace, are the primary goals and strategies. In addition, we aim at securing bio-based raw material technologies in response to decarbonization demands.

Economic Performance

Reporting Scope and Data Reporting Notes

1. The ESG Performance reporting scope in this report includes the HAMC's headquaters, all sites in Korea, and major overseas subsidiaries. This covers 98% of sales and 88% of employees and executives. The major overseas subsidiaries are listed below, and any differences in the reporting scope have been indicated in the footnotes.
2. If an item is not applicable or cannot be applied, it is marked as 'N/A'. If the data was not investigated, it is marked as '-'. Other special Cases are noted separately below the respective items.

Subsidiaries	Country of operation
Hyosung Vietnam Co., Ltd.	Vietnam
Hyosung Quang Nam Co., Ltd.	Vietnam
Hyosung Chemical Fiber (Jiaxing) Co., Ltd.	China
Hyosung Steel cord(Qingdao) Co., Ltd.	China
GST Automotive Safety(Changshu) Co., Ltd.	China
GST Safety Textiles Ro S.R.L	Romania
Hyosung Luxembourg S.A.	Luxembourg

Financial Statement(Consolidated)[1]

(Unit: KRW Mil.)

	2021	2022	2023
Asset			
Current assets	1,355,009	1,331,264	1,185,155
Cash and cash equivalents	33,590	23,869	20,339
Trade & other receivables	703,260	592,665	590,092
Inventories	563,967	652,295	506,523
Other current assets	54,192	62,435	68,201
Non-current assets held for sale	80,285	11	7,056
Non-current assets	1,473,388	1,603,438	1,842,191
Long-term trade & other receivables	5,236	4,905	5,924
Tangible assets	1,224,325	1,344,551	1,572,396
Investments in properties	155,310	153,517	151,722
Intangible assets	36,625	32,738	30,539
Other non-current assets	51,891	67,726	81,609
Total assets	**2,908,682**	**2,934,713**	**3,034,403**
Liability			
Current liabilities	**1,744,511**	**1,624,968**	**1,751,303**
Trade & other payables	508,575	417,068	502,031
Borrowings	1,160,771	1,143,825	1,225,895
Other current liabilities	75,165	64,076	23,378
Non-Current liabilities	442,582	510,188	533,005
Long-term trade & other payables	7,086	6,431	6,767
Long-term borrowings	380,039	487,012	513,298
Other non-current liabilities	55,457	16,744	12,940
Total liabilities	**2,187,093**	**2,135,156**	**2,284,308**
Equity			
Capital stock	22,400	22,400	22,400
Retained earnings	147,307	236,054	204,403
Other components of equity	434,295	449,018	450,860
Non-controlling interest	117,588	92,086	72,431
Total equities	**721,589**	**799,558**	**750,095**
Total liabilities & equities	**2,908,682**	**2,934,713**	**3,034,403**

Statements of Comprehensive Income(Consolidated)

(Unit: KRW Mil.)

	2021	2022	2023
Sales	3,597,777	3,841,373	3,202,331
Cost of sales	2,961,805	3,319,361	2,841,739
Gross profit	635,972	522,012	360,592
SG&A	167,707	173,011	155,713
R&D expenses	30,955	33,931	32,505
Operating income	437,310	315,070	172,374
Other gain	19,113	12,754	9,779
Other loss	12,365	43,129	17,155
Financial income	35,266	101,233	38,134
Financial expenses	67,525	172,766	129,793
Profit before tax	411,799	213,162	73,340
Corporate tax expenses	81,776	52,924	26,084
Net profit	330,023	160,238	47,255
Other comprehensive gain(loss)	48,522	29,306	707
Total comprehensive gain(loss)	378,546	189,544	47,962

Corporation Tax by Country

	Unit	Korea	Vietnam	China	Germany[2]	Luxembourg
Employees	Persons	981	5,521	1,837	2,974	115
Sales	KRW Mil.	662,028	1,762,114	452,438	436,519	347,622
Profit before tax	KRW Mil.	173,162	28,761	(6,514)	(41,892)	(140)
Corporation tax expenses	KRW Mil.	14,087	9,049	(2,447)	5,640	(1,349)
Tax rate	%	23	0, 10[3]	25	28	27
Effective tax rate	%	8	31	38	(13)	964

Sales and Purchases of Specific Products and Services[4]

(Unit: KRW Mil.)

	2021	2022	2023
Resource-efficient products			
Sales	196,432	223,103	196,415
Korea	30,102	38,356	5,835
Overseas	166,329	184,747	190,580
Eco-friendly products			
Sales	202,199	233,360	204,910
Korea	35,102	47,115	10,460
Overseas	167,097	186,246	194,450
Purchases	1,141	1,079	7,763
Korea	1,141	1,079	684
Overseas	0	0	7,079

Production Output by Business Sector

(Unit: KRW Mil.)

	2021	2022	2023
Tire cord, steel cord, and other industrial yarns and fabrics	2,045,997	2,579,102	2,081,525
Spandex, polyester yarn, nylon film	826,727	635,452	441,820

R&D Activities and Investment Performance

	Unit	2021	2022	2023
R&D				
R&D expenses[5]	KRW Mil.	30,954	33,931	32,506
Patent[6]				
Patent registration (accumulated)	Cases	963	971	977
Korea	Cases	674	679	681
Overseas	Cases	289	292	296
Patent application (accumulated)	Cases	1,709	1,719	1,735
Korea	Cases	1,272	1,275	1,280
Overseas	Cases	437	444	455

Compliance with Laws and Regulations

	Unit	2021	2022	2023
Significant legal violations				
Cases of fines imposed	Cases	0	1	4
Cases of non-monetary sanctions	Cases	0	0	0
Fines for significant legal violations				
Environment[7]	KRW Thous.	0	800	4,800
Safety[8]	KRW Thous.	0	0	4,900
Corruption	KRW Thous.	0	0	0
Others[9]	KRW Thous.	0	0	8,000

1. Based on Consolidated Financial Statements.
2. Taxes paid by GST Global GmbH (GST) include all taxes paid not only in Germany but also in Romania, Mexico (Ensenada), South Africa, and China (Changshu)
3. The tax rate of Quang Nam and Vietnam plant, respectively.
4. Due to internal adjustments in the definitions of resource-efficient products and eco-friendly products, the figures for 2021-2022 have been revised.
5. R&D expenses are the total expenditures on research and development, excluding government grants (national subsidies), based on K-IFRS consolidated financial statements.
6. These are the cumulative numbers of registrations/applications since 1984. This differs from the cumulative number of registrations/applications since 2012 reported in the business report.
7. In 2023, a fine of 4,800,000 KRW was imposed for failing to report the resignation and appointment of a hazardous chemical substance manager within the deadline, as required by the Chemical Substances Control Act. To prevent recurrence, we have developed a manual for reporting the resignation and appointment of hazardous chemical substance managers and conducted training for the responsible Personnel.
8. In 2023, a safety fine of 2,400,000 KRW was imposed for failing to prepare and submit a process safety report at least 30 days prior to the commencement of installation, relocation, or major structural modification of hazardous or dangerous equipment, as required by the Occupational Safety and Health Act. Additionally, in 2023, a safety fine of 2,500,000 KRW was imposed for failing to submit an application for the modification permit for high-pressure gas manufacturing within 30 days of the representative director's change, as required by the High-Pressure Gas Safety Control Act. Subsequently, we have developed a manual for the related tasks and conducted training for the responsible personnel.
9. In 2023, a fine of 8,000,000 KRW was imposed for violating the Securities Market Disclosure Regulations.

Social Performance

Employees[1]

(Unit: Persons)

		2021	2022	2023
Employees				
No. of employees	Korea	955	951	981
	Overseas	9,395	9,544	9,213
	Total	**10,350**	**10,495**	**10,194**
Gender				
Male	Korea	857	853	884
	Overseas	6,728	6,906	6,746
	Total	7,585	7,759	7,630
Female	Korea	98	98	97
	Overseas	2,667	2,638	2,467
	Total	**2,765**	**2,736**	**2,564**
Age				
Under 30	Korea	99	130	158
	Overseas	3,416	3,368	3,013
	Total	**3,515**	**3,498**	**3,171**
30-50	Korea	571	545	602
	Overseas	5,434	5,601	5,630
	Total	**6,005**	**6,146**	**6,232**
51 and above	Korea	285	276	221
	Overseas	545	575	570
	Total	**830**	**851**	**791**
Employment type				
Permanent	Korea	919	845	848
	Overseas	8,843	9,037	9,128
	Total	**9,762**	**9,882**	**9,976**
Temporary	Korea	36	106	133
	Overseas	552	507	85
	Total	**588**	**613**	**218**
Nationality				
Domestic	Korea	955	951	980
	Overseas	9,288	9,439	9,106
	Total	**10,243**	**10,390**	**10,086**
Overseas[2]	Korea	0	0	1
	Overseas	107	105	107
	Total	**107**	**105**	**108**
Employee Category[3]				
Salary	Korea	436	435	458
	Overseas	1,548	1,566	1,541
	Total	**1,984**	**2,001**	**1,999**
Hourly	Korea	483	410	390
	Overseas	7,295	7,471	7,587
	Total	**7,778**	**7,881**	**7,977**
Workers who are not employees[4]				
Male	Korea	306	135	96
	Overseas	100	128	109
	Total	**406**	**263**	**205**
Female	Korea	89	15	4
	Overseas	60	64	51
	Total	**149**	**79**	**55**

New Employee Hires & Turnover

(Unit: Persons)

			2021	2022	2023
New hires[5]					
Gender	Male	Korea	99	206	267
		Overseas	3,077	3,767	1,990
	Female	Korea	18	19	28
		Overseas	1,402	1,533	600
	Subtotal	Korea	117	225	295
		Overseas	4,479	5,300	2,590
Age	Under 30	Korea	54	131	136
		Overseas	2,870	3,089	1,536
	30-50	Korea	56	76	149
		Overseas	1,557	2,081	1,017
	51 and above	Korea	7	18	10
		Overseas	52	130	37
Nationality	Domestic	Korea	117	225	295
		Overseas	4,475	5,298	2,586
	Overseas	Korea	0	0	0
		Overseas	4	2	4
Turnover[6]					
Gender	Male	Korea	165	215	219
		Overseas	3,728	3,819	2,391
	Female	Korea	17	21	30
		Overseas	1,607	1,607	889
	Subtotal	Korea	182	236	249
		Overseas	5,335	5,426	3,280
Age	Under 30	Korea	44	57	47
		Overseas	3,149	2,979	1,788
	30-50	Korea	79	110	98
		Overseas	2,043	2,239	1,393
	51 and above	Korea	59	69	104
		Overseas	130	167	93
Nationality	Domestic	Korea	182	236	249
		Overseas	5,330	5,423	3,278
	Overseas	Korea	0	0	0
		Overseas	5	3	2
Voluntary turnover rate[7]		Korea	8	10	12
		Overseas	40	36	23

Regular Performance Evaluation[8]

(Unit: Persons, %)

		2021	2022	2023
Regular performance evaluation status				
No. of employees subject to performance evaluation[9]	Korea	919	845	848
	Overseas	8,876	9,239	8,725
Performance evaluation rate	Korea	96	89	86
	Overseas	92	87	85
Total employees by gender who received a regular performance and career development review				
Male	Korea	97	89	86
	Overseas	91	93	99
Female	Korea	87	85	90
	Overseas	92	92	98
Total employees by employee category who received a regular performance and career development review				
Non-manager level	Korea	95	86	82
	Overseas	92	93	99
Manager level or higher	Korea	99	98	99
	Overseas	100	100	100
Executive	Korea	100	100	100
	Overseas	100	100	100

1. Due to corrections of errors in the existing aggregated data, the figures for 2021 and 2022 differ from those of the previous year. The employee status is based on December 31 of each year, according to the scope of the report.
2. The No. of employees working in countries other than the country where each respective corporation is located.
3. Based on permanent employees
4. These are the contracted workers among the 'affiliated non-employees' reported in the annual report.
5. The scope of new hires has been expanded from college graduate hires to include all newly hired permanent/temporary employees, experienced new hires, and transferees from affiliated companies. As a result, the figures for 2021 and 2022 differ from those in the previous reports.
6. Due to the expansion of the aggregation target from voluntary turnover among permanent employees to include voluntary and involuntary turnover of permanent employees and temporary employees, as well as transfers to affiliated companies, the figures for 2021 and 2022 differ from those in the previous reports.
7. The ratio of voluntary resignations due to the employee's own decision excludes cases of recommended resignation, retirement due to reaching the retirement age, and transfers to affiliated companies.
8. Due to the correction of data aggregation errors in some overseas subsidiaries, the figures for 2021 and 2022 differ from those in the previous reports.
9. Subject of data collection: Permanent employees and temporary employees.

Social Performance

Employee Compensation

		Unit	2021	2022	2023
Basic salary and total compensation for new hires[1]					
Total compensation for entry-level employees	Korea	KRW Mil.	68	42	44
	Vietnam	VND Thous.	141,021	131,598	126,883
	China	RMB	39,368	40,383	41,687
	Europe	EUR	17,924	19,122	20,211
Rate of entry-level compensation to legal minimum wage [Male]	Korea	%	329	182	180
	Vietnam	%	272	244	239
	China	%	207	218	226
	Europe	%	166	165	152
Rate of entry-level compensation to legal minimum wage [Female]	Korea	%	200	212	194
	Vietnam	%	272	244	239
	China	%	207	218	226
	Europe	%	166	165	152
Average total compensation	Korea	KRW Mil.	77	71	69
	Vietnam	VND Thous.	174,126	157,769	148,314
	China	RMB	5,833	6,445	6,516
	Europe	EUR	18,324	21,234	23,420
Ratio of total compensation of female employees to male employees					
Executive	Korea	%	122	111	110
	Vietnam	%	N/A	N/A	N/A
	China	%	28	28	31
	Europe	%	N/A	N/A	N/A
Manager level or higher	Korea	%	85	83	81
	Vietnam	%	86	133	147
	China	%	95	91	91
	Europe	%	89	71	97
Non-manager level	Korea	%	62	68	81
	Vietnam	%	94	91	98
	China	%	86	88	88
	Europe	%	91	92	98

Maternity Leave and Parental Leave[2]

(Unit: Persons, %)

		2021	2022	2023
Maternity leave				
No. of employees on maternity leave [male]	Korea	29	28	22
	Overseas	361	278	365
Return rate after maternity leave [male]	Korea	100	100	100
	Overseas	97	95	98
No. of employees on maternity leave [female]	Korea	8	5	1
	Overseas	186	196	186
Return rate after maternity leave [female]	Korea	100	100	0
	Overseas	77	72	78
Parental leave for male employees				
No. of employees entitled to parental leave[3]	Korea	149	154	157
	Overseas	-	-	-
No. of employees on parental leave	Korea	9	15	10
	Overseas	132	284	311
No. of employees returning to work after parental leave	Korea	6	7	9
	Overseas	121	269	298
Return rate after parental leave	Korea	92	95	96
	Overseas	98	99	99
Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	Korea	100	100	100
	Overseas	92	95	96
Parental leave for female employees				
No. of employees entitled to parental leave[3]	Korea	11	9	7
	Overseas	-	-	-
No. of employees on parental leave	Korea	9	11	10
	Overseas	213	198	206
No. of employees returning to work after parental leave	Korea	4	5	6
	Overseas	174	187	184
Return rate after parental leave	Korea	80	83	100
	Overseas	82	94	89
Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	Korea	83	100	40
	Overseas	60	83	74

Retirement Pension[2]

		Unit	2021	2022	2023
Retirement pension					
Total operation fund for retirement pensions (DB+DC)	Korea	KRW Mil.	73,314	70,899	66,728
	Vietnam	VND Thous.	6,461,721	7,605,105	7,750,819
	Europe	EUR	4,020	3,761	3,551
Operation fund for DB pension[4]	Korea	KRW Mil.	72,173	69,810	65,610
	Europe	EUR	4,020	3,761	3,551
Operation fund for DC pension[4]	Korea	KRW Mil.	1,141	1,089	1,118
Total No. of members	Korea	Persons	1,070	1,007	929
	Overseas	Persons	6,771	7,485	7,358
No. of DB pension members	Korea	Persons	871	826	765
	Overseas	Persons	5,319	5,748	5,475
No. of DC pension members	Korea	Persons	199	181	164

Labor Union[2]

(Unit: Persons, %)

		2021	2022	2023
Labor union membership status				
No. of employees covered by collective bargaining agreements[5]	Korea	500	490	522
	Overseas	9,359	9,499	9,161
Ratio of employees covered by collective bargaining agreements among total employees[6]	Korea	52	52	53
	Overseas	99	99	99
No. of union workers	Korea	343	251	142
	Overseas	4,200	7,610	7,757
Rate of enrollment to the union	Korea	69	51	27
	Overseas	55	65	70
Minimum notice periods regarding operational changes[7]				
Minimum notice periods	Korea	N/A	N/A	N/A
	Vietnam	1	1	1
	China	30	30	30
	Europe	20	20	20

1. The scope of new hires has been expanded from college graduate hires to include all newly hired permanent/temporary employees, experienced new hires, and transferees from affiliated companies. As a result, the figures for 2021 and 2022 differ from those in the previous reports.
2. Due to corrections of errors in the existing aggregated data, the figures for 2021 and 2022 differ from those in the previous reports.
3. At overseas sites, there is no system in place to record whether employees have children. Therefore, it is not possible to ascertain the number of workers who are eligible for parental leave.
4. In the case of Vietnam and China, the legally mandated social insurance includes retirement benefits, so the company does not operate a separate retirement pension plan.
5. Criteria for employees covered by the collective bargaining agreement: Hourly workers (Permanent, temporary)
6. The percentage of employees covered by the collective bargaining agreement, irrespective of the union membership rate.
7. In cases where there are legal requirements such as advance notice of termination, prior notification is given in accordance with the stipulated timeframe.

Social Performance

Employee Diversity[1]

(Unit: Persons, %)

		2021	2022	2023
Gender diversity in the Board of Directors				
Male	Korea	5	6	6
	Overseas	16	14	17
Female	Korea	-	-	-
	Overseas	8	10	8
Total	**Korea**	**5**	**6**	**6**
	Overseas	**24**	**24**	**25**
Age diversity in the Board of Directors				
Under 31	Korea	0	0	0
	Overseas	0	0	0
30-50	Korea	0	0	0
	Overseas	8	8	8
51 and above	Korea	5	6	6
	Overseas	16	16	17
Female talent by employee category[2]				
Non-manager level	Korea	81	79	75
	Overseas	2,543	2,502	2,329
Manager level or higher[3]	Korea	17	19	22
	Overseas	124	136	138
Female employee ratio	Korea	10.3	10.3	9.9
	Overseas	27	29	29
Employee diversity[2]				
Employees with disability	Korea	25	26	24
	Overseas	38	34	33
Veterans	Korea	25	20	17
	Overseas	8	8	10
Foreigners	Korea	0	0	0
	Overseas	132	162	208
Total	**Korea**	**50**	**46**	**42**
	Overseas	**178**	**204**	**251**
Local managers with the local nationality working on site[4]				
No. of local nationals working on site	Overseas	9,266	9,377	9,005
Total No. of managers (manager level or higher)	Overseas	337	358	342
Local managers with the local nationality working on site	Overseas	239	247	233
Percentage of local managers with the local nationality working on site	Overseas	71	71	69

Violations of the Code of Ethics[5]

		Unit	2021	2022	2023
Code of Ethics pledge					
Pledge rate	Korea	%	100	100	100
	Overseas	%	100	100	100
Code of Ethics violation					
Sexual harassment, bullying, and discrimination	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
Embezzlement, bribery, and other corrupt practices	Korea	Cases	3	1	0
	Overseas	Cases	0	1	3
Information leakage incidents	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
False documentation	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
Others[6]	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
Corrective actions for Code of Ethics violations					
Sexual harassment, bullying, and discrimination	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
Embezzlement, bribery, and other corrupt practices	Korea	Cases	3	1	0
	Overseas	Cases	0	1	3
Information leakage incidents	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
False documentation	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
Others[6]	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0

Information Security

	Unit	2021	2022	2023
Information security				
Employee information protection pledge rate	%	100	100	100
Korea	%	100	100	100
Overseas	%	100	100	100
No. of violations of customer information regulations	**Cases**	**0**	**0**	**0**
Korea	Cases	0	0	0
Overseas	Cases	0	0	0

Local Community[7]

	Unit	2021	2022	2023
Community Engagement				
No. of sites performing local community engagement	Sites	11	11	11
Korea	Sites	3	3	3
Overseas	Sites	8	8	8
No. of programs	**Programs**	**63**	**72**	**82**
Korea	Programs	28	38	39
Overseas	Programs	35	34	43
Investment	**KRW Mil.**	**1,362**	**1,014**	**1,090**
Korea	KRW Mil.	495	790	761
Overseas	KRW Mil.	867	224	328

Report on Whistleblowing[8]

		Unit	Internal	External	2023 (Total)
No. of reports					
Sexual harassment, bullying, and discrimination[9]	Korea	Cases	1	0	1
	Overseas	Cases	0	0	0
Embezzlement, bribery, and other corrupt practices	Korea	Cases	0	0	0
	Overseas	Cases	3	0	3
Information leakage incidents	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
False documentation	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
No. of cases processed					
Sexual harassment, bullying, and discrimination[9]	Korea	Cases	1	0	1
	Overseas	Cases	0	0	0
Embezzlement, bribery, and other corrupt practices	Korea	Cases	0	0	0
	Overseas	Cases	3	0	3
Information leakage incidents	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
False documentation	Korea	Cases	0	0	0
	Overseas	Cases	0	0	0
Processing rate					
Sexual harassment, bullying, and discrimination[9]	Korea	%	100	N/A	100
	Overseas	%	N/A	N/A	N/A
Embezzlement, bribery, and other corrupt practices	Korea	%	N/A	N/A	N/A
	Overseas	%	100	N/A	100
Information leakage incidents	Korea	%	N/A	N/A	N/A
	Overseas	%	N/A	N/A	N/A
False documentation	Korea	%	N/A	N/A	N/A
	Overseas	%	N/A	N/A	N/A

1. 2024 Diversity Goals: 61 people with disabilities, 2,606 female talents
2. Due to revisions in the data collection for some overseas subsidiaries, the figures for 2021 and 2022 differ from those in previous reports.
3. Female managers refer to the number of female employees at the level of Performance Manager (PM) and above, including executives.
4. Managers of local nationality working on site fill positions such as team leader, department head, supervisor, and above. Due to corrections of errors in previously collected data, the figures for 2021 and 2022 differ from those in the previous reports.
5. Number of disciplined employees: individuals subjected to reprimand, reduction in pay, suspension, or dismissal (excluding written warnings).
6. Violations of laws and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, as well as breaches related to product and service information and labeling.
7. HAMC's operation in Korea is prohibited from political donation under the Political Funds Act. Overseas subsidiaries also do not engage in donation activities to political organizations.
8. The number of cases reported through internal and external reporting channels, including the website reporting channel, HR counseling center, and grievance handling office.
9. Following an investigation into reports of "workplace harassment" at domestic business sites the committee determined after review and conclusion that the claims were "unfounded."

Social Performance

Employee Training

	Unit	2021	2022	2023
Employee training				
No. of employees	Persons	10,350	10,495	10,194
Korea	Persons	955	951	981
Vietnam	Persons	5,409	5,423	5,521
China	Persons	2,572	2,764	2,495
Europe	Persons	1,414	1,357	1,197
No. of training participants	Persons	88,690	113,995	151,998
Korea	Persons	9,383	12,194	20,735
Vietnam	Persons	70,125	58,183	74,968
China	Persons	3,411	39,686	41,451
Europe	Persons	5,771	3,932	14,844
Total training hours	Hours	660,894	796,736	1,195,510
Korea	Hours	22,521	35,539	51,780
Vietnam	Hours	214,419	444,027	958,608
China	Hours	129,858	76,041	108,342
Europe	Hours	294,096	241,129	76,780
Average training hours per employee	Hours/person	64	76	117
Korea	Hours/person	24	37	53
Vietnam	Hours/person	40	82	174
China	Hours/person	50	28	43
Korea	Hours/person	208	178	64
Total training expenses				
Korea	KRW Thous.	252,589	650,230	693,409
Vietnam	VND Thous.	1,417,000	4,925,680	4,473,002
China	RMB	373,874	479,110	101,422
Europe	EUR	172,877	162,527	215,000
Average training expenses per employee				
Korea	KRW Thous./person	264	684	707
Vietnam	VND Thous./person	262	908	810
China	RMB/person	145	173	41
Europe	EUR/person	122	120	180

General Training

	Unit	2021	2022	2023
No. of general training participants				
Business philosophy	Persons	2,382	2,070	2,054
Korea	Persons	81	53	434
Overseas	Persons	2,301	2,017	1,620
On-the-job training	Persons	9,602	7,877	5,003
Korea	Persons	914	648	154
Overseas	Persons	8,688	7,229	4,849
No. of professional training participants				
Common job skills	Persons	17,492	2,641	0
Korea	Persons	271	64	0
Overseas	Persons	17,221	2,577	0
Function-specific job skills	Persons	-	543	5,003
Korea	Persons	-	50	154
Overseas	Persons	-	493	4,849
Skill Up	Persons	-	21,059	31,925
Korea	Persons	-	233	422
Overseas	Persons	-	20,826	31,503

Global Training and Training by Employee Category

	Unit	2021	2022	2023
No. of training participants				
Global training	Persons	125	217	266
Korea	Persons	71	161	223
Overseas	Persons	54	56	43
Entry-level new employees training	Persons	7,556	4,802	4,834
Korea	Persons	39	95	68
Overseas	Persons	7,517	4,707	4,766
Leadership training	Persons	964	1,096	1,022
Korea	Persons	539	608	139
Overseas	Persons	425	488	883

Training on Social Topics

	Unit	2021	2022	2023
Sustainability				
ESG awareness training	Persons	974	1,121	1,639
Korea	Persons	933	994	901
Overseas	Persons	41	127	738
Human rights				
Sexual harassment prevention training	Persons	12,141	3,886	4,343
Korea	Persons	1,116	917	1,012
Overseas	Persons	11,025	2,969	3,331
Disability awareness and diversity training	Persons	2,426	4,714	3,723
Korea	Persons	1,081	1,545	2,026
Overseas	Persons	1,345	3,169	1,697
Discrimination and harassment prevention training	Persons	9,891	8,229	14,548
Korea	Persons	1,097	947	851
Overseas	Persons	8,794	7,282	13,697
Ethical management				
Ethics and anti-corruption training	Persons	8,340	13,605	16,523
Korea	Persons	940	937	822
Overseas	Persons	7,400	12,668	15,701
Fair trade training	Persons	2,799	1,045	11,047
Korea	Persons	901	986	814
Overseas	Persons	1,898	59	10,233
Procurement				
Sustainable procurement training	Persons	80	15	525
Korea	Persons	19	9	3
Overseas	Persons	61	6	522
Security[2]				
Information security training	Persons	3,653	11,032	11,170
Korea	Persons	92	967	937
Overseas	Persons	3,561	10,065	10,233
Physical security training	Persons	-	-	467
Korea	Persons	-	-	434
Overseas	Persons	-	-	33
Rate of sites conducting human rights training for security managers[3]	%	-	-	27
Korea	%	-	-	25
Overseas	%	-	-	29

Training on Environmental Topics

	Unit	2021	2022	2023
Environment				
General Topics	Persons	9,367	1,500	9,705
Korea	Persons	916	954	782
Overseas	Persons	8,451	546	8,923
Energy saving & climate change[1]	Persons	N/A	3,388	4,912
Korea	Persons	N/A	56	2
Overseas	Persons	N/A	3,332	4,910
Water[1]	Persons	N/A	2,814	3,904
Korea	Persons	N/A	1	0
Overseas	Persons	N/A	2,813	3,904
Chemical management	Persons	1,464	395	1,232
Korea	Persons	77	314	832
Overseas	Persons	1,387	81	400
Occupational safety & health				
General topics	Persons	15,043	14,850	25,152
Korea	Persons	751	1,118	8,370
Overseas	Persons	14,292	13,732	16,782
Risk evaluation[1]	Persons	N/A	33	1,349
Korea	Persons	N/A	20	844
Overseas	Persons	N/A	13	505
Emergency simulation[1]	Persons	N/A	7,011	4,290
Korea	Persons	N/A	470	664
Overseas	Persons	N/A	6,541	3,626

1. When aggregating the 2021 performance data, these items were included under general training without detailed categorization.
2. When aggregating the 2021 performance data, these items were included under information security training without detailed categorization.
3. This data has been aggregated starting from 2023.

Social Performance

Supply Chain

	Unit	2021	2022	2023 (Performance)
Supply chain				
No. of key suppliers	Suppliers	279	252	160
Korea	Suppliers	65	77	36
Overseas	Suppliers	214	175	124
Purchase amount of key suppliers[1]	KRW Mil.	-	-	35,823,946
Korea	KRW Mil.	-	-	57,453
Overseas	KRW Mil.	-	-	35,766,493
Rate of spending on local suppliers[2]	%	-	-	10
Korea	%	-	-	66
Overseas	%	-	-	10
Supply chain management				
Signing rate of supplier code of conduct	%	94	93	100
Korea	%	100	100	100
Overseas	%	92	90	100
Signing rate of contract with added ESG clauses	%	81	76	100
Korea	%	100	53	100
Overseas	%	73	86	100
Supply chain ESG risk assessment				
Preliminary risk evaluation rate for new suppliers	%	71	85	100
Korea	%	100	100	100
Overseas	%	66	82	100
Risk evaluation rate for key suppliers	%	90	83	96
Korea	%	100	100	100
Overseas	%	89	80	94
Due diligence rate for key suppliers[3]	%	-	100	100
Korea	%	-	N/A	100
Overseas	%	-	100	100
Rate of suppliers that agreed improvement based on the results of ESG risk assessment	%	-	100	100
Korea	%	-	N/A	100
Overseas	%	-	100	100
Rate of suppliers whose contracts were terminated based on the results of ESG risk assessment	%	-	N/A	N/A
Korea	%	-	N/A	N/A
Overseas	%	-	N/A	N/A
Complaints handling process				
No. of complaints received	Cases	0	0	4
Korea	Cases	0	0	0
Overseas	Cases	0	0	4
No. of complaints processed	Cases	0	0	4
Korea	Cases	0	0	0
Overseas	Cases	0	0	4
Processing rate	%	N/A	N/A	100
Korea	%	N/A	N/A	N/A
Overseas	%	N/A	N/A	100

SHE Performance

Safety·Health·Environment·Energy Improvements

		Unit	2021	2022	2023
Investment					
Safety · Health	Korea	KRW Mil.	1,879	1,635	3,632
	Overseas	KRW Mil.	-	1,790	910
	Total	**KRW Mil.**	**1,879**	**3,425**	**4,542**
Environment	Korea	KRW Mil.	897	3,425	1,149
	Overseas	KRW Mil.	-	2,804	1,926
	Total	**KRW Mil.**	**897**	**6,046**	**3,076**
Energy	Korea	KRW Mil.	65	274	1,260
	Overseas	KRW Mil.	-	1,737	6,164
	Total	**KRW Mil.**	**65**	**2,011**	**7,424**

Occupational Accidents & Injuries[4]

		Unit	2021	2022	2023
Employee					
No. of fatalities as a result of work-related injuries	Korea	Persons	0	0	0
	Overseas	Persons	1	0	0
	Total	**Persons**	**1**	**0**	**0**
No. of work-related injuries and ill health[5]	Korea	Persons	3	5	4
	Overseas	Persons	41	45	41
	Total	**Persons**	**44**	**50**	**45**
Rate of work-related injuries and ill health[6]	Korea	%	0.49	0.83	0.66
	Overseas	%	0.43	0.46	0.43
	Total	**%**	**0.43**	**0.48**	**0.44**
Fatality rate per ten thousand employees[7]	Korea	bp	0.00	0.00	0.00
	Overseas	bp	1.08	0.00	0.00
	Total	**bp**	**0.98**	**0.00**	**0.00**
LTIFR[8]	Korea	-	2.30	4.04	3.39
	Overseas	-	1.91	2.03	1.92
	Total	**-**	**1.93**	**2.14**	**2.00**
LTISR[9]	Korea	-	0.18	0.35	0.19
	Overseas	-	0.07	0.06	0.07
	Total	**-**	**0.08**	**0.07**	**0.07**
Supplier					
No. of fatalities as a result of work-related injuries	Korea	Persons	0	0	0
No. of work-related injuries and ill health[5]	Korea	Persons	1	4	0
Rate of work-related injuries and ill health[6]	Korea	%	0.50	2.65	0.00
Fatality rate per ten thousand employees[7]	Korea	bp	0.00	0.00	0.00

Occupational Health & Safety Management System

		Unit	2021	2022	2023
Total No. of employees	Korea	Persons	955	951	981
	Overseas	Persons	9,395	9,544	9,213
	Total	**Persons**	**10,350**	**10,495**	**10,194**
No. of workers who are not employees	Korea	Persons	395	150	100
	Overseas	Persons	160	192	160
	Total	**Persons**	**555**	**342**	**260**
No. of workers working at business sites where the company's health & safety management system are operational	Korea	Persons	1,350	1,101	1,081
		%	100	100	100
	Overseas	Persons	9,555	9,736	9,373
		%	100	100	100
No. of workers working within the systems that undergo regular/ irregular audits (or monitoring) of the company's health & safety management system	Korea	Persons	1,350	1,101	1,081
		%	100	100	100
	Overseas	Persons	9,555	9,736	9,373
		%	100	100	100
No. of workers working at business sites subject to customer audits or audits for external certification	Korea	Persons	955	951	981
		%	70	68	67
	Overseas	Persons	7,565	7,494	7,338
		%	79	77	78

Employee Health Check-up[4]

		Unit	2021	2022	2023
Employees eligible for health check-ups	Korea	Persons	697	725	738
	Overseas	Persons	7,643	8,430	7,476
	Total	**Persons**	**8,340**	**9,155**	**8,214**
Employees who received health check-up	Korea	Persons	697	725	738
	Overseas	Persons	7,225	7,998	6,990
	Total	**Persons**	**7,922**	**8,723**	**7,728**
Employee health check-up participation rate	Korea	%	100	100	100
	Overseas	%	95	95	93
	Total	**%**	**95**	**95**	**94**

1. Due to changes in the criteria for key suppliers, the performance data for 2021 and 2022 has not been reported.
2. It refers to the proportion of local procurement amount purchased in the countries where the business sites are located.
3. In 2023, the No. of companies subject to due diligence was 39, including 7 domestic and 32 overseas companies.
4. Due to data error corrections, the figures for 2021 and 2022 differ from those in the previous reports.
5. No. of work-related injuries and ill health = total No. of accident injuries and occupational illness cases
6. Total No. of individuals affected by work related injuries and ill health ÷ Total No. of workers x 100
7. Fatality rate per ten thousand employees = No. of fatalities as a result of work-related injuries ÷ No. of workers x 10,000
8. LTIFR (Lost Time Injury Frequency Rate) = No. of work-related injuries and ill health ÷ Total work hours x 1,000,000
9. LTISR (Lost Time Injury Severity Rate) = Lost workdays due to work-related injuries and ill health ÷ Total work hours x 1,000

SHE Performance

GHG Emissions (Scope 1, 2)[1~5]

		Unit	2021	2022	2023
GHG emissions by type					
CO_2eq	Korea	$TonnesCO_2e$	202,518	178,548	168,278
	Overseas	$TonnesCO_2e$	1,146,322	1,065,534	961,625
	Total	**$TonnesCO_2e$**	**1,348,840**	**1,244,082**	**1,129,903**
CO_2	Korea	$TonnesCO_2e$	201,543	177,725	167,623
	Overseas	$TonnesCO_2e$	1,138,986	1,059,394	955,985
	Total	**$TonnesCO_2e$**	**1,340,529**	**1,237,119**	**1,123,608**
CH_4	Korea	$TonnesCO_2e$	54	45	48
	Overseas	$TonnesCO_2e$	3,812	3,008	2,851
	Total	**$TonnesCO_2e$**	**3,866**	**3,053**	**2,899**
N_2O	Korea	$TonnesCO_2e$	921	778	608
	Overseas	$TonnesCO_2e$	3,523	3,132	2,789
	Total	**$TonnesCO_2e$**	**4,444**	**3,910**	**3,396**
GHG emissions by activity					
Direct (Scope1) + Indirect (Scope2)	Korea	$TonnesCO_2e$	202,518	178,548	168,278
	Overseas	$TonnesCO_2e$	1,146,322	1,065,534	961,625
	Total	**$TonnesCO_2e$**	**1,348,840**	**1,244,082**	**1,129,903**
Direct (Scope1)	Stationary combustion	$TonnesCO_2e$	34,713	39,848	62,413
		$TonnesCO_2e$	99,540	103,564	102,761
	Mobile combustion	$TonnesCO_2e$	132	129	94
		$TonnesCO_2e$	3,455	2,596	1,511
	Waste gas/ wastewater treatment	$TonnesCO_2e$	9,597	4,220	4,255
		$TonnesCO_2e$	3,265	2,594	2,473
	Total	$TonnesCO_2e$	44,442	44,196	66,763
		$TonnesCO_2e$	106,260	108,755	106,745
		$TonnesCO_2e$	**150,702**	**152,951**	**173,508**
Indirect (Scope2)	Electricity	$TonnesCO_2e$	155,560	130,297	98,708
		$TonnesCO_2e$	989,773	917,912	820,797
	Steam	$TonnesCO_2e$	2,516	4,054	2,808
		$TonnesCO_2e$	50,288	38,868	34,083
	Total	$TonnesCO_2e$	158,076	134,352	101,515
		$TonnesCO_2e$	1,040,062	956,779	854,880
		$TonnesCO_2e$	**1,198,138**	**1,091,131**	**956,395**
GHG emissions intensity[6]					
Direct (Scope1)	Korea	$TonnesCO_2e$/ KRW 100 Mil.	4.61	5.15	10.08
	Overseas	$TonnesCO_2e$/ KRW 100 Mil.	3.28	3.05	3.69
	Total	**$TonnesCO_2e$/ KRW 100 Mil.**	**3.59**	**3.46**	**4.88**
Indirect (Scope2)	Korea	$TonnesCO_2e$/ KRW 100 Mil.	16.41	15.66	15.33
	Overseas	$TonnesCO_2e$/ KRW 100 Mil.	32.14	26.82	29.56
	Total	**$TonnesCO_2e$/ KRW 100 Mil.**	**28.53**	**24.65**	**26.91**

Energy[1, 2, 5]

			Unit	2021	2022	2023
Energy Consumption						
Total consumption[7]		Korea	TJ	4,216	3,999	3,763
		Overseas	TJ	8,289	7,922	7,630
		Total	**TJ**	**12,504**	**11,921**	**11,393**
Energy intensity[6]		Korea	TJ/KRW 100 Mil.	0.44	0.47	0.57
		Overseas	TJ/KRW 100 Mil.	0.26	0.22	0.26
		Total	**TJ/KRW 100 Mil.**	**0.30**	**0.27**	**0.32**
Direct energy	LNG (Stationary)	Korea	TJ	483.24	698.80	1,230.65
		Overseas	TJ	1,822.51	1,839.65	1,664.80
	LPG (Stationary)	Korea	TJ	176.18	76.38	0.74
		Overseas	TJ	117.07	171.76	313.39
	Diesel (Stationary)	Korea	TJ	0	0	0
		Overseas	TJ	0.02	0.02	0.01
	Kerosene (Stationary)	Korea	TJ	0.01	0.01	0.01
		Overseas	TJ	0	0	0
	LPG (Mobile)	Korea	TJ	0.13	0.16	0.11
		Overseas	TJ	29.68	30.39	17.05
	Diesel (Mobile)	Korea	TJ	0.85	0.99	0.61
		Overseas	TJ	24.17	10.49	6.36
	Gasoline (Mobile)	Korea	TJ	0.95	0.74	0.68
		Overseas	TJ	1.37	1.33	0.94
Indirect energy	Electricity	Korea	TJ	3,250.64	2,722.74	2,062.63
		Overseas	TJ	5,474.66	5,216.25	5,024.27
	Steam	Korea	TJ	303.62	499.32	467.92
		Overseas	TJ	727.26	549.13	467.05
Renewable energy	Self-generated solar power	Korea[8]	TJ	0.06	0.05	0.04
		Overseas	TJ	23.64	37.16	70.80
	Self-generated hydropower	Overseas	TJ	1.56	1.69	0
	Wind power purchase	Overseas	TJ	66.88	64.25	65.04

2023 Expected Amount of Energy Savings and GHG Reduction[9, 10]

Site	Project	Energy type	Expected energy savings (TJ/year)	Expected GHG reduction (tCO_2eq/year)
Qingdao	Installation of self-generated solar power	Electricity (Scope 2)	26.3	4,168.5
	Improvement of heat recovery and ventilation expansion in heat treatment and plating processes	Natural Gas (Scope 1)	17.1	947.0
	Converting to a compressed air sealed dryer	Steam (Scope 2)	4.0	436.6
Vietnam	Installation of VSD (Variable Speed Drive) compressors	Electricity (Scope 2)	3.6	558.6
	Replacement with a high-efficiency screw compressors	Electricity (Scope 2)	1.9	296.9
Ulsan	Integrated operation of the cooling tower and cooling water pump	Electricity (Scope 2)	8.9	426.6
Quang Nam	Improved operational efficiency of the process cooling water pump	Electricity (Scope 2)	3.5	555.1
Jeonju	Minimization of steam leaks through effective steam trap management	LNG (Scope 1)	1.6	87.2

Ozone Depleting Substances (ODS)[11, 12]

		Unit	2021	2022	2023
Consumption					
Total amount of ODS consumption	Korea	Tonnes	0.40	0.36	1.31
	Overseas	Tonnes	0.80	0.80	0.75
	Total	**Tonnes**	**1.20**	**1.16**	**2.06**
CFC(Chloro Fluoro Carbon; R11)	Korea	Tonnes	0.40	0.05	0.00
	Overseas	Tonnes	0.00	0.00	0.00
HFC (Hydro Fluoro Carbon; R134a, R410A)	Korea[13]	Tonnes	0.00	0.31	1.31
	Overseas	Tonnes	0.74	0.74	0.74
Etc.(R407C)	Korea	Tonnes	0.00	0.00	0.00
	Overseas	Tonnes	0.06	0.06	0.01

Chemicals[11, 14]

		Unit	2021	2022	2023
Consumption					
Hazardous chemicals	Korea	Tonnes	21,056	33,032	39,439
	Overseas	Tonnes	72,570	62,917	71,359
	Total	**Tonnes**	**93,626**	**95,949**	**110,798**
Consumption intensity					
Hazardous chemicals	Korea	Tonnes/KRW Mil.	0.022	0.038	0.060
	Overseas	Tonnes/KRW Mil.	0.023	0.018	0.025
	Total	**Tonnes/KRW Mil.**	**0.023**	**0.022**	**0.031**
Emission					
Hazardous chemicals	Korea	Tonnes	25	18	29
	Overseas	Tonnes	0	0	0
	Total	**Tonnes**	**25**	**18**	**29**
배출 집약도[6]					
Emission intensity	Korea	Tonnes/KRW 100 Mil.	0.003	0.002	0.004
	Overseas	Tonnes/KRW 100 Mil.	0.000	0.000	0.000
	Total	**Tonnes/KRW 100 Mil.**	**0.001**	**0.000**	**0.001**

1. The scope of reporting for greenhouse gas emissions and energy consumption differs from that of this report
   - Korea: Jeonju, Daejeon, Ulsan, Headquarters, and other buildings owned by Hyosung Advanced Materials.
   - Overseas: Vietnam, Quang Nam, Jiaxing, Qingdao, Changshu, Luxembourg, Romania, Ensenada, Germany, South Africa (Jiaxing and Qingdao are excluded from third-party verification due to reporting to Chinese local authorities; Germany and South Africa are excluded from the 2023 reporting scope due to GHG emissions being less than 0.5% in 2023).
2. The Scope 1 and 2 emissions and energy consumption for 2021 and 2022 differ from the 2022 Sustainability Report due to changes in the reporting scope as outlined in footnote 1. This affects the overseas emissions and energy consumption data.
3. Emissions are the sum of emissions from each emission facility.
4. GHG emissions per business site are reported as integers, which may result in differences of less than ±1 ton CO_2e during the summation process due to significant figure rounding.
5. The types of GHG emissions for HAMC are CO_2, CH4, and N_2O. GHG emissions in Korea are calculated using the conversion and emission factors and Global Warming Potential (GWP) specified in the guidelines of the Korean Emissions Trading Scheme. For overseas emissions, the IPCC 2006 conversion and emission factors and GWP are applied.
6. Sales are based on the individual financial statements of each company, rather than on a consolidated basis.
7. Total energy consumption = Direct energy consumption + Indirect energy consumption + Renewable energy consumption
8. As the conversion factors based on the country's specific calorific values for each fuel type in Korea have been applied, the reported figures differ from those in the 2022 Sustainability Report.
9. Not all activities can be disclosed, but these are the key activities that can be shared within the permissible scope.
10. Expected amount of energy savings and greenhouse gas reduction is estimated considering factors such as equipment capacity and efficiency, and operating hours before and after the project.
11. The individual totals for Korea and overseas, and the overall totals in the table, may differ due to rounding differences at the decimal level.
12. Consumption is assumed to be equal to the purchase quantity.
13. The 2021 and 2022 figures for Jeonju differ from the previous report due to a change in the data source to the refrigerant management log.
14. Hazardous chemicals, including those that are prohibited, accident-prone, carcinogenic/mutagenic, restricted, toxic, and substances under intensive management.

SHE Performance

Waste[1]

			Unit	2021	2022	2023
Waste generated						
Total waste generated		Korea	Tonnes	6,238	6,421	6,565
		Overseas	Tonnes	56,329	60,649	56,936
		Total[5]	**Tonnes**	**62,568**	**67,070**	**63,501**
Nonhazardous waste[2] (Ordinary waste)		Korea	Tonnes	5,195	5,177	4,607
		Overseas	Tonnes	29,523	31,418	27,192
Hazardous waste[2] (Designated waste)		Korea	Tonnes	1,043	1,244	1,958
		Overseas	Tonnes	26,807	29,231	29,743
Waste generation intensity[3]		Korea	Tonnes/ KRW 100 Mil.	0.65	0.75	0.99
		Overseas	Tonnes/ KRW 100 Mil.	1.79	1.73	1.99
		Total	**Tonnes/ KRW 100 Mil.**	**1.52**	**1.54**	**1.80**
Waste disposal						
Total waste disposal		Korea	Tonnes	6,238	6,421	6,565
		Overseas	Tonnes	56,329	60,649	56,936
		Total	**Tonnes**	**62,568**	**67,070**	**63,501**
Total waste recycled		Korea	Tonnes	4,536	4,880	5,311
		Overseas	Tonnes	39,308	43,685	39,788
		Total	Tonnes	**43,843**	**48,565**	**45,100**
Waste recycling rate[4]		Korea	%	73	76	81
		Overseas	%	70	72	70
		Total	**%**	**70**	**72**	**71**
Waste recycling intensity[3]		Korea	Tonnes/ KRW 100 Mil.	0.47	0.57	0.80
		Overseas	Tonnes/ KRW 100 Mil.	1.25	1.25	1.39
		Total	**Tonnes/ KRW 100 Mil.**	**1.07**	**1.11**	**1.28**
Nonhazardous Waste (Ordinary waste	**Subtotal**		**Korea**	**Tonnes**	**5,195**	**5,177**	**4,607**
			Overseas	**Tonnes**	**29,523**	**31,418**	**27,192**
	Out sourced treatment	Landfill	Korea	Tonnes	735	502	446
			Overseas	Tonnes	1,305	1,906	523
		Incineration	Korea	Tonnes	902	884	662
			Overseas	Tonnes	2,149	1,503	2,532
		Others	Korea	Tonnes	0	0	0
			Overseas	Tonnes	980	1,800	1,900
		Recycling	Korea[4]	Tonnes	3,558	3,791	3,498
			Overseas	Tonnes	25,088	26,209	22,237
	Self-treatment	Landfill	Korea	Tonnes	0	0	0
			Overseas	Tonnes	0	0	0
		Others	Korea	Tonnes	0	0	0
			Overseas	Tonnes	0	0	0
Hazardous waste (Designated waste)	**Subtotal**		**Korea**	**Tonnes**	**1,043**	**1,244**	**1,958**
			Overseas	**Tonnes**	**26,807**	**29,231**	**29,743**
	Out sourced treatment	Landfill	Korea	Tonnes	0	0	0
			Overseas	Tonnes	3,533	2,752	3,232
		Incineration	Korea	Tonnes	65	154	145
			Overseas	Tonnes	8,782	8,679	8,777
		Others	Korea	Tonnes	0	0	0
			Overseas	Tonnes	272	324	184
		Recycling	Korea	Tonnes	978	1,089	1,813
			Overseas	Tonnes	13,609	17,363	17,551
	Self-treatment	Recycling	Korea	Tonnes	0	0	0
			Overseas	Tonnes	611	113	0

Water Pollutant[5, 6]

		Unit	2021	2022	2023
Water pollutant emission					
BOD (Biochemical Oxygen Demand)	Korea	Tonnes	0.07	0.55	3.76
	Overseas	Tonnes	80.00	75.95	79.37
	Total	**Tonnes**	**80.06**	**76.50**	**83.13**
COD (Chemical Oxygen Demand)	Korea	Tonnes	0.98	3.35	0.00
	Overseas	Tonnes	298.46	271.90	301.57
	Total	**Tonnes**	**299.43**	**275.25**	**301.57**
TOC (Total Organic Carbon)	Korea	Tonnes	0.00	8.08	33.90
	Overseas	Tonnes	0.85	1.08	1.02
	Total	**Tonnes**	**0.85**	**9.16**	**34.92**
SS (Suspended Solid)	Korea	Tonnes	1.48	3.52	1.00
	Overseas	Tonnes	31.86	32.77	46.24
	Total	**Tonnes**	**33.35**	**36.29**	**47.24**
T-N (Total Nitrogen)	Korea	Tonnes	4.87	22.98	2.00
	Overseas	Tonnes	43.14	30.99	39.92
	Total	**Tonnes**	**48.01**	**53.98**	**41.92**
T-P (Total Phosphorous)	Korea	Tonnes	0.09	0.03	0.00
	Overseas	Tonnes	2.17	2.97	1.01
	Total	**Tonnes**	**2.26**	**2.99**	**1.01**

Air Pollutant[5]

		Unit	2021	2022	2023
Air pollutant emission					
NOx (Nitrogen Oxides)	Korea	Tonnes	99.55	170.03	199.52
	Overseas	Tonnes	18.47	18.12	11.50
	Total[5]	**Tonnes**	**118.02**	**188.15**	**211.02**
SOx (Sulfur Oxides)	Korea	Tonnes	0.53	6.59	7.09
	Overseas	Tonnes	5.05	4.35	5.45
	Total	**Tonnes**	**5.58**	**10.94**	**12.54**
PM (Particulate Matter)	Korea	Tonnes	11.23	8.66	5.13
	Overseas[7]	Tonnes	102.10	105.69	72.65
	Total	**Tonnes**	**113.33**	**114.35**	**77.78**
Air pollutant emission intensity[3]					
NOx (Nitrogen Oxides)	Korea	Tonnes/KRW 100 Mil.	0.010	0.020	0.030
	Overseas	Tonnes/KRW 100 Mil.	0.001	0.001	0.000
	Total	**Tonnes/KRW 100 Mil.**	**0.003**	**0.004**	**0.006**
SOx (Sulfur Oxides)	Korea	Tonnes/KRW 100 Mil.	0.000	0.001	0.001
	Overseas	Tonnes/KRW 100 Mil.	0.000	0.000	0.000
	Total	**Tonnes/KRW 100 Mil.**	**0.000**	**0.000**	**0.000**
PM (Particulate Matter)	Korea	Tonnes/KRW 100 Mil.	0.001	0.001	0.001
	Overseas	Tonnes/KRW 100 Mil.	0.003	0.003	0.003
	Total	**Tonnes/KRW 100 Mil.**	**0.003**	**0.003**	**0.002**

Water[8]

		Unit	2021	2022	2023
Water withdrawal					
Total water withdrawal	Korea	1,000 Tonnes	4,083	3,884	3,316
	Overseas	1,000 Tonnes	4,593	4,303	4,191
	Total	**1,000 Tonnes**	**8,676**	**8,186**	**7,507**
Municipal water	Korea	1,000 Tonnes	18	24	31
	Overseas[5]	1,000 Tonnes	12	16	14
Industrial water	Korea	1,000 Tonnes	4,065	3,859	3,285
	Overseas[5]	1,000 Tonnes	4,581	4,287	4,177
Water withdrawal intensity[3]	Korea	1,000 Tonnes/KRW 100 Mil.	0.424	0.453	0.501
	Overseas	1,000 Tonnes/KRW 100 Mil.	0.146	0.123	0.146
	Total	**1,000 Tonnes/KRW 100 Mil.**	**0.211**	**0.188**	**0.213**
Wastewater discharge[9]					
Total wastewater discharge	Korea	1,000 Tonnes	1,178	1,370	1,802
	Overseas	1,000 Tonnes	2,095	2,137	2,135
	Total	**1,000 Tonnes**	**3,274**	**3,507**	**3,938**
Wastewater discharge intensity[3]	Korea	1,000 Tonnes/KRW 100 Mil.	0.122	0.160	0.272
	Overseas	1,000 Tonnes/KRW 100 Mil.	0.067	0.061	0.075
	Total	**1,000 Tonnes/KRW 100 Mil.**	**0.080**	**0.080**	**0.112**
Direct discharge to river after self-treatment	Korea	1,000 Tonnes	337	550	835
	Overseas	1,000 Tonnes	1,888	1,933	1,924
Treatment/discharge by the 3rd party	Korea	1,000 Tonnes	842	821	968
	Overseas	1,000 Tonnes	207	204	211
Water consumption[10]					
Total water consumption	Korea	1,000 Tonnes	2,905	2,513	1,514
	Overseas	1,000 Tonnes	2,498	2,166	2,056
	Total	**1,000 Tonnes**	**5,403**	**4,679**	**3,570**
Water consumption intensity[3]	Korea	1,000 Tonnes/KRW 100 Mil.	0.302	0.293	0.229
	Overseas	1,000 Tonnes/KRW 100 Mil.	0.079	0.062	0.072
	Total	**1,000 Tonnes/KRW 100 Mil.**	**0.131**	**0.107**	**0.101**
Reused water					
Total reused water	Korea	1,000 Tonnes	550.70	338.35	0.00
	Overseas	1,000 Tonnes	245.30	179.23	245.69
	Total	**1,000 Tonnes**	**796.00**	**517.58**	**245.69**
Water reuse rate[11]	Korea	%	13.49	8.71	0.00
	Overseas	%	5.34	4.17	5.86
	Total	**%**	**0.09**	**0.06**	**0.03**
Water reuse intensity[3]	Korea	1,000 Tonnes/KRW 100 Mil.	0.057	0.039	0.000
	Overseas	1,000 Tonnes/KRW 100 Mil.	0.008	0.005	0.009
	Total	**1,000 Tonnes/KRW 100 Mil.**	**0.019**	**0.012**	**0.007**

1. The waste generation data for Luxembourg and Changshu has been corrected for 2021 and 2022 due to identified data aggregation errors.
2. Waste is classified as hazardous or non-hazardous according to the regulations of the country where each business site is located.
3. Sales are based on the individual financial statements of each company, rather than on a consolidated basis.
4. Waste recycling rate = (Total waste recycled ÷ Total waste disposal) × 100
5. The individual totals for Korea and overseas, and the overall totals in the table, may differ due to rounding differences at the decimal level.
6. Ulsan is excluded from the reporting scope as it falls under outsourced treatment according to the environmental information disclosure standards.
7. Starting from the 2023 report, PM (Particulate Matter) data for Jiaxing has been newly collected, leading to revisions in the reporting scope and figures for 2021-2022.
8. Due to error corrections in the Quang Nam water withdrawal, figures for 2021 and 2022 differ from those in previous reports.
9. Data correction for Jeonju, Vietnam, Cheongdo, and Luxembourg shows discrepancies in overseas figures for 2021 and 2022 compared to previous sustainability reports.
10. Water consumption = Water withdrawal – Water discharge
11. Water reuse rate = (Total reused water ÷ Total water withdrawal) x 100

Hyosung Chemical

The Next Chemistry

Company Overview

Hyosung Chemical Overview

Navigate to global business sites

Company name	Hyosung Chemical Corporation
Date of establishment	June 4, 2018
CEO	Kun-Jong Lee
Headquarters location	235, Banpo-daero, Seocho-gu, Seoul, Republic of Korea (Banpo-dong)
Domestic business sites	Seoul, Ulsan, Gumi, Cheongju
Overseas business sites	Vietnam, China

Business division	Petrochemicals : PP/DH PU, TPA PU, POK Biz. Division Basic chemicals: Neochem PU Film: Film PU (Nylon, PET), Optical Film PU Other: M-Project TFT
Brand	HYOSUNG Polypropylene, HYOSUNG TPA, HYOSUNG Poketone, HYOSUNG Neochem, HYOSUNG Film, HYOSUNG Optical Film, HYOSUNG Membrane
Manufacturing products	PP, TPA, Polyketone, NF_3, 20% F_2/N_2, Nylon Film, PET Film, TAC Film, Membrane
Major export countries	China, Japan, Europe, USA, Türkiye, etc.
Major businesses	Petrochemicals, industrial gas, and film

Number of employees*
1,707 People

Sales
KRW 2.7916 trillion

Operating profit
KRW (188.8) billion

* On the consolidated basis, as of December 31, 2023

Major Business Areas

Navigate to detailed business introductions

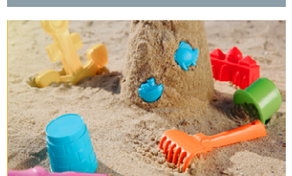

PP/DH


TPA

Neochem


Film


Optical Film


POK


Membrane

2023 Sustainability Management Highlights

2023 Major Sustainability Management Performance

Efforts to Accomplish Green Management Vision 2030
-54 cumulative cases through the Carbon Emission Reduction TFT
-Identified reduction measures for approximately 16,000 tons

Advancement of the Safety and Health Management System
-Established mid- to long-term roadmap for safety and health
- Established safety and health system for partner companies

Improving Employee Awareness of the Importance of ESG Management
- Enhanced the internal ESG education
- Published monthly in-house ESG newsletters

Diversification of Biodiversity Conservation Activities
- Protected winter migratory birds in the Hwapocheon wetland
- Participated in the marine seagrass forest management project in Geoje

Continuation of Community Contribution
-Recognized as the company conducting community contribution for 5 consecutive years
- Selected as an outstanding organization for cultural and arts sponsorship

Strengthening Transparent Management
-Disclosed the BSM (Board Skill Matrix)

Awarded CDP Carbon Management Sector Honors
- Received an A- grade in the Climate Change area

Achieved Silver Rating from Ecovadis assessment
- Ranked in the top 20% overall

Practicing Anti-corruption and Ethical Management
- Participated in the B.E.S.T Forum CEO Pledging Ceremony for 5 consecutive years

2023 Global ESG Assessment

한국ESG기준원
A
KCGS ESG Rating

CDP
A-
CDP Climate Change Score

ecovadis
SILVER 2023 ecovadis Sustainability Rating
EcoVadis Rating

2023 Major Awards and Certifications

Family-friendly Certification

Company Recognized for Community Contribution

Certificate of Recognition for Endangered Species Sponsorship

Materiality Assessment

Hyosung Chemical is a company that produces chemical products, including PP, film, NF3, and Polyketone, and we have a substantial impact on the environment, society, and the economy. We selected material topics by considering the impact of Hyosung Chemical's activities on the environment, society, and the economy, and by identifying and assessing sustainability issues that provide opportunities and risks upon the financial performance of Hyosung Chemical. We incorporated stakeholder opinions in the process.

Materiality Assessment Process

Hyosung Chemical implemented a 7-step process for the selection of material sustainability topics. We came up with an issue pool reflecting the global sustainability topics, domestic and overseas guidelines, and material topics from the previous year. Stakeholders involved in the material topic selection process included team leaders, 91 VOC of client companies and partner companies, and 5 social contribution organizations. We analyzed an additional 263 business report keywords for the financial impact identification. The selected material topics were reviewed and approved by the ESG Management Promotion Committee and the Board of Directors.

Step	Step1	Step2	Step3	Step4	Step5	Step6	Step7
Task	Organize Sustainability Issue Pool	Take stakeholder interests into account	Assess the relevance to business performance	Determine priorities through comprehensive analysis	Report to the executives and reflect their feedback	The Board makes decisions	Reflect on sustainability management strategies/goals and disclose them in the report
Detail	Reflection of global sustainability issues, global guidelines, industry-specific issues, and Hyosung Chemical's material issues in 2022 **Selected Issue Pool by Area** **E** Response to climate change, Pollutant management, Chemical management, Environmental conservation around the business sites, Eco-friendly business, Resource consumption reduction and establishment of a circular economy system, and Water resource management (total of 7 issues) **S** Talent recruitment, management, and development, Business site safety and health, Sustainable supply chain establishment, Fair-trade and mutual growth, Increase of community engagement, Strengthening of human rights management, and Product safety and customer satisfaction (Total of 7 issues) **G** ESG management leadership establishment, Securing the Board independence, expertise, and diversity, Implementation of ethics and legal compliance, Comprehensive risk management, Information security and privacy reinforcement, Securing new growth engine and business diversification, Development and production of sustainable technologies and products, and Communication with a variety of stakeholders (Total of 8 issues)	<Internal> ① Survey provided to 86 team leaders ② PU Business report keywords analysis <External> ① Media press coverage ② ESG disclosure requirements of the ESG rating agencies ③ Identifying customers and partner company VOC ④ Survey of local partner organizations	FGI 1st and 2nd round (Focus Group Interview) • Targeting major team leaders in the Sales support and management department and Production department • Identification of relevance and materiality of each issue to the business performance	FGI 3rd round • Targeting team leaders of business planning, ESG management, and PU planning team • Comprehensive analysis by issue - materiality of issues researched in the steps 1, 2, and 3. - 2023 Performance of major issues by area - 2024 strategic plans for major issues by area	Reporting steps 1, 2, 3, and 4 to executives • Reflection of executives' feedback and preparation of the reporting document to the Board	Reporting steps 1, 2, 3, 4, and 5 to the Board and determining material topics • Reflection of directors' feedback • Determination of material topics and their titles **Material topic selection results by area** **E** • Expansion of sustainable businesses • Management of chemicals and pollutants **S** • Product safety and quality management • Business site safety and health **G** • Risk management • Sustainability management leadership enhancement	Reflection and disclosure of material topics to the business • Reflection of the topics to 2024 sustainability strategies, goals, and businesses • Disclosure of material topic management status through the sustainability report

Material Sustainability Topics

Material Topic Performances and Plans

Area	Material topic	Topic materiality	2023 performances	2024 plans	GRI No.
Environmental	Sustainable business expansion	• Expanding the supply of products incorporating recycled and bio-based materials to reduce adverse environmental impact and secure new growth engines • Strengthening of the global environmental regulations and demands of client companies for low-carbon products, products with reduced pollutants, and energy efficiency promotion	• Initiated the PCR-PP project by signing an MOU with the Korea Marine Environment Management corporation and the Tugbusiness Corporation for the utilization of waste ropes • Developed and commercialized an energy-saving water treatment system	• Production of PCR-PP pellet for the disposable pallets for annual exports of 3,000 tons • Expansion of the energy-saving water treatment system business	GRI 301
Environmental	Management of chemicals and pollutants	• Due to the petrochemical industry characteristics, management of pollutants that pose serious effects on the environment, safety, and health is critical. • As environmental accidents are highly likely to cause significant financial crises for the company, we prevent accidents by managing them beyond the standards of the environmental regulation.	• Substituted the toxic substance toluene with the non-toxic substance naphtha for cleansing PP/DH facilities. • Implemented periodic maintenance and repair work of plants to maintain pollutant emissions prevention facility	• Establishment and reinforcement of stormwater final discharge outlet detection system • Establishment of an automatic deodorant sprinklers in the wastewater treatment plant	GRI 303 GRI 305 GRI 306
Social	Product safety and quality management	• Due to the characteristics of plastic that is heavily exposed to consumers, a thorough quality management of hazardous substance should be performed • Enhancement of international prohibition of hazardous substance within plastic financially affects plastic manufacturing companies	• Acquired Low VOC (Volatile Organic Compound) certification for TAC film • Managed TPA process impact factors and enhanced PET film thermal resistance through a smart factory system, achieving an anticipated annual benefit of KRW.1.601 billion	• Expansion of product safety certification and quality management enhancement • Achieving cost savings of KRW 3.985 billion by establishing control system for major processing and quality factors through smart factory	GRI 416 GRI 417
Social	Workplace health and safety	• Chemical industry sites can damage the surrounding communities in the event of accidents • Financial loss such as operational shut down could occur in the event of accidents due to enhancement of safety and health management regulations	• Held monthly EHS Committee meetings involving the CEO to plan safety and health and manage performance • Reflected safety and health KPIs in the human resources system • Established the mid- to long-term roadmap for safety and health management	• Conducting safety survey and deriving action plans for domestic and overseas business sites • Reinforcement of safety and health through consultation of external expert institution. • Enhancement of partner company safety management system	GRI 403
Governance	Risk management	• Exposure to various sustainability risks occur and risk management demands from stakeholders such as rating agencies and investors increase • Appointment of risk manager for each business area and facilitation of systematic management framework by risk, as well as the enhancement of the executive and Board responsibilities have become critical	• Held quarterly Carbon Emission Reduction TFT, generating 54 action plans to reduce approximately 16,000 tons of carbon • Safety risk identification and improvement at the EHS Committee	• Discovery of plans for carbon emission reduction • Enhancement of action plans for safety and health risks	GRI 2-12,13
Governance	Reinforcement of sustainability management leadership	• For sustainable growth of a company, enhancement of the organization capabilities for decision-making of the Board, ESG Management Promotion Committee and the top management as well as internalization of sustainability management are critical	• Held quarterly ESG Management Promotion Committee meetings to share ESG management performance and planning, and reported 10 ESG agendas • Reported 9 ESG management agendas to the Board and conducted ESG education for outside directors • Conducted employee sustainability education and published ESG newsletters	• Diversification of ESG education for outside directors • Enhancement of the in-house ESG newsletter	GRI 2-9,12,13, 14, 16, 17

Sustainable Business Expansion

Why So Important?

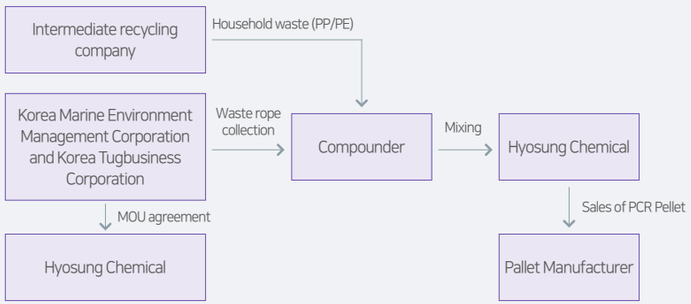
Hyosung Chemical acknowledges that its primary petrochemical products can have substantial effects on the environment and climate. As a result, it is crucial to develop low-carbon products and products containing a greater proportion of bio-based raw materials, as well as develop and commercialize recycled plastic materials. This not only promotes the company's sustainable growth but also minimizes adverse environmental consequences.

Our Approach

Hyosung Chemical is expanding low-carbon products and businesses. We carry out active investment in sustainable products and technology R&D, with sustainable business promoting governance at the center, and expand the manufacturing of products with higher sustainability, such as polyketone and TAC film. We also plan to focus on the PRC-PP business that recycles waste plastic.

Our Achievement

- Development and commercialization of **energy-saving water treatment systems**
- Initiation of the **PCR-PP business** by signing an MOU with the Korea Marine Environment Management Corporation and the Tugboat Cooperative for the utilization of marine waste ropes



Sustainable Business Governance

Decision-making Body	Board	Sustainable product development and business management
	CEO	Decision-making on the sustainable product development, sales performance and plan management
	R&D Committee	Semi-annual meetings of the product and technology R&D committee engaging the CEO and major executives
	Meetings supervised by the PU head officer	Proposal and commercialization of sustainable products and technologies
Working-level organization	Working-level department	Customer demand research, sales, and quality control
	R&D labs and centers	Research and development

Goals and Strategies

Hyosung Chemical aims at expanding sustainable products and technologies that can substitute existing ones by developing and commercializing low-carbon products and increasing the use of recycled raw materials

- Increasing sales of Polyketone through diversification of applications including automotive parts
- Expanding recycled plastic proportion for PCR-PP electronics and automotive manufacturers
- Increasing the proportion of bio-based TAC film raw-materials
- Expanding the energy-saving water treatment system application

Sustainable Products

Low-carbon Plastic Polyketone

Polyketone is the first engineering plastic of its kind exclusively developed by Hyosung Chemical. The carbon emission of polyketone are 3.08 kg-CO2eq per kilogram, which is lower than those of other engineering plastics, as indicated by its Life Cycle Assessment (LCA). Furthermore, the Ministry of Trade, Industry, and Energy has granted Green Technology Certification to the sustainable polymer manufacturing technology that employs carbon monoxide and olefin to produce polyketone. Hyosung Chemical is capitalizing on the sustainable properties of polyketone to broaden its uses in automotive components, household goods, and other applications.

TAC Film Composed of Biomass Raw Materials (Tri-Acetyl Cellulose Film)

The primary raw material for TAC film is biomass called Cotton Linter, and TAC film has received the USDA's BioPreferred® program certification in the 'Films: Semi-Durable' category. We intend to establish a robust market presence with sustainable products by increasing the biomass content of TAC film in the future.

Sustainable Businesses

PCR-PP Recycling Waste Plastics

Hyosung Chemical has launched a PCR (Post-Consumer Recycled) business. To ensure the proper disposal of waste ropes made of PP that are found in marine environments, we have signed MOU with the Korea marine Environment Management Corporation and the Tugbusiness Corporation. This agreement aims to facilitate the collection of waste ropes from tugboats. We produce PCR-PP pellets by blending discarded ropes with domestic PP/PE waste and sell them to pallet manufacturers. As of 2023, our sales for export of PCR-PP disposable pallets amount to roughly 15 tons. Our goal is to replace all disposable export pallets with PCR-PP pallets, totaling roughly 3,000 tons per year. In addition, we are leading the way in developing new markets in the electronics and automotive sectors.

Energy-saving Water Treatment System Development and Commercialization

Hyosung Chemical has developed water treatment technologies for the purification of river water and other water sources into drinking water. These technologies include the 'submerged water purification technology,' 'pressurized membrane filtration water treatment technology,' and the 'two-stage submerged water purification system.' All of these technologies have received certifications for their environmental innovation.
We installed the water purification facility applying new energy reduction technologies at the Goheung Hohyung Water Purification Plant. The pressurized membrane filtration products, which improve raw water recovery rates, were equipped at the Jindo Hoedong Water Purification Plant and the Paju wastewater reuse facility. The application of these technologies is also proposed for the Jeju Gangjeong Water Purification Plant and the Topyeong Water Purification Plant. Furthermore, the pressurized membrane filtration technology that is applicable to seawater desalination will be implemented in the seawater desalination pretreatment facilities at the Jeju Chuja Water Purification Plant."

Management of Chemical and Pollutants

Why So Important?

Hyosung Chemical is a petrochemical company that deals with a significant quantity of hazardous substances that possess high flammability, explosiveness, and toxicity. The release of these materials can provide substantial hazards to the natural environment, local communities, and people. Hyosung Chemical acknowledges the significance and gravity of this matter.

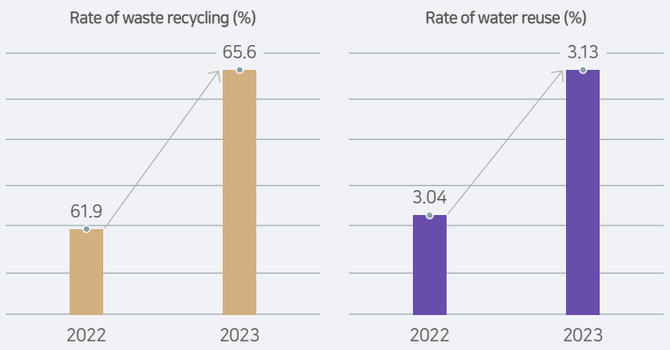
Our Approach

For safe management of chemical and pollutants, Hyosung Chemical has established and implemented safe management principles and multiple management system.

- Immediate incorporation of environmental regulations and effective management of environmental risks
  - Establishing internal standards that are stricter than legal standards to minimize environmental effects
- Transparent disclosure of environmental regulation compliance and safety management system

Our Achievement

- Zero chemical and environmental pollution accidents in 2023
- Replaced the toxic substance toluene with the non-toxic substance naphtha for cleaning PP/DH facilities
- Maintained the capacity of pollution control facilities through periodical maintenance and repair work at plants



Environmental Management System

Governance

The ESG Promotion Committee of Hyosung Chemical makes decisions on material ESG strategies, goals, and performances, involving environmental area, and reports major issues to the Board on a regular basis. Also, the committee organizes environmental safety team by business site and appoints managers to enhance the on-site response and execution capabilities. In particular, the EHS Committee meetings held monthly covers chemical and pollutant management improvement as a material topic.

Meeting date	Major agendas of the EHS Committee
April 2023	• Inspection results of hazardous chemical treating facilities during the thawing season
	• Enhancement of hazardous chemical transporting vehicle majors
August 2023	• Improve on-site verification by responsible employees of safe tank lorry loading with hazardous chemicals
November 2023	• Implementation of special education for new hires to improve safe environment awareness
December 2023	• Implementation of hazardous chemical spill drills to secure response capabilities for vulnerable times such as night and weekends

Chemical and Pollutant Management Policy

Hyosung Chemical mandates clean production system establishment in its Environmental Management Policy. Refer to the link below to see major details.

Navigate to Environmental Management Policy

Goals

- Zero Chemical and Environmental Pollution Accidents
- Mid-term Targets for Air Pollutants and Waste Emissions Intensity Reduction

Classification	Unit	2024	2025	2026
NOx emission intensity	ton/ KRW 100 million	0.0123	0.0116	0.0110
Dust emission intensity		0.0011	0.0011	0.0010
Waste generation intensity		1.465	1.379	1.318

Pollutant Emissions Management

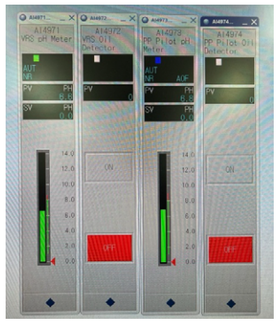
Hyosung Chemical operates chemical and pollutant management system based on ISO 14001. We also manage pollutant emissions according to air and water management guidelines and hazardous chemical substance safety management guidelines for each business site.

Review of the installation of facilities for pollutant emissions prevention	• Implementation of tasks to achieve permits and approvals in accordance with environmental laws - Review of emission facilities (identification of facilities that are subject to permits - Review of optimal prevention facilities installation - Prediction of pollutant emissions - Identification of process
Obtaining permits and approvals	
Inspection and test operation after installation and construction of facilities	• Review of emissions/prevention facilities installation details and whether they comply with permit documents
Verification of compliance with permit requirements	
Operation of emissions/ prevention facilities	• Providing feedback on measurement results to operations to encourage identification and improvement of issues
Measurement of pollution level	• Pollution level management and improvement through continuous maintenance and management of environmental facilities
Maintenance and management	

Management of Chemical and Pollutant Management

Water Quality Management

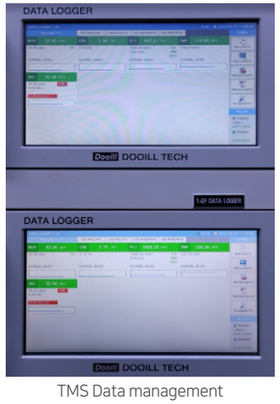
Hyosung Chemical either directly operates wastewater treatment plants or outsources wastewater treatment in order to mitigate the impact on water quality near the factory. We apply strict management by setting own standards for the discharge of water contaminants at 80% of the legal limit. Furthermore, in 2023, an early detection system for pollutants was installed at the final discharge outlet of the stormwater conduit at Yongyeon Plant 2 to prevent water pollution incidents caused by stormwater. We intend to implement the identical system at all locations.



pH Meter management

Air Quality Management

Hyosung Chemical has established more stringent standards compared to the legal requirements to manage air quality, to prevent air pollution. Tele Monitoring System (TMS) has been implemented on main facilities at the Yongyeon Plant to facilitate control of the total amount of air pollutants through the real-time monitoring. Furthermore, flare stack calorimeters have been implemented to guarantee the proper combustion of controlled substances, including volatile organic compounds. We employ low NOx burner boilers to reduce the emission of air pollutants. In order to mitigate the environmental and air pollutants produced by the inline coater liquid manufacturing facilities, we have implemented local exhaust devices and activated carbon adsorption towers during the PET film manufacturing process.



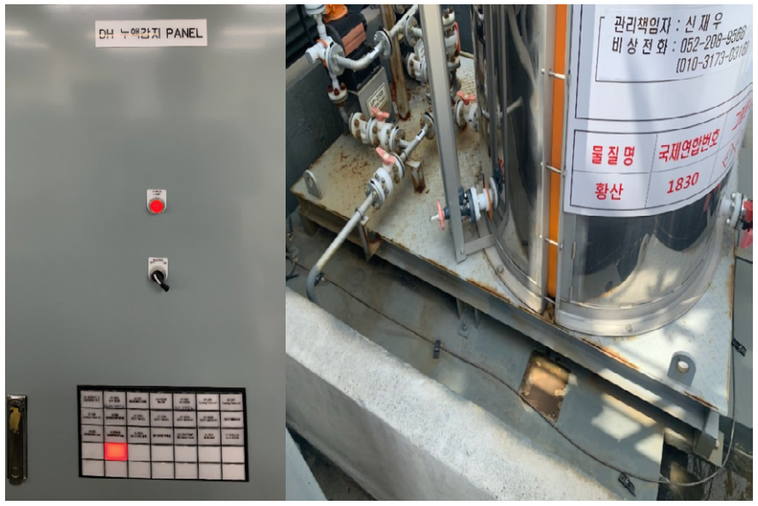
TMS Data management

Management of Chemical Substances

The Ministry of Environment frequently proclaims new toxic substances, necessitating that responsible personnel review and verify the disclosure information on a regular basis. Hyosung Chemical whether purchased substances are toxic chemicals by utilizing the ERP system and obtains MSDS (Material Safety Data Sheets) from suppliers through the electronic procurement system to verify regulatory compliance and obtain safety management approval before purchase.

Hyosung Chemical implements systematic management of data on all chemicals through its computer system, and transparently submits and discloses environmental performance, including chemical substance performance reports, emission surveys, and statistical investigations, to the Ministry of Environment. The responsible department oversees MSDS updates every two years in order to mitigate the risk of legal violations.

In 2023, Hyosung Chemical replaced toluene (a toxic substance) used in equipment cleansing operations at Yongyeon Plant 1 with naphtha (a non-toxic substance) to reduce the use of hazardous chemicals. Furthermore, in order to prevent environmental accidents, leak detectors were installed in hazardous chemical storage facilities to facilitate the early detection and rapid response to spills or other emergencies.



Chemical spill detector

Sight of the Yongyeon Plant 1

Product Safety and Quality Management

Why So Important?

Polypropylene (PP), polyketone, and film produced by Hyosung Chemical are representative plastic materials. As all of them are utilized for plastic products with frequent contact with human body, thorough management of hazardous substances within products is critical. Furthermore, the safety and quality management of products by companies that manufacture plastic materials is a critical issue that is directly correlated with the sustainability of the company, given the escalating restrictions on the use of hazardous substances in plastics on both a domestic and international scale.

Our Approach

Hyosung Chemical continuously raises product safety and quality standards through regular measurement, experiments, and certification achievement, complying with national and international product safety and quality regulation sand standards. We also conduct frequent product safety and quality reviews during PU leader meetings and plant quality meetings. In addition, to ensure product safety and quality standards that meet customer requirements, customer demands received through technical exchange meetings and VOC (Voice of Customers) are incorporated into the products.

Our Achievement

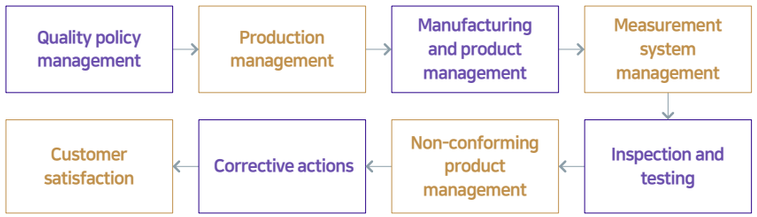
- Achieved '**Low VOC**' certification for TAC film
- Generation of an expected benefit of **KRW 1.601 billion per year** by managing the TPA process through smart factories and improving PET film heat resistance

Safety and Quality Management Governance

Under the leadership of PU heads, Hyosung Chemical conducts periodic meetings related to product safety and quality, in which plant managers and relevant department heads participate. Material issues are reported to the CEO for approval. Also, at the monthly Technical Committee, we discuss quality issues and select action plans for improvement. Additionally, production and quality related departments conduct daily, weekly, and monthly quality reports through quality meetings to share the quality status with all employees. By taking these measures, we are meticulously implementing product safety and quality management for each step.

Product Quality Management Process

Hyosung Chemical operates optimized quality management system in accordance with the ISO international quality management standards. We manage quality according to the quality assurance process regulations and implement quality improvement activities to satisfy customer requirements that are identified during regular technical exchange meetings and VOC sessions, in which customers are involved.



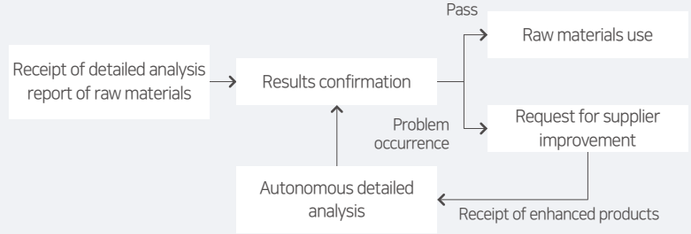
Product Safety Management Process

Hyosung Chemical meticulously and thoroughly examines incoming materials and manufactured products for environmental hazardous substances to guarantee that the products do not have a detrimental effect on human health and the environment, in compliance with the "Product Environmental Hazardous Substance Management Guidelines."

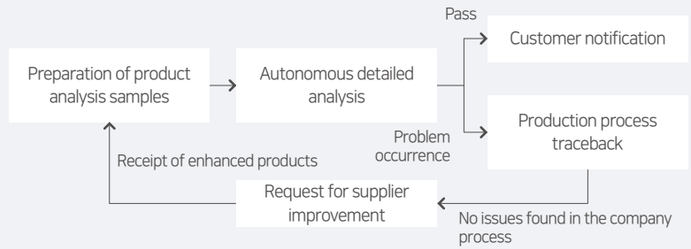
Environmentally Hazardous Substances Related to Product Safety

Cadmium, lead, mercury, hexavalent chromium, brominated flame retardants, phthalates, halogens, SVHC (Substances of Very High Concern), and other hazardous chemicals specified by customers

Raw Material Management

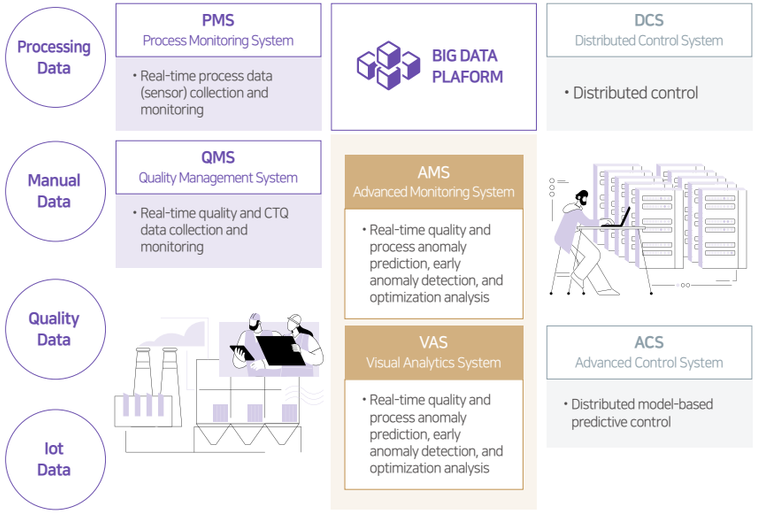


Product Management



Product Safety and Quality Management

Quality Management through Smart Factory Establishment



Hyosung Chemical employs the PMS (Process Monitoring System) to analyze the correlation between process and quality data on a second-by-second basis, ensuring precise quality management. In addition, the company operates a QMS (Quality Management System) for feedback and action management in the instance of product quality anomalies. Additionally, Hyosung Chemical is utilizing the VAS (Visual Analytics System) to operate a real-time quality management system. This system determines internal management standard specifications for each inspection item and generates an alarm in the event of an issue.

The TPA PU implemented a system in 2023 to regulate factors that influence the color of products through the Smart Factory VAS, which led to a KRW 501 million enhancement effect. Furthermore, the VAS was employed to conduct a correlation analysis of major properties and process factors in order to address the issue of heat creases in PET films within the Film PU. This resulted in an enhancement of sales restrictions caused by thermal resistance issues, which had an impact of KRW 1,100 million.

Furthermore, the Optical Film PU has been working on a project to establish a process/quality control system for the smart factory since 2023. This approach is expected to guarantee a high level of uniform quality and achieve an annual cost reduction effect of KRW 3,985 million

Quality-related Response Process

Upon obtaining complaints from consumers regarding product safety and quality, Hyosung Chemical promptly determines the root causes and implements strategies to prevent their recurrence. Furthermore, we implement compensation procedures to improve customer trust and contentment with our organization in the event that the error is attributable to us.

The sales team receives complaints from consumers during the first stage. In the second stage, the cause of the consumer complaint is determined by the gathering of relevant departments, including production and quality assurance. In the third stage, the customer receives an official response, and if the company at fault, the customer and we agree on the compensation method and amount. The complaint management is finalized in the fourth stage, and the efficacy of the measures to prevent recurrence is assessed.

Furthermore, we conduct technical exchange meetings with customers on a regular basis to directly attend to their needs. Additionally, we maintain an internal online system that stores customers' specifications, enabling employees to integrate them into their work. In 2023, a total of 771 quality-related VOCs, including meeting minutes and issue updates, were registered in the internal online system, averaging 3 entries per day, allowing employees to reflect them in their work.

Customer Dissatisfaction Handling Procedure

Steps	Explanation	Responsible department
Registration	Registration of customer dissatisfaction regarding quality	Sales
Action	Establishment and implementation of recurrence prevention measures after investigation	Quality assurance and production
Compensation plan consultation	Consultation with customers on compensation measures	CS
Termination	Evaluation of the recurrence prevention measure effectiveness	Quality assurance and production

Product Safety and Quality Related Certification

Acquisition of TAC film 'Low VOC' Certification

VOC (Volatile Organic Compound) are compounds that evaporate at room temperature. The representative Benzene, a representative VOC, is extremely hazardous to the human body, emits a foul odor, and is a carcinogenic chemical. In 2024, Hyosung Chemical conducted emission experiments on 35 types of VOCs, including benzene, targeting TAC films, which are a type of optical film. This experiment demonstrated that Hyosung's TAC films release none of the 35 types of VOCs externally, and as a consequence, received Intertek's 'Low VOC' certification.

Low VOC Certification

Product Safety and Quality Certification Acquisition

Hyosung Chemical's primary products, which include PP, polyketone, TAC films, and general films, have received safety and quality certifications in the United States and Europe, confirming their safety.

Product	Details
PP	RoHS (Restriction of Hazardous Substances), FDA (U.S. Food and Drug Administration)
Polyketone	FDA, KFDA (Korean Food and Drug Administration), GB (China National Standards), KTW (Germany Drinking Water Certification), WRAS (UK Water Regulations Advisory Scheme), ACS (French Sanitary Conformity), NSF 51/61 (U.S. National Sanitation Foundation), UL (Underwriters Laboratories, U.S. Safety Certification)
TAC film	certification (Low Halogen, Phthalates, Volatile Organic Compounds, Perfluorinated Compounds)
Film	RoHS, FSSC 22000 (Food Safety Certification)

Workplace Safety and Health

Why So Important?

Hyosung Chemical is a large-scale petrochemical manufacturer that processes a significant volume of hazardous materials. The lives and health of employees, as well as the surrounding community, can be at severe risk in the event of a safety accident. Furthermore, the company's reputation and competitiveness may be compromised by safety incidents. These facts are well-known to all our employees, who acknowledge that workplace safety and health are critical issues that are directly correlated with the company's sustainability.

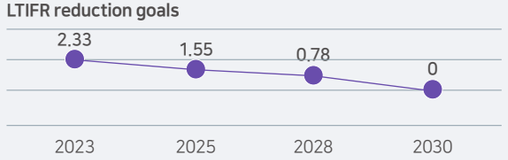
Our Approach

1) Compliance with regulations through strict risk management
   - Thorough compliance with policies, regulations, and environmental safety and health laws at all stages from product design, purchase, production, use, and disposal.
2) Unsafe condition and behavior removal through risk assessment
   - Achieve the highest level of global competitiveness by identifying and removing potential risks
3) Customer management based on VOC
   - Active listening to the opinions of internal and external customers regarding environmental safety and health and active participation to improvement activities to save resources and energy, minimize pollutants, and prevent industrial accidents and occupational diseases.
4) Enhancement of a system to promote global-level safety culture
   - Continuous education and education to improve environmental and safety awareness of employees and encourage voluntary participation of all employees
5) Strengthening of legal compliance management system
   - Establishment of policies and budgets to prevent chemical and industrial accidents and protect environment, and their continuous maintenance and improvement
6) Enhancement of environmental safety and health leadership for all employees
   - Continuous promotion of safety and health improvement and support to secure safety and health for partner company workers and stakeholders, thereby internalizing safety and health culture

Our Achievement

- Incorporation of Safety and Health KPIs into human resources system
- Enhancement of support for partner companies' safety management system
- Introduction of an in-house award system for risk factor elimination proposals
- Establishment of a mid- to long-term safety and health management roadmap

LTIFR reduction goals



Organization and Responsibilities of Safety and Health Management Team

CEO
Overall health and safety management

Dedicated Safety and Health Organization (CSO and the Safety and Health Team)	Safety and Health Managers (all plant managers)	Occupational Safety and Health Committee
✓ Implementation of the compliance of Serious Accident Punishment Act across the company ✓ EHS Committee operation across the company	✓ Overall safety and health management of the plant	✓ Discussion of safety and health issues at plants

Environmental Safety Team	Supervisors (Team Leaders/Section Chiefs)	Plant Environmental Safety Manager
✓ Safety and health management Tasks ✓ Firefighting, hazardous materials, and gas safety management tasks ✓ Chemical substances and environmental management tasks ✓ Safety and health system management tasks	✓ Inspection and identification of abnormalities in hazardous machinery and equipment ✓ Inspection and guidance on worker protection equipment and safety devices ✓ Reporting and taking emergency action in the occurrence of industrial accidents ✓ Other matters related to safety and health management	✓ Environmental safety personnel within a team ✓ Discussion of environmental safety task discussion in representation of a team ✓ Implementation of environmental safety patrols

Mid-to Long-term Targets for Safety and Health Management

Navigate to the mid-to long-term target roadmap for safety and health management

Hyosung Chemical places safety and health at the forefront of its management decision-making process. Additionally, we are committed to achieving zero accidents and zero incidents by means of continuous improvement and preventive activities in order to ensure a safe workplace. Based on this safety and health management policy, Hyosung Chemical has established a mid- to long-term safety and health management roadmap in 2023 that aims to achieve LTIFR=0 by achieving disaster-free and accident-free.

※ LTIFR (Lost Time Injury Frequency Rate) = (Number of accidents requiring more than 3 days of leave * 1,000,000) / Total working hours of all workers

EHS Committee

Hyosung Chemical convenes monthly EHS Committee meetings under the direction of the CSO (Chief Safety Officer) to present updates on environmental, health, and safety management across all business sites and review the implementation goals and performance of the preventive activities. In 2023, a total of 95 improvement agendas were proposed to the EHS Committee, with all 95 proposals (100%) addressed and completed.

Major Improvement Performance

Meeting date	Improvement agenda details	Action status
April 2023	Analyze emergency drill scenarios in multiple angles to create a variety of scenarios and train	Completed
April 2023	Install safety item containers and respirator stands	
May 2023	Activate consultative meetings to collect feedback	
August 2023	Request consultation to train each PU (Production Unit) on fire suppression methods tailored to the specific types of fires, including initial suppression and spread prevention.	
October 2023	Conduct re-education sessions in each PU for all employees, including contractors, regarding the occurrence of industrial accidents in other companies.	
November 2023	Apply a wide range of awards to provide recommendations for enhancing hazardous risk factors	

Workplace Safety and Health

Employee Safety and Health System Establishment

Incorporation of the Safety and Health KPI into HR System

In 2023, Hyosung Chemical has established and operated safety and health performance assessment system to strengthen the actual responsibility of the safety and health personnel.

Overview of the Safety and Health Performance Assessment Incorporation

Targets	Safety and Health KPI	
Plant managers, executives, team leaders	Number of Serious/Industrial Accidents	
	Compliance with Serious Accident Regulations	Implementation of the Serious Accident Punishment Act
		Task performance evaluation
Office positions of grades 1~5	Compliance with Serious Accident Regulations	Evaluation of safety and health level

Implementation of Firefighting Guidance and Consultation

Since 2022, Hyosung Chemical has been conducting annual consultation with external firefighting expert to strengthen fire accident response capabilities. Firefighting consultations include site fire risk factor discovery and removal, inspection of documents following firefighting regulations, observation and guidance of fire response drills, and advisory on regulatory amendments.

Firefighting guidance consultation photograph

Employee Health Promotion and Measurement of Working Environment

Hyosung Chemical ensures the well-being of its employees and partner company workers by conducting routine health assessments at company-designated hospitals. Also, a health care center is operated to offer treatment for anyone at any time, recording 1026 visitors as of 2023. The company also implements a cardiovascular disease prevention and management program targeting employees and partner company workers, assessing the risk of cardiovascular disease and conducting health promotion activities. Furthermore, we reduce the intervals for certain health check-ups and environmental measures if exposure to hazardous materials exceeds the recommended limits in the workplace, and implement respiratory and hearing protection programs.

Operation of the Latest Safety and Health Equipment

Hyosung Chemical operates the latest safety and health equipment for the safety of our employees and in-house partner company workers. Dedicated containers have been installed to ensure the efficient storage and utilization of safety and health equipment. Furthermore, we intend to implement 40 on-site installations to facilitate the rapid deployment of air respirators in the event of an emergency. Smoke-penetrating flashlights have been installed on-site to ensure visibility, thereby facilitating a smooth rescue and response during a fire.

Safety equipment container

Air respirator stand

Smoke-penetrating flashlight

Safety Education and Emergency Drill Implementation

Hyosung Chemical provides in-house safety and health education and emergency exercises for employees and partner companies. These programs involve statutory safety education and emergency drills, as well as the dissemination of accident cases from other companies, first aid, safety and health regulations, and emergency evacuation. In 2023, a total of 295 emergency response exercises were conducted, which included scenarios such as hazardous chemical leaks, power disruptions, electric shocks, and fires. Furthermore, since emergencies may occur between 10 p.m. and 6 a.m., which is designated as nighttime under the Labor Standards Act, nighttime confined space emergency rescue exercises were also conducted.

Safety education photograph

Emergency drill photograph

Awards for Proposals to Improve Hazardous and Risk Factors

Since 2023, Hyosung Chemical has established the award for hazardous and risk factors improvement proposals, implementing monthly awards targeting employees who propose outstanding ideas for safety improvement.

Award-winning Cases

Award-winning proposal case	Before improvement	After improvement
Installation of an emergency switch to deactivate the air shower door function in case of an emergency		

Establishment of the Partner Company Safety and Health System

Enhancement of Partner Company Safety Management System

Hyosung Chemical provides support for strengthening and improving the partner company safety management system to secure the in-house partner company workers' safety and health. In 2023, we provided a total of KRW 136 million in salary for dedicated safety managers to 7 partner firms. Additionally, we paid roughly KRW 20 million in fees for outsourcing safety management services to professional organizations for 13 partner companies. By 2024, we aim to broaden our support to encompass 27 companies, allocating a total of KRW 274 million to enhance safety management.

Enhancement of Partner Company Safety Communication

Hyosung Chemical, in conjunction with its partner companies, is dedicated to upholding a safe and healthy workplace and resolving concerns through diverse approaches, including the establishment and operation of a partner company council, the organization of PU environmental safety meetings, and the collection of feedback via mobile platforms. In 2023, a total of 175 safety management proposals were received from partner companies, and 100% of them were attended to. Notable instances of improvement include the implementation of alarms and warning lights on hoists following a recommendation that nearby workers were ignorant of hoist activities, which posed a potential hazard. Another instance arose when it was suggested that the pipes in the work passage constituted a risk of collision, leading to the decision to cut their length.

Risk Management

Why So Important?

The global economy recession is enduring due to severe climate change and the expansion of international conflicts. Consequently, business enterprises, such as Hyosung Chemical, are encountering a variety of risks in their company operation. Hyosung Chemical acknowledged the significances of integrated risk management in both mitigating adverse business risks and improving the level of sustainable management practices, and is actively applying this strategy.

Our Approach

Additionally, in order to identify and improve implementation of risk management in perspective of sustainability, we assigned responsibility of integrated risk management to the ESG Management Team. Personnels in charge of risk management in each department report response plans against identified risks to top management and lead improvement to prevent adverse impact by effective measures.

Our Achievement

•2023 Risk Improvement Performance

Classification	Results
Identified carbon emission reduction measures - Expected carbon emission reduction amount	Cumulative 54 cases Approximately 16,000 tons
Implementation of measures for the EHS Committee agendas - Risk improvement	95 cases 95 cases (100%)

Risk Management System

Risk Management Organization and Process

Hyosung Chemical appointed personnels in charge of risk management in each department for managing risk systematically. Each department assessed the severity and probability of each risk to evaluate its significance, and subsequently develops response strategies and reports them to management. Improvement activities are implemented as a result to anticipate potential hazards. The ESG Management Team is responsible for the integrated management of company-wide risks, and reports top management and the Board on status of implementation.

Non-financial Risks

- Plant manager › • Carbon emission reduction • Pollutants and chemicals
- CSO › • Safety and health
- Purchasing manager › • Supply chain
- Head of support office › • Ethics • Compliance • HR
- CISO › • Information protection

Plan
- Determine whether the identified risks are being addressed
- Establish strategies for risk removal

Do
- Perform tasks based on processes in accordance with the established schedule and methods

Check and Action
- Assess the efficacy of the risk mitigation results
- Summarize the evaluation results and integrate them into operations

Board

Top management

ESG Manager

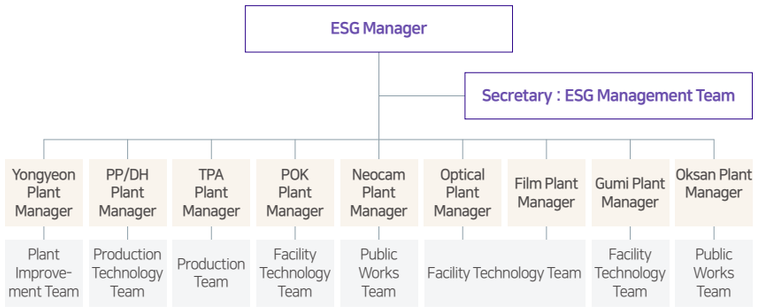
Response Activities by Risk

Implementation cycle	Risk category	Risk selection background	Response activities
Quarterly	Carbon emission reduction	• Need for discovery of greenhouse gas emissions reduction measures and emissions reduction	• Identified 54 carbon emission reduction measures to reduce an approximate 16,000 tons of carbon
Monthly	Pollutants and chemicals	• Need for the review and compliance assessment of modifications in environmental safety regulations	• Conducted environmental impact assessment and continuous management and implemented chemical spill response drills
	Safety and health	• Need for business site safety activity inspection and improvement of deficiencies	• Implemented joint inspection of the Occupational Safety and Health Committee and partner companies, and convened monthly EHS Committee meetings
Weekly	Supply chain	• Stable supply and maintenance of appropriate inventory levels for raw materials • Support program implementation for partner companies to mitigate ESG risk impacts such as environmental effects, safety, and health across the supply chain	• Established a VMI (Vendor Managed Inventory) system through maintenance of collaborative partnership with partner companies • Provided support for partner company safety management cost and implemented ESG education
	Ethics	• Risk of losses that could occur due to inappropriate tasks	• Prevented ethics management violation through means including operation of whistleblowing system
	Compliance	• Threat of external sanctions due to legal violations	• Prevented legal violation through periodical compliance education and occasional monitoring
	HR	• Threat to labor-management relations due to HR and labor issues	• Improved corporate culture, and operated employee satisfaction enhancement programs and labor-management consultation channels
	Information protection	• Threat to sustainable management due to sales information leakage	• Enhanced the information security system by appointing a CISO (Chief Information Security Officer)

Risk Management

Establishment and Major Initiatives of the Carbon Emission Reduction Task Force Team (TFT)

Hyosung Chemical has implemented a Carbon Emission Reduction Task Force at the corporate level to address the climate change crisis. The company is implementing practical reduction activities by eliminating energy waste factors through process improvement and optimization and evaluating the introduction of renewable energy and the acquisition of carbon credits.



2023 Major Agendas and Performances

By 2023, Hyosung Chemical has identified a cumulative total of 54 new reduction measures through the Carbon Emission Reduction Task Force, with an estimated reduction amount of approximately 16,000 tons. The primary topics addressed include the following:

Major Reporting Agendas by Quarter

Meeting date	Major agendas
March 22	1. Review of prospective supplementary allocations following the emissions trading system amendments 2. Review of new reduction measures for each plant 3. Carbon capture technology assessment
June 28	1. Review of the anticipated reduction in GHG emissions by 2030 2. Research of external trends for carbon emission reduction 3. Impact and response strategies for the EU Carbon Border Adjustment Mechanism
September 26	1. Estimation and review of 2030 carbon credit purchase scale 2. Investigation of carbon emission from major material suppliers
December 20	1. Estimation of 2023 carbon credit purchase scale 2. Study of information related to E-Fuel 3. Sharing Scope 3 emissions calculation measures 4. Review of 2024 reduction plans for each plant

Carbon Emission Reduction Tasks and Target Reduction Amount

By 2030, we will continuously identify new carbon emission reduction measures for each business site in order to achieve a reduction of over 14.5% from the 2018 emission levels. Furthermore, in order to implement the mid- to long-term carbon emission reduction roadmap, we are also evaluating activities such as the reduction of steam consumption, hydrogen cogeneration, and the implementation of CO_2 capture technology.

Mid- to Long-Term Carbon Reduction Review Plan

(Unit: 1000 tCO_2-eq)

Tasks for review	Major details	2030 Target reduction
Improvement of energy efficiency	Plant improvement, operation of power-saving equipment, waste heat recovery and thermal efficiency enhancement	16
Steam consumption reduction	Waste heat recovery through diagnosis of energy within processes	22
Hydrogen cogeneration	Generation of hydrogen fuel to replace LNG	56
CCUS	Operation of amine-based wet-scrubbing and CO_2 wet-scrubbing technology utilizing water solubility	100
Total		**194**

Mitigation of Safety Accidents through Autonomous Safety Inspections

Hyosung Chemical has been reducing potential safety accident risks at business sites through autonomous safety inspections. Initially, we eliminate hazardous risk factors and guarantee the safety and well-being of employees by conducting risk assessments. In 2023, a total of 1,613 risk assessments were conducted across all business sites, which led to the enhancement of 89 hazardous risk factors. Major improvement case includes the implementation of mirrors in the warehouse unloading area to prevent collisions between forklifts and workers. In addition, we resolve serious accident occurrence risk by periodically improving near-miss accidents which are incidents that could have caused accidents but did not result in direct damage.

In 2023, we identified a total of 745 near-miss cases and achieved a 100% improvement. For instance, we implemented stairs in locations where employees were required to ascend for equipment inspections, thereby mitigating the likelihood of accidents. Finally, we identified a total of 1,017 non-compliance issues company-wide and resolved 1,010 of them (99%) through inspection activities conducted by environment and safety officers for each PU in accordance with the themes suggested by the safety and health team.

Safety and Health Risk Identification through Partner Company Assessment and Joint Inspections

Hyosung Chemical assesses the safety and health capabilities of partner companies and utilizes these evaluations to determine new contracts and the extension of existing contracts. A total of 225 evaluations were conducted in 2023, with each evaluation being conducted semi-annually. Furthermore, we are addressing safety non-compliance issues in workplaces, offices, and restrooms by conducting quarterly joint inspections with partner companies. The plant managers, Environmental Safety Team leader, partner company representatives, and partner company management personnels are all involved in the joint inspections. A total of 260 issues were identified in 2023, and all 260 (100%) were resolved. Major enhancements include the cases in which the insulation of power tools has been reinforced to prevent electric shock accidents, and items that were stored in front of emergency entrances have been removed to ensure clear evacuation routes.

Partner Company Education for Supply Chain Risk Prevention

In 2023, Hyosung Chemical provided ESG education and consulting to 11 outstanding partner companies in order to prevent potential issues in the areas of human rights, labor, safety and health, and the environment among partner companies and to stabilize the supply chain through the establishment of continuous collaborative partnership. The establishment of the Ethical Management Policy and the development of a risk management system, which encompasses the identification and mitigation of workplace hazards, were both facilitated by this education. Compliance with each item of the ESG standard guideline indicators was assessed for the partner companies that received offline education, and consulting services were implemented to address deficiencies.

Initiative to Mitigate Adverse Impacts on Local Communities

Our business facilities emit waste gases in accordance with the Clean Air Conservation Act. Hyosung Chemical implemented membrane separation apparatus in 2023 to mitigate the quantity of hydrocarbons that contribute to air pollution prior to the emission of waste gases. This initiative has mitigated the adverse effects on the local communities by reducing the quantity of hydrocarbons discharged into the environment to within 10% of the previous levels.

Reinforcement of Sustainability Management Leadership

Why So Important?

Sustainability management is critical for not only the sustainable development of the entire humanity, but also for stable long-term growth and risk management of corporations. Hyosung Chemical fully acknowledges the importance of sustainability management, and finds the enhancement of sustainability management leadership of the Board and the management executives critical more than anything.

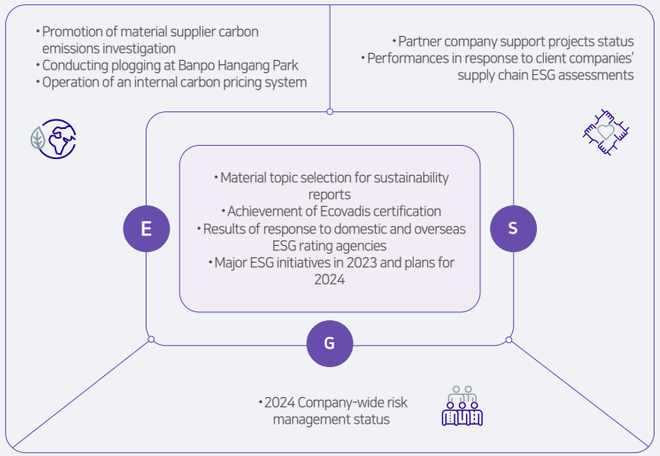
Our Approach

Hyosung Chemical established the ESG Management Promotion Committee in 2021, and holds quarterly meetings. The committee manages environmental issues, social value creation, governance enhancement promotion performances and plans. Major agendas of the ESG Promotion Committee are reported to the Board for approval.

Our Achievement

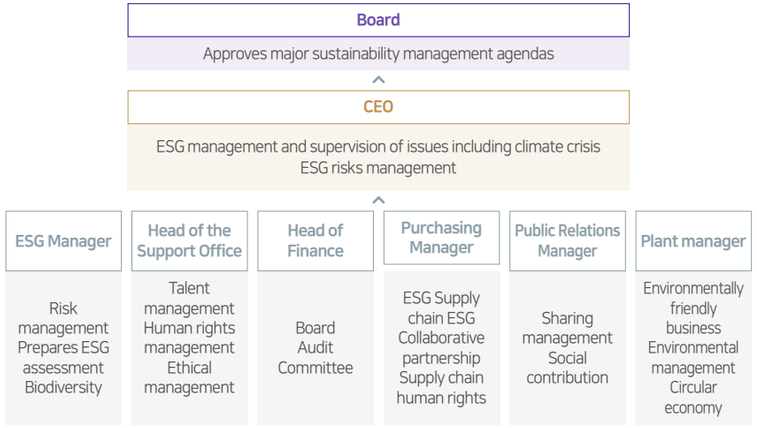
- In 2023, submitted 9 ESG agendas to the Board, and provided ESG expertise enhancement education for all outside directors
- Held quarterly ESG Management Promotion Committee meetings, having discussions and making decisions on 10 major agendas

ESG Agendas Reported in 2023 Board meetings



Sustainability Management Governance

ESG Management Promotion Committee Composition



Hyosung Chemical operates sustainability management governance centered around the ESG Management Promotion Committee chaired by the CEO, and major issues are reported to the Board for approval. Especially, the ESG Promotion Committee involves responsible personnels from each working level organization, including environmental safety and health, planning, human resources, purchasing, and advertisement, to implement specific sustainability management for each area.

ESG Management Promotion Committee Major Discussion Agendas

In 2023, the ESG Management Promotion Committee discussed 10 agendas that are necessary to accomplish sustainability management strategic tasks such as carbon emission reduction, business site environmental management and strengthening of safety and health, and supply chain ESG management strategies. Major agendas include 2023 social contribution activity planning, Ecovadis certification, and establishment of mid- to long-term goals for safety and health management.

Quarterly Major Agendas

Meeting dates	Major discussion agendas
March 29, 2023	1. Support for mold production costs for POK tray manufacturers and distributors 2. 2023 Support project plans for sustainable management of partner companies 3. 2023 Plans for social contribution activities
July 5, 2023	1. Major details and impact of the EU Carbon Border Adjustment Mechanism and response strategies 2. Participation in Ecovadis certification
September 20, 2023	1. KCGS evaluation status analysis and improvement plans
January 3, 2024	1. Promotion of ISCC Plus certification achievement 2. Establishment of human rights management system and mid-to long-term roadmap 3. Establishment of mid- to long-term goals for safety and health management 4. 2024 plans for ESG business plan

Major ESG Reports to the Board and Education for Outside Directors

In 2023, a total of 9 major ESG matters were reported in the quarterly Board meetings, such as performances regarding response to external stakeholders, preparation of evaluation agencies. Also, we provided education for the enhancement of outside directors' sustainability management expertise.

Reported Major Agendas in Each Quarter

Meeting Date	Details of reported major agendas and education
Quarter 1	Material sustainability issue selection results
Quarter 2	Promotion of initiating Ecovadis evaluation
Quarter 3	Operation of internal carbon pricing system
Quarter 4	2024 ESG business plan (education topic: Importance of ESG information disclosure)

Implementation of Education for Sustainability Management Capabilities Enhancement

Hyosung Chemical provides online ESG education as well as mandatory statutory education to all employees, to ensure the successful implementation and accomplishment of sustainability management strategies. Additionally, all personnel in the purchasing department, which is responsible for overseeing subcontract transactions, received additional education regarding the Fair Trade Act. The following are the distinct education seminars that were conducted in 2023.

Major Education Details

Classification		Course title	Date	Hour
All Employees	Environment	Climate change and biodiversity	July 2023	1 hour
	Compliance	Anti-corruption (ethical management) and Fair Trade Act		2 hours
	ESG	Comprehension of the concept of social value	August 2023	1 hour
	Human rights	First steps in human rights studies (equality edition)		1 hour
	Security	Understanding phishing and action plans		1 hour
Purchasing Team	Supply chain	Basic education for the Fair Trade Act		4 hours

Internalization of Sustainability Management through Communication with Members

Hyosung Chemical shares ESG task implementation status, related news, explanations of major ESG keywords, and columns through in-house ESG newsletters. Furthermore, we strive to internalize sustainability management through a variety of means, such as the provision of ESG education content for partner companies.

Governance and Economic Performance

Reporting Scope

This ESG Performance report includes the following subsidiaries that account for 100% of the consolidated sales of Hyosung Chemical. The data of Hyosung Chemical and its subsidiaries are listed separately, and the data of the subsidiaries are provided from 2021 onwards. Some items may not include data from certain subsidiaries, and in such cases, the relevant details are noted as footnotes.

Subsidiaries	Country of operation
Hyosung Vina Chemicals Co., Ltd.	Vietnam
Hyosung Film (Quzhou) Co., Ltd.	China

Data Reporting Notes

1. If an item is not applicable or cannot be applied, it is marked as 'N/A'. If the data was not investigated, it is marked as '-'. Other special cases are noted separately below the respective items.
2. Figures are rounded, so there may be slight differences between the actual sum of the individual figures and the totals listed.

Corporate Tax by Country

Category	Sub-category	Unit	2021	2022	2023
Korea	Sales	KRW million	2,108,872	2,287,412	2,011,884
	Profit before tax	KRW million	173,976	(130,533)	(203,642)
	Corporate tax expense	KRW million	43,956	0	(25,685)
	Tax rate	%	24.2	24.2	23.1
	Effective tax rate	%	21.4	N/A	N/A
Vietnam	Sales	KRW million	345,048	592,547	782,395
	Profit before tax	KRW million	(60,504)	(317,784)	(259,446)
	Corporate tax expense	KRW million	0	(4,061)	0
	Tax rate	%	0	0	0
	Effective tax rate	%	N/A	N/A	N/A
China	Sales	KRW million	0	0	380
	Profit before tax	KRW million	0	1,956	998
	Corporate tax expense	KRW million	0	0	698
	Tax rate	%	25	25	25
	Effective tax rate[1]	%	N/A	N/A	69.9

1. The deferred corporate tax of the Chinese subsidiary for 2022 has been included in the corporate tax for 2023.

Financial Statements (Consolidated)

Category	Unit	2021	2022	2023
Current assets	KRW million	788,985	819,924	699,214
Non-current assets	KRW million	22,554,064	2,311,195	2,416,397
Total assets	KRW million	3,044,049	3,131,119	3,115,611
Current liabilities	KRW million	1,083,164	1,715,749	2,147,489
Non-current liabilities	KRW million	1,471,585	1,300,753	906,238
Total liabilities	KRW million	2,554,749	3,016,502	3,053,727
Total equities	KRW million	489,300	114,617	61,884

Consolidated Statements of Comprehensive Income

Category	Unit	2021	2022	2023
Sales	KRW million	2,519,965	2,878,558	2,791,629
Operating income	KRW million	136,574	(336,727)	(188,836)
Net profit	KRW million	58,416	(408,867)	(346,912)

Governance and Economic Performance

Compliance with Ethics and Laws

Category		Unit	Hyosung Chemical			Subsidiaries[1]	
			2021	2022	2023	2022	2023
Employee discrimination	Total No. of discrimination incidents	Case	0	0	0	0	0
	Reviewed incidents of discrimination	Case	0	0	0	0	0
Corruption	No. of reported incidents of corruption	Case	0	0	0	0	0
	No. of people dismissed or disciplined for corruption	person	0	0	0	0	
Unfair transaction[2]	No. of unfair transaction practices	Case	0	0	0	0	0
	Fine for unfair transaction practices	KRW million	0	0	0	0	0
Non-compliance with laws and regulations	Cases of fines-imposed	Case	9	5	2	9	7
	Cases of non-monetary sanctions	Case	0	0	0	0	0
	No. of employees with records of investment-related investigations, customer complaints, lawsuits, or legal sanctions	Person	0	0	0	0	0
	No. of violations of legal and voluntary regulations regarding product and service information and labeling	Case	0	0	0	0	0
	No. of violations of legal and voluntary regulations regarding health and safety impact of products and services	Case	0	0	0	0	0
	No. of violations of legal and voluntary regulations regarding marketing communication such as advertising, promotion, and sponsorship	Case	0	0	0	0	0
	Total amount of fines	KRW million	7	2	19	29	3
	Fines for violations of financial regulation (insider trading, monopoly, and anticompetitive behaviors)	KRW million	0	0	0	274	3
	Fines for violation of environmental regulations, such as pollutant emissions [3]	KRW million	0	1	0	8	1

1. The data from subsidiaries has been aggregated excluding Hyosung Film (Quzhou) Co., Ltd.
2. The number of unfair transaction practices includes cases that are currently in litigation, and fines represent the total sum of fines, penalties, and surcharges.
3. Fines related to environmental regulation violations by subsidiaries in 2022 have been recalculated due to errors.

Compliance with Ethics and Laws

Category		Unit	Hyosung Chemical			Subsidiaries[4]	
			2021	2022	2023	2022	2023
Anti-Corruption	No. of employees that have received notification and training on anti-corruption policies and procedures	Person	478	1,172	1,191	1	27
	Percentage of employees that have received notification and training on anti-corruption policies and procedures	%	39.0	92.0	94.0	0.2	6.2
	Total No. of operations assessed for risks related to corruption	Operation	1	2	1	0	1
	Percentage of operations assessed for risks related to corruption	%	7.7	15.4	7.7	0	100

4. The data from subsidiaries has been aggregated excluding Hyosung Film (Quzhou) Co., Ltd.

Social performance

Employees[1]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Total No. of employees		Person	1,213	1,272	1,273	429	434
Gender							
Permanent	Male	Person	1,019	1,069	1,078	51	103
	Female	Person	113	119	124	21	30
	Subtotal	**Person**	**1,132**	**1,188**	**1,202**	**72**	**133**
Temporary	Male	Person	65	51	45	283	240
	Female	Person	16	33	26	74	61
	Subtotal	**Person**	**81**	**84**	**71**	**357**	**301**
Age							
Permanent	Under 30	Person	188	200	205	19	42
	30-50	Person	705	748	753	43	80
	51 and above	Person	239	240	244	10	11
Temporary	Under 30	Person	63	55	57	262	237
	30-50	Person	7	17	9	86	55
	51 and above	Person	11	12	5	9	9
Employee category							
Employee category based on permanent employees	Office	Person	532	541	559	53	60
	Technical	Person	600	647	643	19	73
Region							
Permanent	Korea	Person	1,132	1,188	1,202	0	0
	China	Person	0	0	0	0	0
	Vietnam	Person	0	0	0	72	133
	Subtotal	**Person**	**1,132**	**1,188**	**1,202**	**72**	**133**
Temporary	Korea	Person	81	84	71	0	0
	China	Person	0	0	0	0	0
	Vietnam	Person	0	0	0	357	301
	Subtotal	**Person**	**81**	**84**	**71**	**357**	**301**
Diversity & Inclusion							
Gender diversity in the Board of Directors	Male	Person	5	4	5	N/A	N/A
	Female	Person	0	0	0	N/A	N/A
	Subtotal	**Person**	**5**	**4**	**5**	**N/A**	**N/A**
Age diversity in the Board of Directors	Under 30	Person	0	0	0	N/A	N/A
	30-50	Person	0	0	0	N/A	N/A
	51 and above	Person	5	4	5	N/A	N/A
Employee diversity	Employees with disability	Person	26	27	27	0	0
	Veterans	Person	23	24	24	0	0
	Foreigner	Person	1	5	4	3	3
	Subtotal	**Person**	**50**	**56**	**55**	**3**	**3**
Fostering female talent[2]	Female employee ratio	%	10.6	11.9	11.8	22.1	21.0
	No. of Female at manager level (or higher)	Person	20	20	19	10	9
	No. of male at manager level (or higher)	Person	245	234	228	70	69
	Proportion of female at manager level (manager and above)	%	7.5	7.9	7.7	12.7	11.5

Diversity performance and targets[3]

Category	Sub-category	Unit	Hyosung Chemical			
			2021	2022	2023	2024(Target)
Employee diversity	Employees with disability	Person	26	27	27	27
	Female	Person	129	152	150	162

Workers who are not employees[4]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Gender	Male	Person	281	293	292	0	0
	Female	Person	16	17	17	0	0
	Subtotal	**Person**	**297**	**310**	**309**	**0**	**0**

1. As of December 31, 2023.
2. Manager level refers to positions of PM/Manager or higher.
3. Diversity performance and targets are documented exclusively for domestic subsidiaries.
4. Workers who are not employees: Dispatch, subcontract, and service personnel who work at our business sites but are classified as non-affiliated workers in the business report.

Local Senior Managements with the Local Nationality Working on Site[5]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Senior managements	Total senior managements	Person	92	92	92	17	18
	No. of local senior managements with the local nationality working on site	Person	92	92	92	0	0
	Percentage of local senior managements with the local nationality working on site	%	100	100	100	0	0

5. Senior management refers to positions at the team leader, department head, supervisor level, or higher.

Social performance

New Employee Hires[1]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
New hires	New hires	Person	99	117	88	43	20
	Experienced new hires	Person	31	40	32	47	59
	Transferees from affiliated companies	Person	10	45	31	0	0
	Subtotal	**Person**	**140**	**202**	**151**	**90**	**79**
Gender							
New hires	Male	Person	121	157	122	76	73
	Female	Person	19	45	29	14	6
	Subtotal	**Person**	**140**	**202**	**151**	**90**	**79**
New hire rate	Male	%	86.4	77.7	80.8	84.4	92.4
	Female	%	13.6	22.3	19.2	15.6	7.6
Age							
New hires	Under 30	Person	102	116	92	82	69
	30-50	Person	32	76	55	8	10
	51 and above	Person	6	10	4	0	0
New hire rate	Under 30	%	72.9	57.4	60.9	91.1	87.3
	30-50	%	22.9	37.6	36.4	8.9	12.7
	51 and above	%	4.3	5.0	2.6	0	0

1. The data for 2021 and 2022 has been updated to include new hires by expanding the scope to encompass transferees from affiliates, dual-role appointees from affiliates, etc.

Employee Turnover[2]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
No. of employee turnover	Total employees of turnover (Resignation)	Person	109	152	154	74	74
	Voluntary turnover	Person	82	108	100	68	65
	Transfer to affiliated company	Person	9	15	8	0	1
	Involuntary turnover[3]	Person	18	29	46	6	8
	Voluntary turnover rate	%	6.8	8.5	7.9	15.9	15.0
	Total turnover rate	%	9.0	11.9	12.1	17.2	17.1
Employee turnover by gender	Male	Person	89	126	123	60	64
	Female	Person	20	26	31	14	10
	Subtotal	**Person**	**109**	**152**	**154**	**74**	**74**
Turnover rate by gender	Male	%	7.3	9.9	9.7	14.0	14.7
	Female	%	1.6	2.0	2.4	3.3	2.3
Employee turnover by age	Under 30	Person	31	52	49	49	57
	30-50	Person	52	65	66	19	15
	51 and above	Person	26	35	39	6	2
	Subtotal	**Person**	**109**	**152**	**154**	**74**	**74**
Turnover rate by age	Under 30	%	2.6	4.1	3.8	11.4	13.1
	30-50	%	4.3	5.1	5.2	4.4	3.5
	51 and above	%	2.1	2.8	3.1	1.4	0.5

2. The data for 2021 and 2022 has been revised due to expanding the scope of turnover statistics from voluntary turnover among permanent employees to include both voluntary and involuntary turnover of permanent and temporary employees, as well as transfer to affiliated companies.
3. Involuntary turnover: resignation upon recommendation, dismissal, death, etc.

Social performance

Employee Salary and Compensation[1]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Average total annual compensation for entry-level employees		KRW Million	41	48	46	17	9
Local annual average legal minimum wage [2]							
Ratio of wages for new hires compared to the local legal minimum wage	Male	%	189.1	218.8	197.8	584.0	303.6
	Female	%	179.4	184.1	164.7	303.4	291.1
Ratio of total compensation for female to male	Executive	%	N/A	N/A	N/A	N/A	N/A
	Manager level or higher	%	76.0	83.8	78.0	48.5	46.9
	Non-manager level	%	66.4	62.8	44.3	98.8	101.1
Average total compensation of all employees		KRW Million	77	73	72	18	18

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Highest-paid individual	Total compensation	KRW Million	454	274	251	229	192
	Year-on-year increase in total compensation	%	35.1	(39.8)	(8.1)	(21.0)	(15.9)
Employees (excluding highest-paid individual)	Average total annual compensation	KRW Million	77	73	72	28	26
	Median total annual compensation	KRW Million	69	67	66	14	13
	Median total annual compensation increase year-on-year	%	12.1	(2.6)	(1.4)	3.0	(3.0)
Ratio of the total annual compensation for the organization's highest-paid individual to the median total annual compensation for all employees (excluding the highest-paid individual)		Time	6.6	4.1	3.8	16.7	14.4

1. The criteria for aggregating the total compensation of new hires has been expanded from permanent employees with a university degree to include permanent, temporary employees, experienced new hires, and transferees from affiliated companies. As a result, the existing data has been revised.
2. The local average annual legal minimum wage data is compiled for all locally hired employees, excluding expatriates.

Labor Union [3]

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
No. of employees covered by collective bargaining agreements [4]	Person	600	647	643	370	374
Ratio of employees covered by collective bargaining agreements among total employees	%	49.5	50.9	50.5	86.2	86.2
No. of union workers	Person	591	637	636	370	373
Rate of enrollment to the union	%	98.5	98.5	98.9	100	99.7

3. Some 2022 data has been revised due to aggregation errors.
4. The collective bargaining agreement at Hyosung Chemical applies to functional staff.

Maternity Leave and Parental Leave[5]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Maternity leave (male)	No. of employees on maternity leave	Person	37	35	41	15	28
	Return rate after maternity leave	%	100	100	100	100	100
Maternity leave (female)	No. of employees on maternity leave	Person	5	8	8	10	7
	Return rate after maternity leave	%	100	100	100	90.0	85.7
Parental leave (male)	No. of employees entitled to parental leave	Person	211	223	234	76	89
	No. of employees on parental leave	Person	6	4	5	14	8
	No. of employees returning to work after parental leave	Person	2	2	8	15	28
	No. of employees with over 12 months of service after parental leave	Person	0	2	2	15	28
	Return rate after parental leave	%	66.7	66.7	88.9	100	100
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	0	100	100	100	100
Parental leave (female)	No. of employees entitled to parental leave	Person	16	21	25	20	21
	No. of employees on parental leave	Person	5	5	9	7	8
	No. of employees returning to work after parental leave	Person	3	5	4	9	6
	No. of employees with over 12 months of service after parental leave	Person	6	2	5	9	6
	Return rate after parental leave	%	75.0	83.3	100	90.0	85.7
	Ratio of employees retained 12 months after returning to work in the previous reporting period following a period of parental leave	%	85.7	66.7	100	90.0	85.7

5. Some data from 2021 to 2022 has been revised due to aggregation errors.

Retirement Pension

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
Total operation fund for retirement pensions (DB+DC)	KRW million	74,731	72,104	72,123	N/A	N/A
Operation fund for DB pension	KRW million	73,530	70,819	70,810	N/A	N/A
Operation fund for DC pension	KRW million	1,201	1,336	1,313	N/A	N/A
Total No. of members	Person	1,262	1,315	1,317	N/A	N/A
No. of DB pension members	Person	1,060	1,109	1,115	N/A	N/A
No. of DC pension members	Person	202	206	202	N/A	N/A

Social performance

Employee Training[1]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
No. of training participants[2]		Person	10,423	16,273	15,791	1,683	2,600
Total training expenses		KRW million	680	840	906	14	13
Total training hours		Hour	30,638	43,426	39,241	8,935	15,097
Average training hours per employee (total training hours / No. of employees)		Hour	25	34	31	21	35
Average training expenses per employee (total training expense / No. of employees)		KRW	560,404	660,621	711,811	32,803	29,907
Total training hours by gender	Male	Hour	26,625	35,149	31,440	7,960	12,711
	Female	Hour	4,013	8,278	7,802	975	2,386
Total training hours per employee by gender	Male	Hour	25	31	28	24	37
	Female	Hour	31	55	52	10	26
Total training hours by employee category	Executive	Hour	1,281	423	361	0	86
	Manager level or higher (PM, manager level or higher)	Hour	13,167	14,584	23,712	529	1,693
	Non-manager level (Pro, assistant manager level or lower)	Hour	16,191	28,420	15,169	8,406	13,318
Average training hours per by employee category	Executive	Hour	75	26	25	0	12
	Manager level or higher (PM, manager level or higher)	Hour	53	61	103	7	24
	Non-manager level (Pro, assistant manager level or lower)	Hour	17	28	15	24	37
No. of participants in environmental training		Person	514	1,286	1,215	88	106
No. of participants in ethics and anti-corruption training		Person	544	1,272	1,233	86	106
No. of participants in fair trade training		Person	492	1,355	1,131	86	106
No. of participants in safety and health training		Person	533	1,319	1,224	85	78
No. of participants in human rights training (Sexual harassment prevention/ disability awareness/discrimination prevention, etc.)		Person	3,390	5,109	5,105	98	107
Ratio of security personnel who have received formal training in human rights policies or specific procedures		%	0	0	0	100	100
No. of employees trained for information security		Person	137	1,449	1,787	88	108
No. of employees trained for physical security		Person	0	0	0	0	0
No. of participants in sustainability management training		Person	1,101	808	1,242	0	29
No. of participants in retiree training		Person	20	18	2	0	0

1. The data for 2022 has been revised due to some aggregation errors.
2. This data represents the cumulative No. of participants in the training courses.

Regular Performance and Career Development Reviews[3]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
No. of employees subject to performance evaluation		Person	1,132	1,188	1,202	72	133
Performance evaluation rate		%	93.3	93.4	94.4	16.8	30.6
Performance evaluation and career development review rate by gender	Male	%	94.0	95.4	96.0	15.3	30.0
	Female	%	87.6	78.3	82.7	22.1	33.0
Performance evaluation and career development review rate by employee category	Executive	%	100	100	100	100	100
	Manager level or higher (PM, manager level or higher)	%	98.4	98.7	99.6	47.9	70.4
	Non-manager level (Pro, assistant manager level or lower)	%	91.9	92.0	93.2	8.9	21.3

3. The data from 2021 to 2022 has been revised due to aggregation errors.

Suppliers[4]

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
No. of suppliers	Company	790	745	759	269	268
Total purchase from suppliers	KRW million	1,387,200	1,771,300	1,443,346	498,276	597,449
Total purchase from local suppliers	KRW million	1,250,200	1,615,500	1,282,249	14,743	23,939
Proportion of purchase from local suppliers	%	90.1	91.2	88.8	3.0	4.0

4. The 2022 data has been revised due to aggregation errors.

Social Impact Assessment of the Supply Chain

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
No. of new suppliers	Company	0	0	0	56	71
No. of new suppliers that conducted social impact assessment	Company	0	0	0	0	0
Percentage of new suppliers that conducted social impact assessment	%	0	0	0	0	0
No. of suppliers under focused management	Company	0	0	42	0	0
No. of suppliers that conducted social impact assessment	Company	14	17	47	0	0
No. of suppliers having practical or/and potential negative impact	Company	0	0	0	0	0
Percentage of suppliers that agreed improvement based on the results of social impact assessment	%	0	0	0	0	0
Percentage of suppliers whose contracts were terminated based on the results of social impact assessment	%	0	0	0	0	0

Social performance

Business partners' Dissatisfaction / Safety and Health related Grievance Mechanismt

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Business partners' dissatisfaction	No. of cases received	Case	73	220	233	13	21
	No. of cases processed	Case	73	209	232	13	21
	Ratio of cases processed	%	100	95	99.6	100	100

Social Contribution

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
Social contribution investment	KRW million	427	492	619	0	0
No. of social contribution programs	Program	32	41	49	0	0
No. of participants among employees [1]	Person	-	533	633	0	0
Total volunteer hours [1]	Hour	-	183	226	0	0
Amount of social value generated [2]	KRW million	-	-	749	0	0

1. Data on No. of participants among employees and total volunteer hours has been collected since 2022.
2. The amount of social value disclosed in the "Corporate Social Responsibility" section of the 2022 Sustainability Management Report is the total sum of the social value amounts calculated by Hyosung Corporation and its four operating companies. The social value amount for Hyosung Chemical has been aggregated since 2023. This is the total amount for donations, support for employment activation of women with careers, support for firefighters, donations for the Gangneung wildfire, donations for heavy rain relief, support for university theater groups, support for disabled artists, and welfare support for army soldiers.

Occupational Health and Safety Management System

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
Total No. of employees	Person	1,213	1,272	1,273	429	434
No. of workers who are not employees	Person	255	269	330	0	0
Subtotal (=①)	**Person**	**1,468**	**1,541**	**1,603**	**429**	**434**
No. of employees and workers who are covered by a system out of ①	Person	1,468	1,541	1,603	429	434
No. of employees and workers who are covered by a system that has been internally audited out of ①	Person	1,213	1,272	1,273	429	434
No. of employees and workers who are covered by such a system that has been audited or certified by an external party out of ①	Person	1,213	1,272	1,273	0	0

Occupational Injuries and Ill-health

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Employees	No. of work-related injuries and ill health	Person	5	4	6	0	0
	Rate of work-related injuries and ill health [3]	%	0.41	0.31	0.47	0	0
	No. of fatalities as a result of work-related injuries	Person	0	0	0	0	0
	Work-related fatality rate per ten thousand employees [4]		0	0	0	0	0
	No. of cases of work-related injuries and ill health	Case	5	4	6	0	0
	Lost Time Injury Frequency Rate (LTIFR) [5]	Cases per million hours	1.97	1.51	2.26	0	0
Workers who are not employees	No. of work-related injuries and ill health	Person	7	5	5	0	0
	Rate of work-related injuries and ill health [3]	%	2.75	1.86	1.52	0	0
	No. of fatalities as a result of work-related injuries	Person	0	0	0	0	0
	Work-related fatality rate per ten thousand employees [4]		0	0	0	0	0
	No. of cases of work-related injuries and ill health	Case	7	5	5	0	0
	Lost Time Injury Frequency Rate (LTIFR) [5]	Cases per million hours	13.15	8.90	7.26	0	0

3. Total No. of individuals affected by work related injuries and ill health ÷ Total no. of workers x 100. The data from 2021 to 2022 has been revised as the rate of work-related injuries and ill health for employees and workers who are not employees is now calculated separately.
4. No. of work-related fatalities ÷ Total No. of workers x 10,000
5. No. of work-related injuries and ill health ÷ Total work hours x 1,000,000

Minimum Notice Periods regarding Operational Changes

If there is a legal standard such as a notice of dismissal, it is notified in advance in accordance with the stipulated timeframes.

Social performance

Infringement of Local Community Rights

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
Total No. of incidents of violations involving the rights of indigenous people	Case	0	0	0	0	0

Products and Services subject to Safety/Health evaluations

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
Percentage of major products and services that have undergone evaluations for health and safety impacts.	%	100	100	100	100	100

Customer Privacy Protection

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Breaches of customer privacy	Complaints received from outside parties and substantiated by the organization	Case	0	0	0	0	0
	Complaints from regulatory bodies	Case	0	0	0	0	0
Total No. of identified leaks, thefts, or losses of customer data		Case	0	0	0	0	0

Quality Certification

Company	Business Sites	PU/Business Division	Certification
Hyosung Chemical	Yongyeon	PP/DH	ISO 9001
	Yongyeon	TPA	ISO 9001
	Yongyeon, Gumi	Film	ISO 9001
	Yongyeon, Oksan	Neochem	ISO 9001
	Yongyeon, Oksan	Optical Film	ISO 9001
	Yongyeon	POK	ISO 9001, IATF 16949
Hyosung Vina Chemicals Co., Ltd.	Vietnam	PP/DH	ISO 9001

Safety Certification

Company	Business Sites	PU/Business Division	Certification
Hyosung Chemical	Yongyeon	PP/DH	KOSHA MS
	Yongyeon, Oksan	Neochem	ISO 45001
	Yongyeon	TPA	KOSHA MS
	Yongyeon	POK	KOSHA MS
	Gumi	Film	ISO 45001, FSSC 22000

Association Membership

Company	Business Sites	PU/Business Division	Association
Hyosung Chemical	All	All	The Korean Chamber of Commerce and Industry
			Korea International Trade Association
			Korea Listed Companies Association
			Federation of Korean Industries
			Korea Employers Federation
			Korea Economic Research Institute
			Korea Semiconductor Industry Association
			Korea Specialty Gas Association
			Korea Petrochemical Industry Association
			Korea Packaging Technology Association
			Korean Institute of Chemical Engineers
			Korea Display Industry Association
			Korea Packaging Association
			Korea Human Resource Management Association
			Korea Exchange

Environmental Performance

Greenhouse gas and energy consumption data include all business sites of Hyosung Chemical (including the headquarters buildings in Banpo, Gongdeok, and Hoehyeon AK, Yongyeon Plants 1, 2, and 3, Oksan Plant, Gumi Plant, Daejeon Plant, and the tank terminal). Other environmental data has been aggregated to include the headquarters buildings (Banpo, Gongdeok, and Hoehyeon AK) and the tank terminal starting from 2023. The subsidiary data includes only the data from Hyosung Vina Chemicals Co., Ltd. in Vietnam.

Energy Consumption [1]

Category	Sub-category	Unit	Hyosung Chemical				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Direct energy consumption	Diesel	TJ	8.32	8.19	7.61	8.28	9.46	27.73
	Kerosene	TJ	0.04	0.02	0.03	0.02	0	0
	LNG	TJ	742.73	637.86	390.20	568.82	0	0
	NG	TJ	0	0	0	0	600.46	466.65
	Gasoline	TJ	0.85	0.75	1.18	0.60	0	0
	Propane	TJ	50.02	50.07	36.40	49.18	36.59	62.40
	BC oil	TJ	0	0	10.99	0	0	0
	Off-gas	TJ	5,698.64	5,591.13	4,825.69	5,821.30	2,143.29	3,152.14
	LPG	TJ	0.89	0.80	0.13	1.23	0	0
	Subtotal	**TJ**	**6,501.50**	**6,288.83**	**5,272.22**	**6,449.43**	**2,789.81**	**3,708.92**
Indirect energy consumption	Electricity [2]	TJ	11,934.32	12,093.80	10,587.71	11,528.54	2,247.60	2,812.83
	Steam	TJ	0	0	0	0	0	0
	Heat from waste incineration	TJ	496.27	455.76	544.96	435.38	0	0
	Subtotal	**TJ**	12,430.58	12,549.56	11,132.67	11,963.92	2,247.60	2,812.83
Total energy consumption	**Total**	**TJ**	**18,932.08**	**18,838.39**	**16,404.89**	**18,413.36**	**5,037.41**	**6,521.74**
Energy intensity [3] (Total energy consumption/Sales)		TJ/KRW 100 million	0.90	0.82	0.63	0.92	0.85	0.84
Separate sales		KRW 100 million	21,089	22,874	25,874	20,119	5,917	7,806
Renewable energy consumption	Self-generation (solar energy)	TJ	1.65	1.60	1.92	2.05	0	0
	Heat from waste Incineration [4]	TJ	496.27	455.76	544.96	435.38	0	0
	Subtotal	**TJ**	**497.91**	**457.36**	**546.88**	**437.44**	**0**	**0**

1. Some errors in the 2021-2022 data have been corrected.
2. The conversion coefficient for electricity energy consumption is 9.6 TJ/GWh for domestic use (based on the country's specific calorific value and emission coefficient for each fuel type) and 3.6 TJ/GWh for overseas use.
3. The intensity is calculated based on separate sales figures.
4. The heat from waste incineration for renewable energy is the amount purchased externally and used.

Treatment of Water and Effluents

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Wastewater discharge by destination	Wastewater treatment	Ton	1,692,788	1,727,196	1,513,662	976,231	688,587
	Outsourced treatment	Ton	389	59	59	0	0
Total Wastewater discharge		Ton	1,693,178	1,727,255	1,513,721	976,231	688,587
Biochemical Oxygen Demand (BOD)		Ton	6.6	6.0	4.2	17.1	13.4
Chemical Oxygen Demand (COD)		Ton	16.8	16.6	N/A	24.4	28.6
Total Organic Carbon (TOC) [5]		Ton	14.6	3.9	12.6	N/A	N/A
Suspended Solids (SS)		Ton	11.9	7.5	12.6	9.5	6.5
Total Nitrogen (T-N)		Ton	4.6	4.5	2.5	5.9	5.6
Total Phosphorus (T-P)		Ton	0.2	0.2	0.3	0.8	1.1

5. The Total Organic Carbon (TOC) item has been added.

Water Management [6,7]

Category	Sub-category	Unit	Hyosung Chemical				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Water consumption by withdrawal source	Municipal water	Ton	88,933	73,714	70,506	66,565	3,012,966	3,386,223
	Groundwater	Ton	34,980	77,964	59,535	82,141	0	0
	Industrial water	Ton	6,840,039	6,926,571	7,688,778	6,868,830	0	0
	Reused sewage treatment water	Ton	225,067	222,275	250,962	226,898	0	0
Total water consumption		**Ton**	**7,189,019**	**7,300,523**	**8,069,781**	**7,244,433**	**3,012,966**	**3,386,223**
Water consumption intensity (Total water consumption/sales)		Ton/KRW 100 million	340.9	319.2	311.9	360.1	509.2	433.8
Separate sales		KRW 100 million	21,089	22,874	25,874	20,119	5,917	7,806
Total reused water		Ton	225,067	222,275	250,962	226,898	704,135	1,044,487
Percentage of water consumption		%	3.1	3	3.1	3.1	23.4	30.8

6. Some errors in the 2021-2022 data have been corrected.

Category	Sub-category	Unit	Hyosung Chemical			
			2021	2022	2023	
					Plan	Performance
Yongyeon Plant 1	Municipal water	Ton	31,548	27,687	21,976	19,869
	Industrial water	Ton	3,253,945	3,253,949	3,558,383	3,217,167
	Reused water	Ton	225,067	222,275	250,962	226,898
	Subtotal	**Ton**	**3,510,560**	**3,503,910**	**3,831,321**	**3,463,934**
Yongyeon Plant 2	Municipal water	Ton	7,314	7,632	10,950	9,540
	Industrial water	Ton	3,018,774	3,051,210	3,464,580	3,018,456
	Ground water	Ton	34,980	31,164	36,135	31,482
	Subtotal	**Ton**	**3,061,068**	**3,090,006**	**3,511,665**	**3,059,478**
Yongyeon Plant 3	Municipal water	Ton	9,306	8,745	10,403	9,405
	Industrial water	Ton	223,707	232,287	265,319	239,877
	Subtotal	**Ton**	**233,013**	**241,032**	**275,721**	**249,282**
Gumi Plant	Municipal water	Ton	5,110	5,475	5,293	6,497
	Industrial water	Ton	146,365	153,300	149,833	168,484
	Subtotal	**Ton**	**151,475**	**158,775**	**155,125**	**174,981**
Oksan Plant	Municipal water	Ton	12,775	12,775	4,745	4,745
	Industrial water	Ton	120,450	155,125	171,915	171,915
	Subtotal	**Ton**	**133,225**	**167,900**	**176,660**	**176,660**
Daejeon Plant	Municipal water	Ton	22,880	11,400	17,140	7,742
	Industrial water	Ton	76,798	80,700	78,749	52,931
	Ground water	Ton	0	46,800	23,400	50,659
	Subtotal	**Ton**	**99,678**	**138,900**	**119,289**	**111,332**
Business sites other than the headquarters	Municipal water	Ton	0	0	8,766	8,766
Total water consumption		**Ton**	**7,189,019**	**7,300,523**	**8,069,781**	**7,244,433**

7. The subsidiary data pertains only to the single business site of Hyosung Vina Chemicals Co., Ltd. in Vietnam, so it has been excluded from the table.

Environmental Performance

Waste Disposal

Category	Sub-category	Unit	Hyosung Chemical				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Non-hazardous waste (ordinary waste)								
Outsourced treatment	Recycling	Ton	14,624	18,202	17,891	18,053	108	212
	Incineration	Ton	748	682	711	713	0	0
	Landfill	Ton	5,435	4,455	4,507	4,509	499	563
	Others	Ton	2,304	1,248	785	785	0	0
Subtotal		**Ton**	**23,112**	**24,587**	**23,894**	**24,058**	**608**	**775**
Hazardous waste (designated waste)								
Outsourced treatment	Recycling	Ton	756	458	1,698	1,201	0	0
	Incineration	Ton	396	374	341	357	539	859
	Landfill	Ton	12	3	25	30	0	0
	Others	Ton	4,329	4,738	3,461	3,722	423	32
Subtotal		**Ton**	**5,492**	**5,574**	**5,525**	**5,309**	**961**	**891**
Total waste generated		Ton	28,604	30,161	29,419	29,367	1,569	1,666
Total waste recycled		Ton	15,380	18,660	19,589	19,253	108	212
Total ratio of waste recycled		%	53.8	61.9	66.6	65.6	6.9	12.7

Air Pollutant Emissions [1]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
General air pollutants	Nitrogen Oxides (NOx)	Ton	230.9	240	128.6	7.0	122.2
	Sulfur Oxides (SOx)	Ton	13.5	25.9	52	0.3	7.2
	Particulate Matter (PM)	Ton	10.2	14.4	13.8	4.6	42.9
Volatile Organic Compounds (VOCs)[2]		Ton	1.4	0.9	2.2	N/A	N/A
Hazardous Air Pollutants (HAPs)[2]		Ton	14.4	16.8	47.1	N/A	N/A
Ozone-Depleting Substances (ODS) [3]	HCFC(R-22)	Ton	143	143	0	N/A	N/A
	CFC(R-11)	Ton	0	0	0	N/A	N/A
	HCFC(R-123)	Ton	0	0	0	N/A	N/A

1. Hyosung Chemical does not emit Persistent Organic Pollutants (POPs).
2. The data for 2021-2022 has been revised due to changes in the aggregation methods for Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs).
3. In the case of Ozone-Depleting Substances (ODS), the purchase amount has been considered as the emission amount and recorded accordingly.

Chemical Substances Management [4]

Category	Unit	Hyosung Chemical				Subsidiaries	
		2021	2022	2023		2022	2023
				Plan	Performance		
Hazardous chemicals consumption	Ton	300,785	333,099	282,125	281,086	856	1,163
Hazardous chemicals consumption intensity	Ton / KRW 100 million	14.26	14.56	10.90	13.97	0.14	0.15
Sperate sales	KRW 100 million	21,089	22,874	25,874	20,119	5,917	7,806
Chemical substance emissions	Ton	573	476	518	461	N/A	N/A

4. Some errors were identified in the 2022 data and have been corrected.

Environmentally Friendly Vehicles [5]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
On-road vehicles [6]	Electric vehicle	Car	0	0	2	0	0
	Hydrogen fuel cell electric vehicle	Car	1	1	1	0	0
Off-road vehicles [7]	Electric vehicle	Car	28	35	26	0	7
Total No. of company vehicles		Car	92	99	86	23	52
Ratio of environmentally friendly vehicle ownership [8]		%	31.5	36.4	33.7	0	13.5

5. Some errors in the 2021-2022 data have been corrected.
6. On-road vehicles: passenger cars, vans, trucks, special vehicles, and motorcycles (excluding electric bicycles).
7. Off-road vehicles: including construction machinery, agricultural machinery, and other unspecified vehicles (e.g., forklifts, tool cars, carts used in workplaces).
8. The classification is based on the definitions in Article 2 of the Act on the Promotion of Development and Distribution of Environmentally-Friendly Vehicles (abbreviated as the Environmentally-Friendly Vehicle Act).

Environmentally Friendly Products and Services Sales and Purchases [9]

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
Sales of environmentally friendly products and services	KRW million	211,823	188,578	190,293	0	0
Purchases of environmentally friendly products and services [10]	KRW million	17,107	15,234	20,336	0	0

9. Environmentally Friendly Products and Services
   1) Products and installation services with higher energy efficiency than existing products, such as LED lighting and high-efficiency certified equipment.
   2) Products with a lower carbon footprint than existing products, such as recycled chips and biochips.
   3) Products that emit fewer hazardous chemicals or environmental pollutants than existing products.
10. The data for 2021-2022 has been revised due to changes in the aggregation methods for environmentally friendly product purchases.

Environmentally Friendly Investment

Category	Unit	Hyosung Chemical				Subsidiaries	
		2021	2022	2023		2022	2023
				Plan	Performance		
Environmentally friendly research cost	KRW million	138	595	803	448	0	0
Environmentally friendly equipment cost [11]	KRW million	2,249	127	685	1,021	0	0

11. Environmentally friendly equipment: Equipment used to manufacture environmentally friendly products, equipment to eliminate or reduce environmental pollution, and equipment for recycling and other aspects of the circular economy.
    This investment is in accordance with Article 2 of the Act on the Promotion of Transition to an Environmentally Friendly Industrial Structure (abbreviated as the Environmentally-Friendly Industry Act).

Environmental Performance

GHG Emissions [1]

Category	Sub-category	Unit	Hyosung Chemical				Subsidiaries	
			2021	2022	2023		2022	2023
					Plan	Performance		
Direct GHG emissions (Scope 1)	Stationary combustion	tCO_2eq	271,239	261,614	236,828	267,443	119,512	154,963
	Mobile combustion	tCO_2eq	636	589	624	556	699	1,989
	Processing emissions	tCO_2eq	24,765	24,126	24,211	22,762	927	1,927
	Waste disposal	tCO_2eq	23,173	30,856	23,170	28,497	7,358	48,364
	Subtotal	**tCO_2eq**	**319,813**	**317,185**	**284,833**	**319,258**	**128,497**	**207,244**
	Biogenic CO_2 emissions	tCO_2eq	4	8	1	4	N/A	N/A
Indirect GHG emissions (Scope 2)	Electricity	tCO_2eq	567,422	574,879	514,221	548,088	394,267	493,417
	Steam	tCO_2eq	0	0	0	0	0	0
	Subtotal	**tCO_2eq**	**567,422**	**574,879**	**514,221**	**548,088**	**394,267**	**493,417**
Total GHG emissions (Scope 1&2)		tCO_2eq	887,235	892,064	799,055	867,346	522,763	700,661
GHG emissions intensity (Total GHG emissions/ separate sales) [2]	Scope 1	tCO_2eq/KRW 100million	15.2	13.9	11.0	15.9	21.7	26.5
	Scope 2	tCO_2eq/KRW 100million	26.9	25.1	19.9	27.2	66.6	63.2
	Subtotal	**tCO_2eq/KRW 100million**	**42.1**	**39.0**	**30.9**	**43.1**	**88.3**	**89.8**
Separate sales		KRW 100 million	21,089	22,874	25,874	20,119	5,917	7,806

1. The greenhouse gas emissions for 2021-2023 have been revised to include emissions from flare stacks. These emissions are reported and certified based on the Guidelines for Reporting and Certification of Emissions under the Emissions Trading Scheme (Ministry of Environment Notice No. 2021-278) and the Ministry of Environment's conformity assessment for the relevant year's emissions permit submission certification. Only CO_2, CH_4, and N_2O emissions are included. The total greenhouse gas emissions listed above may differ from the emissions reported in the business reports due to rounding off at the facility level.
2. The intensity has been calculated based on separate sales.

Reclaimed Packaging Materials [3]

Category	Sub-category	Unit	Hyosung Chemical		
			2021	2022	2023
Total amount of packaging materials sold	Pad	Each	356,182	351,885	336,476
	Pallet		65,790	59,047	60,666
	Core		753	1,012	1,003
	Tube		270,903	259,741	242,575
Total amount of reclaimed packaging materials	Pad	Each	159,528	111,274	94,970
	Pallet		27,135	28,705	22,849
	Core		764	981	731
	Tube		17,655	18,513	20,005
Percentage of reclaimed packaging materials	Pad	%	44.8	31.6	28.2
	Pallet		41.2	48.6	37.7
	Core		101.5	96.9	72.9
	Tube		6.5	7.1	8.2

3. Among domestic and subsidiary entities, only the Film PU at the Yongyeon and Gumi plants reclaims packaging materials, while no products are reclaimed at any of the business sites.

Expected Amount of Energy Savings and Greenhouse Gas Reduction[4]

Energy type	Business Sites	Project	Introduction date	Investment (KRW million)	Expected energy savings (kWh/year)	Expected energy savings (TJ/year)	Expected greenhouse gas reduction (tCO_2eq/year)
Scope2	Yongyeon 1	PP3 Recovery process: raw material recovery	23.04	564	787,966	7.6	362
		ECF-2,3 Distillation room air conditioning improvement	23.02	0	668,248	6.4	307
		ECF-1 Wastewater treatment facility non-operation	23.02	0	811,910	7.8	373
		ECF-2,3 Waste KF pump operation time adjustment	23.02	0	43,534	0.4	20
		CF-2,3 KOH absorption pump non-operation	23.02	0	30,474	0.3	14
		ECF-1,2,3 Air scrubber dust collector operation adjustment	23.04	0	95,775	0.9	44
		Neochem lighting facility operation efficiency improvement	23.06	0	250,321	2.4	115
	Yongyeon 2	Flexible operation of unrefined terephthalic acid centrifuge	23.06	0	557,236	5.3	256
		Shutdown of condensate supply pump at Seongam incineration plant	23.06	0	21,767	0.2	10
		Load reduction of distillation tower	23.01	0	87,068	0.8	40
	Yongyeon 3	Improvement of operating conditions for the No. 1 coater dryer	23.08	0	63,124	0.6	29
		Non-operation of agitators through load management of No. 1 and No. 2 fluff storage towers	23.04	0	43,534	0.4	20
		Improvement of preheating operation for polymer filters in No. 1 and No. 2 extruders	23.06	0	67,478	0.6	31
		Improvement of operating efficiency through dryer dew point control	23.09	24	78,361	0.8	36
	Gumi	Temperature control devices for machine direction stretching units 2-1, 2-9, 2-10 pump capacity reduction	23.09	10	15,237	0.1	7
		PET temperature control device 2: power cost reduction through improvement of temperature control system	23.11	1	78,361	0.8	36
	Oksan	Solvent condenser: improved thermal efficiency (energy savings through process condition adjustment)	23.02	0	208,963	2.0	96
		Optimal temperature management for turbo chillers during summer	23.08	0	204,610	2.0	94
		Optimal operation of cooling water pumps during summer: reduction of flow rate (from 3 pumps to 2)	23.08	0	50,064	0.5	23
		Application of inverters to air conditioners in electrical rooms	23.06	64	30,474	0.3	14

4. The expected amounts of energy savings and greenhouse gas reduction are estimated values based on the capacity and efficiency of the equipment, as well as the operating hours, before and after the project.

Renewable material consumption

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Renewable material consumption	Total consumption	Ton	1,017,462	979,665	989,452	376,656	622,249
	Renewable material consumption [5]	Ton	7,717	5,172	5,974	0	0
	Non-renewable material consumption [6]	Ton	1,009,745	974,493	983,478	0	0

5. Renewable materials are substances that are quickly replenished by ecological cycles or agricultural processes. In the case of fibers, these include materials sourced from bamboo, hemp, and biochips
6. Non-renewable materials are resource that do not renew in short time periods (e.g., coal, gas, metals, minerals, oil, etc.)

Environmental Performance

Biodiversity within the Areas Affected by Business Sites[1]

Country	Region	Characteristics of the locations of operation	Physical Risk	Reputation Risk	Risk indicators of the organization among physical risks			Endangered species	
					Ecosystem regulation service[2]		Biodiversity pressure	Nationally designated endangered species[3] (domestic)	I IUCN Red List[4] (overseas)
					Heat wave	Tropical cyclone (typhoon)	Pollutant emissions		
Republic of Korea	Seoul area	3 offices	2.5	2.5	3.5	4.5	2.9	1	80
	Ulsan	Yongyeon plant, tank terminal	3.2	3.3	3.0	4.5	4.1	6	92
	Oksan	Production	3.1	2.7	3.5	4.5	4.4	4	26
	Gumi	Production	2.6	2.7	3.5	4.5	4.1	7	24
	Daejeon	Production	3.0	2.7	3.5	4.5	4.4	0	26
	Anyang	Production	2.5	2.6	3.0	4.5	4.4	0	90
China	Quzhou	Production	3.0	3.1	3.5	4.5	4.3	N/A	22
Vietnam	Ba Ria Vung Tau	Production	3.3	3.0	3.5	3.5	4.0	N/A	223

1. The impacts were identified using the WWF (World Wide Fund for Nature) Biodiversity Risk Filter.
2. Regulating Services: Ecosystem services refer to the goods and benefits that humans receive directly or indirectly from ecosystem functions. Among these, regulating services are those that maintain and regulate environmental balance through the various interactions among ecosystem components.
3. In accordance with the Wildlife Protection and Management Act, the species protected by the Ministry of Environment for effective wildlife protection were aggregated based on the major administrative regions in the nationwide distribution survey of endangered wildlife by the National Institute of Biological Resources.
4. Based on the IUCN Red List of Threatened Species, species categorized as Critically Endangered (CR), Endangered (EN), and Vulnerable (VU) within a 25 km radius of the business site were aggregated.

Water Risks [8]

Category		Republic of Korea			Quzhou, China	Vina,Vietnam
		Seoul/Gumi/Yanyang	Ulsan	Oksan/Daejeon	Plant	Plant
Water risk [5]		Low to Medium	Medium to High	Low to Medium	High	High
Water stress [6]	Baseline	Medium to High	Medium to High	High	High	Low to Medium
	2030 Outlook [7]	Medium to High	Medium to High	High	High	Low to Medium

* The Water Resource Risk analysis tool (Aqueduct 4.0) from the World Resources Institute (WRI) was used.
5. A comprehensive indicator that aggregates quantity, quality, regulatory, and reputational risk indicators.
6. Water Stress: Total demand/available surface water and groundwater supply (low <10%, low to medium 10-20%, medium to high 20-40%, high 40-80%, Extremely High >80%)
7. BAU (Business as usual) scenario
8. Seoul: Headquarters offices (Banpo, Gongdeok, Hoehyeon AK), Gumi plant, Anyang plant, Ulsan: Yongyeon plants 1, 2, 3, Oksan plant, Daejeon plants, Quzhou plant in China, Vina Chemical in Vietnam

Environmental Initiative Memberships

Company	Business Sites	PU/Business Division	Initiative
Hyosung Chemical	All	All	Korea TCFD Alliance

Recycled Materials [9, 10]

Category	Sub-category	Unit	Hyosung Chemical			Subsidiaries	
			2021	2022	2023	2022	2023
Recycled materials	Total consumption	Ton	1,017,462	979,665	989,452	376,656	622,249
	Recycled input material consumption	Ton	32,744	32,961	34,247	0	0
	Percentage of recycled input material consumption	%	3.2	3.4	3.5	0	0

9. Recycled raw materials are materials that have undergone artificial recycling process, such as recycled chips.
10. The data for 2021-2022 has been revised due to changes in the aggregation methods for recycled input materials.

Environmental Impact Assessment of the Supply Chain

Category	Unit	Hyosung Chemical			Subsidiaries	
		2021	2022	2023	2022	2023
No. of new suppliers	Company	0	0	0	1	0
No. of new suppliers that conducted environmental impact assessment	Company	0	0	0	0	0
Ratio of new suppliers that conducted environmental impact assessment	%	0	0	0	0	0
No. of suppliers under focused management	Company	9	20	0	0	0
No. of suppliers that conducted environmental impact assessment	Company	9	17	47	0	0
No. of suppliers having practical or/and potential negative impact	Company	0	0	0	0	0
Ratio of suppliers that agreed improvement based on the results of environmental impact assessment	%	0	0	0	0	0
Ratio of suppliers whose contracts were terminated based on the results of environmental impact assessment	%	0	0	0	0	0

Environmental Management Certifications and Eco-Friendly Certifications

Company	Business Sites	PU/Business Division	Environmental Management	Eco-Friendly
Hyosung Chemical	Yongyeon	PP/DH	ISO 14001	GRS (PCR-PP)
	Yongyeon, Oksan	Neohem	ISO 14001	-
	Yongyeon	POK	ISO 14001	Green Technology, Green Technology Products
	Yongyeon	TPA	ISO 14001	-
	Yongyeon, Gumi	Film	ISO 14001	GRS (PCR-PET film)
	Yongyeon, Oksan	Optical film	ISO 14001	RCS
				USDA BioPreferred® program
	Anyang	M-Project	-	Environmental New Technology Certification No. 534
	Anyang		-	Environmental New Technology Certification No. 538
Vina Chemical	-	PP/DH	ISO 14001	-

Appendix

Third-Party Assurance Statement

ECONINE Co., Ltd. has provided an independent assurance statement in accordance with the scope and criteria of the assurance for the sustainability report conducted by Hyosung (referring to Hyosung Corporation and operating companies, hereinafter referred to as "Hyosung"). The assurance has been carried out on the assump¬tion that the information provided by Hyosung is complete and that the company is liable for all content in the sustainability report.

Assurance Criteria

ECONINE Co., Ltd. conducted verification in accordance with AA 1000 AccountAbility Principles (AA1000 AP) 2018 and GRI Standards 2021. We verified based on the following standards.

- Accountability Principle and Type 1, information reliability at a moderate level
- Compliance and reporting principles in accordance with GRI Universal Standards and Topic Standards

Assurance Scope and Measure

ECONINE Co., Ltd. verified the reliability of contents in this report based on the sam¬pling of sustainability performance from January 1, 2023 to December 31, 2023.

- Consistency with the annual report and other disclosures
- GRI Standards performance interconnected to materiality analysis process and material issues
- Consistency with previous reports and major changes
- Informational errors, inappropriate information and ambiguous expressions
- Interviews with internal and external stakeholders who participated in conducting the report

Independence and Eligibility

ECONINE Co., Ltd.'s performance of the assurance was carried out by professionally qualified personnel in the area of sustainability management in accordance with ECONINE Co., Ltd.'s code of ethics. ECONINE Co., Ltd. does not have any interest that could possibly hinder the independence of the verification of Hyosung other than the task of providing the third-party assurance service.

Limitations

The information provided in the sustainability report of Hyosung has limited accuracy in terms of completeness and correspondence that inher¬ently follows the process of selecting, measuring and assuming the infor¬mation. Hyosung provided the information and supporting data on the company's non-financial performance and ECONINE Co., Ltd. does not guarantee the reliability of the original data.

Conclusion

According to the certification results, the sustainability report of Hyosung is considered to have secured the ground for Type 1 assurance level of AA 1000 AccountAbility Principles (AA 1000 AP). Also, it is judged to be in accordance with GRI Universal Standards and Topic Standards, with no deviation from material reporting principles.

Inclusiveness People should be able to have a voice in decisions affecting them.
Based on its identification methodology, Hyosung identifies stakeholders, including customers, employees, partners, shareholders and investors, and local communities. ECONINE Co., Ltd. confirmed that Hyosung has developed and maintained a variety of communication channels in accordance with their major interests, both occasionally and periodically.

Materiality Decision-makers should identify and clarify material sustainability topics.
Hyosung utilized an issue pool created by operating companies to evaluate the impact of its group-level business activities on the environment, society, and the economy. 5 material topics were selected through the process, and the ESG Promotion Committee and the ESG Management Committee reviewed and approved these topics.

Responsiveness Organizations should behave transparently regarding material sustainability topics and related impacts.
Hyosung has revealed the significance of each of the 5 material topics, as well as 2023 performances and 2024 implementation plans.

Impact Organizations should monitor, measure and take responsibility for the impacts of their behaviors on the larger ecosystem.
Hyosung has disclosed measurable quantitative and qualitative indicators for evaluating the impact of performance and implementation plans for each of the 5 key material topics, implementing the GRI Standards to allow for the comparisons with other organizations.

Recommendations

The scope of Hyosung's sustainability report includes Hyosung Corporation and its 4 operating companies, with performance data covering subsidiaries that account for over 90% of the consolidated sales. Although this report is significant in that it provides stakeholders with a comprehensive explanation of the group's sustainability, it is subject to inherent structural limitations since it inevitably includes excess of explanations that are specific to the business characteristics and current status of individual organizations. It is advisable to issue distinct reports in the future that accurately reflect the distinct business characteristics and detailed sustainability performance of each entity, given the maturation of sustainability management activities at Hyosung Corporation and the 4 operating companies.

June 24, 2024
ECONINE Co., Ltd. CEO Seo Uk

ECONINE ESG Solution Partner

AA1000 Licensed Report 000-498/V3-414HE

GRI Standards Index

General Standards

GRI Standard 2021	Remark	
GRI 1 : Foundation 2021	Statement of use	Hyosung reports data for the period from January 1, 2023, to December 31, 2023, based on the GRI Standards 2021. For some significant performance, activities up to the first half of 2024 are also reported.
	GRI 1 used	GRI 1 : Foundation 2021
	Applicable GRI Sector Standard(s)	Not currently applicable (as of the report publication date in June 2024, the standards for the industry sectors relevant to Hyosung Corporation, Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials, and Hyosung Chemical have not been published).

GRI Standard 2021		Disclosure	Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical	Remarks
GRI 2 : General Disclosures 2021	2-1	Organizational details	6, 7, 11	6, 7, 41	6, 7, 71	6, 7, 98	6, 7, 117	
	2-2	Entities included in the organization's sustainability reporting	2, 30	2, 59	2, 87	2, 108	2, 130	
	2-3	Reporting period, frequency and contact point	2	2	2	2	2	
	2-4	Restatements of information	2, 31-35	2, 59-69	2, 87-96	2, 108-115	2, 130-141	
	2-5	External assurance	143	143	143	143	143	
	2-6	Activities, value chain and other business relationships	6, 7, 11, 21-24, 34, Business Report p.58	6, 7, 41, 43, 55-57, 65, Business Report p.20	6, 7, 71, 72, 84, 85, 92, Business Report p.27	6, 7, 100, 104, 113, Business Report p.16	6, 7, 117, Business Report p.21	
	2-7	Employees	32	61, 62	89	109	132	
	2-8	Workers who are not employees	32	61	89	109	132	
	2-9	Governance structure and composition	28, Homepage (BoD Composition and Activities)	42, Homepage (BoD Composition and Activities)	73, Homepage (BoD Composition and Activities)	HAMC Report p.114-117	Homepage (BoD Composition and Activities)	
	2-10	Nomination and selection of the highest governance body	Homepage (BoD Composition and Activities)	Homepage (Status of Board of Directors)	Homepage (BoD Composition and Activities)	Homepage (BoD Operation)	Homepage (BoD Composition and Activities)	
	2-11	Chair of the highest governance body	Business Report p.469	Homepage (Status of Board of Directors), Business Report p.243	Business Report p.341	HAMC Report p.114	Business Report p.265	
	2-12	Role of the highest governance body in overseeing the management of impacts	28, 29	42	73, Homepage (Risk Management)	99, Homepage (BoD Operation)	127-129	
	2-13	Delegation of responsibility for managing impacts	28, 29	42	73, Homepage (Risk Management)	99, Homepage (BoD Operation)	127-129	
	2-14	Role of the highest governance body in sustainability reporting	12, 28, 29	42, 44	73, 74	99, 101	118, 129	
	2-15	Conflicts of interest	Homepage (Rules for BoD Operation), Business Report p.502-504	Corporate Governance Report p.2	Homepage (BoD Operation Regulations), Homepage (Corporate Governance Charter)	HAMC Report p.114-117	Homepage (BoD Operation Regulations), Business Report p.292-293	
	2-16	Communication of critical concerns	28, 29	42, Homepage (Status of Board of Directors)	73, 76, 79, 82, 84	HAMC Report p.18-19, 24-27	129	
	2-17	Collective knowledge of the highest governance body	-	-	-	HAMC Report p.114-117	129	Information unavailable
	2-18	Evaluation of the performance of the highest governance body	-	-	-	HAMC Report p.114-117	-	Information unavailable
	2-19	Remuneration policies	Business Report p.492	Business Report p.266-267	Business Report p.361	HAMC Report p.114-117, Business Report p.271	Business Report p.286-287	
	2-20	Process to determine remuneration	Homepage (Charter of Corporate Governance-Article 11)	Homepage (Charter of Corporate Governance-Article 11)	Homepage (Charter of Corporate Governance-Article 11)	HAMC Report p.117	Homepage (Charter of Corporate Governance-Article 11)	
	2-21	Annual total compensation ratio	33	62	91	HAMC Report p.124	134	Confidentiality constraints
	2-22	Statement on sustainable development strategy	5	5, 42, Homepage (Greetings)	5	HAMC Report p.16-17	5, Homepage (Greetings)	
	2-23	Policy commitments	Homepage (ESG Policy)	41, Homepage (ESG Policy)	81, Homepage (ESG Policy)	Homepage (Policies&Regulations)	Homepage (ESG Policy),117, 141	
	2-24	Embedding policy commitments	28, Homepage (ESG Policy)	42, Homepage (ESG Policy)	73, Homepage (ESG Policy)	99	129, Homepage (ESG Policy)	
	2-25	Processes to remediate negative impacts	28, 29, Homepage (ESG Policy)	Homepage (ESG Policy)	Homepage (ESG Policy)	Homepage (Policies&Regulations)	127, 128, Homepage (ESG Policy)	
	2-26	Mechanisms for seeking advice and raising concerns	29, Homepage (Whistleblowing Center)	Homepage (Compliance Hotline)	Homepage (Ethical Management), Homepage (Whistleblowing Center)	Homepage(Whistleblowing Center)	Homepage (Whistleblowing Center)	
	2-27	Compliance with laws and regulations	31, Business Report p.521-530	60, Business Report p.277-278	88, Business Report p.375	108	131, Business Report p.295	
	2-28	Membership associations	18	18, 65	18, 88	HAMC Report p.143	18, 137	
	2-29	Approach to stakeholder engagement	9	9	9	HAMC Report p.20-21	9	
	2-30	Collective bargaining agreements	33	63	91	110	134	

*HAMC Report refers to the 2023 Sustainability Report of Hyosung Advanced Materials.

GRI Standards Index

Topic-Specific Standards

GRI Standard 2021		Disclosure	Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical	Remarks
GRI 3 : Material Topics 2021	3-1	Process to determine material topics	12	44	74	101	118, 119	
	3-2	List of material topics	12	44	74	101	118, 119	
	3-3	Management of material topics	13-29	45-58	75-86	102-107	119-129	
	201-1	Direct economic value generated and distributed	30	59	87	108	130	
	201-2	Financial implications and other risks and opportunities due to climate change	17, 18	51	81	HAMC Report p.40-45	Homepage (Response to Climate Change)	
	201-3	Defined benefit plan obligations and other retirement plans	33, 34	63	91, 92	110	134-135	
	201-4	Financial assistance received from government	Business Report p.247, 365	Business Report p.44	Business Report p.141, 269	Business Report p.39	Business Report p.93, 185	
	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	33	62	91	110	134	
	202-2	Proportion of senior management hired from the local community	32	61	89	109	132	
	203-1	Infrastructure investments and services supported	24, 35	24, 56, 65, Homepage (Sharing Management)	24, 93	24, 111	24, 136	
	203-2	Significant indirect economic impacts	21~24, 35	24, 56, 57, 65	24, 93, 84, 85	24, 104	24, 136	
	204-1	Proportion of spending on local suppliers	34	65	92	113	135	
	205-1	Operations assessed for risks related to corruption	31	60	88	HAMC Report p.108	131	
	205-2	Communication and training about anti-corruption policies and procedures	31, 34	60, 64	88, 92	112	131, 135	
	205-3	Confirmed incidents of corruption and actions taken	31	60	88	111	131	
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	31	60	88	HAMC Report p.109	131	
	207-1	Approach to tax	-	-	-	HAMC Report p.110	-	Information unavailable
	207-2	Tax governance, control, and risk management	-	-	-	HAMC Report p.110	-	Information unavailable
	207-3	Stakeholder engagement and management of concerns related to tax	-	-	-	HAMC Report p.110	-	Information unavailable
	207-4	Country-by-country reporting	30	59	87	108	130	
	301-1	Materials used by weight or volume	38	68	96	-	140	Confidentiality constraints
	301-2	Recycled input materials used	38	68	96	-	141	Confidentiality constraints
	301-3	Reclaimed products and their packaging materials	38	68	-	HAMC Report p.35	140	
	302-1	Energy consumption within the organization	36	66	94	114	138	
	302-3	Energy intensity	36	66	94	114	138	
	302-4	Reduction of energy consumption	36	69	94	114	140	
	303-1	Interactions with water as a shared resource	37, Homepage (Pollution Prevention)	69	95	HAMC Report p.36	141	
	303-2	Management of water discharge-related impacts	37, Homepage (Pollution Prevention)	69	95	HAMC Report p.36	121, 122, 141	
	303-3	Water withdrawal	37	67	95	115	138	
	303-4	Water discharge	37	67	95	115	138	
	303-5	Water consumption	37	67	95	115	138	
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	38	69	96	HAMC Report p.46-49	141	
	304-2	Significant impacts of activities, products and services on biodiversity	38	69	96	HAMC Report p.46-49	141	
	304-3	Habitats protected or restored	24	24	24	24, HAMC Report p.46-49, 101	24	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	38	69	96	HAMC Report p.46-49	141	

*HAMC Report refers to the 2023 Sustainability Report of Hyosung Advanced Materials.

GRI Standards Index

Topic-Specific Standards

GRI Standard 2021		Disclosure	Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical	Remarks
GRI 3 : Material Topics 2021	305-1	Direct (Scope 1) GHG emissions	36	66	94	114	140	
	305-2	Energy indirect (Scope 2) GHG emissions	36	66	94	114	140	
	305-3	Other indirect (Scope 3) GHG emissions	Disclosure on CDP	66	Disclosure on CDP	Disclosure on CDP	Disclosure on CDP	
	305-4	GHG emissions intensity	36	66	94	114	140	
	305-5	Reduction of GHG emissions	36	69	94	114	140	
	305-6	Emissions of ozone-depleting substances (ODS)	36	67	94	114	139	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	36	67	94	115	139	
	306-3	Waste generated	37	67	95	115	139	
	306-4	Waste diverted from disposal	37	67	95	115	139	
	306-5	Waste directed to disposal	37	67	95	115	139	
	308-1	New suppliers that were screened using environmental criteria	34	65	92	113	141	
	308-2	Negative environmental impacts in the supply chain and actions taken	34, Homepage (Win-win Management)	65	85, 92	113	141	
	401-1	New employee hires and employee turnover	32	61, 62	90	109	133	
	401-3	Parental leave	33	63	91	110	134	
	402-1	Minimum notice periods regarding operational changes	33	62	91	110	136	
	403-1	Occupational health and safety management system	25-27	52-54	82, 83	HAMC Report p.80	125, 126	
	403-2	Hazard identification, risk assessment, and incident investigation	25-27	52, 54	82, 83	HAMC Report p.82-83	125	
	403-3	Occupational health services	25-27, 35	53, 54, 64	82, 83, 93	103, HAMC Report p.83-85	125, 126, 136	
	403-4	Worker participation, consultation, and communication on occupational health and safety	25-26	54	82, 83	Homepage (Safety & Health Vision)	125	
	403-5	Worker training on occupational health and safety	25-27, 34	53, 64	82, 83	HAMC Report p.84, 131	126	
	403-6	Promotion of worker health	Homepage (Safety&Health)	53, Homepage (Safety and Health Management)	83	103, HAMC Report p.85	126	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	26-27	53-54	82, 83	103, HAMC Report p.82-85	126	
	403-8	Workers covered by an occupational health and safety management system	35	64	93	113	136	
	403-9	Work-related injuries	35	64	93	113	136	
	403-10	Work-related ill health	35	64	93	113	136	
	404-1	Average hours of training per year per employee	34	64	92	112	135	
	404-2	Programs for upgrading employee skills and transition assistance programs	Homepage (Talent Development)	Homepage (Talent Development)	Homepage (Talent Development)	Homepage (Talent Management)	Homepage (Talent Development)	
	404-3	Percentage of employees receiving regular performance and career development reviews	34	63	92	109	135	
	405-1	Diversity of governance bodies and employees	32	61	89	111	132	
	405-2	Ratio of basic salary and remuneration of women to men	33	62	91	110	134	
	406-1	Incidents of discrimination and corrective actions taken	31	60	88	111	131	
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	N/A(Information unavailable)	N/A(Information unavailable)	N/A(Information unavailable)	HAMC Report p.65-69, 88-91	N/A(Information unavailable)	Incomplete information on suppliers

*HAMC Report refers to the 2023 Sustainability Report of Hyosung Advanced Materials.

GRI Standards Index

Topic-Specific Standards

GRI Standard 2021		Disclosure	Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical	Remarks
GRI 3 : Material Topics 2021	408-1	Operations and suppliers at significant risk for incidents of child labor	-	-	-	HAMC Report p.91, 129	-	Information unavailable
	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	-	-	HAMC Report p.91, 129	-	Information unavailable
	410-1	Security personnel trained in human rights policies or procedures	34	64	92	112	135	
	411-1	Incidents of violations involving rights of indigenous peoples	35	64	93	HAMC Report p.98-99	137	
	413-1	Operations with local community engagement, impact assessments, and development programs	35	65	93	111	136	
	413-2	Operations with significant actual and potential negative impacts on local communities	-	-	-	HAMC Report p.98-99	-	Information unavailable
	414-1	New suppliers that were screened using social criteria	34	65	92	113	135	
	414-2	Negative social impacts in the supply chain and actions taken	34	65	85, 92	113	135	
	416-1	Assessment of the health and safety impacts of product and service categories	34	65	93	Homepage (Product Responsibility), HAMC Report p.56	137	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	31	60	88	HAMC Report p.50-51, 121	131	
	417-1	Requirements for product and service information and labeling	34	65	93	HAMC Report p.127	-	
	417-2	Incidents of non-compliance concerning product and service information and labeling	31	60	88	HAMC Report p.127	131	
	417-3	Incidents of non-compliance concerning marketing communications	31	60	88	HAMC Report p.127	131	
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	35	65	93	112	137	

*HAMC Report refers to the 2023 Sustainability Report of Hyosung Advanced Materials.

SASB

In 2011, the Sustainability Accounting Standards Board (SASB) was established to develop industry-specific sustainability accounting standards. Since then, SASB has identified financially material sustainability issues for each industry, considering their unique characteristics, and has published these issues for 77 industries across 11 sectors according to the Sustainable Industry Classification System (SICS). Accordingly, Hyosung Corporation and its four operating companies disclose relevant information in their sustainability reports in alignment with SASB standards and SICS industry classifications, striving to engage more actively with stakeholders.

Chemicals

Sustainability Disclosure Topics & Accounting Metrics							
Topic	Code	Metric	Category	Page			Comments
				Hyosung TNC	Hyosung Advanced Materials	Hyosung Chemical	
Greenhouse Gas Emissions	RT-CH-110a.1	Gross global Scope 1 emissions, percentage covered under emissionslimiting regulations	Quantitative	66	114	140	
	RT-CH-110a.2	Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	49~51	102	Homepage (Response to Climate Change)	
Air Quality	RT-CH-120a.1	Air emissions of the following pollutants: (1) NOX (excluding N2O), (2) SOX, (3) volatile organic compounds (VOCs), (4) hazardous air pollutants (HAPs)	Quantitative	67	115	139	
Energy Management	RT-CH-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable and (4) total self-generated energy	Quantitative	66	115	138	
Water Management	RT-CH-140a.1	(1) Total water withdrawn, (2) total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	67	115	138, 141	
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	60	108	131	
	RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	Hompage (Water Quality)	HAMC Report p.36-37	121, 122	
Hazardous Waste Management	RT-CH-150a.1	(1) Amount of hazardous waste generated, (2) percentage recycled	Quantitative	67	114	139	
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	Discussion and Analysis	22	HAMC Report p.98-101	128	
Workforce Health & Safety	RT-CH-320a.1	(1) Total recordable incident rate (TRIR)and (2) fatality rate for (a) direct employees and (b) contract employees	Quantitative	64	113	136	
	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	Discussion and Analysis	54	HAMC Report p.82-83	125, 126	
Product Design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for usephase resource efficiency	Quantitative	68	108	Not applicable	
Safety & Environmental Stewardship of Chemicals	RT-CH-410b.1	(1) Percentage of products that contain Globally Harmonised System of Classification and Labelling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	Quantitative	68	Not applicable	137	
	RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human or environmental impact	Discussion and Analysis	Homepage (Chemical materials)	HAMC Report p.50-51	123, 124	
Genetically Modified Organisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	Quantitative	N/A	Not applicable	Not applicable	
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Discussion of corporate positions related to government regulations or policy proposals that address environmental and social factors affecting the industry	Discussion and Analysis	Homepage (Green Management)	HAMC Report p.33, 35	121, 122	
Operational Safety, Emergency Preparedness & Response	RT-CH-540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	Quantitative	64	-	-	
	RT-CH-540a.2	Number of transport incidents	Quantitative	N/A	-	-	

Activity Metric					
Code	Activity Metric	Category	Page		Comments
			Hyosung TNC	Hyosung Advanced Materials	Hyosung Chemical	
RT-CH-000.A	Production by reportable segment	Quantitative	Business Report - 2. Business Overview - 3. Raw Materials and Production Facilities	113	-	

Electrical & Electronic Equipment

Sustainability Disclosure Topics & Accounting Metrics					
Topic	Code	Metric	Category	Page	Comments
				Hyosung Heavy Industries	
Energy Management	RT-EE-130a.1	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	94	
Hazardous Waste Management	RT-EE-150a.1	(1) Amount of hazardous waste generated, (2) percentage recycled	Quantitative	95	
	RT-EE-150a.2	(1) Number and aggregate quantity of reportable spills, (2) quantity recovered	Quantitative	-	Information incomplete
Product Safety	RT-EE-250a.1	(1) Number of recalls issued, (2) total units recalled	Quantitative	-	Not applicable
	RT-EE-250a.2	Total amount of monetary losses as a result of legal proceedings associated with product safety	Quantitative	88	
Product Lifecycle Management	RT-EE-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	-	Not applicable
	RT-EE-410a.2	Percentage of eligible products, by revenue, certified to an energy efficiency certification	Quantitative	-	Not applicable
	RT-EE-410a.3	Revenue from renewable energy-related and energy efficiency-related products	Quantitative	96	
Materials Sourcing	RT-EE-440a.1	Description of the management of risks associated with the use of critical materials	Discussion and Analysis	Homepage (Pollution Prevention)	
Business Ethics	RT-EE-510a.1	Description of policies and practices for prevention of: (1) corruption and bribery and (2) anti-competitive behaviour	Discussion and Analysis	Homepage (Ethical Management)	
	RT-EE-510a.2	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	Quantitative	88	
	RT-EE-510a.3	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behaviour regulations	Quantitative	88	

Activity Metric				
Code	Activity Metric	Category	Page	Comments
			Hyosung Heavy Industries	
RT-EE-000.A	Number of units produced by product category	Quantitative	-	Confidential
RT-EE-000.B	Number of employees	Quantitative	89	

SASB

Engineering & Construction

Sustainability Disclosure Topics & Accounting Metrics					
Topic	Code	Metric	Category	Page	Comments
				Hyosung Heavy Industries	
Environmental Impacts of Project Development	IF-EN-160a.1	Number of incidents of non-compliance with environmental permits, standards and regulations	Quantitative	88	
	IF-EN-160a.2	Discussion of processes to assess and manage environmental risks associated with project design, siting and construction	Discussion and Analysis	78	
Structural Integrity & Safety	IF-EN-250a.1	Amount of defect- and safety-related rework costs	Quantitative	-	Not applicable
	IF-EN-250a.2	Total amount of monetary losses as a result of legal proceedings associated with defect- and safety-related incidents	Quantitative	88	
Workforce Health & Safety	IF-EN-320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employe	Quantitative	93	
Lifecycle Impacts of Buildings & Infrastructure	IF-EN-410a.1	Number of (1) commissioned projects certified to a third-party multi-attribute sustainability standard and (2) active projects seeking such certification	Quantitative	78	
	IF-EN-410a.2	Discussion of process to incorporate operational-phase energy and water efficiency considerations into project planning and design	Discussion and Analysis	78	
Climate Impacts of Business Mi	IF-EN-410b.1	Amount of backlog for (1) hydrocarbonrelated projects and (2) renewable energy projects	Quantitative	-	Confidential
	IF-EN-410b.2	Amount of backlog cancellations associated with hydrocarbon-related projects	Quantitative	-	Confidential
	IF-EN-410b.3	Amount of backlog cancellations associated with hydrocarbon-related projects	Quantitative	-	Confidential
Business Ethics	IF-EN-510a.1	(1) Number of active projects and (2) backlog in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Quantitative	-	No related projects
	IF-EN-510a.2	Total amount of monetary losses as a result of legal proceedings associated with charges of (1) bribery or corruption and (2) anti-competitive practices	Quantitative	88	
	IF-EN-510a.3	Description of policies and practices for prevention of (1) bribery and corruption, and (2) anti-competitive behaviour in the project bidding processes	Discussion and Analysis	Homepage (Ethical Management)	

Activity Metric				
Code	Activity Metric	Category	Page	Comments
			Hyosung Heavy Industries	
IF-EN-000.A	Number of active projects	Quantitative	-	Confidential
IF-EN-000.B	Number of commissioned projects	Quantitative	-	Confidential
IF-EN-000.C	Total backlog	Quantitative	-	Confidential

Asset Management & Custody Activities

Sustainability Disclosure Topics & Accounting Metrics					
Topic	Code	Metric	Category	Page	Comments
				Hyosung Corporation	
Transparent Information & Fair Advice for Customers	FN-AC-270a.1	(1) Number and (2) percentage of licensed employees and identified decision-makers with a record of investment-related investigations, consumer-initiated complaints, private civil litigations, or other regulatory proceedings	Quantitative	31	
	FN-AC-270a.2	Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of financial product-related information to new and returning customers	Quantitative	-	Not applicable
	FN-AC-270a.3	Description of approach to informing customers about products and services	Discussion and Analysis	34	
Employee Diversity & Inclusion	FN-AC-330a.1	Percentage of (1) gender and (2) diversity group representation for (a) executive management, (b) non-executive management, (c) professionals, and (d) all other employees	Quantitative	32	
Incorporation of Environmental, Social, and Governance Factors in Investment Management & Advisory	FN-AC-410a.1	Amount of assets under management, by asset class, that employ (1) integration of environmental, social, and governance (ESG) issues, (2) sustainability themed investing and (3) screening	Quantitative	-	Not applicable
	FN-AC-410a.2	Description of approach to incorporation of environmental, social and governance (ESG) factors in investment or wealth management processes and strategies	Discussion and Analysis	-	Not applicable
	FN-AC-410a.3	Description of proxy voting and investee engagement policies and procedures	Discussion and Analysis	-	Not applicable
Financed Emissions	FN-AC-410b.1	Absolute gross financed emissions, disaggregated by (1) Scope 1, (2) Scope 2 and (3) Scope 3	Quantitative	-	Not applicable
	FN-AC-410b.2	Total amount of assets under management (AUM) included in the financed emissions disclosure	Quantitative	-	Not applicable
	FN-AC-410b.2	Percentage of total assets under management (AUM) included in the financed emissions calculation	Quantitative	-	Not applicable
	FN-AC-410b.4	Description of the methodology used to calculate financed emissions	Discussion and Analysis	-	Not applicable
Business Ethics	FN-AC-510a.1	Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, antitrust, anticompetitive behaviour, market manipulation, malpractice, or other related financial industry laws or regulations	Quantitative	31	
	FN-AC-510a.2	Description of whistleblower policies and procedures	Discussion and Analysis	29	Homepage (Whistleblowing Process)

Activity Metric				
Code	Activity Metric	Category	Page	Comments
			Hyosung Corporation	
FN-AC-000.A	Total assets under management (AUM)	Quantitative	-	Not applicable
FN-AC-000.B	Total assets under custody and supervision	Quantitative	-	Not applicable