

2024 GS E&C Integrated Report



COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through
Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

About This Report

Report Overview

GS E&C is committed to creating stable financial value through its business activities while pursuing environmental and social values, as a global E&C company. We are accelerating ESG (environmental, social, and governance) management by carrying out our environmental and social responsibilities to the fullest, guided by the vision of becoming a “Sustainable Global Company.” Our 13th Integrated Report transparently discloses to our stakeholders information on our financial and non-financial performance achieved through ESG management.

Reporting Principles

This report was prepared in compliance with the Global Reporting Initiative (GRI) Standards of 2021.

Reporting Period

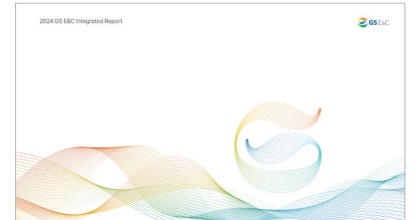
January 1, 2023 to December 31, 2023 (including some major achievements /performance in the first half of 2024)

Reporting Scope

The headquarters, 189 business sites, and major supply networks of GS E&C in the Republic of Korea and abroad (Korean International Financial Reporting Standards, K-IFRS) , on governance, society and the environment

Reporting Assurance

This report has been verified by an independent assurance provider to ensure the credibility and integrity of its preparation process and contents. The results of this third-party assurance can be found in the Independent Assurance Statement.



Cover Story

We designed sustainable values that have an impact on society, the environment and the economy in gradation graphic to convey the meaning of each value in three colors of orange, green and blue. The cover design of this report utilizes the dynamic form of line illustration to express GS E&C’s management philosophy, “We create the value of new life and fulfill the dream of a better tomorrow with customers.”

Interactive PDF

This report was produced as an interactive PDF, offering features such as shortcuts to relevant pages in the report and shortcuts to relevant webpage, etc.

☰ Contents 🖨️ Print 📌 Save ↶ Back page

Contact Information

Address Gran Seoul, 33, Jong-ro, Jongno-gu,
Seoul, 03159, Republic of Korea
Hyungsoo Jang, Senior manager of ESG
Team, GS E&C
Tel +82-2-2154-5025
E-mail hsjang2@gsenc.com
www.gsenc.com

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Contents

COMMITMENT

- 005 CEO Message
- 006 Business Overview
- 007 Business Portfolio

ESG CORE

- 013 ESG Strategy
- 014 Stakeholder Communication
- 015 Double Materiality Assessment
- 019 Materiality Issue 1.
Occupational Health and Safety Management
- 029 Materiality Issue 2.
Response to Climate Change
- 037 Materiality Issue 3.
Supply-Chain Management and Strengthening of Shared Growth
- 041 Materiality Issue 4.
Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

- 047 Minimizing Environmental Impact
- 058 Developing Eco-friendly Technology

Social

- 061 Human Rights Management
- 063 Talent Management and Respect for Diversity
- 069 Strengthening Communication with Stakeholders through Digital Innovation
- 075 Strengthening Information Protection
- 078 Local Communities Development and Engagement

Governance

- 083 Establishment of Transparent Governance
- 087 Implementation of Responsible and Fair Ethical Management
- 091 Strengthening Company-wide Risk Management

APPENDIX

- 095 ESG Performance Data
- 104 GRI Standards 2021
- 107 SASB
- 108 TCFD
- 108 UNGC Advanced Level
- 108 Award and Certification
- 109 Membership Associations
- 110 GHG Verification Summary
- 113 Independent Assurance Statement

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through
Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

COMMITMENT

005 CEO Message

006 Business Overview

007 Business Portfolio

COMMITMENT

→ CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through
Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

CEO Message



Dear stakeholders,

I would like to extend my sincere gratitude to our esteemed stakeholders for the unwavering support and encouragement you have given GS E&C.

Global politics has continued to be disrupted by conflicts in Europe and the Middle East and the domestic economic uncertainty due to high prices, interest rates and exchange rates. The environment at home and abroad has placed companies in situations that are difficult to manage. However, we have scored meaningful achievements and laid a firm foundation for sustainable growth based on our construction competency, leading technology, and brand value.

We have evolved into a total-solutions company that can create synergies while maintaining a stable balance between the construction sector and new business. In particular, we will actively seek opportunities for eco-friendly future business such as environmentally friendly modular housing projects, second battery recycling, water treatment, waste management and new renewable energy business. It also encompasses CCUS, hydrogen/ammonia, Urban Aviation Mobility (UAM) and Small Modular Reactor (SMR). It demonstrates our willingness to comply with global efforts to reduce GHG emissions. We also aim to establish a sustainable business model and ecofriendly values through these initiatives.

GS E&C is striving to pursue sustainable prosperity and meet the heightened social responsibilities. Part of its efforts, the ESG committee, the highest decision-making body, examines the management system company-wide, and we are strengthening our authority to execute sustainable management through the ESG Council and the Subsidiary Council. We are dedicated to ESG management, which includes responding to the climate-change crisis, human rights issues and supply-chain risks under the governance system. We will continue to use our influence to improve the sustainability of our entire value chain. We communicate our achievements in this direction to our stakeholders to continue growing as a representative sustainable company. Your continuous support and interest will be highly appreciated.

June 2024

GS E&C CEO **Huh Yoon-hong**

Business Overview

GS E&C was founded on December 19, 1969 as Lackhee Development Co. (LDC). The corporation’s name was changed in March 2005 to our current name, GS E&C. We consider customer value as our top priority in all business areas, including architecture/housing, plants, infrastructure, and new eco businesses. As a leading ESG company, GS E&C will pursue growth as a global top-tier E&C company that promotes sustainable values all over the world.

Overseas subsidiaries and branches

*As of December 2023

24 overseas subsidiaries and branches

Overseas branches

7 countries | 7 branch offices

UAE, Saudi Arabia, Bahrain, China, Singapore, Indonesia, and Vietnam

Overseas subsidiaries

13 countries | 17 subsidiaries

UAE, Saudi Arabia (2), Philippines, India (2), China, Vietnam (2), Thailand, Indonesia, Australia, Spain, UK, Poland (2) and USA.

Business Overview

Company name		GS E&C(GS Engineering & Construction Corp.)
Date of Establishment		December 19, 1969
Total assets		KRW 17.7 trillion
Credit rating	Corporate bil	A2(Korea Ratings)
	Corporate Bonds	A(Korea Ratings)
No. of business sites		155
No. of employees		5,256

2023 Financial Performance

Unit : KRW 100 million

Sales	Orders received	Operating profit*
134,367	101,844	(3,879)

* Converted into deficit compared to the previous year after application of reconstruction costs related to the accident in Geomdan New Town, Incheon

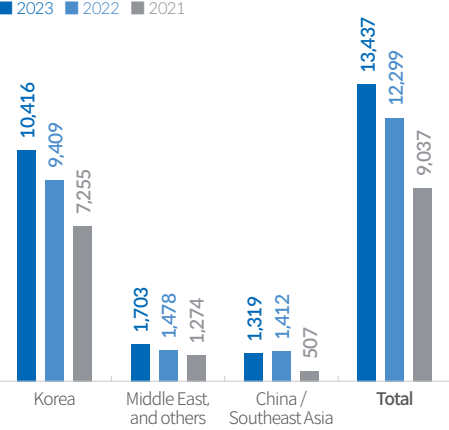
2023 Performance by Customers

Unit : %

Classification	By sales	By order received
Private	74	67
Overseas	22	21
Public	4	13

Sales by major market

Unit : KRW billion



COMMITMENT

CEO Message

Business Overview

→ **Business Portfolio**

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through
Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Business Portfolio

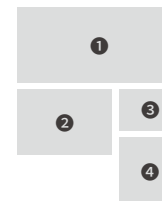


Architecture and Housing

GS E&C's construction business projects include all types of structures including housing, office facilities and manufacturing facilities. We have experience in construction management as well as differentiated technologies applicable to state-of-the-art office buildings, factory facilities, Internet data centers, etc. In the housing business, we plan and supply premium residential products based on awareness of our leading apartment brand, Xi, and our technology in line with changes of customer perception and demand. Furthermore, we suggest lifestyle enhancement for our customers by establishing a two-way communication platform as well as providing residential spaces.

Looking Ahead

As the architecture business is expanding and becoming more sophisticated, there has been a steady growth in demand for state-of-art office buildings and high-tech equipment production facilities, such as semiconductor and LCD factories. GS E&C will strive to pursue sustainable growth with differentiated technology and accumulated know-how gained from implementing such large-scale projects. There is also increasing demand for maintenance business caused by deterioration of metropolitan areas and old downtown areas of local cities. The housing-supply policy will also continue including the Third New Town. Therefore, we will expand the size of our business, and accordingly secure business stability by actively participating in architecture and housing projects.



① Brighten Yeouido

- Construction period: July 2019 - April 2023
- Construction scale: 1,503 units

② Songdo Xi Crystal Ocean

- Construction period: January 2021 - June 2024
- Construction scale: 1,503 units

③ LG Science Park DP2 2nd stage

- Construction period: January 2021 - June 2024
- Construction scale: Four floors underground, nine to ten floors above ground, four buildings (research facilities)

④ Data Center, Hoggie-dong, Anyang City

- Construction period: August 2021 - February 2024
- Construction scale: Three floors underground - nine floors above ground, Data Center

COMMITMENT

CEO Message

Business Overview

→ Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Business Portfolio



New Business

GS E&C has implemented its business in various fields including modular (prefab), housing, recycling of secondary batteries, smart fish farming, and other business. Unlike conventional methods, the modular (prefab) method, is a construction technique by which structures and building materials are produced to a certain stage in a factory, before being transported and completed on-site. GS E&C has equipped itself with capabilities to respond to the modular market in various types and purposes by taking over advanced modular companies in Europe and establishing subsidiaries in Korea. After witnessing a drastic increase in the volume of waste batteries after the expansion of EVs and the electronic mobile market, GS E&C established Energy Materials Co., Ltd* to advance into the Lithium-ion battery recycling industry in 2020. We took over Inima, a specialized company for water treatment, and expanded our industrial water assets. As a result, we secured water and sewage business operation abilities with expansion of our business portfolio. Similarly, as part of our efforts to prepare for developments in fish farming, we deployed our water-treatment technology as part of the Busan Smart Fishing Cluster Project. Through these efforts, we have laid the foundation for a next-generation fishing business focused on the growth of eco-friendly fish farming. We plan to produce 500 tons of Atlantic salmon per year from 2025, thereby contributing to the sustainable growth of the domestic fisheries industry. GS E&C continues to utilize sustainable resources and implement social responsibility through these innovative new businesses.

*Former) ENERMA Co., Ltd.

Looking Ahead

Modulr (prefab) construction has a variety of advantages such as shorter construction period compared to conventional construction methods, reduced waste, and fewer safety accidents. Its utilization and importance have been demonstrated and are continuously increasing. To improve its construction capability with the modular method and expand its applications, GS E&C has established a research department and concentrated its competencies in R&D. Danwood, a subsidiary of the company's wooden detached housing business, is reinforcing its advantage in the modular (prefab) construction method to maximize efficiency of construction by developing passive production to reduce external energy use, developing 3D volume type, and applying eco-friendly materials. GPC, a domestic manufacturer of precast concrete products, introduced carbon-capture technology into Precast Concrete (PC) products to obtain carbon credits and reduce the amount of cement usage, thereby making the PC production-process more eco-friendly. The launching of Energy Materials Co., Ltd. will be completed within this year and it will vitalize the modular construction industry. GS E&C will also intensify its market dominance, and expand business sites by possessing various national water treatment facilities for industrial water and sewage such as Inima. As a specialized company in the global modular (prefab) market, GS E&C will advance as a new global leader with a goal of generating KRW 531.2 billion and KRW 144 billion in Danwood and GPC respectively in 2025.



- | | |
|---|---|
| 1 | 3 |
| 2 | 4 |
- ① Energy Materials Co., Ltd(Pohang)

•Lithium-ion battery recycling business

•Black Mass Processing Scale: 20,000 ton/year

② Mostaganem

•Seawater desalination 200,000m³/day

•Cocession: 2008-2036 (29 years)

③ Precast Concrete (PC) plant in Eumseong-gun, Chungcheongbuk-do

•Production scale: 170,000m³/year

④ Modular house supplied by Danwood in Poland

•1,500 units of housing are produced and supplied annually

COMMITMENT

CEO Message
Business Overview
→ [Business Portfolio](#)

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Business Portfolio



Plant construction

Plant construction involves complex projects that require basic and concrete design of facilities related to oil, gas, petrochemicals, etc., the procurement of materials, the final completion of construction and various other services encompassing feasible studies, maintenance, and operation. GS E&C is one of the global-leading EPC players in oil refinery plants, commencing with the CDU expansion project implemented in 1979 and the successful completion of an advancement facility for Residual Fluid Catalytic Cracking (RFCC) in 1992. We have successfully completed various projects in many countries based on our experience and excellent technology. In the gas plants field, since our first launching of the LPG/LNG Terminal in Incheon and the Shantou LPG Terminal in China, we have successfully carried out a range of projects in the Middle East, and Asia, based on our strengths in constructing gas-processing facilities and LNG terminals.

Looking Ahead

GS E&C intends to discover commercialization opportunities focused on profitable projects based on its experience of conducting many projects in the UAE, Saudi Arabia, and Oman — and its good relationships with clients. As eco-friendly projects have expanded globally, we have also pursued Carbon Capture, Utilization & Storage (CCUS), and White bio business, etc. Furthermore, we aim to diversify our business by establishing partnerships with leading companies based on our module-design technology accumulated through numerous oil, petrochemicals, and gas plant business projects. We are expanding new Engineering, Procurement and Construction (EPC) business gradually such as hydrogen energy, Biofuel, and recycling of waste plastics.



- ① **MFC Project (Jeonnam)**
 - Construction period: August 2018 - March 2021
 - Construction scale: Ethylene 700,000 tons/year, Propylene 350,000 tons/year, Polyethylene 500,000 ton/year
- ② **Karbala Refinery Project**
 - Construction period: May 2014 - December 2023
 - Construction scale : Refinery 140,000 BPSD(CDU 140,000 BPSD/ VDU 75,000 BPSD)
- ③ **Boryeong LNG Terminal Project**
 - Construction period: May 2013 – October 2023 (Stage 1~2-3 stage)
 - Construction scale: 7 LNG Tanks, 1 LPG Tank, vaporizer facility
- ④ **Y2C(Yeosu No2. Complex)**
 - Construction period: August 2018 – June 2021
 - Construction scale: NCC 800,000 ton/year, HDPE 200,000 ton/year

1

2

3

4

COMMITMENT

CEO Message

Business Overview

→ [Business Portfolio](#)

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through
Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Business Portfolio



Infrastructure

In the infrastructure business division, GS E&C constructs basic facilities for other industries by creating new spaces of public interest in the natural environment. In the domestic market, we have participated in numerous public and private civil engineering and SOC projects based on our accumulated construction know-how and our developed technologies, and have contributed to the national economy and balanced land development. In the case of overseas markets, we have advanced into the Vietnamese market and are in the early stages of a new city development project. Furthermore, we are carrying out several subway-construction projects in Singapore based on our outstanding technology and experience. Lastly, we are contributing to making construction sites safer and more advanced by applying smart construction technology, and automated construction equipment. GS E&C will lead the infrastructure industry at home and abroad and provide innovative solutions for sustainable development of the global construction industry.

Looking Ahead

Following the amendment of laws in the Republic of Korea allowing investment from the private sector, the infrastructure business is expected to expand in the country. GS E&C took the initiative of being designated as a private preferred bidder for Sasang Haundae Express in Busan. We will strive to win private infrastructure projects by reinforcing private sector-led projects.

We also successfully participated in Australia's PPP project. Based on this achievement, the Australia Business Division has been newly established within the company. GS E&C demonstrates how excellent our competencies and technologies are through the current NEL Project. We also participate in a range of other projects such as infrastructure PPP, road/railway, development of pumped-storage hydroelectricity technology and power grid projects. Furthermore, in the mid- to long-term, we are seeking commercialization opportunities for new projects. When our business expansion plans at home and abroad in 2024 become more concretized, GS E&C will engage in new projects in Canada, Singapore, and a marine bridge construction project in Philippines.



- ① **Construction of New highway connecting Saemangeum and Jeonju (1st construction region)**
*Construction period: May 2018 – December 2025
*Construction scale: highway extension of 7.4 km/1C 1unit
- ② **Construction of National Route 14 of National expressway connecting Changyeong and Miryang (3rd construction region)**
*Construction period: October 2016 – December 2024
*Construction scale: Highway extension of 6.32km/2 Tunnels
- ③ **Hinterland of the Busan New Port Container**
*Construction period: December 2015 – July 2022
*Construction scale: Total extension of 238m, one steel bridge, Cross Arch Bridge + Steel box
- ④ **Greensboro region of the North Earth Link (NEL) project in Australia**
*A project to connect the disconnected sections between the northeastern ring road and eastern road on the outskirts of Melbourne City

COMMITMENT

CEO Message
Business Overview
→ Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Business Portfolio



Green Business Division

Our Green Business Division has pursued a range of projects of developing and operating renewable-energy and electronic-generation facilities and electric power transmission projects. GS E&C has been responding preemptively to the changes in the energy paradigm based on our varied expertise in power-plant construction and technology, and implemented a range of renewable business projects ranging from solar power, to roof-type solar power plants, and fuel cell to wind power, etc. As for our overseas business, we plan to invest in a 300Mw solar project in India, and review new investments in, Australia in 2024. GS E&C also has differentiated competitiveness in water and waste treatment. Based on our advanced technology and construction capability, GS E&C has taken the lead in advanced sewage and waste treatment, and the waste-incineration market. In the water-treatment sector, our business scope has broadened into facilities improvement, and the advanced treatment sector such as the Osan sewage treatment facility, the Jeonju sewage advanced treatment facility, and the Jungnang sewage treatment center based on our expertise accumulated through years of varied construction experience. We also have taken over GS Inima, the first seawater desalination company in the world to expand its business areas of SWRO/BWRO and advanced into overseas market through BAPCO sewage treatment facility in Bahrain, and Azzour water-conveyance equipment in Kuwait. Through this, we have earned trust and support from customers as a global player in water treatment. In the waste-treatment sector, we have the best domestic performance record, as demonstrated by projects like the Mapo Resource Recovery Facility, with the best performance in the world, the Resource Recovery Facility in Masan City, the Cheongju Metropolitan Incineration Facility, etc. We also secured differentiated competitiveness in the waste-treatment and recycling sectors, as demonstrated by the Jungnang Sewage Sludge Treatment Facility, the Stabilization for Landfill site 1 in Metropolitan Areas, the Food waste recycling facility in Namdong autonomous district of Incheon, and recycling centers for electronic goods in metropolitan areas, etc.

Looking Ahead

The global energy market has shown a trend of increasing business scale based on the expansion of new renewable-energy technologies and the rising interest of governments and markets in ESG. These trends are expected to accelerate the changes in the energy paradigm. Against this backdrop, GS E&C plans to actively promote development and investment in the new renewable energy business. The demand for environment business projects is also expected to increase, leading to more investments in domestic and international environmental facilities, and accordingly, we plan to secure opportunities to receive new orders. In particular, GS E&C has secured the expertise (specialized technology) for development, construction and operation of photovoltaic power plants, and also advanced into eco-friendly energy business through ‘Haedulwon,’ the 1st roof-solar PV in Korea located in Taeaen County (Taeaan Solar Farm PV power plant project). We will increase high-profit orders through continuous improvement and risk management and continue to pursue environmental business based on our solid experience.



- ① Construction of the Industrial water supply (SWRO) in the Daesan Coastal Industrial Zone
 * Construction period: 2021 – August 2024
 * Construction scale: Seawater desalination facility 100,000m³/day, intake pumping station 210,000m³/day, ocean pipeline 1.10 km, land pipeline, 23.43km
- ② Construction of Seongnam Municipal Waste Incineration Facility (BTO, Build, Transfer, Operation risk sharing)
 * Incineration facility: 500 ton/day (250 ton/day × 2 units)
 * Residual heat recovery facility
- ③ Ulsan Metropolitan City Resource Recovery Facility Reconstruction project of Seongam incineration plant 1 and 2 in Ulsan (T/K)
 * Construction period: May 2023 – May 2026
 * Construction scale: incineration facility 460 ton/day (230ton/day × 2 units)
- ④ Solar power business in India (SECI-IV 300 MW)
 * PPA: May 2022 – April 2047
 * Facility scale: 300MW solar-power generation equipment

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

ESG CORE

- 013 ESG Strategy
- 014 Stakeholder Communication
- 015 Double Materiality Assessment
- 019 Materiality Issue 1. Occupational Safety and Health Management
- 029 Materiality Issue 2. Response to Climate Change
- 037 Materiality Issue 3. Supply Chain Management and Strengthening of Shared Growth
- 041 Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

→ ESG Strategy

Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

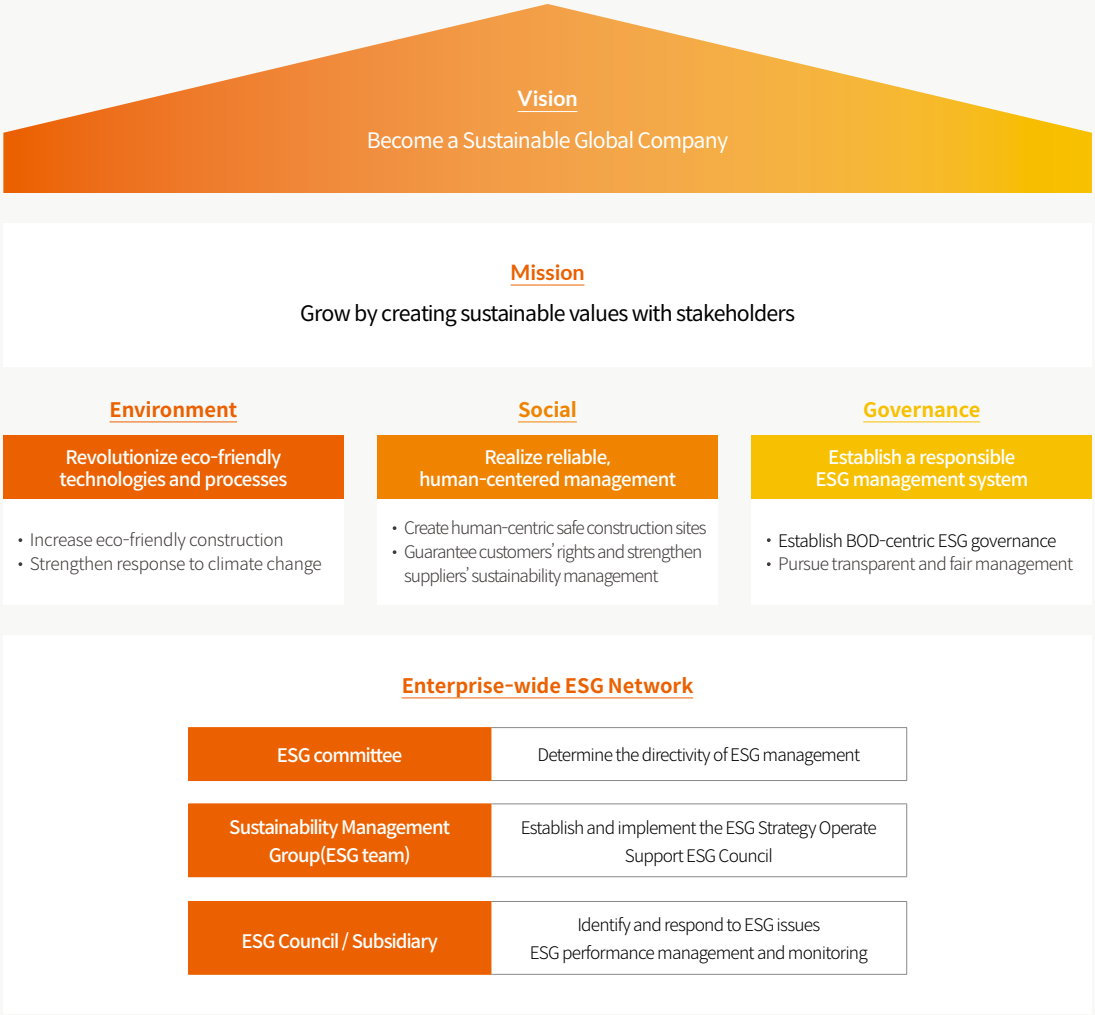
Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

ESG Strategy

GS E&C has established a company-wide ESG management strategy embracing the interests of various stakeholders in order to help build a better world for everyone. With the growing importance of ESG management throughout society, GS E&C aims to become South Korea’s representative ESG company by fulfilling its corporate social responsibility. With the establishment of objectives in accordance with the company’s vision of becoming a sustainable global company, we will pursue the sustainable development of our company and society by setting the strategic directions and objectives for each area of the environment, society, and governance, respectively. Furthermore, the efforts of GS E&C will contribute to the sustainable development of the world as well as the sustainability of the company in connection with the UN Sustainable Development Goals (SDGs)



COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
→ Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

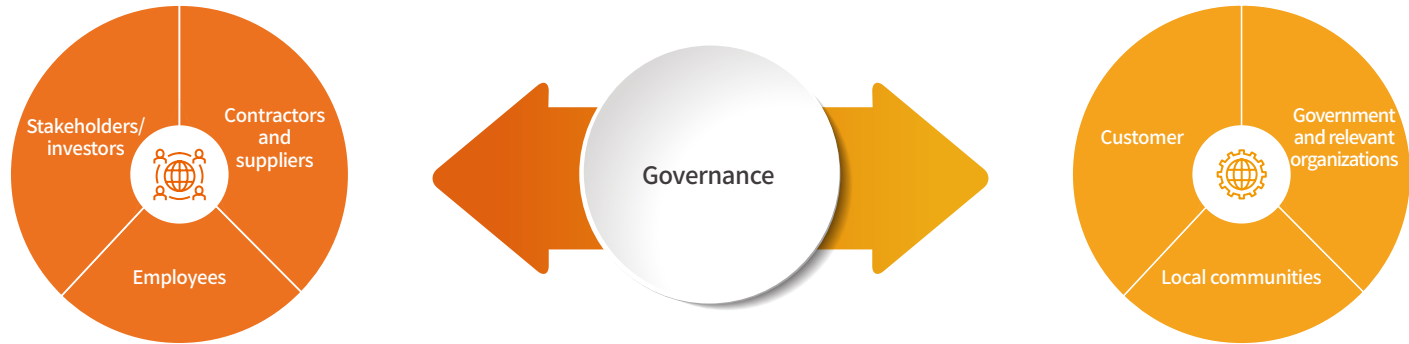
APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Stakeholder Communication

GS E&C identifies material issues that may affect customers, shareholders, employees, governments, and local communities, and actively communicates with major stakeholders through extensive communication channels. We carry out various activities through stakeholders’ forums, questionnaires, and on-site visits to communicate with stakeholders and develop mutual understanding. We strive to establish cooperative relationships based on active responsiveness.

Groups of stakeholders and communication channels



Classification	Issues of interest	Communication channels	Efforts of GS E&C
Stakeholders/ investors	• Creation economic value • Risk management • Ethics and anti-corruption management	• General meeting of shareholders • Institutional investor’s meeting • Public announcement materials	• Creation of stable profits • Strengthening company-wide risk management • Establishment of transparent governance
Employees	• Employment and welfare • Occupational safety and health management • Human rights management	• VOE (Voice of Employees) and ‘Suri Suri’ to listen to Employees’ Voices • Joint labor-management conference and grievance-handling ledger • Stress Zero Program (individual consulting, on-line psychological health examination)	• Happy corporate culture • Employee-rights protection activity • Human-rights management system
Contractors and suppliers	• Supply-chain management and strengthening of shared growth • Fair trade	• Human rights assessment and human rights due diligence • Xi Ceo Forum / Subcontractor Board, Discussion meetings • GS Partner / Cyber whistleblowing system	• Great Partnership Package • Supply-chain assessment and support • Fair-trade compliance program

Classification	Issues of interest	Communication channels	Efforts of GS E&C
Customer	• Products and services • Customer-oriented management • Communication	• Efficient system for handling civil complaints • Xi application/customer satisfaction survey • SNS/Xi TV • Youtube/Instagram/Facebook	• Improvement of customer satisfaction • Quality management and quality-control system • Creative customer-communication using social media
Government and relevant organizations	• Compliance with the law • Diligent payment of taxes	• Homepage • Press releases	• Compliance with related legislation • Performance of government policies • Execution of eco-friendly conventions
Local communities	• Development of local communities • Information disclosure and communication	• Social contribution activities • Briefing sessions for residents	• Social-contribution activities • Discussions on coexistence with local communities

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

→ Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

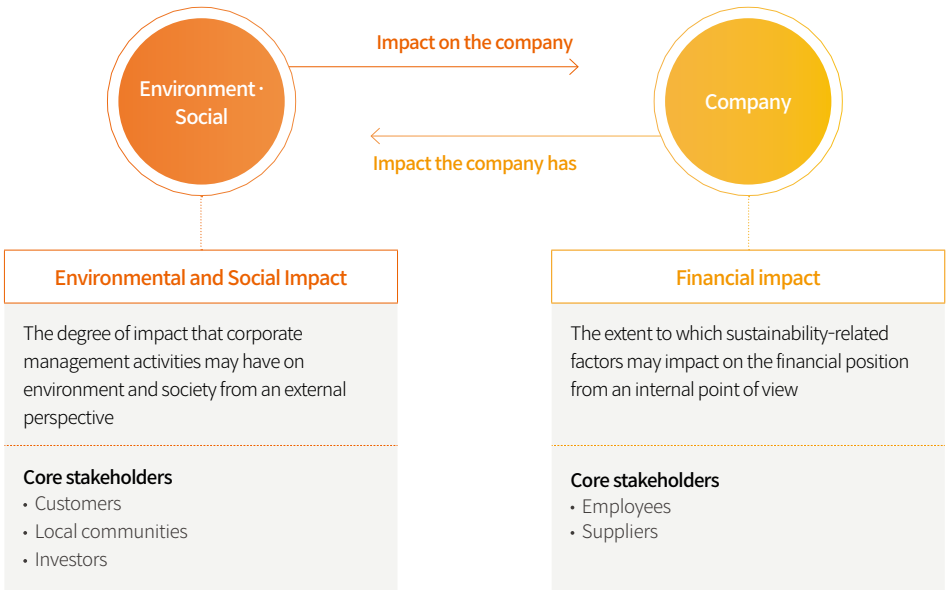
Independent Assurance Statement

Double Materiality Assessment

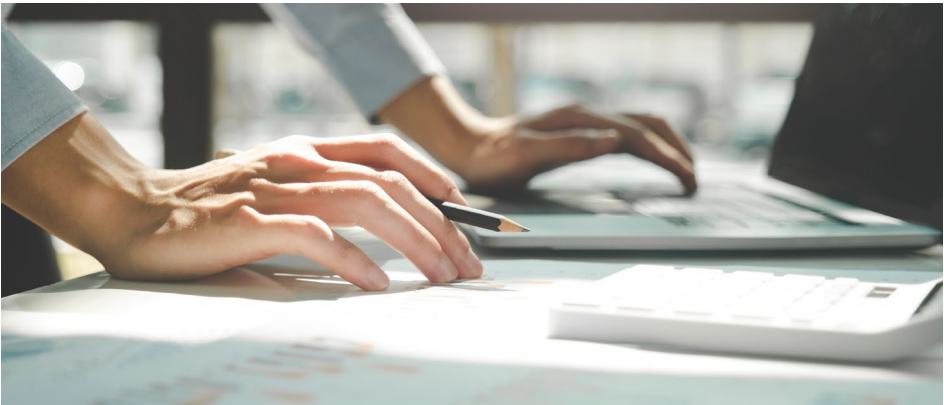
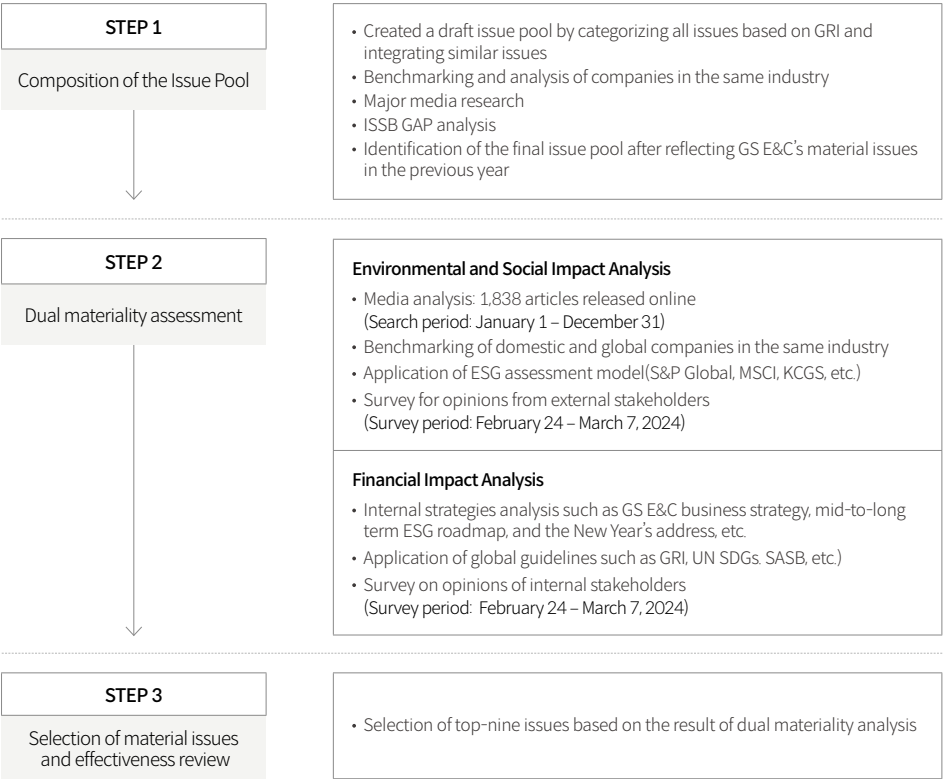
The Concept of Double-Materiality Assessment

Materiality assessment is a process of identifying major issues or factors which can affect the sustainability of a company. GRI Standards 2021 recommends selecting important issues which satisfy the viewpoints of financial importance and importance of environment/social/human at the same time through ‘double materiality.’ GS E&C has introduced and analyzed double-materiality assessment in the process of publishing its annual sustainability management report since 2022. It has enabled us to identify important issues by collecting opinions from customers, suppliers, local communities, investment institutions, and external stakeholders — and related activities, achievements and goals are presented in the Sustainability Report.

What is double-materiality assessment?



Double-Materiality Assessment Process



COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
→ Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

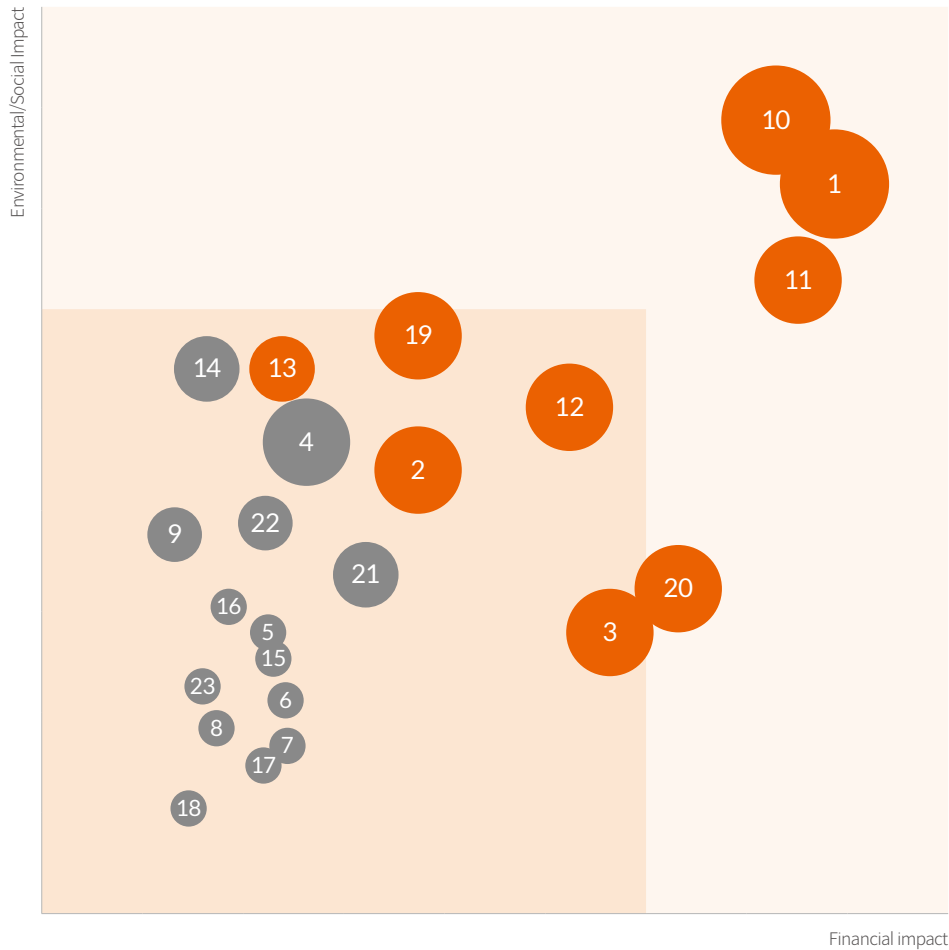
ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Double Materiality Assessment

Double-Materiality Assessment Result

Of the 23 high-impact issues that GS E&C identified, nine were considered to have a high impact on our business. We select them after considering environmental/social impact and financial impact through a double-materiality assessment.

Material Issues



Classification	Issues	Degree of Impact		Material Issues
		Financial Impact	Environmental/ Social Impact	
Environment	1. Climate-change response activities	● ● ●	● ● ●	Material Issues
	2. Carbon-neutrality strategy	● ●	● ● ●	Material Issues
	3. Construction-pollutant management	● ● ●	● ●	Material Issues
	4. Waste management	● ●	● ● ●	
	5. Environmental management	●	●	
	6. Water-resource management	●	●	
	7. Sustainable product/ technology development	●	●	
	8. Circular economy	●	●	
	9. Biodiversity momentum	●	● ●	
Social	10. Occupational-safety and health management	● ● ●	● ● ●	Material Issues
	11. Product safety and quality	● ● ●	● ● ●	Material Issues
	12. Supply-chain management and shared growth	● ● ●	● ●	Material Issues
	13. Respect for human rights	●	● ● ●	Material Issues
	14. Local community engagement	●	● ● ●	
	15. Performance compensation and welfare	●	●	
	16. Respect for employee diversity	●	●	
	17. Employment and talent development	●	●	
	18. Customer-oriented management	●	●	
Governance	19. Ethics and anti-corruption management	● ●	● ● ●	Material Issues
	20. Comprehensive risk management	● ● ●	● ●	Material Issues
	21. Transparency of governance	● ●	● ●	
	22. Strengthening information security	●	● ●	
	23. Diversification of business portfolio	●	●	

Double Materiality Assessment

GS E&C carried out materiality assessments to identify material issues of ESG. Based on this, it conducts an in-depth analysis on ESG risks and opportunities and engages in active communication with stakeholders. GS E&C plans to integrate core ESG issues into executive KPI for systematic management

Material Issues Impact and Response Strategy

Material issues	Major Impact	Promotion strategy	Response activities	GRI Index	UN SDGs	Reporting pages
Occupational Safety and Health Management	- Occupational Safety - Increasing productivity - Cost reduction - Legal risk	Human-centric safe construction-site	- Risk assessment and prevention - Strengthening safety education - Heath-management program (Zero Stress program, etc.)	403 Occupational Health and Safety		19~28
Climate-change response activities	- Increasing natural disasters - Changes in raw-material costs (rising raw-material costs) - Changes in the regulatory environment	Strengthening climate-change response activities	- Decreasing carbon emissions - Sustainable resource use - Climate-risk management	302 Energy		29~36
Product safety and quality	- Safety and quality of buildings - Reputation risk	- Strengthening customers' rights and suppliers' sustainability - Revolutionize eco-friendly technologies and processes	- Strengthening on-site quality management - Selection of high-quality construction material - Strengthening preliminary measures and response framework	Non-GRI		41~45
Supply-chain management and shared growth	- Strengthened global standards and customers' expectations - Shared growth - Strengthening business resilience - Human rights risks	Strengthening customers rights and suppliers' sustainability	- Cooperation with and support for suppliers - Strengthening supply-chain transparency - Ethical procurement	308 Supplier Environmental Assessment 414 Supplier Social Assessment		37~40
Comprehensive risk management	- Competition pressure - Technology innovation - Legal changes - Economic volatility	- Establishing a responsible ESG management system - Establishing BOC-centric ESG governance	- Risk identification and evaluation - Risk mitigation plan - Continuing monitoring and its improvement	Non-GRI		91~93
Ethics and anti-corruption management	- Business transparency - Financial soundness - Ethical business practice	Transparent and fair management	- Ethics charter and anti-corruption policy - Education and awareness program - Online whistleblowing system	205 Anti-corruption 206 Anti-competitive Behavior		87~90
Construction-waste management	- Compliance with regulations - Efficient use of resources - Cost reduction - Sustainable environment management - Environmental pollution	Expanding eco-friendly construction activities	- Measures to reduce waste - Recycling and reuse	306 Waste		55~57
Carbon-neutrality strategy	- Regulation risks - Greenhouse gas reduction	- Strengthen response to climate change - Revolutionize eco-friendly technologies and processes	- Energy transition - Energy-efficiency improvement	305 Emissions		29~36
Respect for human rights	- Employees' satisfaction and productivity - Human rights risks - Compliance risks	Realize reliable, human-centric management	- Establish human rights policies - Education and enhancement of ESG awareness - Human rights impact assessment	406 Non-discrimination 408 Child Labor 409 Forced Labor		61~62

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

→ Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Double Materiality Assessment

Detailed Responses to Each Material Issue

Materiality Issue	Occupational health and safety management
Reason for selection	As government has accelerated safety management regulations, such as amendment of the ‘Serious Accident Punishment Act,’ establishing a systematic safety and health system has become a core factor for the company’s sustainable growth. The occupational safety and health management issues are selected as a matter of materiality that will be considered for the company’s risk management and its long-term survival.
Response Strategy	- Strengthen management and prevention, such as making mandatory Pre-Safety and Executives’ safety inspections - Strengthen site-centered education
Major KPIs	- Number of occurrences of serious accidents - Death rate from accidents per 10,000 persons - Safety Traffic-Signal System assessment - Three-Year LTIFR of Suppliers
Materiality Issue	Strengthen response to climate change
Reason for selection	We will minimize legal and financial risks arising from ever-strengthening global environmental regulations. Doing so will also promote sustainable growth as we utilize eco-friendly construction materials and energy-efficient designs and construction techniques. New renewable-energy use and the development of eco-friendly technology can increase efficiency and reduce costs. For these reasons, response to climate change has been emerging as an important issue.
Response Strategy	- Establish mid - to long-term GHG reduction strategy - Establish a company-wide council for climate-related risks and opportunities and respond to data disclosure
Major KPIs	- Advance climate-change scenarios - Develop and research eco-friendly technology
Materiality Issue	Product-safety and quality
Reason for selection	Construction-safety and quality are factors of critical importance. They protect the lives and safety of workers and related persons and minimize the company’s risks through compliance with legal regulations. They also contribute to preventing economic losses and raising the company’s reputation. Furthermore, it is necessary for securing the long-term competitiveness of the company by enabling sustainable development. Buildings that guarantee safety and quality are core factors that can realize the company’s success and social responsibility.
Response Strategy	- Strengthen construction-site centered activities - Patrol inspections for construction type with multiple defects - Strengthen quality-improvement process at each stage - Strengthen departments in charge of quality and structural design to prevent defects and improve structural quality
Major KPIs	- Customer/ Corporate client-satisfaction surveys - Minimize number of defects
Materiality Issue	Supply-chain management and shared growth
Reason for selection	Supply-chain management and shared growth are essential strategies for companies to strengthen their operational efficiency and sustainable growth. In today’s complex global economy, supply-chain management enables companies to remain competitive by reducing expenses, improving quality, and minimizing operational risks at every stage of material procurement, production, and logistics. Through shared growth with their suppliers, companies can stabilize their supply chains and promote technological development.
Response Strategy	- Strengthen policies for supply-chain sustainable management (15 areas) - Safety and health - Labor and human rights, Safety and health, Environment, Ethics, Management system
Major KPIs	- Suppliers ESG Evaluation and Support - Subcontracting activities and online training

Materiality Issue	Comprehensive risk management
Reason for selection	There are various risk factors in all aspects of business such as financial risk, potential risk, etc. It is thus necessary to conduct preemptive risk-identification and establish a response system as many investors in Korea and abroad consider not only financial performance but also non-financial performance in evaluating a company’s value and deciding on their investment.
Response Strategy	- GS E&C classifies and defines the risks as strategic, operational, regulatory policies, and financial risk, to respond to risks effectively from a company-wide perspective. - GS E&C maintains a BOD-level risk-management system by establishing a risk-management organization to maintain the company-wide risk-management system.
Major KPIs	Strengthening of the company-wide risk management system (ESG committee, ESG council)
Materiality Issue	Ethics and Anti-corruption Management
Reason for selection	As more companies increase their efforts to meet their social responsibilities, ethics compliance management is gaining more attention. Against this backdrop, companies across the value chain and their employees must better understand the importance of compliance. High-level management systems are necessary to prevent unethical behavior from increasing companies’ behaviors.
Response Strategy	- Ethic management/ Enactment and compliance of anti-corruption and a detailed code of conduct - Offline/Online Ethics education for employees - Receipt of reports of violations of the code of ethics through the online company reporting & ethics misconduct channel - Establish a corporate culture by strengthening punishments for unethical violations
Major KPIs	- Penalties and monetary losses as a result of legal proceedings - Participation rate of ethics education provided through on-site visits and online training - VOE and number of grievances handled
Materiality Issue	Construction-waste management
Reason for selection	Efforts to minimize waste generated while increasing the rate of waste reuse and recycling are necessary factors to promote resource circulation and establish eco-friendly business. GS E&C strives to realize a circular economy and prevent resource depletion by raising the rate of waste reuse, thereby minimizing environmental pollution.
Response Strategy	- Strengthen Monitoring and reuse of waste generated by type of construction waste and treatment method - Establishment of environment management plan and waste management plan in accordance with law and compliance of each nation
Major KPIs	Achieve 100% waste-recycling rate by 2050
Materiality Issue	Carbon neutrality strategy
Reason for selection	Recently, we have witnessed an increase in the demand for GHG reduction from the international community, markets, and governments. Therefore, business risks can occur if we fail to respond to market changes. Furthermore, natural disasters caused by climate change not only threaten the natural ecosystem, but also affect revenue generated by a company’s management activities.
Response Strategy	- Establish mid- to long-term GHG reduction targets and implementing measures to reduce GHG - Establish and reporting investment and policy for low-carbon technology development
Major KPIs	31.86% reduction of GHG emissions compared to BAU by 2050
Materiality Issue	Respect for human rights
Reason for selection	Companies that disregard human rights and employee value in the process of management are not seen as acting responsibly. Thus, it is even more important than before that companies’ management activities consider the human rights of both employees and stakeholders, including suppliers and customers. Therefore, organizations should understand how their actions affect human rights and take corrective measures accordingly.
Response Strategy	- Implement preventive training in areas where human rights violations are likely to occur such as sexual-harassment prevention, awareness of the disabled, and workplace bullying, etc. - Human-rights impact assessment for domestic and foreign stakeholders
Major KPIs	- Performance of handling opinions through human rights grievances deal with - Human rights educational completion rate - Scope of Human Rights Impact Assessment (HRIA)

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

→ Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

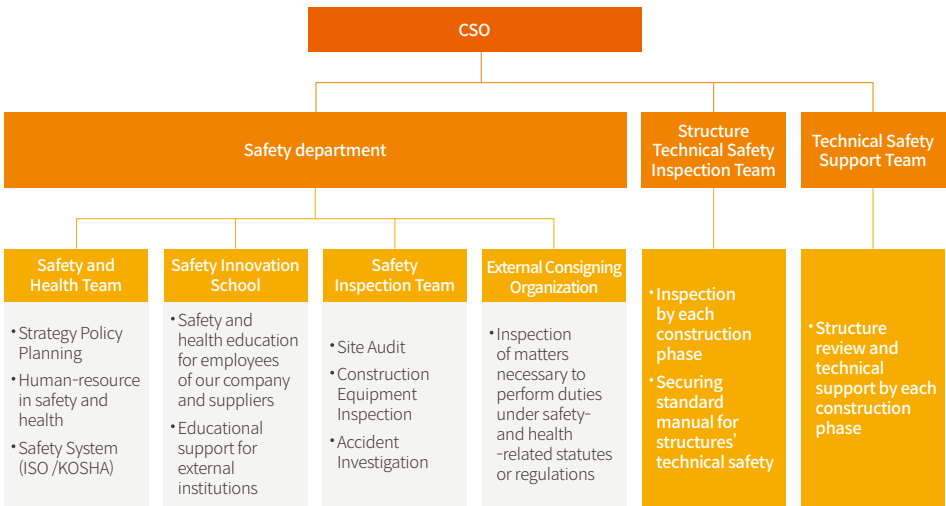
Materiality Issue 1. Occupational Safety and Health Management

Governance

Occupational-Safety and Health-Management System

GS E&C assigns a Chief Safety Officer (CSO) to lead the safety management and strengthened support for each sector, including equipment, technical safety and training. The technical-safety inspection team in the system oversees supporting necessary technology and its inspection. The technical-safety support team provides support for matters in need of structure review. Under the leadership of CSO, a weekly meeting is held to handle occupational-safety and health risks and opportunities. Weekly video conferences attended by on-site safety managers and monthly QHSE Committee meetings are held on a regular basis to share all sorts of safety-related information. These meetings are introduced to pursue consistency among business HQs and review best and serious practices of other companies. Based on this, GSE&C has a target of exceeding that of legal requirements to achieve optimal operation of the company in 2024. And each HQ and departments engage in discussions for its improvement. Along with this, GS E&C has carried out demonstration projects including translating safety principle guidelines, training, and work order, etc. to cope with increasing numbers of foreign workers. GS E&C also has focused on identifying risks and establishing countermeasures against occupational safety and health risks for stakeholders such as workers, suppliers, clients, government relations organizations, local communities, and media at all sites across the nation. Thanks to these efforts, performance measurement, trends of government policies and the status of safety and health management from companies in the same industry are well reflected into selecting the goal and promotion tasks in 2024.

Organization under the Safety Department



Major R&R and tasks

R&R	Detailed tasks
On-site support	• Respond to the Serious Accidents Punishment Act and semi-annual inspection monitoring • Safety and health document and R&R management, punishment and rewarding for suppliers' safety and health activities • Capacity-building training for safety managers • Support for preparation of occupational-safety and health-management expenses and usage status
Promotion/ Insurance	• Establish or amend on-site safety standards and pre-safety operation • Check whether on-site safety and health systems are implemented or not • Feedback for operational activities related to the Serious Accidents Punishment Act • Authorization and maintenance of the safety and health management system
Employment/ Education	• Receiving and reporting of domestic safety accidents, compensation after death accident and incident rate management • Industrial accident compensation • Workers compensation insurance • Contractors' all-risk insurance and liability insurance
Health	• fostering of personnel management/training safety health managers • Personnel management and assessment of on-site safety/health managers in Korea and abroad
	• Establish a company-wide health policy and its direction, manage health manual and standards • Recruit, foster health managers and on-site support and system monitoring • TPMS health-system management

The Safety- and Health-Management Activities led by the BOD and Executives

The CEO and CSO of GS E&C visit sites and check on safety on a regular basis to enhance employees' awareness of safety and to encourage their work on strengthening safety. In 2023, there were 145 on-site safety management activities completed by the CEO and the CSO. To reinforce the level of responsibility of safety and health-management, we added whether the safety- and health-related goals are achieved or not, the number of safety inspections conducted and the number of critical injuries to the executive KPIs. The CEO and CSO participated in the safety health meetings held five times in each quarter to listen to the voices of on-site employees and create a safer workplace, and took part in meetings of the Q·HSE Operation Committee and Technical Safety Committee to reinforce workplace safety. The Safety and Health Committee and safety health manager video conference supervised by the head of the business headquarters were held to strengthen the operation of the safety and health meeting system, and the matters that were discussed at the meeting were delivered to the sites to increase the safety level at the sites. In addition, the BOD reviewed and approved the safety and health plan in accordance with the Occupational Safety and Health Act for the prevention of safety accidents, and we plan to focus continuously on preventing safety accidents and enhancing workplace safety.



CEO's site visits

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

→ Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

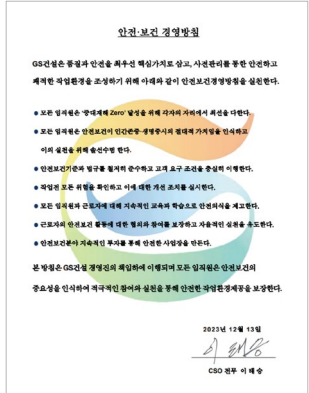
Independent Assurance Statement

Materiality Issue 1. Occupational Safety and Health Management

Strategy

Safety and Health Management System

GS E&C considers ‘safety’ to be a top priority, and to ensure the safety of our employees, GS E&C plans and practices safety and health tasks every year. We strengthened our safety standards based on the ISO45001:2018 Certification and KOSHA-MS Certification on sites in the Republic of Korea and abroad. In 2022, we enacted and amended the Serious Accidents Punishment Act Procedure for safety management focused on the prevention of severe accidents with the goal of recording zero severe accidents, and furthermore, we expanded the procedure to divisions under the CSO, the relevant divisions of the headquarters, and construction sites, and monitored progress on a regular basis to check on-site compliance. In 2023, we selected “strengthening the prevention system based on risk assessment” as a major management task in accordance with the government's Serious Accidents Reduction Roadmap. It is part of our efforts to strengthen the level of safety- and health-management through more intensive on-site inspection and equipment and provision of health education according to lifecycle and job duties. We also prepare for supportive measures to elevate the safety-levels of suppliers through intensive management and assistance for high-risk work. We set major promotional tasks in 2024 to enhance competencies of safety and health managers. They are producing the response procedure in accordance with the Serious Accidents Punishment Act and have a staff from the headquarters to manage the site directly. We strive to create and improve a safe and convenient workplace through these safety and health policies applying to all employees and suppliers’ workers.



Safety and Health Management Policy

| Safety and Health Goals and Tasks for 2024

Goals	Recording zero serious accidents
	Continuous reduction of general accidents
Major Promotional Task	Strengthening the prevention system based on risk assessment
	Monitoring to reinforce areas of safety vulnerable
	Improving the ability to respond to the Serious Accidents Punishment Act
	Establishment of an autonomous construction system for structures
	Smart safety and health education

Strengthening of the Preliminary Accident-Prevention System

These days, safety at construction sites is gaining more importance. Against this backdrop, GS E&C enhances on-site technical education and prevention activities to ensure safe construction of buildings and prevention of building-collapse accidents. GS E&C will continue to strengthen the management system to prevent accidents in advance. In 2024, competencies of the On-site Inspection Team and the Technical Inspection Team will be enhanced and specialized to ensure air-tight support for structural technical safety and on-site safety management. By doing this, risk factors will be identified, preventive measures will be improved, and safety of all sites will be maximized. GS E&C will take the lead in improving safety-management systems and instill a safety-construction culture by prevention-focused management activities.

On-site Focused Support and Strengthening of Education

GS E&C conducted the safety and health competency mindset education, a program designed to increase expertise of on-site workers. It is part our efforts to increase competency-building of on-site workforces and create safe and efficient construction sites. The education is offered in the forms of classroom training and virtual training to increase the expertise of on-site job workers. It also includes tailored education programs for workers transferring their job duties. In 2024, GS E&C will continue to enhance the capabilities of on-site workers, and realize safe and efficient construction sites. We will dedicate ourselves to supporting all employees to achieve their best performance through on-site support and education.

| Mindset education for competency-building of health and safety awareness



COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

→ Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

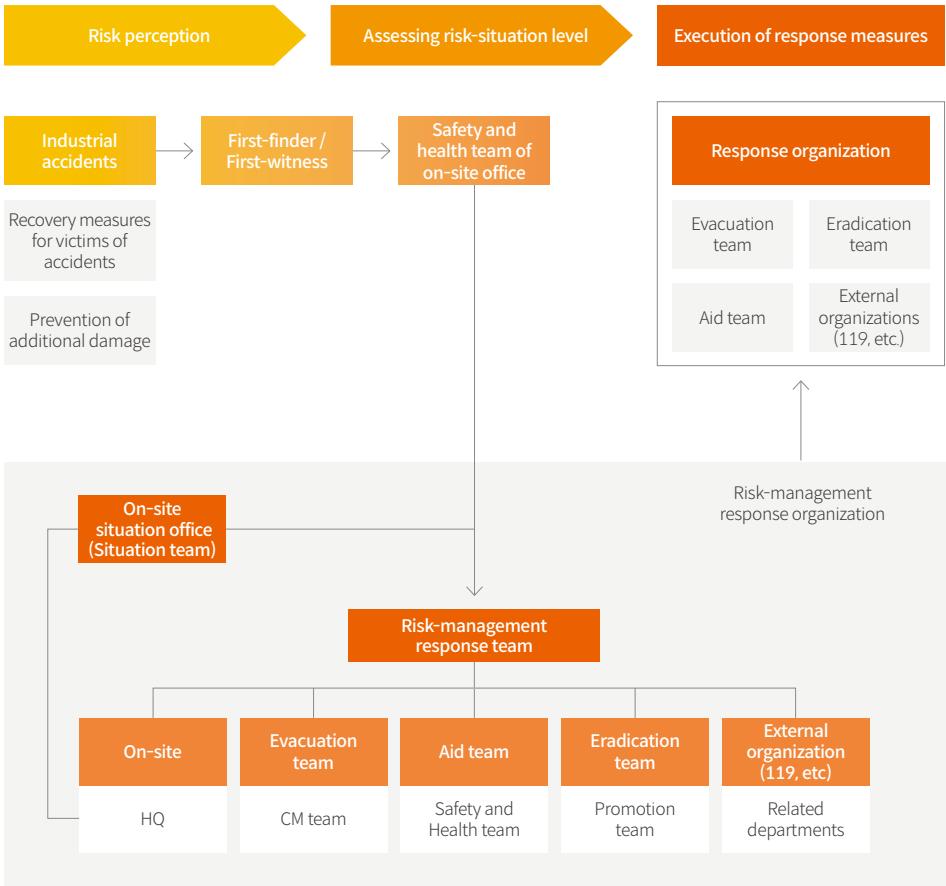
Independent Assurance Statement

Materiality Issue 1. Occupational Safety and Health Management

Establishment of Response Plan for Dangerous Accidents /Emergencies

GS E&C strives to identify potential risk of emergencies such as fires, explosions, and earthquakes, etc., and establish response plans for such emergencies to minimize damages. In line with this, we have conducted emergency response drills on a regular basis. All stakeholders are eligible to attend the emergency response drills, and in case of revision of the plans, we guarantee participation.

Response flow to dangerous incidents/ emergencies



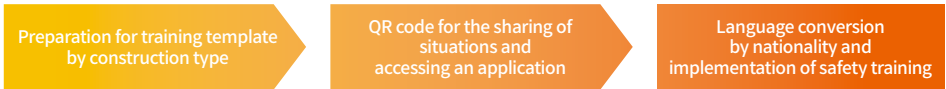
Enhancing the Preliminary Safety Review

GS E&C operates a Pre-Construction Meeting (PCM) system to prevent accidents. We made PCM compulsory before commencement of construction through a process involving high-risk and safety vulnerabilities at all construction sites, to support the establishment of an overall safety management system and to identify and eliminate risk elements promptly. The field PCM has been expanded to infrastructure sites with wide working sections to educate on-site workers directly on the contents of PCM, and thereby eliminate risk elements in advance. Furthermore, we dispatch the Structure Technical Safety Team and the Technical Safety Support Team to the site to review the site. By doing this, we prevent and eliminate risk factors more thoroughly. Such efforts for achieving a safe construction environment are implemented by checking the performance status of safety plans, contributing to prevention of safety accidents. GS E&C operates the safety manager system to prevent safety accidents that many occur at infrastructure sites with high risks such as tunnels, highways, ports, etc., as well as extra-large project construction sites. A safety manager with technical competence and abundant experience is appointed to oversee overall on-site safety. (Data on the safety manager shall be checked)

Safety Management for Foreign Workers

GS E&C takes active measures for on-site foreign workers to instill safety awareness to solve problems that may occur due to inadequate communication and raise safety awareness among them. For this, a simultaneous translation application is employed at sites where foreigners from five to seven different nationalities work together. It is part of our efforts to help them share important matters and create safe working environments. The simultaneous translation application is used for better understanding and access of foreign workers on the safety education. The DX team advances the technology which works even in case of poor communication networks, and various languages of on-site foreign workers. GS E&C is committed to making working environments safe for all workers.

Foreign Workers' Training Process



COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
→ **Materiality Issue 1. Occupational Safety and Health Management**
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

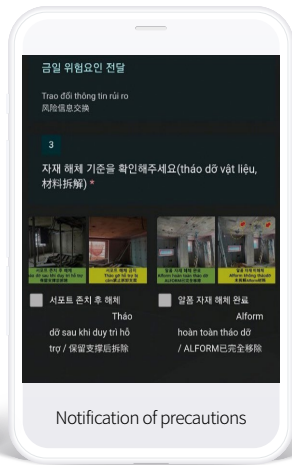
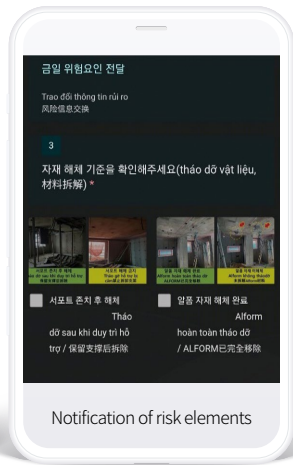
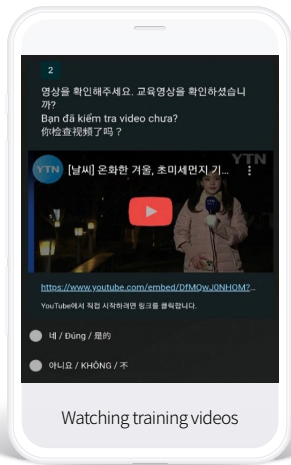
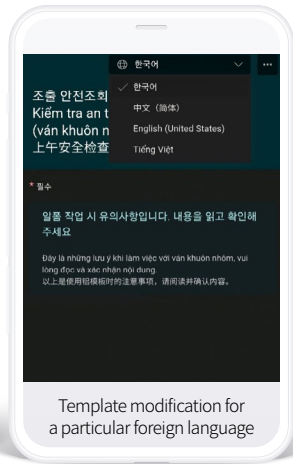
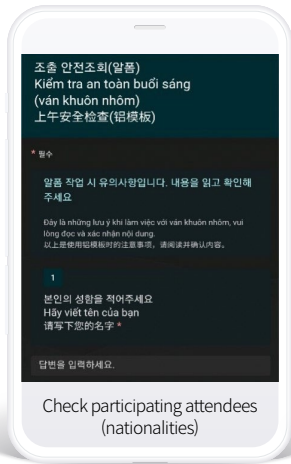
Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 1. Occupational Safety and Health Management

| Safety Training for Foreigners at Morning Assembly



Risk Management

Smart Safety-Management System

GS E&C strives to enhance on-site safety and protect the safety of workers by introducing various devices and systems actively based on the IT technology of the 4th Industrial Revolution. We introduced a CCTV Monitoring System (CMS) for all sites and established a smart safety-management system such as intelligent CCTVs, Real Time Location System (RTLS), and Internet Bluetooth of Things (IBOT), in order to check safety in real time — even in environments with poor communications, and to help workers evacuate swiftly in cases of emergency. The Construction Equipment Collision Prevention System (Surround View) was introduced into all sites to prevent accidents caused by construction equipment. We create safe sites by applying a total of 12 smart safety-management systems, including mandatory forklift safety devices (driving interlocking safety belts, laser safety guards, and wireless call bells. The system’s efficiency was demonstrated with application of five smart safety-management systems at sites in 2023. We will strive to realize a more efficient and safer management system on the sites in the future through use of this cutting-edge technology.

| Status of Smart Safety Management Activities

Item	Description	Progress	Site
CMS + AI	(Before: application at the site) remote site monitoring + (test operation) fire, fumes(smoke) and dangerous zone control	Completion	Application
Image analysis of construction equipment	Notification alerts when workers approach (Around view)	Completion	Application
Portable webcam	Wireless remote site monitoring	Completion	Application
Forklift safety devices	Interlocking device, safety guard, wireless cam bells	Completion	Application
VR training provided through on-site visit	Wearing VR glasses, experimental VR training at virtual space	Completion	Application
Smart airbag	Minimizing injuries of workers in case of fall accidents	Completion	Non-application
Automatic rebound meter	Test operation of rebound check operation from long distance	Test operation	Improvement is needed

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
→ **Materiality Issue 1. Occupational Safety and Health Management**
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

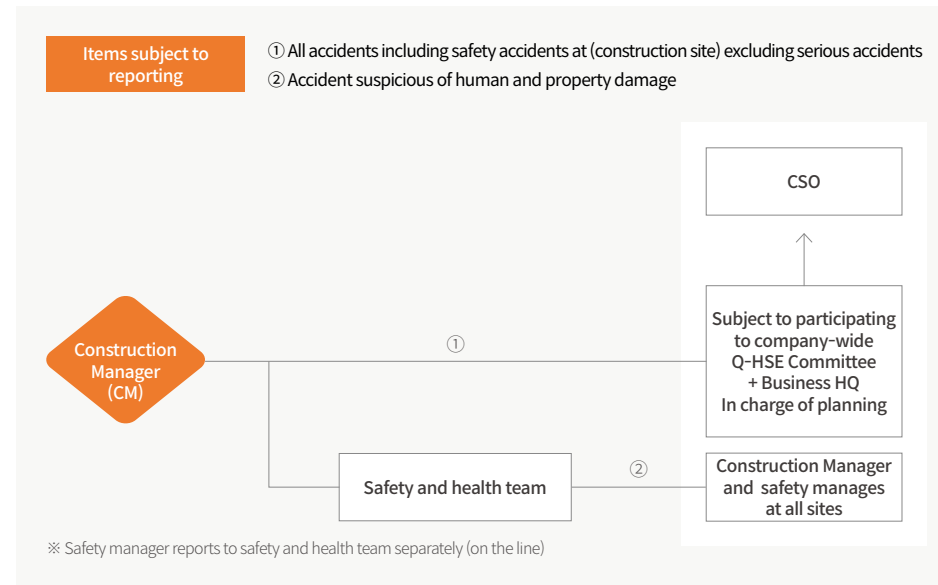
ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 1. Occupational Safety and Health Management

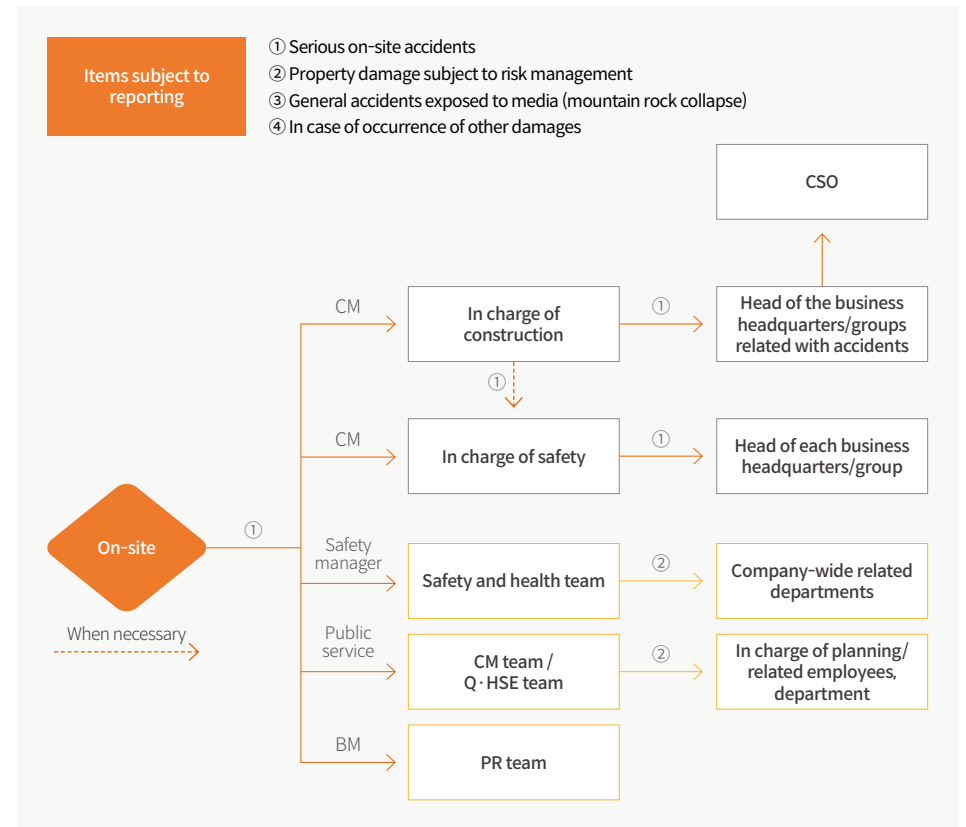
Response to Safety Accidents

GS E&C has a systematic accident reporting and response process to ensure swift and appropriate responses upon the occurrence of a safety accident. General accidents must be reported within 30 minutes after they are detected, and emergency cases including severe accidents are required to be reported as soon as they are detected. Upon the occurrence of an accident, each related department with priority given to the Safety Health Team is dispatched to the site to investigate the accident. When causes of the safety accident are identified, we make it a rule to establish preventive measures to deter recurrence. A process manual to respond to emergencies and prevent recurrence of the same accidents was created. To ensure top management's direct engagement to responding to accidents, the head of each business group, from CSO to CEO, are all included in the reporting system. GS E&C seeks to prevent recurrence of the same accidents when causes of the safety accidents are identified. We also inspect continuously to check whether preventive measures are applied in the site.

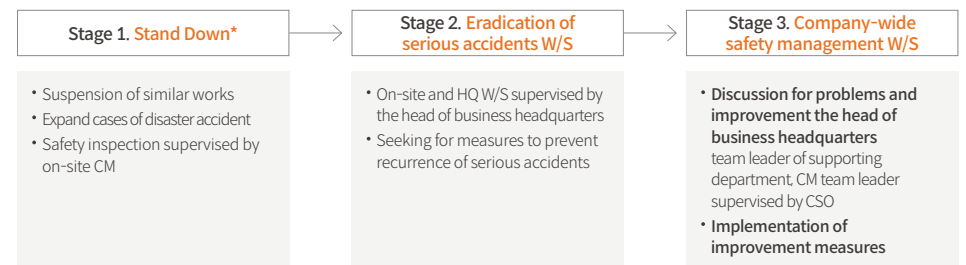
General Reporting System



Emergency reporting system



Follow-up actions for serious accidents (measures to prevent recurrence)



* Stand Down : After suspension of similar works, disseminate the information on the accident and implement safety inspection to prevent recurrence

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
→ **Materiality Issue 1. Occupational Safety and Health Management**
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

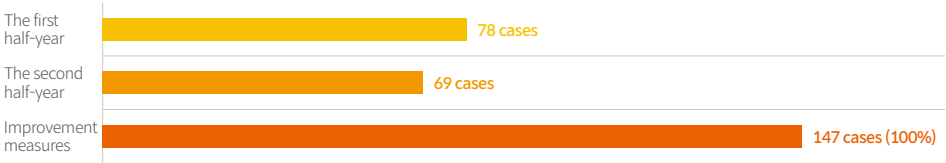
Materiality Issue 1. Occupational Safety and Health Management

Safety Accident Improvement and Assessment

GS E&C shares safety and health issues based on monthly/quarterly safety indicators and inspection results, presents directions for safety and health activities, and establishes safety and health plans in accordance with the requirements of the Occupational Safety and Health Act and the Serious Accidents Punishment Act to increase the efficiency of safety management. The plans are reported to the BOD for approval and continuously checked for implementation. We have designated external specialized institutions for business divisions and headquarters to conduct semi-annual diagnoses. Furthermore, when workers at construction sites feel threatened for their safety or dangerous situations occur, we support them by requesting the right of work suspension for immediate improvement at the site. These measures are part of our efforts to create safe working environments. GS E&C reconfirms the risk elements, identifies abnormal work factors, and takes measures to improve insufficient health and safety issues identified on-site. For this, the safety-inspection checklist is produced and the safety-job group and the construction-job group are assigned safety scores. GS E&C will continuously do its utmost to improve our employee's safe and health activities and raise their safety awareness.

Status of Taking Measures for the Right of Work Suspension in 2023

Total: all sites



Occupational safety and health risk management and measures for stakeholders

Classification	Risk	Response
Workers	• Increased risk of cerebrovascular disease due to an increase in elderly workers and workers with hypertension	• Occupational Safety and Health Commission/ risk assessments/ establishment of safety and health goals/ enhancement of safety and health environment through voluntary participation of workers in reporting risk situations
Suppliers	• Increased risk due to the duplication of workflow in narrow site • Increased risk due to the use of temporary structures and field fabrication tool	• Increase in safety investment due to increased industrial safety and health management expenses for suppliers • Reduction of risks and construction costs due to changes in construction methods
Owners	• Requirements for thorough compliance with safety and health guidelines/penalties and fines	• Promotion of safety and health and sharing of information through risk assessment meetings organized by clients • Recommendations for introduction of smart safety management (CMS rooms, drones, etc.)
Government relations	• Requirements for thorough compliance with safety and health laws/penalties and fines	• Increased interest and participation in the safety and health among all employees through regular performance measurements to comply with legal standards
Local communities	• Community health problems due to civil complaints (noise, dust, vibration, etc.)	• Improving the corporate image within local communities through regular resident briefing sessions
Media	• Damage to the corporate external image due to suspicion of the concealment of accidents and occurrence of serious accidents • Media reports on scattering dust and noise at the site	• Improving the corporate image through media coverage on improved working environment for workers

Safety- and Health-System Certification

GS E&C obtained the ISO45001 certification, an international standard, by meeting the requirements for predicting and preventing various risks that may occur in the workplace, and systematically managing the safety and health of the organization. We also obtained KOSHAMS certification, as an outcome of the CEO establishing a safety- and health-management system, and conducting systematic safety and health activities under the P-D-C-A system. Based on this, the procedures to respond to emergencies, and a process manual to prevent recurrence of accidents are prepared. We ensure that this process is carried out based on a thorough reporting system, from the head of each business group to CEO. We will strive to prevent accidents and implement sustainable management by considering the safety and health of our business sites as priority.



KOSHA-MS certification



ISO 45001 certification

Materiality Issue 1. Occupational Safety and Health Management

Implementation of the Plan to Strengthen Safety Management for Suppliers

GS E&C established the Partner Safety Management Plan in accordance with the direction of its safety external policies and the legislation of ‘the Serious Accidents Punishment Act’ and has actively implanted it. For this, we introduced a fair bidding system to restrict bidding at low prices and expanded safety items in partner evaluations to enhance the partner management standards. A total of 138 safety personnel were assigned to seven high-risk areas to strengthen safety- management activities. GS E&C makes advance payments of occupational safety and health administration costs to 81 suppliers to promote safety- and health- management activities. In addition, the Safety Champion Incentive system was introduced to provide suppliers with excellent capabilities incentives such as the right to contract and the right to participate, while restricting the right to participate in bidding for companies with frequent industrial accidents. This is a system to encourage safety and health activities of suppliers. We will continuously strive to create a safer working environment in cooperation with constructors by implementing comprehensive safety-management measures.

Safety Evaluation Area for Suppliers

Safety evaluation area	1. Violation of IECR (Identify, Eliminate, Control, Respond) and management status of high-risk work
	2. Safety-accident management (As of the approval date)
	3. Whether complaints are handled or not
	4. Preliminary safety plan and GS APS activities
	5. Safety- and health-management participation

Happy Call System

GS E&C implemented the Happy Call system to listen to opinions on the safety· health, welfare and distress of suppliers’ employees. We also establish and operate the Occupational Safety and Health Committee and the Safety and Health Council under the Occupational Safety and Health Act. With this system, we have listened to various suggestions from workers regularly and take measures accordingly. In 2023, a total of 1,936 opinions were collected in the first half of the year, with 1,850 opinions were collected in the 2nd half of the year. The rate of taking measures for preventing disasters was 100%, and that of taking responsive actions for welfare and distress was 91%.

Listening to happy call

Unit: case/%

Classification		First half of the year	Second half of the year	Total
Disaster prevention	Request	615	799	1,414
	Measure	615	799	1,414
	Rate of taking measure	100.0	100.0	100.0
Welfare and grievance	Request	1,321	1,051	2,372
	Measure	1,294	862	2,156
	Rate of taking measure	98.0	82.0	90.9

Safety and Health Education Platform Development

GS E&C improves access of safety education materials which were operated separately such as safety, health, equipment and virtual education material by establishing an integrated platform for education material in the GS APS (Accident on-site Prevention System). With the integrated platform, we developed a safety and health education platform by systemizing the classification of materials, adding search function for increased utilization of it at each business site. The safety and health platform is designed to support on-site oriented safe and health education by providing media materials such as SIS Tube, Meta-SIS, and lesson plan on safety education, health education and equipment education.



VR(Virtual Reality)



Practical training for suspended scaffold rope

Materiality Issue 1. Occupational Safety and Health Management

Goals and Indicators

GS E&C strives to continuously reduce the number of general accidents in order to achieve a record zero serious accidents. In 2023, the number of general accidents decreased by 8% compared to 2022. Our goal is to achieve the highest reduction-level in the industry. We implement various health and safety activities and measure and manage our quantitative performance. As part of our efforts, GS E&C has set the goal of LTIFR (Lost Time Injury Frequency Rate) for the next three years for quantitative performance management and goal achievement. It is to increase the efficiency of safety and health management and lay the foundation to achieve the vision of achieving a record zero serious accidents by preventing all sorts of disasters in the long-term.

Occupational safety and health management goals

Unit: cases, %, number/million hours worked

Goals	2023 (Performance)	2024	2025	2026
Zero serious accidents	0 (for 2 consecutive years)	0	0	0
Reduction of general accidents cases	Reduced by 3.7%	Continuous reduction	Continuous reduction	Continuous reduction
Rate of deaths	0	0	0	0
Three-year LTIFR* of Suppliers	3.02	3.00	2.95	2.90

Three-year LTIFR of Suppliers

Unit: number/million hours worked

Classification	2021	2022	2023
Three-year LTIFR* of Suppliers	2.96	2.72	3.02

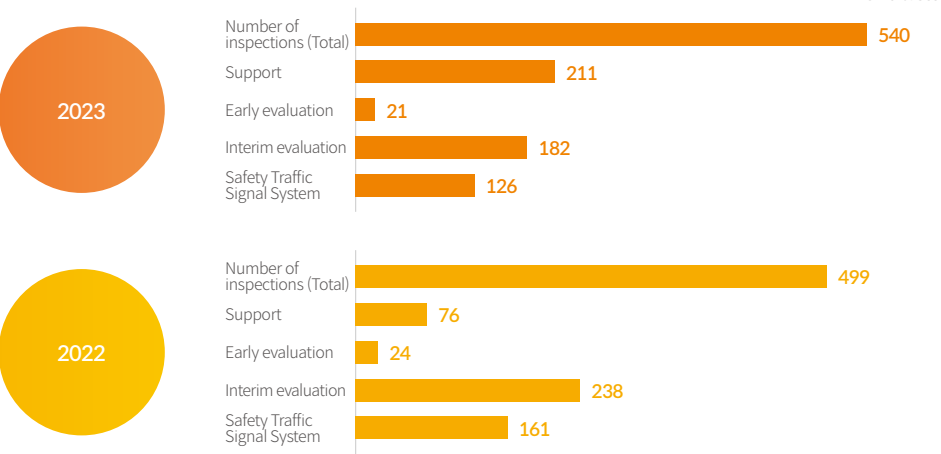
* Accidental industrial accident rate, number of accidental industrial accidents per million hours

On-Site Safety/ Equipment Inspections

GS E&C operated a Safety Traffic Signal System for efficient and systemic safety management. The system was operated and managed based on a code system of safety level of the site — green, yellow, and red. Since December 2023, we have promoted a transition to direct on-site management from traffic signal evaluation. We inspect the danger elements at the worksites without any omission based on a checklist and strengthen the review of legal documents in compliance with the Serious Accidents Punishment Act. We also support the preliminary inspection of high-risk construction machinery (tower cranes, construction lifts, large mobile cranes and pile drivers) for 100% coverage and conduct theme-based inspection of construction machinery twice every month. We support recruiting additional staffs responsible for equipment and systematic training to build competence of staff in charge of equipment and foster core talent. The “carrying-in and use criteria guidance” for equipment was enacted and amended to increase work efficiency of staffs responsible for equipment management. GS E&C will strive to create safer working environments, and improve safety management at the specialized and advanced construction sites.

Support/ Inspection activities

Unit: cases



COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

→ Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Materiality Issue 1. Occupational Safety and Health Management

On-site Visits Training & Fostering Experts in Equipment

GS E&C fosters experts in equipment to promote workplace safety. Employees with interest in construction equipment are selected from among the safety managers and practical education lasting more than one week is carried out upon on-site inspection by the safety inspection team, and video training is provided every week. Apart from this, equipment specialists are designated to be in charge of only equipment-related tasks to lower the burden on such personnel and to increase their expertise as equipment specialists. Furthermore, an institution dedicated to equipment education will be selected so that the on-site equipment manager will take a tour of the site to conduct training tailored for each site. We strengthen efficiency and safety of equipment use by providing a manual on equipment setting. As such, we will take the lead in ensuring safer workplaces by supporting on-site workers to deal with equipment more professionally.



Cardiopulmonary resuscitation (CPR)



PC construction safety management



Tower cranes signalman



Management of fire explosions occurring in sealed places

Certified for the Education & Training Management System

In August 2018, the Safety Innovation School of GS E&C was certified for its education and training management system (ISO 29993:2017) by the International Standards Organization (ISO), for the first time in the South Korean construction industry. We have renewed our certification status last year to ensure international trust. We formed and continue to operate the Curriculum Development Deliberation Committee consisting of on-site employees and experts to provide practical safety training applicable to the rapidly changing business environment. In 2023, we organized and operated additional safety- and health-experience training courses for employees at our headquarters in line with the increasing social emphasis on safety as indicated by trends such as the enforcement of the Serious Accidents Punishment Act. In addition, training courses for foreign workers are added according to directions for training curriculum improvement. We conduct g-surveys annually to collect opinions on improving training curricula and directions. We will do our utmost to offer training tailored to various needs of workers in the future.

Training curriculum survey in 2023



By training course :

Basic emergency treatment(23%) ▶ Accident cases by construction type(22%) ▶ Construction disaster experience(13%)



By training course :

Basic emergency treatment(15%) ▶ Accident case by construction type(13%) ▶ construction disaster experience(9%)



By training course :

Accident case by construction type(26%) ▶ Basic emergency treatment(19%) ▶ Fire/Explosion (9%)

Materiality Issue 1. Occupational Safety and Health Management

Safety Innovation School

GS E&C has been operating the Safety Innovation School since 2006 and providing safety training for on-site workers at construction sites since 2015. The Safety Innovation School provides safety and health education for each stage of the lifecycle (beginner, competency enhancement, advanced, and professional) and each job group (construction job group, management job group) to create safer workplaces and to foster talent. In addition, we provide safety education on new business sectors and administer shared growth partnership training for our clients and contractors to improve the safety and health levels of suppliers.

Curriculum of the Safety Innovation School

Classification	Safety and health managers		Construction	BM	Shared partnership
LV.4(15 years ~)	Training on Safety and health duties (maintenance)	Intensification of Safety and health management (Leadership)	Expertise in the job construction group (CM)	Intensification	Supplier's on-site manager (personnel in charge)
LV.3(9~14 years)			Intensification of the construction job group		
LV.2(5~8 years)		Safety and health competency (Lecturer course)	Construction job group competency	Competencies	Supplier's safety manager
LV.1(~4 years)	Training on safety and health duties (new/maintenance)	Introduction of safety and health for general positions (new/career)	Introduction of construction job group (new/career)	Introduction	



Safety Innovation School /Training to strengthen competencies

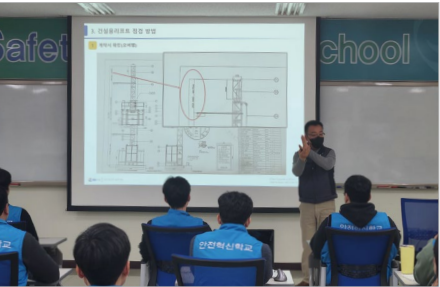
Safety Innovation School Training

Unit: persons, times

Classification	2021	2022	2023
No. of employees who completed the training (cumulative total)	19,039	20,657	22,892
Workplace training visits	48	89	76

In-house staff	Construction	Beginner/Competency enhancement/Advanced/Professional
	Non-construction	Direct management/Headquarter/BM
	Safety and health managers	CMS/Beginner/Competency/Enhancement/Advanced/Continuing legal training

Supplier / Contractor	Supplier	Safety/On-site manager/Executives of HQ
	Contractor	Xi GEIST/Xi C&A/Xi S&D/GS power
	Private safety experience	Public institutions / University



Advanced training for safety managers, personnel in charge of management



CPR training for newly appointed employee



VR training for on-site workers



Safety harness training for contractors

Materiality Issue 2. Response to Climate Change

Governance

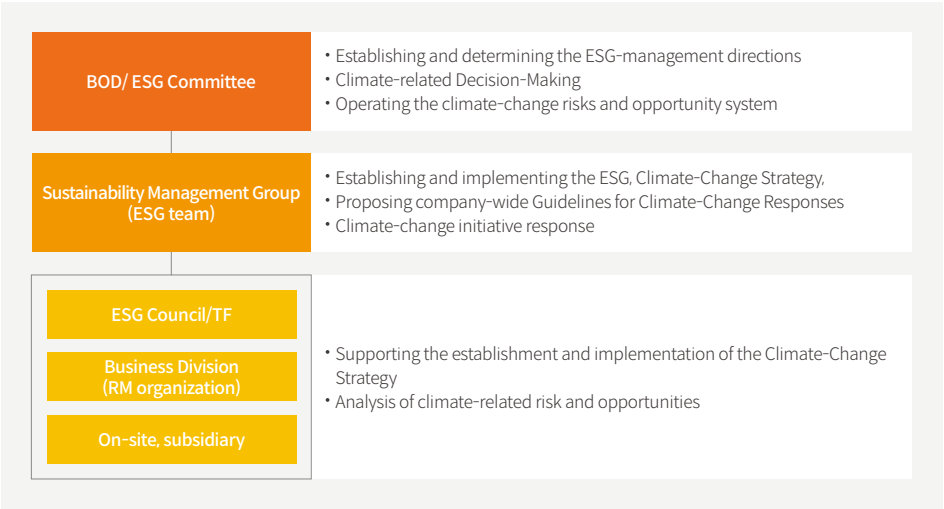
Supervision of the Board of Directors (BOD) and Role of Management

The highest decision-making body of GS E&C is the BOD. The Board meetings are normally held seven times per year, and there are three committees, including the ESG Committee, under the BOD. The ESG Committee oversees all decision-making on sustainability management, including climate-change response. All the results of decisions are reported to the Board of Directors. In addition, GS E&C appointed an ESG expert as an outside director for strengthening the ESG management, which is evidence of our commitment to tackling climate change. As part of detailed implementation to respond to climate change and GHG reduction, we have operated the Energy Management Committee with supervision of quality/environment since 2012. The Energy Management Committee implements make reports on progress of energy and GHG reduction related activities on a regular basis with the participation of various departments such as the Green Environment Team, Business Sector/HQ CM Team, and Technology and Planning Teams, etc. Among them, major issues are reported to the management committee where the CEO participates to establish company-wide sustainable development.

Organization Responsible for Climate-Change Responses

Responses to climate change by GS E&C are implemented throughout the overall organization of company. ESG Team supervises he establishment of a company-wide Climate-Change Strategy and suggests Guidelines for Climate-Change Responses. The Project Management Department and each Business Division perform company-wide RM activities, including climate-related risks and opportunities analysis throughout the entire process of project implementation. The Green Environment Team responds to the GHG emissions reduction regulations of governments in cooperation with each Business Sector, HQ and related department on real-estate assets operated by the company through the Energy Management Committee.

Responsible Organization and Role Definition



Climate-Response Council

Classification	R&R
Business HQ	Establishing measure to manage climate risks and utilize opportunities
	Using low-carbon method
	Establishing and implementation of GHG reduction measures
Procurement	Establishing a supply-chain sustainability due diligence system
	Policy giving preference to low-carbon and eco-friendly materials
	Carbon-management support (EPD*, inventory and consulting)
CSO	Scope1-2 inventory management and respond to regulations
	GHG reduction activities and monitoring reduction
ESG	Scope-3 inventory and subsidiaries management
	Supporting identification of company-wide climate risk and scenario analysis

* EPD (Environmental Product Declaration: The verification system for quantifying information about the entire lifecycle of a product (from collecting raw material to discarding the product)

Materiality Issue 2. Response to Climate Change

BOD Reporting Process

The ESG committee meetings were held quarterly in 2023. It examines and deliberates on non-financial risks and opportunities identified company-wide areas. The BOD and the ESG committee examine climate-change issues and utilize them in the decision-making process accordingly. In case of significant investment exceeding a certain size, the results of examining climate-change risks and opportunities are applied to written opinions and they are frequently reported to the BOD. The ESG agendas including climate change are ESG management strategy, climate-change response; ESG due diligence; and audit.

Major Reports in 2023 (related to climate change)

Committee name	Composition	Names of Directors	Major resolutions and reports
ESG Committee	- Four outside directors - One non-standing director	- Ho-In Gang (committee president) - Ho-Young Lee - Hyun-sook Choi - Chul-kyu Hwang - Jin-soo Huh	- Re-examination of the carbon-neutrality roadmap - Advancement of climate-change scenario analyses - Establishment and report of low-carbon technology and policy - Establishment and performance of subsidiary's GHG inventory establishment

Activities to strengthen BOD’s Competencies

GS E&C has conducted regular training for outside directors to enhance their climate-change related competencies. We strive to strengthen the expertise of the BOD on climate change including ESG issues and trends of the industry. In 2023, we had implemented a range of training programs for the BOD under the topics of ‘Global trends and implications of ESG response,’ ‘Report of results on carbon neutrality consulting and way forward,’ etc.

Remuneration for management for their response to climate-change management

Including the CEO, recognizes that responding to climate change is an important management task. For this reason, remuneration for climate-change related performance is a main concern. The incentive for the CEO is remuneration in general and determined within a certain scope of the CEO’s fixed salary. This bonus can be changed according to the CEO’s performance, and the major performance index reflects the progress made toward a climate-related goal. Such an incentive is linked to a short-term incentive plan. The CEO’s performance is determined by the quantitative indicator comprised of strategic goals and financial performance. The performance indicator is set after considering the CEO’s performance in the corresponding year, a performance standard based on a medium-term goal for the next five years comprehensively. In accordance with detailed information regarding this incentive and performance indicator, climate-change response is considered an important part of our mid- to long-term goals. Reflected in the climate change response are not only the establishment of new business avenues, and digitalization, but also performance that constitutes non-financial risk management such as responding to large-scale disasters. Therefore, the fact that the company’s CEO and management have contributed to implementing the Company’s Climate Commitment directly and have adopted climate-change response as a core strategy of the company has been clearly demonstrated through these incentive and performance indicators.

Climate-Change Response Performance Indicators 2023

Classification	Major performance indicators
Climate-change response	- Climate-change impact analysis - Prepare for climate risk review process when reviewing investment
Establish business model	- Low-carbon, eco-friendly R&D - Expansion of new business

Strategy

Identify Climate-Change Risks and Opportunities

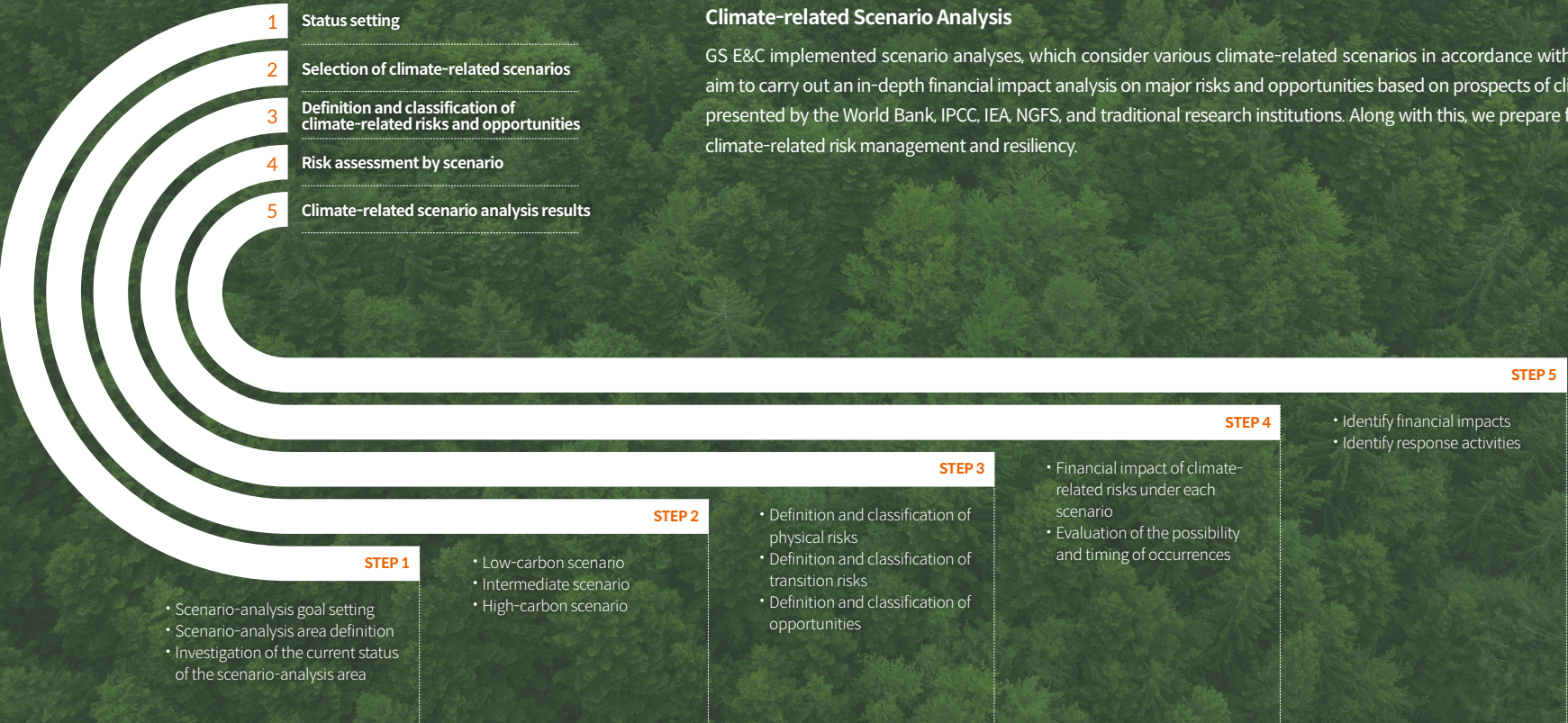
Responses to climate change by GS E&C are implemented throughout the overall organization of the company. The ESG Team supervises the establishment of a company-wide Climate-Change Strategy and suggests Guidelines for Climate-Change Responses. The Project Management Department and each Business Division perform the company-wide RM activities, including climate-related risks and opportunities analyses throughout the entire process of project implementation. Such response activities are used as basic material for establishing the direction of GS E&C ESG business to be examined and decided by the ESG committee within the BOD of the company. In 2022, the current ESG committee of the GS E&C has implemented decision-making for major agendas on climate change such as establishment of a climate-change response strategy, establishment and performance of GHG reduction, and establishment of a supply-chain ESG management system, etc.

Timeframe for Climate-related Scenario Analysis



GS E&C classified the time for analysis into short-term (~ 2025), mid-term (2025-2030) and long-term (2030-2050) after considering internal business strategy and GHG reduction goals. GS E&C examined not only its business sites, upstream and downstream, but also new business areas to identify risks and opportunities expected to affect its business activities due to climate change by scenario. We plan to expand business sites subject to analysis based on the consolidated financial statement and analyze the impact of climate change in the future.

Materiality Issue 2. Response to Climate Change



Climate-related Scenario Analysis

GS E&C implemented scenario analyses, which consider various climate-related scenarios in accordance with TCFD recommendations. We aim to carry out an in-depth financial impact analysis on major risks and opportunities based on prospects of climate and transition pathways presented by the World Bank, IPCC, IEA, NGFS, and traditional research institutions. Along with this, we prepare for laying a firm foundation for climate-related risk management and resiliency.

Classification	Overview	Business activities impact	Physical risk			Assumption
			IPCC*	IEA**	NGFS***	
Low carbon scenario	Thorough implementation of GHG-emissions reduction to keep the global average temperature-rise below 1.5°C	More transition risk	SSP1-2.6	NZE 2050	Net Zero 2050	(IPCC) This assumes to minimize the use of renewable fuel and achieve eco-friendly sustainable economic growth due to development of renewable energy technology (IEA) This assumes to achieve 2050 Net ZERO in energy sector to restrict the global average temperature rise below 1.5°C before 2100 (NGFS) This presents a pathway to achieve carbon-neutrality in 2050 and restrict the global average temperature rise to below 1.5°C compared to before industrialization (1,850~1,900 year).
Intermediate scenario	Significant implementation of policies and measures in each country to reduce GHG emissions that are above the level disclosed	More physical risks	SSP2-4.5	APS	NDCs	(IPCC) This assumes an intermediate standard between the degree of climate change mitigation and that of social-economic development (IEA) This assumes complete implementation of each nation within the NDC (Nationally Determined Contribution) period and the commitment period of carbon neutrality (NGFS) This assumes a pathway of implementing only a 30-year short-term climate policy announced by each nation
High carbon scenario	Passive implementation of policy measures or technological changes to restrict GHG emissions	Severe physical risk	SSP5-8.5	STEPS	Current Policies	(IPCCP) This assumes high use of fossil fuels and indiscriminate development with its focus on the rapid growth of industrial technology (IEA) This assumes the maintenance of the current policy paradigm and considers policy measures, the GHG-reduction goal and the plan which have been already implemented (NGFS) This assumes a pathway in which global warming becomes more severe, as no additional policies have been approved, except for policies that have already been introduced

* Intergovernmental Panel on Climate Change, ** International Energy Agency, *** Network for Greening the Financial System

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
→ **Materiality Issue 2. Response to Climate Change**
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 2. Response to Climate Change

Physical risk analysis scenario

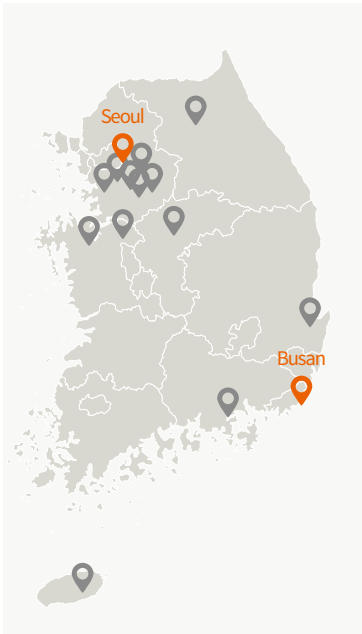
GS E&C deployed Mitiga EarthScan, a solution to analyze the climate-related risks facing the company. For this, we selected the company's priority assets of the company for efficient analysis of physical risks caused by climate change. During 2023, we analyzed 21 business sites in total (15 sites in Korea, and six sites abroad) and assessed them focusing on six core physical-risk factors. We found similar trends from 21 business sites during our comprehensive analysis. Then, for a more in-depth analysis, five representative business sites were selected and received focused analyses. They were chosen based on a differentiation of geographical factors of each area. This was done after considering differences in physical risk factors, pact and severity. We will establish responses and activities differentiated by each area through this analysis.

Business sites subject to analysis

Business sites subject to analysis : 21 business sites in total



Overseas : 6 business sites abroad



Domestic : 15 business sites abroad

Physical-risk assessment by scenario

GS E&C evaluated five major five business sites based on three scenarios of the 6th IPCC report. We identified grades from A (low) to F (high) to assess for each physical-risk factor of floods, winds, heatwaves, rainfall, droughts and forest fires) based on the site's exposure to climate hazards. We conducted an in-depth examination of various physical risks facing each business site. Therefore, the analysis utilizing the Mitiga EarthScan solution serves as the foundational material upon which the company can establish its risk-management strategy. The analysis result by each scenario and period showed that both business sites in domestic and overseas business sites are facing various physical-risk factors. However, as time passes, changes in influence are not necessarily large, and the impact of climate change is relatively insignificant. Despite this, GS E&C is committed to strengthening its preemptive response to physical risks based on the result-analysis of each business site as physical risks exist and differ from one area to another. We have established a plan for minimizing the potential impact of climate change and will continue to develop this plan accordingly.

Domestic business sites										
		IPCC SSP5 – 8.5			IPCC SSP2 – 4.5			IPCC SSP1 – 2.6		
		2025	2030	2050	2025	2030	2050	2025	2030	2050
Central region	Flood	A	A	A	A	A	A	A	A	A
	Wind	D	D	D	E	D	D	D	D	D
	Heatwave	B	B	B	B	B	B	B	B	B
	Rainfall	D	D	D	E	E	E	E	E	E
	Drought	A	A	A	A	A	A	A	A	A
	Forest fire	A	A	A	A	A	A	A	A	A
Southern region	Flood	A	A	A	A	A	A	A	A	A
	Wind	E	E	E	E	E	E	E	E	E
	Heatwave	B	B	B	B	B	B	B	B	B
	Rainfall	D	D	D	D	D	D	D	D	D
	Drought	B	B	B	B	B	B	B	B	B
	Forest fire	A	A	A	A	A	A	A	A	A

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
→ **Materiality Issue 2. Response to Climate Change**
Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through
Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 2. Response to Climate Change

Overseas business sites											
		A B C D E F						Low → High			
		IPCC SSP5 – 8.5			IPCC SSP2 – 4.5			IPCC SSP1 – 2.6			
		2025	2030	2050	2025	2030	2050	2025	2030	2050	
UK	Flood 🏠	A	A	A	A	A	A	A	A	A	
	Wind 🌀	A	A	A	A	A	A	A	A	A	
	Heatwave ☀️	C	C	D	C	C	C	C	C	C	
	Rainfall ☁️	A	A	B	A	A	B	A	A	A	
	Drought 🌳	A	A	B	A	A	A	A	A	A	
	Forest fire 🔥	A	A	A	A	A	A	A	A	A	
Spain	Flood 🏠	A	A	A	A	A	A	A	A	A	
	Wind 🌀	A	A	A	A	A	A	A	A	A	
	Heatwave ☀️	D	E	E	D	E	E	D	D	E	
	Rainfall ☁️	B	B	B	B	B	B	B	C	C	
	Drought 🌳	D	D	D	D	D	D	D	D	D	
	Forest fire 🔥	F	F	F	F	F	F	F	F	F	
Poland	Flood 🏠	A	A	A	A	A	A	A	A	A	
	Wind 🌀	A	A	A	A	A	A	A	A	A	
	Heatwave ☀️	B	B	C	B	B	C	B	B	C	
	Rainfall ☁️	B	B	C	B	B	B	B	B	B	
	Drought 🌳	A	B	B	A	A	A	A	A	A	
	Forest fire 🔥	A	A	A	A	A	A	A	A	A	

It has been confirmed that domestic business sites' exposure to the climate hazards of wind and rainfall risks are higher with its D and E grades compared to overseas workplaces. Therefore, the values of CVaR (Climate Value-at-Risk), which means the cost-ratio of rebuilding and fixing a business site, were also relatively high. CVaR refers to forward-looking estimates of replacement costs, and it can be also understood as the recovery ratio or replacement ratio among the business sites. The analysis indicated that the replacement ratio among the central regions was 4-5%. In the southern region of Korea, that figure was more than 16%. That is to say, it is forecasted that the cost induced by winds and rainfalls will more likely be incurred in Korea's southern region. GS E&C has actively responded for each construction site by establishing clear criteria for suspending work in the "Guidelines for suspension of construction machinery in case of typhoon and strong winds" in accordance with the Occupational Safety and Health Act. Additionally, as part of our company's efforts to minimize impact damages, the guidelines also detail the suspension criteria for wind and rainfall, but also that of coldwaves, heatwaves and heavy snowfalls. To prevent workers from becoming sick from heat and cold-related diseases, guidelines must be complied with regarding working hours. In summer, we must operate by adhering to three principles for preventing heat-related disease, and a flexible work system. In winter, we have discouraged workers older than 65 years, and workers who are likely to have compromised health from working. In addition, we have implemented measures for them to keep warm, such as providing hot water and hot packs and constructing heat shelters to maintain body temperature. The result of climate analysis showed that CVaR of the overseas business sites was less than 0.1 %, and heatwaves were identified as the most concerning risk among the physical risks. The UK and Poland received A ratings for their relatively low risk regardless of period or scenario, indicating a relatively low risk, while Spain has shown high exposure to risk of heatwaves, droughts and forest fires. Especially, as overseas business sites in Spain are in central regions with geographically high temperatures, which were reflected in the result of physical risk analysis, Spain has implemented flexible working hours for domestic business operations to prevent heat-related diseases, like in Korean business sites. GS E&C plans to introduce the 'Water Positive System' as a business promotion strategy and goal in 2024 in response to Spain's drought risk. This system is also in line with preparing for increased water footprint demand and water-trading systems that may resemble carbon markets. This system will promote water reuse and develop prevention and response measures in Spain, where water shortages and droughts are a concern. GS E&C will strive to identify and implement sustainable innovative water-management solutions to strengthen sustainable water management and efficiently respond to water-related risks.

Materiality Issue 2. Response to Climate Change

Identification of Climate-Change Risks and Opportunities (Impact analysis)

GS E&C identified financial impacts considering changing policies; carbon priciest; energy demand and composition; major raw materials; and technology levels — based on the physical risks, as well as transition risks and opportunity factors arising from climate change — and set out company-wide activities to respond to the impacts. Based on this analysis, GS E&C assessed climate change-induced risks and set priorities to manage climate-related risks and opportunities systemically by integrating them into the company-wide risk management system. We are also seeking ways to create new business opportunities through energy efficiency, development of eco-friendly technology and expanding renewable energy business.

Unit: 100million won

Classification	Type	Risk/Opportunity factors	Business impact	Timing of occurrence	Financial impact	Impact on Value Chain	Likelihood (or possibility)	Response activities
Physical risks	Acute	Reduction of on-site production capacity due to extreme weather events such as typhoons	- Increased damage at construction sites due to extreme weather events such as typhoons - Increased costs to meet construction timelines due to construction delays	Short-term	80	Operations	3	- Installation and operation of weather condition monitoring systems at construction sites - Regular typhoon drills for construction sites (once a quarter) - Addition of a disclaimer clause for the delay due to extreme weather events in the contract
Transition risks	Policies and Laws	Increased regulatory compliance costs due to stricter carbon emission regulation	- Increased demand for GHG-emission reductions and regulations - Increased urgency in preparing countermeasures according to the possibility of the construction industry's inclusion in the ETS	Mid-term	11	Operations	4	- Establishing response strategies for carbon neutrality and climate change - Expansion of investment in renewable energy (solar, wind) portfolios and eco-friendly technologies R&D - Establishing response strategies and monitoring emission-trading systems
	Market	Increased costs due to rising raw material costs	- Lack of raw materials and unstable supply and demand due to global environmental regulations - Increased costs due to rising raw material costs	Short-term	924	Upstream	3	- Monitoring the raw-materials market and diversifying supply channels - Debt ratio management by strengthening profitability-oriented housing business
Total of Risks and Financial Impacts					1,015			
Opportunities	Resource efficiency	An increase in sales due to business expansion such as waste recycling considering resource circulation	- An increase in recycling business needs due to increase environmental regulations - Organic-waste resource gasification facility, an increase in sales through expansion of the recycling industry such as material recovery facilities (MRFs)	Mid-term	214	Downstream	4	Actively seeking to commercialize measures on recycling such as organic waste resource gasification facilities, material recovery facilities (MRFs), and waste-reuse facilities
	Energy sources	Competitiveness enhancement and increased sales due to renewable-energy business expansion	- Business portfolio expansion through new sources of renewable energy such as solar power, fuel cells, and wind - Competitiveness enhancement due to renewable-energy business expansion - An increase in sales resulting from achieving GHG-reduction goals and renewable-energy transition trends	Mid-term	402	Downstream	5	- Investment related to renewable energy and policy monitoring - Expansion of renewable energy utilizing agricultural land and building rooftops
	Market	An increase in sales resulting from new emerging nations' entry into renewable energy business	- Identification of renewable energy markets overseas and increased accessibility - An increase in sales resulting from expansion of overseas markets such as India, Southeast Asia and Australia	Long-term	4,550	Downstream	4	- Expansion into markets of new emerging nations considering expandability of the business environment, and profitability - Stable business operation by securing business partners and localization strategy
		Increased sales through eco-friendly new businesses and value-chain expansion	- Entry into new markets through discovery of businesses related to carbon emissions and resource efficiency - Increased sales through eco-friendly new businesses and value-chain expansion					- Development and commercialization of low-carbon technologies such as hydrogen power generation based on clean hydrogen - Hydrogen fuel cell R&D and business development to expand new business models into the overall value chain of the hydrogen/ ammonia industry
Total of Opportunities and Financial Impacts					5,166			

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
→ **Materiality Issue 2. Response to Climate Change**
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 2. Response to Climate Change

Risk Management

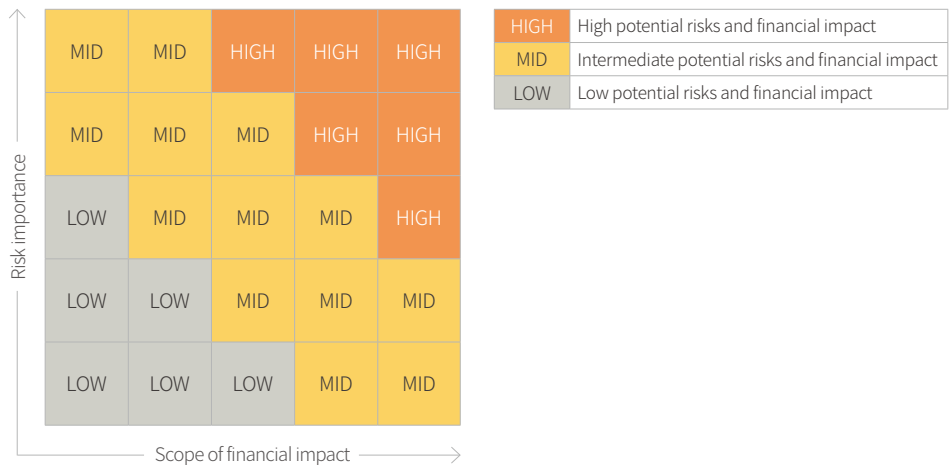
Definition /Classification of Risks and Opportunities

To identify a pool of risks and opportunities that can significantly impact the construction industry, GS E&C has closely examined global climate-change trends and public announcements in the same industry based on the TCFD recommendations. Furthermore, we identify the risks and opportunities of climate change by categorizing them after considering related regulations expected to impact the company based on an examination of its connectivity with our business and strategy.

Climate-change risk assessment

GS E&C evaluates the climate-related risks and opportunities from financial and strategic perspectives in accordance with our risk-management procedures. A detailed evaluation is made using a matrix to assess the importance and possibility of occurrence. A score of importance evaluation (Consequence) is granted within a range of 1 to 5 points considering cost impact and schedule impact, and as for financial scope, a score is given in five stages, categorized as: Remote, Unlikely, Possible, Probable, and Almost Certain — based on the score of occurrence possibility (probability). The importance of risks is classified as high, middle, and low, according to the score obtained by the multiplication of Consequence and Probability through the matrix analysis. Based on the climate-related risks and opportunities listed as final candidates, we identify financial-impact possibilities through analysis of the opportunities, recent trends of market, policy changes, and macro-environment development.

Climate-change risk assessment Matrix



Prioritize risks

For risks identified as those of GS E&C, their financial impact on business was comprehensively evaluated using the specialized climate modeling analysis solution. As for physical risks, the extent of risk exposure by each risk factor and estimated loss were calculated based on a climate modeling data-based specialized climate analysis solution. In terms of transition risk and opportunities, specific assumption and logic were utilized as indicators after employing climate change scenario released by global institutions such as IEA, NGFS, etc. for quantitative analysis of their financial impact. In particular, we performed financial analyses on significant risks and opportunities by expanding the scope of scenario for analysis and advancing new regulation analysis and detailed assumptions. Importance is evaluated after combining possibility (extent of exposure) with estimated impact (estimated loss). To confirm GS E&C's priority, the results of quantitative analysis and opinions from external experts were considered. GS E&C is preparing for strengthening our decision-making utilization and resiliency by identifying and assessing climate-change related risks and opportunities and establishing a systematic and feasible response strategy.

Process of Climate-related Risk Management

The risk-management processes of GS E&C are classified into business risks and environmental risks. Climate-related risk management requires both considerations, and climate-related RM is performed throughout the overall process based on company-wide organizations including the Project Management department, each business Division's RM organization and the Green Environment Team. GS E&C has established a risk-management process to preemptively respond to climate change, and conducts annual monitoring of risk and opportunity response measures to upgrade the process. The RM activities of GS E&C are implemented in accordance with the company-wide RM procedure, and risk management is conducted based on the risk process cycle in all processes — from the identification and understanding of risk, to assessing risks, responding to risks, and monitoring after responding. These monitoring results are reported to the CEO on a regular basis, and material risks are reported to the ESG committee to address financial / non-financial impacts in-depth. GS E&C will continue to implement sustainable management by responding to global issues such as climate change.

Climate-related risks and opportunities assessment and management process



COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
→ **Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth**
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

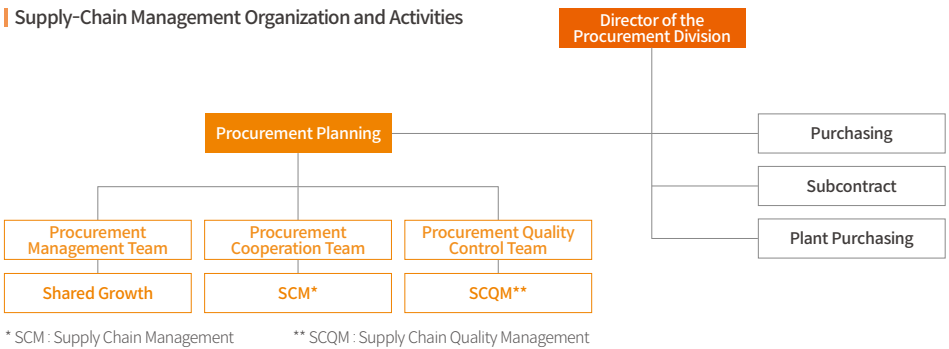
ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Governance

GS E&C has appointed a 'Procurement Management Team,' 'Procurement Cooperation Team,' and a 'Procurement Quality Control Team,' under the Director of the Procurement Division, as an organization dedicated to supply-chain management and related tasks. The Procurement Cooperation Team' manages and administers fair-trade policy and shared-growth system. The Procurement & Subcontract Cooperation Team conducts general operations and shared growth activities for supply-chain management such as registrations, selections, evaluations, rewards, and risk management of suppliers. Especially, the Procurement and Quality Control Team has been newly established to strengthen supply-chain quality control through recent reorganization. GS E&C establishes a code of conduct that stipulates the obligation of suppliers to fulfill their social responsibilities, such as establishing and complying with safety and health management plans, appointing safety officials, and ensuring workers' compliance in contract with suppliers.

Supply-Chain Management Organization and Activities



Major R&R by Team

Shared Growth	SCM	SCQM
Shared Growth Evaluation - Fair Trade Commission's annual evaluation, shared growth index and mutual cooperation evaluation Shared Growth Program for Suppliers - Communication/Education: Xi CEO forum, Supply Board, working-level staff education, Xi Core Partnership, etc. - Support Program: Finance, technology, and benefit sharing program Preventing the Violation of Laws/Regulations - Training and support for employees and suppliers for supply-chain compliance management	Supply-chain management - Implement supply chain management improvement Subcontractor Management Operation - Registration/selection/evaluation/reward/restriction for supply-chain based on rotation by each group - General management through supply chain system improvements/operations - Supply-chain safety strengthening council	Supply-chain quality control - Implement supply chain quality control improvement - Supply-chain quality grade, defects data management - Strengthening of education on supply-chain quality (Meeting to share major defects) - Supply-chain improvement activities

Strategy

GS E&C operates a sustainability management system for its suppliers to realize economic, environmental, and social values together. We established a sustainable management system for suppliers with the aim of securing and fostering the highest level of safety and quality competitiveness throughout the supply chain. We evaluate our suppliers systematically and fairly on an annual and quarterly basis. GS E&C developed the Great Partnership Package to ensure the adoption of fair subcontracting transaction practices between conglomerates and small and medium-sized enterprises (SMEs), and to lay the foundation for shared growth. The Great Partnership Package is a comprehensive support system designed to achieve sustainable shared growth with suppliers. This system contributes to improving suppliers' financial integrity through various support measures, establishes a fair-trade order, and strengthens the competitiveness of suppliers as well as promoting trust through horizontal communication. We strive to secure the highest level of safety and quality competitiveness throughout our supply chain by implementing a supply-chain management system of registration, selection, evaluation, and development, and by operating an efficient and reasonable system based on shared growth partnership.

Shared Growth System

Great Partnership Package			
Compliance and Fair Trade	Financial and Managerial Support	Enhancing Competitiveness	Promoting Parallel Communication
- Using the Standard Contract Form - Implementing the four major tasks and Fair-Trade Commission - Monitoring compliance - Fair and Managerial Support - Enhancing Competitiveness	- Direct/indirect financial support (Management support fund, Shared Growth Fund) - Industry-leading payment terms - Support for safety officer costs - Advance payment of safety management costs - Welfare support	- Joint development of new technologies - Operation of Quality/Safety Councils - Pre-con activities - Assisting in employee education and hiring - ESG consulting support	- Xi CEO Forum - Xi Core Partnership, supply board, etc - Operation of partner company B2B platform - The online whistleblowing system

Conceptual Diagram of the Supply-System Management

STEP 1. Registration	STEP 2. Selection	STEP 3. Assessment	STEP 4. Development
- Securing and maintaining the supply-chain pool - Supply-chain level (capacity) management - Supply-chain information management	- Selection of appropriate supply chains by project - Promoting fair competition - Securing supply-chain opportunities	- Supply-chain verification - Obtaining objective information on the supply chain - Collection of on-site opinions	- Establishing shared growth partnerships within supply chains - Strengthening responsible construction capabilities and loyalty - Motivating excellence throughout the supply chain

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Financial Support System for the Liquidity of Suppliers

GS E&C operates various financial support systems to support suppliers to strengthen the stability of management and manage funds properly. We provide direct funding support for our suppliers to improve their cashflow in times of difficulties through the management support fund system. We established the Shared Growth Fund, which allows suppliers to borrow funds at low interest rates from banks. We operate a network loan system that allows suppliers to receive a lower loan interest rate upon advancement into overseas markets.

Major Financial Support 2023



Condition of Payment Terms

Classification	2022	2023
Ratio of cash payment	95.8	96.2
Ratio of cash equivalent payment	100	100
Payment due date	On the 10th of the month following closing	

Improving the Technological Prowess of Suppliers through Technical Support

GS E&C supports suppliers with technology development using various methods to help them achieve sustainable growth. We support royalties on technologies that are jointly developed, and when a patent is registered jointly, we support the costs for the registration of the patent. Furthermore, we strive to promote the technology of suppliers and to commercialize their technology by assisting with the adoption of the patents and new technologies of suppliers.

Developing the Workforce Capabilities of Suppliers through Educational Support in Various Fields

GS E&C offers workforce education and training to enhance its suppliers' human resource competencies. Such efforts include the Safety Innovation School, education for working-level staffs, and ESG education. Recently, we have engaged in case-oriented discussion and education with suppliers by newly establishing the Safety and Quality Committee to support their HR competency-building.

Supplier Construction Support System

GS E&C is strengthening its cooperative relationships with suppliers by operating a variety of systems to support the construction projects of suppliers. We conduct PCM (Pre-Construction Meeting) activities continuously at each stage to ensure that the construction process is implemented systematically, assist suppliers with construction projects through TPMS meetings, inspect safety in the field, and provide technical support.

Practicing Fair Bidding

GS E&C has operated a fair bidding system since April 15, 2021 to enhance safety management by restricting bidding at low prices. The fair bidding system provides the proper level of construction expenses to suppliers to enhance safety, construction capabilities, and quality control, and we plan to operate the system continuously.

Fair Bidding Implementation

For mutual development of GS E&C and suppliers, we have continuously upgraded the process for selecting suppliers in accordance with the core principles of 'Fairness, Objectivity and Transparency.' The evaluations are performed comprehensively on safety, quality competence, performance competitiveness and cost competitiveness, etc. It also conducts safety evaluation, considering factors such as safety management, accident rate, the frequency of serious accidents, safety certification — and closely examines performance competencies such as construction and environmental management. Supplier management relies on construction performance, management status, technology standard and safety evaluation results. Thus, we contribute to creating a fair environment for competitiveness by restricting the bidding by suppliers who fail to meet requirements. We will consolidate our relationships with suppliers through the systematic assessment management.

Criteria factors for supply-chain selection and evaluation management

Classification	Description
Comprehensive evaluation	Comprehensive evaluation is performed on safety/quality competence, performance competitiveness, cost competitiveness, etc.
Performance evaluation	Evaluate based on safety, quality, environment, human resource management, etc.
Safety evaluation	Performance evaluation (safety management), accident rate, frequency of occurrence of serious accidents, safety authorization, etc.
Registration of new suppliers	Supplier evaluation of construction performance prior to registration, management status, technical level, safety evaluation, etc.

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Rewarding Outstanding Suppliers with Incentives

GS E&C provides suppliers with incentives to encourage them to create a more sustainable management system. Suppliers are evaluated to encourage them to internalize sustainable management into their corporate cultures by focusing more on various forms of risks including economic, environmental, and social risks. There are also future incentives for suppliers to encourage them to be more aware of safety and quality control. Additional incentives are provided to suppliers with outstanding performance and safety practices. In line with this, we offer incentives for sites of suppliers with good performance produced by their own quality-control activities led by dedicated workforces to ensure their voluntary safety management. GS E&C will contribute to improving its win-win relationships with suppliers and creating shared sustainable values.

Promoting the Progress of Suppliers to Build a Global E&C Company

GS E&C actively support suppliers' entry into overseas markets. In 2023, our domestic suppliers' sales in overseas market reached up to KRW20.26 trillion and we are putting various efforts into helping their expansion into overseas markets. We hold briefing sessions to give information to assist their entry into overseas markets efficiently. Furthermore, we provide an overseas integrated country information system for the latest information to suppliers and implement a pre-bid system to participate in bidding on overseas contracts with suppliers. GS E&C will continue to make efforts to enhance competitiveness in the global market with its suppliers.

Risk management

Subsidiary ESG Council

GS E&C has operated a Subsidiary ESG Council to support standardizing the ESG data, sharing policies, ESG training and cases since April, 2023. The subsidiary ESG council is composed of the GS E&C ESG team and ESG working-level managers from each subsidiary. The GS E&C ESG team is responsible for standardizing and collecting ESG data, sharing ESG policies & guidelines, and supporting ESG training and sharing cases. ESG working-level managers of each subsidiary are responsible for developing ESG plans and managing ESG data for subsidiaries. In 2023, we established the process for setting ESG indicators and collecting ESG data and will broaden the scope of ESG management for a more systematic ESG data management system. We will continue to share and apply ESG policies through the Subsidiary ESG Council.

Suppliers ESG Risk Management

GS E&C takes measures to establish a safe and sustainable supply chain by managing the ESG risks of its suppliers. While evaluating a company for registration as a supplier, we consider its credit rating, financial status, industrial accident ratio, etc.; to identify potential risks in the fields of the economy, environment, and society. The risks are reflected in the supplier registration review. Suppliers are monitored and evaluated on a regular basis and disqualified if no improvements are made, even after receiving a warning that internal requirements are not met. GS E&C supports education, assessment, consulting, etc., for suppliers' competency building, and enacted the Code of Conduct to ensure suppliers' compliance with the sustainable management principles in the fields of human rights, safety, environment, ethics, etc.

Ratio of Suppliers with Risk in 2023

Classification	Registered Suppliers	Unit: Suppliers, %		
		Economic (including financial)	Environmental	Social
No. of Suppliers	742 suppliers	8	0	0
Ratio of Suppliers		1.1	0.0	0.0

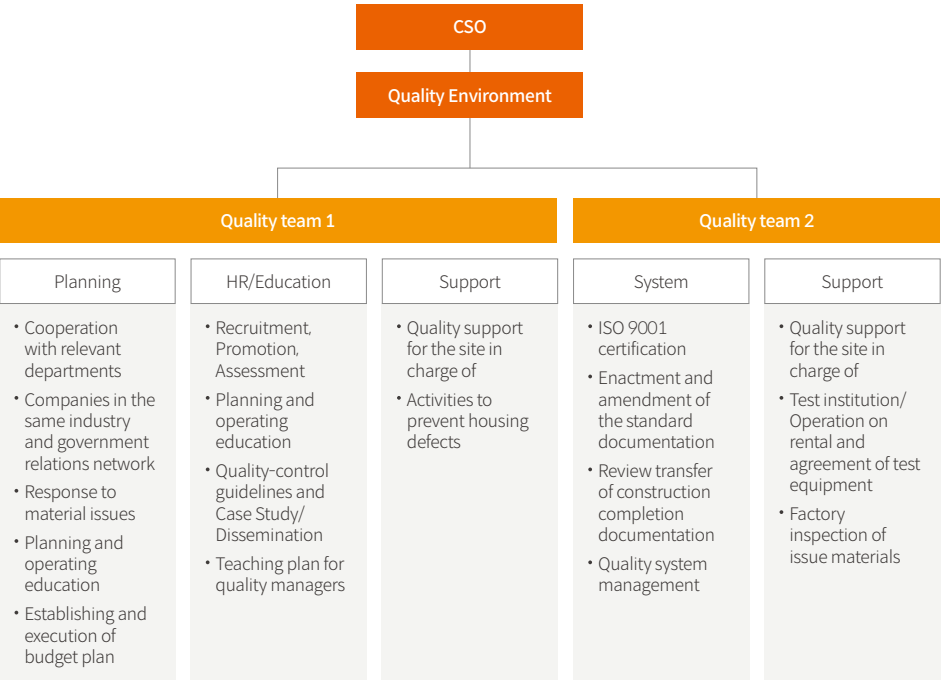
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

Governance

Quality-Management System

GS E&C strives to perform on-site focused quality control and strengthening. GS E&C considers quality and safety to be a top priority and restructured the quality-control organization in 2023. Especially, for on-site quality control, company-wide quality-control guidelines were established, with processes to respond preemptively through on-site focused support. We are doing our best to minimize quality risks through proactive quality control to keep up with trends on quality in society.

Quality Team Organizational Chart



Strategy

Quality-Enhancing Activities

GS E&C strives to provide customers with outstanding service based on a customer-oriented philosophy. We conduct pre-inspection and quality assurance for key construction project materials. Furthermore, we increase customer satisfaction by adhering to the strict standards for the finishing materials that customers come into direct contact with. As part of our efforts to maintain high-control standards, we forge cooperative relationships with specialized quality assessment institutions. In line with this, the Procurement Quality Control Team, a newly established team in the company, systemizes procurement for KS and KORAS certified materials only. The previous Quality Team was divided into two sub-teams to increase specialization and efficiency of quality control. To accurately determine material quality, we have conducted an MOU with a renowned specialized quality-control institution. A process to avert accidents has been established by implementing structure-quality improvement processes, increasing quality and design organization, performing technology safety activities and strengthening construction management by structure experts after the construction site collapse in Incheon. GS E&C will continue to dedicate ourselves to identifying ways to increase structural stability.

Quality Enhancement Description

1. Risk-management system improvement for government relations	2. Concentrated support considering the characteristics of headquarters
Strengthening penalty-point risk management from plan establishment stage before commencement of construction - Produce and supervise safety management plan - Quality control / initial production of test plan (Headquarter) follow-up F/U(site)	Strengthening construction projects and material quality management (construction) Patrol inspection for construction type with multiple defects /quality management at each construction stage (Materials) Reinforcement of finishing material quality / Ensuring performance for inter-floor noise reduction and indoor air quality
Concentrated support for the site with high penalty points Items of major penalty points: rupture, material separation, all sorts of written plans	Strengthening truck-mixer quality control - Strengthening truck-mixer quality verification - Implement special inspection for low-level suppliers in accordance with NDT(Non-destructive Testing)

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
→ **Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management**

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

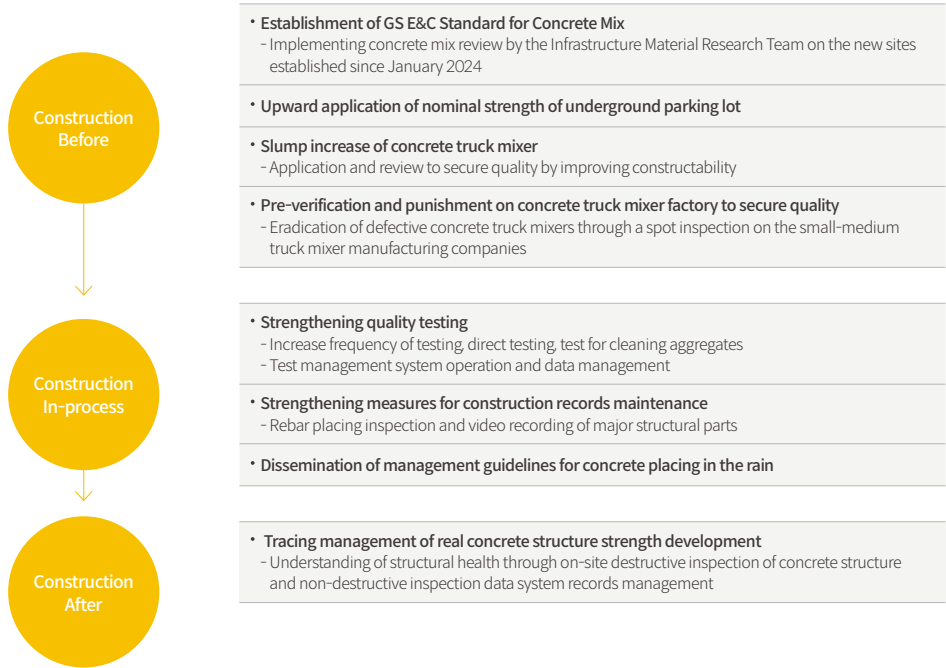
ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

Strengthening quality-control measures after collapse construction site in Incheon

1. Structure Quality Improvement Process

Process establishment by each stage of construction to secure concrete structure quality



2. Strengthen Quality and Design Organization

Classification	Position	Team name	Headcounts	Major roles	Notes
Quality	CSO	Quality Team 1	7	Prevention of building defects	Reinforcing the quality organization
		Quality Team 2	4	Improvement of structure quality	
	Procurement	Procurement Quality Management Team	3	Supplier quality control	Newly established
Design	RIF Tech.	Construction material research team	12	Reviewing the concrete mix and measuring core strength at the new construction sites	Add tasks
	Building	Building Structure Team	16	Design document and structure safety assurance	Newly established

3. Develop Pre-Safety Activities for Technology Development

- **Strengthening technology safety support**
- Enhancing support for design and construction by integrating the Technical Safety Support Team and the Structure Technical Safety Inspection Team
- **Identify risk factors by each construction stage and pre-safety management activities by establishing measures**
- Production of a checklist for 71 items under 11 construction types: strengthening the execution to prevent serious accidents

4. Strengthening Construction Management by Structural Experts

Deployment of structural experts at construction sites(Infrastructure site deployment in progress)

Key Improvements	Major Items
On-site placement of structural occupants by area	• On-site dispatch of structural occupants by area and technical support for the frame construction
On-site inspections by structural experts	• Introduction and implementation of on-site inspections by structural designer (Check rebar placement, review Shop.dwg)
Rebar Shop.dwp quality improvement	• Education for rebar placement for on-site workers and suppliers • Review special parts such as flat plates, transfer girders, etc.

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
→ **Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management**

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

Risk Management

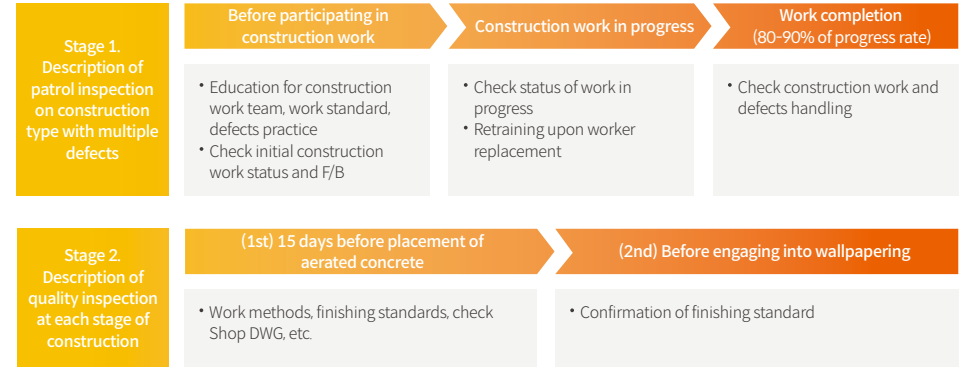
Quality-Management System Advancement

GS E&C develops and uses the best quality-management tools by applying its outstanding IT capabilities based on the integrated management system approved by the international standard ISO 9001. We apply stringent quality management to all projects to meet not only customer requirements, but also internal quality criteria corresponding to global standards. GS E&C strives to construct the highest-quality buildings through various preliminary quality inspection activities. We check the status at each stage of construction based on our internal manual, and strive to realize perfect construction in all processes by means of total quality inspection. We check the preliminary quality through QC (Building Quality Control) and inspect quality during each stage of construction in all processes and BS (Preliminary Quality Control) to implement on-site training and inspection. In particular, the visual inspection and functional inspection on finishing material are conducted simultaneously during BS to prevent multiple defects and quality inspection is performed 90 days before the completion of construction. Pre-visit is made to each household as part of quality-management activities that satisfy customers' needs — and complaints and defects on exclusive areas and common areas are inspected. Furthermore, we take prompt action against inconveniences to increase customer satisfaction by visiting each household after completion of construction.

TPMS based Quality Control System

Standard Setting	Establish global level of standardization
Quality guidelines (fostering)	Foster voluntary quality-collection competence characteristic
Quality guidelines (support)	System support for outstanding quality management
Measurement analysis	Regular inspection and audit of process
Standard improvement	Failure exposure, culture for improvement

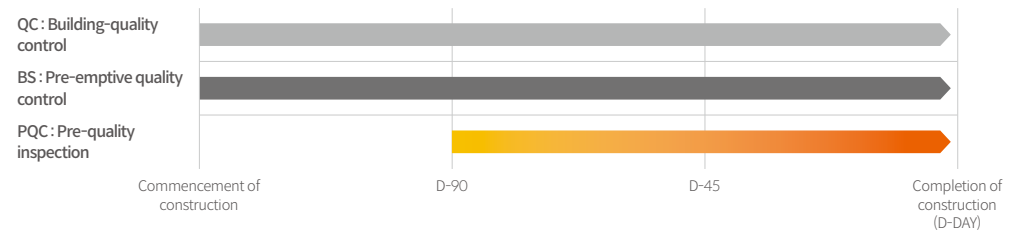
Construction quality management process



Material quality management process



Pre-quality inspection



Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management



Use of Safe Stone Material

As radon has become a major social issue in Korea, GS E&C conducts tests in accordance with the relevant laws and regulations to secure material quality and ensure customer trust. We measure the radiation index for granite and marble material, and we have strictly prohibited the use of stones that fail to comply with the standards. For example, granite bathroom shelves are replaced with engineered stone to ensure customer trust. We request an accredited testing laboratory to run tests, and only qualified materials that meet related standards are used upon the introduction of new stone material. Furthermore, we launch to develop covering and lining to contribute to creating an environment that is conducive to customers' health and safety to be a top priority.

Cooperation with the Technology Research Institute for Quality Advancement

GS E&C requests support and cooperates with the Technology Research Institute for Quality Advancement when technological reviews are deemed necessary during the design stage, to review matters such as dew condensation or verification of insulation materials. The Institute provides support to verify the performance of new insulators upon their introduction, to ensure optimal insulation design. E&C is also supported by the Institute for matters of evaluation of areas with concerns of dew condensation, noise between apartments, vibrations, etc., through on-site visit to the Institute. For better energy efficiency of building and living quality performance, we are dedicated to developing convenient living and heating/cooling environment systems and smart environmental operation systems,

Productivity and Quality related Research

Research	Technology classification
Manufacturing technology development for high-quality circular aggregates for structure concrete	Productivity enhancement
Developing evaluation technique of concrete compression strength of structures	Productivity enhancement
Design / Construction of hyper-strength PHC stake optimization	Productivity enhancement
Developing radon-reduction functional coverings and lining, and research on its application	Productivity enhancement
Research on construction rationalization of tunnel concrete lining connection	Productivity enhancement
Verification of applicability of reinforced high performance polyurea	Productivity enhancement
Develop AI-based real-time quality abnormality detection technology	Productivity enhancement

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

Goals and Indicators

Strengthening Quality Practice (QP)

GS E&C is dedicated itself to the Quality Team’s quality practices and implements systematic enhancement in diverse areas. The Quality Team provides standard guidelines suitable for each project to ensure on-site compliance with a consistent construction process. The standard guidelines are necessary to guarantee the high quality of the construction result and support all workers to perform the construction work in line with clear guidelines. In the quality-control process, strengthened monitoring activities are implemented through regular visits to the site and close examination before issues occur. From the initial stage of construction, we support the preemptive initial set-up through active participation at the site. From the outset of the project, we focus on establishing a systematic quality-control structure that adapts to the unique characteristics and demands of each site.

Quality Practice Goal				Unit: Score
2023(Performance)	2024	2025	2026	
0.78	Less than 1.0	Less than 1.0	Less than 1.0	

* Ministry of Land, Infrastructure and Transport, quality penalty scor



Quality Control Education

GS E&C has a systematic education program to ensure continuous construction quality. Through construction quality control job training, we identified four major construction types with multiple defects — tiles, waterproofing frameworks, and insulation — and trained 232 personnel dedicated to quality control. We also conducted the same training for 75 general project personnel to enhance their core competencies in construction quality. On-site visits and education for construction-quality control were actively performed. We performed construction-quality education 33 times for sites where finishing construction work was in full swing to enhance the expertise of on-site quality-control managers and disseminated seven best practices to encourage their application in practice. For competency-building of quality-control managers of construction work, we provided eight types of production teaching plans and education. At the local council of quality team leaders, quality-related issues and practices were shared with an attendance of 305 people three times. Finally, we established and disseminated company-wide quality control guidelines through the distribution of a handbook on on-site quality and building construction, while also providing support to on-site quality-control managers. Thus, we advanced the entire organization’s control competency by making this effort. Such efforts serve to lay a firm foundation for GS E&C to achieve the outstanding quality that we pursue.

Quality Control Education Activities				unit: persons
Classification	Education name	Target	Number of persons	
Common	Competency-building education (including construction quality management)	Legally appointed persons (related with legal education)	259	
	Virtual training for quality control managers	Entire	-	
Persons converting duties	Competency-building mentoring for non-strategic force	Regular employees	52	
	Quality school	New persons converting duties	-	
Quality control team leader	Competency-building education for quality control team leader	Newly appointed persons	10	
PJT experts/ general position	Introductory education for newly recruited persons	Newly recruited PJT experts	10	
	Introductory education for quality-management positions	General Lv.1 workers	49	
Others	Training for new employees	New employees	3	

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through
Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

ESG FACTBOOK

ENVIRONMENTAL

047 Minimizing Environmental Impact

058 Developing Eco-friendly Technology

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

→ [Minimizing Environmental Impact](#)

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Minimizing Environmental Impact

Environmental Management

Environmental Management Strategy

As climate policies are introduced across the globe, environmental issues such as climate change are emerging and gaining importance. Domestic and overseas environmental regulations have been strengthened and environmental-risk response capabilities are now a key component of corporate competitiveness. GS E&C has established an environmental management strategy system to strengthen its ability to tackle environmental issues, to preemptively respond to global changes and to fulfill its responsibilities as a global top-tier construction company. We have established three strategic directions and ten strategic tasks with the goal of reducing GHG emissions by 31.86% compared to the BAU level by 2050. We are managing our KPIs thoroughly in accordance with the assessment procedure applied to our green management evaluation reports. GS E&C is committed to creating sustainable development and positive changes across society and taking on its responsibilities.

Long-term Strategy for Environmental Management

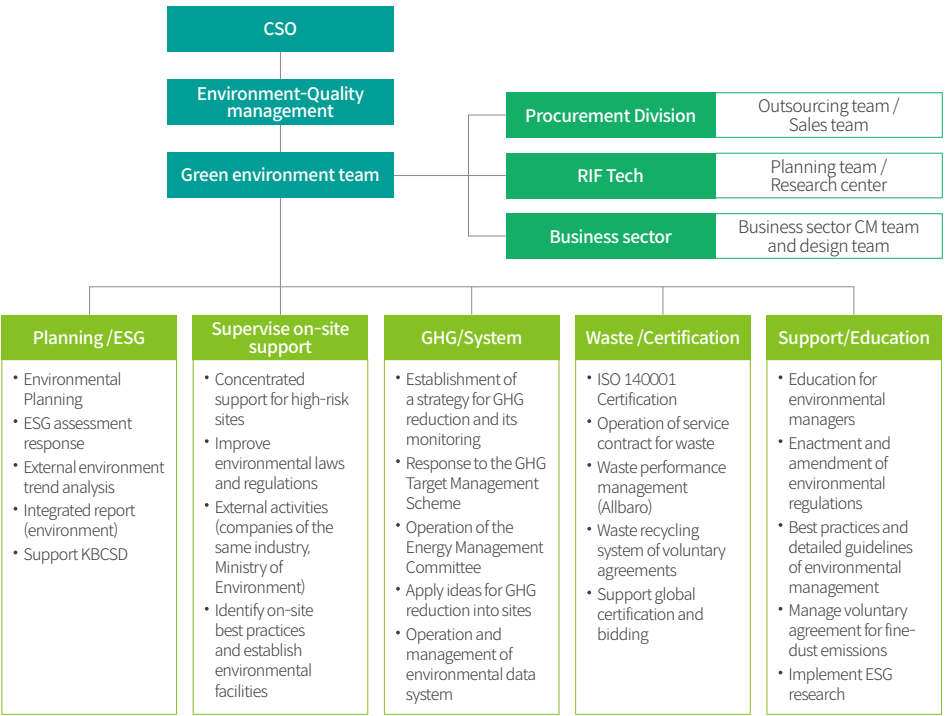


* Business As Usual, forecasts of GHG emissions trends
 ** The GHG-reduction target is currently being re-established

Environmental Management Organization

GS E&C has established an ESG team to manage the implementation of climate-change strategies that properly reflect the risks and opportunities associated with climate change. The ESG team reports to the ESG Committee within the BOD. The Green Environment Team under the Quality Environment Section of the CSO Division is responsible for conducting environmental-management activities such as acquiring environmental management system certifications, managing environmental performance, and external networking. In addition, we have established the Energy Management Committee to set specific energy conservation goals by business sector and to monitor relevant performance. We aim to create eco-friendly business sites by encouraging all employees to develop stronger awareness of the importance of our environmental practices and participate actively in environmental-management activities.

Environmental-Management Organizational Chart



COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

→ [Minimizing Environmental Impact](#)

Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Minimizing Environmental Impact

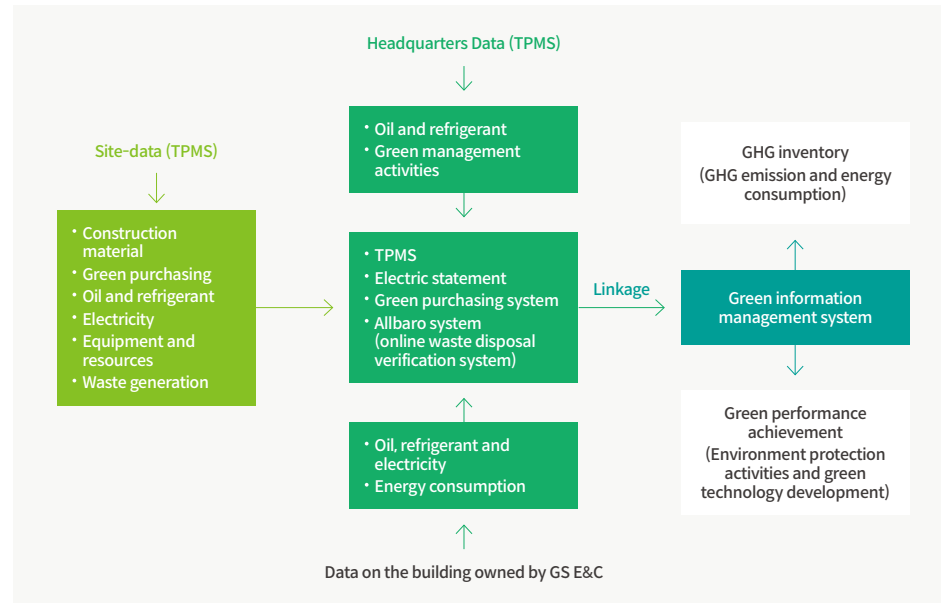
Environmental Management System

GS E&C is practicing environmental management in all its business processes, from the commencement of construction to the completion of the construction. GS E&C operates an environmental-management system in accordance with the PDCA standard (Plan, Do, Check, & Act). Furthermore, GS E&C monitors GHG emissions systemically for efficient management of environmental performance with the Green Information Management System. This system is focused on improving water in 2022 and sophisticated in 2023 to focus on the management of data closure.



ISO certification

Operation of the Green Information Management System



Eco-friendly Sales Business

Establish criteria for calculating eco-friendly sales

GS E&C established eco-friendly sales criteria for eco-friendly business, ESG investment, and eco-friendly R&D, and calculates the sales of businesses that have achieved eco-friendly standards based on six environmental goals. We will further specify the criteria for suitability and become a leading company that contributes to sustainable development through our field work and continuous monitoring.

Criteria for calculating eco-friendly sales



Eco-friendly products/ service sales

Unit: 100 million won



Eco-friendly business classification

Eco-friendly business	GHG reduction	- Renewable energy (solar, wind) - Transmission and distribution infrastructure related to renewable energy - Zero energy architecture, green building, green remodeling - Carbon capture, utilization, and storage	- Establishment and operation of a low-carbon data center (green data certification) - District Heating Corporation - Landfill gas power plan
	Climate-change adaptation	Water supply: Water-supply construction (water supply, drainage)	Seawater desalination
	Sustainable conservation of water	- Wastewater-treatment facilities - Water supply: Water-supply construction (water supply, drainage) - Alternative water resources: Seawater desalination, sewage reuse, and artificial reservoirs	- Water-supply network maintenance project - Reuse of water (treated sewage water, rainwater, heavy water, etc.) - Groundwater purification project in contaminated areas
	Transition to a circular economy	- Waste recycling (SRF, biomass), waste energy - Landfill gas collection and treatment	
	Pollution prevention and management	Prevention and treatment of air pollution, odor, and sea pollution	
	Biodiversity	Restoration of the forest ecosyste	Protection and preservation of biological species (Protection of endangered species and eradication of foreign organisms)

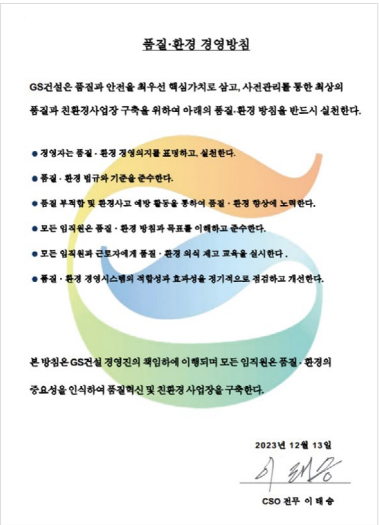
Minimizing Environmental Impact

Strengthening Environmental-Management Competencies

Environmental issues such as climate change, resource depletion, water shortages, etc. are emerging across the globe. In response to these challenges, governments worldwide are stepping up their environmental regulations, with the construction sector increasingly prioritizing GHG reduction due to its inclusion in the GHG Target Management Scheme. In line with this trend, GS E&C is actively responding to the environmental management goal of 30% GHG reduction.

Complying with Environmental Regulations and Enforcing Inspection

We strive to achieve a record of zero environmental fines, by carrying out our legal responsibilities and strengthening environmental inspections to comply with all environmental regulations. We collaborate with local governments and the Ministry of Environment to establish eco-friendly business sites, as well as actively implement environmental management activities tailored to each site. GS E&C has strengthened 'Self-Inspection of Essential Environmental Regulations' linked with QHSE (Quality, Health, Safety, and Environment) to ensure suppliers' access as part of our efforts to increase transparency and efficiency in environmental management. We continue to respond preemptively to the strengthened construction-environment regulations, and increase our environment-management capability by preparing and distributing the construction-environment management facility guidelines and the environment management casebook.



Environment-Quality Management Guidelines

Environmental Goal and Major Promotional Task

Classification	2023	2024
Goal	• Environment Penalty-zero	• Environment Penalty-zero
Important promotional task	• Fine dust and waste management	• Prevention activities for environmental risk • Close support considering characteristics of headquarters

Installation Guide for Environmental Management Facilities

GS E&C develops 'the standards for the installation of environmental facilities' and applies them at construction sites in view of the recent tightening of environmental regulations, thereby standardizing the establishment standard. The guide is produced for user's easy understanding. This guide is organized into 15 thematic categories such as wheel-washing facilities, and waste-sorting storages. We also actively apply revised regulations and guidelines to the new construction sites. This is part of our efforts to enhance environmental protection and management standards.

Response to meeting environmental regulations in 2023

Control area	Response to meeting environmental regulations	Description of response
Dust scattering	• Clean Air Conservation Act • Special Act on the Reduction and Management of Fine Dust	• Strengthening dust scattering inspection at construction sites • Restrict /Control vehicles of Grade 5 of emission gas in Green Transport Zone • Mandatory alternate no-driving system for public vehicles
Waste management	• Framework Act on the Construction Industry • Construction Waste Act • Water Environment Conservation Act • Waste Management Act • Framework Act on Resources Circulation • Construction Waste Recycling Promotion Act	• Waste separation and storage • Install lid • Install drainage • Compliance with the date of on-site storage
Noise, vibration	• Noise and Vibration Control Act	• Installation of noise measurement device at business sites • Installation of CCTV at access roads and exits
Water quality	• Water Environment Conservation Act • Sewerage Act • Groundwater Act	• Review whether wastewater from factory is purified or not • Sediment discharge control in rain • Compliance with the Standard for Permissible Discharge Limits
Soil	• Soil Environment Conservation Act	• Excavation / Check whether contaminated or not when constructing pipe • Manage occurrence of waste oil /waste paint • Manage whether contaminated soil occurs or not
Demolish and asbestos	• Occupational Safety and Health Act • Rules on the occupational safety and health standards • Asbestos Safety Management Act • Waste Management Act • Construction Act	• Check of status of use • Distribute the 'Guide on-site work procedure'

Minimizing Environmental Impact

Investment to strengthen eco-friendly competency

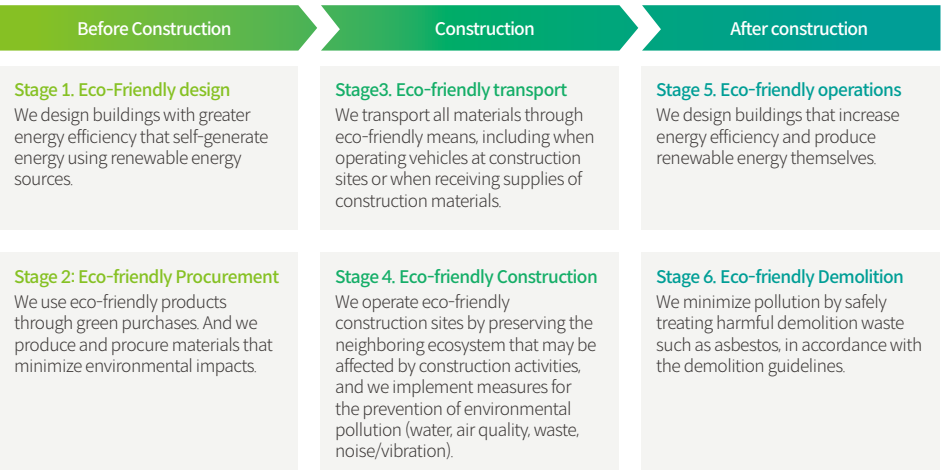
GS E&C increases its investments in the development of low-carbon technology and eco-friendly technology to keep up with the national GHG-reduction goals and 2050 carbon-neutral scenario. In particular, GS E&C divides its environmental investment into the following categories: investment in R&D and investments in eco-friendly business. GS E&C is dedicated to making investments in environmental conservation and sustainable development.

Investments in Environmental R&D and New Business			
	Unit: 100 million won		
Classification	2021	2022	2023
Eco-friendly R&D	34.9	60.6	82.7
Investment in new eco-friendly business	674.0	138.1	1,008.0

Eco-friendly Construction Process

GS E&C operates an environmental-management system, in accordance with the procedures and guidelines for related fields based on the Environmental Manual. We practice enterprise-wide environmental management through all business process, ranging from before the commencement of construction to the completion of construction and address issues that may occur during the entire process such as GHG, waste, water resources, air quality and ecosystem preservation to handle risks preemptively.

Company-wide eco-friendly construction process



Environmental Education

Environmental education for employees

GS E&C provides systematic education for eco-friendly management. We distribute on-site environmental management guidelines in preparation for periods when intensive environmental management is needed, such as during winters, rainy seasons, etc. In the event that an environmental issue arises, we use the internal EP bulletin board to upload case studies accessible to all employees We provide advanced programs not only on subjects such as legal environmental, core issues and environmental improvement issues but also noise/vibration, and fine dust, to new CMs, environmental managers and on-site the staff at headquarters. This education is offered in the form of on-site visits and video-conferences to help employees to enhance response competency for environmental issues. In 2023, we conducted competency-building education once for environmental managers in metropolitan areas and non-metropolitan areas respectively.

Environmental Education for suppliers

We provide tailored training to each target group for competency-building of suppliers. We conduct comprehensive education on environmental management issues considering the specific characteristics of the site. In line with this, we support the establishment of roles and an operation system for on-site environmental management to help suppliers’ understanding on how to manage equipment and facilities. In addition, our training programs on topics including resource saving/recycling, energy conservation, and GHG emissions reduction have contributed to raising environmental awareness among our partners. Furthermore, we increase our partners’ interest in the environment by actively sharing information on the latest environmental policies and social issues

Environment Education Achievements of Employees and Suppliers

Education target	Education method	Education classification	Number of times
Headquarters: 259 persons	Virtual education (Headquarters)	Dust scattering	23 times
		Education for job duties and government relations	18 times
Our company: 528 persons	On-site training (Visits)	Architecture and housing	138 times
		Green business	8 times
		Infrastructure	28 times
Suppliers: 176 persons		Plant	2 times



On-site Environmental education for employees



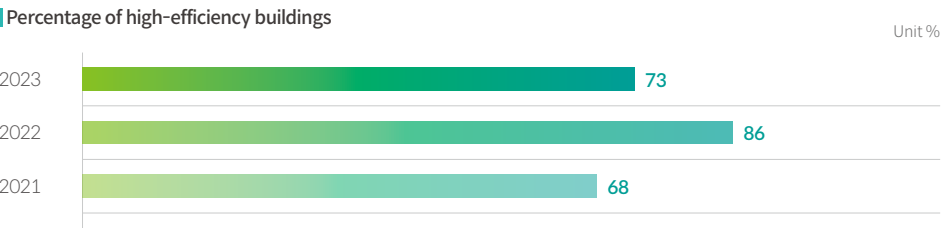
On-site Environmental education for suppliers

Minimizing Environmental Impact

Eco-Friendly Designs

Eco-Friendly Designs for High-Efficiency Buildings

GS E&C increases the energy-efficiency of buildings by implementing eco-friendly designs and technologies. Under the goal of reducing buildings’ energy-consumption with eco-friendly designs, we reduced carbon emissions and increased energy efficiency by developing optimized design technology and exterior cladding, applying new renewable energy technology, and introducing an electricity-energy management system, etc. We are continuing our research into developing products that can reduce energy consumption, and seeking ways to develop and apply eco-friendly construction materials. In creating zero-energy buildings, we closely examine various factors such as responses to legal requirements and construction expenses. We identify various ways to meet eco-friendly legal standards, identify and purchase eco-friendly items that can be used on the construction sites through preliminary certification of eco-friendly products to actively utilize in constructing eco-friendly buildings.



Eco-Friendly Procurement and Use of Green Materials

Green Purchasing

GS E&C procures materials and products through a green-purchasing process to contribute to the government’s policy of expanding the use of eco-friendly products. We identify materials that can be replaced with green alternatives and preferentially purchase green products. Applying the green-purchasing system, GS E&C manages the status of our partners’ certifications, including environmental marks, HB marks and energy-consumption efficiency certifications – and calculates eco-friendly green-purchasing costs and monitors performance by managing item codes by certification. We completed green purchases worth a total of KRW 131 billion, which is equivalent to 8.2% of our total procurement volume in 2023. In addition, we declared our green procurement plan within the purchasing system to strengthen environmental management, and provide incentives to eco-certified companies and eco-friendly product suppliers when evaluating current partners and new suppliers.

Green Purchases

Unit: KRW 100 million, %			
Classification	2021	2022	2023
Eco-friendly construction (HB Mark)	43	69	165
High energy-efficient machinery	286	257	200
Energy-consumption efficiency grade 1 or 2	232	409	563
Eco-Label	358	237	130
Others	20	39	16
Total (A)	938	1,011	1,074
Total purchase amount of raw materials *(B)	9,862	12,571	13,100
Purchase ratio (B/A)	9.5	8.0	8.2

* Finishing and electrical material orders

Green Construction Material

GS E&C uses eco-labeled materials at its construction sites to reduce the environmental burden from construction and to minimize environmental impacts. At our sites, we apply eco-friendly design guidelines such as the Green Standards for Energy and Environmental Design, in accordance with our designs and purchases. In addition, we continuously use eco-friendly materials for major construction areas such as internal wall materials, floor materials, and window materials, where we apply Environmental Product Declaration (EPD) products, low-carbon materials, certified resource recycled materials, and certified harmful substance reduction materials in 2023.

Introduction of Eco-Friendly Workwear

GS E&C has adopted eco-friendly vests made of REGEN, which is a recycled polyester textile material developed from crushed waste PET bottles. Since 2022, we have gradually expanded the adoption of eco-friendly workwear at other worksites. Following 2023, We plan to produce approximately 5,400 articles of eco-friendly workwear in 2024. GS E&C will continuously engage in active eco-friendly management for sustainable consumption to increase the circulation of resources and minimize the environmental destruction caused by production activities, through various means, such as using eco-friendly materials for most frequently used items of workwear.

Minimizing Environmental Impact

Eco-Friendly Transport for Maximizing Fuel Efficiency

Eco-Driving Campaign

GS E&C is conducting an eco-driving campaign to minimize environmental impact during transport. We educate our drivers to avoid engine idling, drive at moderate speeds, and refrain from using outdated vehicles. We will distribute eco-driving posters and conduct relevant campaigns to further promote green transport.

Converting Business Vehicles to Electric Vehicles

GS E&C jointed K-EV100 for the phased conversion into eco-friendly vehicles free of air pollution to achieve the goal of converting business vehicles to electric vehicles in phases leading up to 100 % by 2023, according to the eco-friendly vehicle-conversion policy of the South Korean government. We established the foundation for conversion to electric vehicles, and encourage suppliers to use eco-friendly transportation equipment. We also pursue carbon-emission reduction by improving various means of transportation and efficiency of equipment.



Eco-friendly Construction to Prevent Environmental Pollution around Construction Sites

Reduction of Fugitive and Fine Dust

GS E&C publishes and distributes a fugitive-dust management casebook to comply with the environment laws and guidelines of the Ministry of Environment. GS E&C developed technologies for rapid ventilation and portable dust collectors to reduce fugitive- and fine-dust generated during construction. A portable dust collector absorbs dust generated during construction, and then mixes the dust with water and discharges it in the form of soil. We took action to minimize air pollution resulting from construction by installing wheel-cleaning facilities and anti-dust covers. In addition, we thoroughly manage our environmental performance at work sites by distributing an environmental management guidebook* that includes information on fugitive dust, noise and vibration, water quality, and soil. In 2023, we conducted 145 environmental management activities** at our site.

* Composed of legal requirements, licensing requirements, facility installation standards and management guidelines based on laws and cases, and key issues.
** Based on data form the Internal Environmental Management System (QHSE)

Site Support and Inspection Activities

Unit: cases				
Category	 Fugitive dust	 Noise vibration	 Waste	 Water quality
Site support and inspection	116	2	54	26

Total number of sites support and inspections
145 sites

Eco-friendly Activities in Local Communities

All employees of GS E&C are working together to reduce waste generation. We participate in resource circulation through various activities such as recycling waste safety helmets, using eco-friendly paper, packaging containers, multi-use cups, and conducting paperless meetings. We perform voluntary environmental cleanup activities such as cleaning and collecting waste at worksites in Korea, impacting positively on local communities and the environment. In 2023, as many as 2,656 employees took the initiative in participating in eco-friendly activities in local communities at 18 sites for a total of 2,464 hours. In addition, we have continued eco-friendly activities through a voluntary agreement with the Ministry of Environment, and participation in eco-friendly construction sites operated by the Seoul Metropolitan Government. We will take the lead in creating positive changes in the environment and local communities based on sustainable-management focused environment protection and social responsibility.

Environmental Cleanup Activities in Local Communities within Korea in 2023

Category	Number of sites	Participants	Participation time
Environmental Cleanup Activities in Local Communities within Korea in 2023	18 sites	2,656 persons	2,464 hours

Minimizing Environmental Impact

Reuse of Water Resources

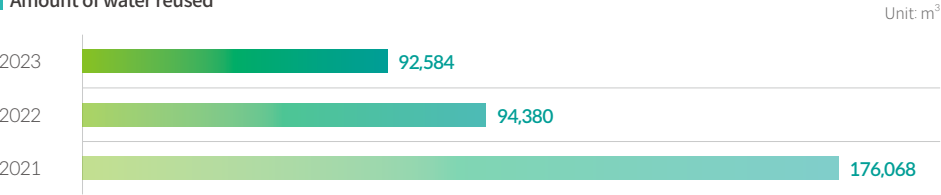
GS E&C is contributing to environmental protection by reusing groundwater generated from construction sites. We have completed the research on water recycling technology and finished all preparations for its immediate application to the sites. With this technology, discharged water can be recycled and reused as washing water to remove fine dust at the site. In cases where the recycled water volume per site is 60 m³ daily, this technology can reduce GHG emissions by approximately 4.8 tCO₂-eq annually. If this technology is applied across all GS E&C sites, it is expected to reduce annual emissions by about 400 tCO₂-eq. The Seoul Metropolitan Government implements a policy of reducing sewage charges by 50% in cases where spilled groundwater is used. We therefore expect to reduce on-site operating costs when we apply the water saving technology to sites in Seoul. This technology has been successfully applied to our construction sites such as North Suwon Xi Rexvia, Icheon Xi The Park, the infrastructure site of Incheon Subway Line 1 extension construction, and Yeosu Station Xi Heritage., etc. In future, GS E&C will continue to implement sustainable environmental management by developing and applying water-recycling technology focused on our Environment Solution Research Team.

Consumption by water source

Unit: ton

Category	2021	2022	2023
Service water	632,549	666,927	969,564
Ground water	1,217,059	1,408,963	933,686
River water	841,875	627,891	565,326
Total	2,691,483	2,703,781	2,468,576

Amount of water reused



Eco-friendly Operations

‘Building Energy’ for Enhanced Energy Efficiency

GS E&C applies “Building Energy” technology to reduce energy-consumption during construction operations. GS E&C has actively engaged in reducing energy consumption through optimization of heat sources, the use of new renewable energy, and enhanced underground parking-lot lighting design. It is also developing new technologies to reduce energy consumption of external and internal parts of buildings. The optimization technology for heat sources responds to the demand for heating and cooling of buildings by identifying optimized energy-supply solutions. Solar power and geothermal energy, which are forms of renewable energy, are appropriately utilized to produce energy necessary for buildings by applying optimization technology for renewable energy. Highly efficient diffusive optical lenses are designed and applied to LED lighting to increase the diffusion of light, and thereby achieve high-efficiency building operations using less energy.

Renewable Energy Usage

Unit: TJ

Category	2021	2022	2023
Renewable Energy (Geothermal)	7.5	8.0	8.2

Zero Energy Building (ZEB)

GS E&C develops optimized apartment designs that include both passive and active elements and renewable energy sources that meet the requirements for each grade to prepare for the mandatory Zero-Energy Building Certification (ZEB). As part of our efforts, in 2022, we developed and demonstrated the value of building integrated photovoltaic (including BIPV), solar panels by applying them to apartment facades, to increase buildings’ use of renewable energy, which was a key factor in obtaining ZEB-Certification. The results were used as the foundation for future solar-energy research related to zero-energy building in 2023. Xigeist, one of our subsidiaries, successfully secured the function which meets the standards of confidential ZEB function by improving the module central way and complementing connection parts. In response to an increase in demand for eco-friendly buildings and mandatory ZEB certification, GS E &C is preparing for ZEB design guidelines for the realization of sustainable-building certification. In this way, we will contribute to environmental protection and energy-efficiency enhancement by providing appropriate guidelines to acquire the ZEB certification by each grade.

Water Pollutant Management

GS E&C manages water quality in accordance with its established water-quality guidelines. GS E&C operates sewage treatment plants in Elysian Gangchon and Elysian Jeju, respectively To minimize the environmental impact from water pollutants generated from these sewage-treatment plants, water pollutants are managed according to criteria that are stricter than the legal discharge concentration criteria.

Minimizing Environmental Impact

Water Pollutant Discharge*

Classification		Unit	2021	2022	2023
BOD	Discharge	ton	0.3	0.4	0.7
	Discharge concentration	ppm	1.6	1.6	3.1
	Legal criteria	ppm	100	100	100
SS	Discharge	ton	0.3	0.2	0.7
	Discharge concentration	ppm	1.3	0.8	3.1
	Legal criteria	ppm	100	100	100
COD	Discharge	ton	1.0	1.2	1.3
	Discharge concentration	ppm	5.3	4.8	6.2
	Legal criteria	ppm	200	200	200

* Based on Ganchon Elysian and Jeju Elisyan

Wastewater Treatment Using an Eco-Friendly CO₂-Neutralization System

GS E&C established an automatic control system for safe operation by developing a carbon dioxide-dissolving device for the highly efficient dissolution of carbon dioxide in alkaline wastewater. As eco-friendly technology, it was registered for a Carbon-Dioxide Neutralization System patent (10-1953829) in 2019 for the first time among construction companies. This technology was applied to the Eumseong PC Factory Wastewater Treatment Plant, replacing the use of hazardous chemicals (e.g. sulfuric acid) prohibited by the Chemicals Control Act. We prevented environmental accidents by prevent discharge of alkaline wastewater at construction sites and reduced the risk of accident significantly caused by negligence that can occur when dealing with sulfuric acid.

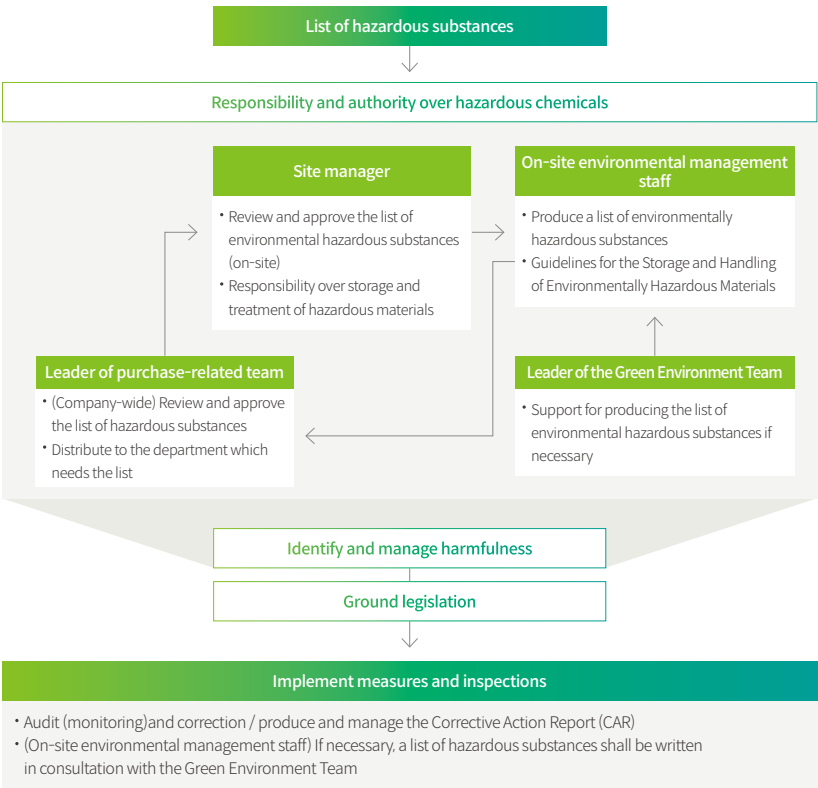
Hazardous Chemicals Search Engine

GS E&C has developed and operated a chemical search system for the safe management of hazardous chemicals. This system has advanced hazardous chemical management and inventory by automatically determining whether the hazardous chemicals exceed the criteria or not, based on the MSDS* numbers, and CAS** numbers. GS E&C responds preemptively to any risks that may occur during the handling process, and reinforces the risk-response system by complying with legal regulations such as the Occupational Health and Safety Act and the Serious Accident Punishment Act.

* MSDS : Material Safety Data Sheet

** CAS : Chemical Abstracts Service

Hazardous Chemicals Management Process

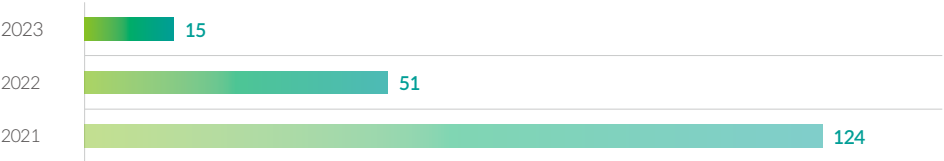


Hazardous Chemicals (Designated Waste) Management

GS E&C classifies and treats construction equipment and designated waste, such as waste oil and waste paint generated from construction in accordance with the Waste Management Law. We operate and manage designated waste-storage sites and relevant facilities in compliance with the relevant regulations to prevent environmental pollution resulting from the leakage of designated waste.

Total hazardous chemicals discharge

unit: ton



Minimizing Environmental Impact

Eco-friendly Demolition and Waste Management

Eco-friendly Demolition Standard

GS E&C complies with the Construction-Waste Recycling Act and the Waste Management Law to minimize the environmental impact of waste generated from construction activities. Before demolition, we first remove asbestos, and all the waste generated during demolition is safely disposed of in accordance with the waste demolition guidelines and waste management manual. Recently, we enhanced the waste-disposal standard to ensure active guidance of the right way of treating on-site waste.

Demolition process

Demolition process	Major management issues for environmental priority
1. File for a report of building dismantlement	Establish an environmental plan in advance for the entire process of building demolition
2. Dismantle/Destroy asbestos	- Asbestos preliminary survey - Remove asbestos - Discharge asbestos waste (treated as designated waste)
3. Dismantle / Remove structures	- File a licensing report ① File a report on fugitive dust discharge ② Preliminary reporting on specific construction (noise) ③ File a report as a discharger report (Construction/designated/business sites waste) - Structure dismantlement: implement the items of the basic plan when reporting on licensing for noise and dust
4. Waste management	- Waste storage/disposal and compliance with the standards - Enter into the Allbaro System and prepare for waste management register

Major management issues for environmental priority of removal work

Related laws	Major management issues for environmental priority
Clean Air Conversation Act	- Operation of high-pressure sprays when dismantling, and removing building materials - When storing fieldwork materials for more than one day, dustproof covers shall be installed (Installation of dustproof in case of storing ~) (demolished waste is stored temporarily) - When loading or unloading, water is sprinkled (when removing waste) - Pass through the wheel-washing facility (If it is impossible to operate the facility, an alternative facility is operated, portable sprinkler, nonwoven, etc.)
Waste Management Law	- Compliance with waste-treatment method /classified for storage by nature, status and type of waste - Installation of anti-dust covers
Noise and Vibration Control Act	- Installation of noise-proof barriers before construction - Compliance with matters to be filed for specific construction (types of applied machinery and equipment, hours of use) - Management of noise record of areas where civil complaints were reported
Water Environment Conservation Act	- Prevent external sediment discharge (installation of portable drain channel and sediment basin) - Prevent cleaning of equipment, tools, and kits in the site - Prevent external water leaks from wheel-washing facilities outside
Soil Environment Conservation Act	Compliance with the method of treating contaminated soil (Prevention of re-landfill and shipping out the contaminated soil)

Waste Treatment through the Waste-Processing System

GS E&C controls waste generated from its business sites thoroughly and in real-time and achieves 99.6 % of high waste-recycling rate. In the process, the Green Environment Team is in charge of verifying water-treatment companies to ensure the legal treatment of waste. We confirm the licenses related to waste treatment and waste-treatment contracts during the verification process. We check whether the waste-treatment service companies have a guarantee insurance certificate to treat the abandoned wastes, which is socially problematic these days.

Waste-generation status

	unit: ton, %		
Classification	2021	2022*	2023**
Goals	1,070,984	1,100,143	544,991
Total amount of generation	1,049,565	1,078,140	534,091
Recycling	1,048,286	1,077,798	522,127
Landfill and incineration	1,279	342	2,263
Others	0	0	9,701
Recycling rate	99.88	99.97	97.76

* Recalculation due to errors of totaling waste in 2022 (business sites and designated sites)

** Waste amount (volume) has been calculated only for construction sites since 2023

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

→ Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

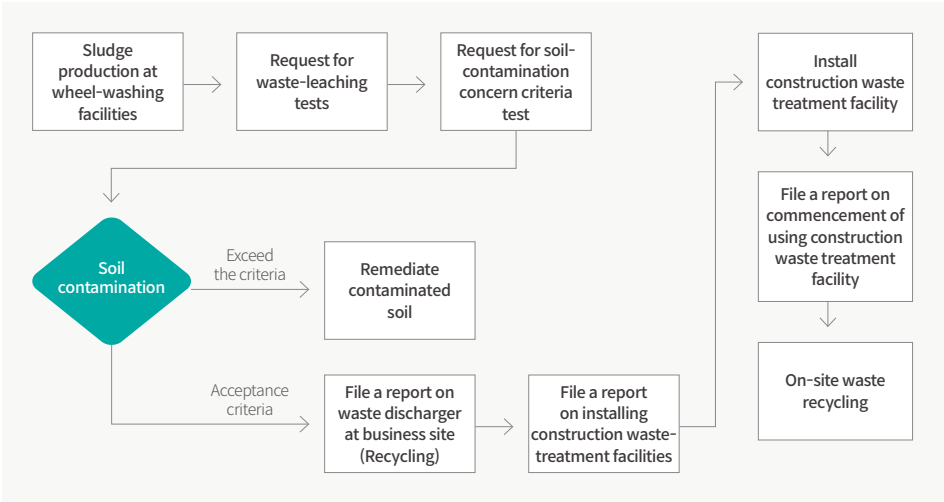
Membership Associations

GHG Verification Summary

Independent Assurance Statement

Minimizing Environmental Impact

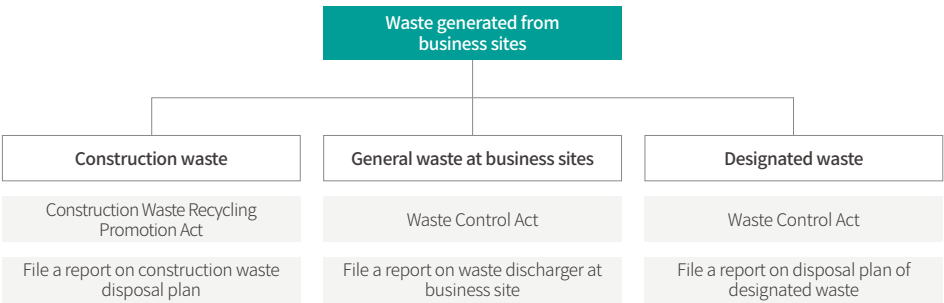
Recycling process in the construction waste sites



Strengthening of Monitoring and the Recycling of Construction Waste

GS E&C establishes waste-discharge and recycling targets to minimize waste discharged during construction and perform our environmental responsibilities. As a representative case, we legally dried and recycled construction sludge (29,371m³ of heaving soil) generated at the Baegot New Town Coastal Road Expansion Construction Site. Furthermore, we concluded an agreement with suppliers to minimize incineration and landfill to increase waste-recycling rates. Following the waste-recycling rate of 99.9% in 2022, we achieved a recycling rate of 99.6% in 2023. We will commit ourselves to making continuous improvements and contributions to environmental protection in waste management and recycling.

Monitoring process

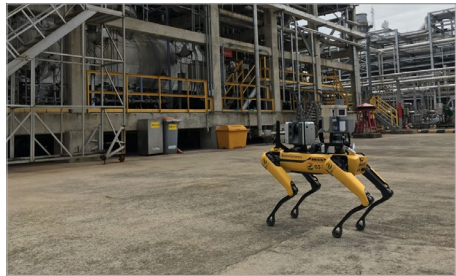


Waste recycling use plan in 2023

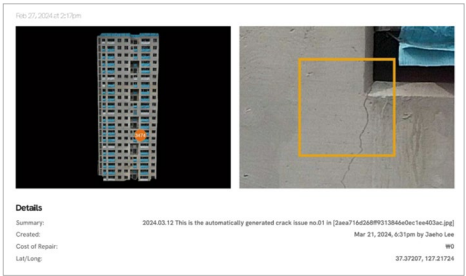
Category	Waste disposal status	Expected effects
Discarded cartridge (Silicon cartridge)	Disposal of mixed waste	- Reduction of waste disposal costs - Operation of eco-friendly site where resources are circulated
Discarded drum (Cable drum)	Construction waste disposal	Discarded drum recycling

Reducing Waste through Smart Construction

With the goal of environmental protection and increasing construction efficiency, GS E&C has introduced eco-friendly construction methods and cutting-edge technologies. To minimize the amount of generated waste, we fully utilize new technologies. The PC method and modular method minimize dust and noise by producing structures first in the factory and then assembling the parts at the work site to complete construction. The PC method is generally used to construct the underground parking lots of apartments. This method not only reduces complaints about waste and noise, but also construction time, and enhances economic feasibility. Likewise, the modular method involves assembling prefabricated modules in the manner of Lego blocks, which is also effective for reducing waste. In the BIM method, a structure is designed as a virtual model in 3D. This method prevents excess use of materials and waste generation. GS E&C has acquired certification for ISO 19650, an international standard, from the British Royal Standards Institute (BSI) in recognition of our substantive use of BIM techniques. Our company has renewed the certification every year to maintain our technical competitiveness. BIM Team oversees not only design, construction, but also the operation platform of data scanners, 3D map production, laser-scan related software, and developing a quadruped walking robot. It serves a pivotal role in sustainable and smart construction by putting the quadruped walking robot into testing at the site, collecting data with drones, and conducting crack monitoring. GS E&C will exert its best efforts to create a sustainable construction environment by securing technology competitiveness through smart construction.



Putting quadruped walking robot into test at the site



On-site application of drone exterior wall-inspection

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

→ Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Minimizing Environmental Impact

Waste-to-Energy Technology to Reduce Waste and Protect the Environment

GS E&C treats waste and converts wastes into electric power and heat at the same time. This results in minimizing the environmental impact of waste and saving resources by generating energy. We have patents on waste-to-energy technology such as automatic waste collection system, mechanical biological treatment (MBTI) and stoker incineration technology. We constructed 30 waste-to-energy facilities and operate 37 waste-to-energy facilities by actively applying this technology.

Construction and Operation of Waste-to-Energy Technology Facilities

Category	2021	2022	2023
Construction	26	26	30
Operation	28	28	30

Unit: EA

Ecosystem Protection

Efforts to Preserve the Aquatic Ecosystem

GS E&C strives to protect the aquatic ecosystem and possesses an air bubble barrier technology that protects the aquatic ecosystem. Air bubble barrier technology keeps marine organisms from moving to other areas by generating high-pressure air bubbles in the water, which prevents the inflow of organisms and thereby preserves the aquatic ecosystem. We monitor water quality and prevent water pollution by conducting environmental impact assessments on a regular basis during construction. In addition, wastewater treatment facilities are installed to meet the criteria on allowable wastewater discharge. At Elysian Gangchon and Jeju resort with strengthened wastewater treatment management guidelines, the amounts of aquatic pollutants such as BOD, SS, COD were measured at less than 16%, 8% and 24%, respectively, compared to the legal criteria. GS E&C will continue to comply with the legal criteria by effectively handling the wastewater occurring in the construction process and minimize environmental impact at the same time.

Protection of Plants and Endangered Species

GS E&C actively responds to a range of environmental problems arising during the construction process and seeks to increase biodiversity. From the initial stage of business, we analyze and evaluate impacts that our business has on the ecological environment. Accordingly, we also pursue measures to reduce negative impacts. Through various means such as vegetation nurseries, eco-corridors, wildlife fences, and the use of low-noise, low-vibration construction methods, we strive to maintain ecosystem continuity by preventing habitat loss of wildlife and fully providing shelters and movement routes. GS E&C analyzed the ecological impact of business sites with the ENCORE data defining the ecosystem service reliance impact based on the causes of nature loss recommended by the Taskforce on Nature-related Financial Disclosure (TNFD). With this, we protect the habitats of legally protected species such as the common kestrel, otter and Chinese sparrowhawk. We are committed to minimizing ecosystem impacts that can occur in the construction process for sustainable management protecting biodiversity.

Ecosystem analysis for business areas

Site name	Construction period	Major ecosystem status				
		Birds	Mammals	Fishes	Amphibian Herptile	Plant
Construction work of the Techno Park General Industrial Park in Cheonan	July 28, 2022 ~ September 27, 2025	• Common kestrel* • Lesser cuckoo • Brown boobook*	• Leopard cat*** • Eurasian otter**	• Cyprinus rubrofuscus • Oryzias latipes • Oriental weather fish • Stone moroko	• Japanese tree frog • Pelophylax nigromaculatus	• Quercus acutissima • Pinus rigida • Pine tree
High-tech Valley General Industrial Complex (Chung Buk)	January 05, 2023 ~ January 04, 2026	• Mandarin duck* • Eurasian goshawk* • Common kestrel* • Chinese sparrowhawk* • Eagle*	• Leopard cat*** • Eurasian otter**	• Minnow • Oriental weather fish • Stone moroko	• Japanese wrinkled frog • Dybowski's frog • Korean salamander	• Pine tree • Black locust • Tulip tree • Castanea crenata • Castanea crenata • Willow

* Natural monuments, ** 1st grade endangered species, *** 2nd grade endangered species

Biodiversity risk*

Site name	Construction period	Risk type				
		Soil pollutants	Aquatic pollutants	Use freshwater ecosystem	Use terrestrial ecosystem	Water usage
Construction work of the Techno Park General Industrial Park in Cheonan	July 28, 2022 ~ September 27, 2025	High	Medium	High	Very High	High
High-tech Valley General Industrial Complex in Cheongju (Chungbuk)	January 05, 2023 ~ January 04, 2026	High	Medium	High	Very High	High

* Criteria of biodiversity risk analysis: Construction & Engineering in ENCORE (<https://encorenature.org/>)

Ecosystem-protection activities in business sites

Site name	Construction period	Protection plan	Protection activities
Construction work of the Techno Park General Industrial Park in Cheonan	July 28, 2022 ~ September 27, 2025	Establishment of temporary drainage	Length of temporary drainage 1.169M
		Sediment retention reservoir	9 Sediment retention reservoirs
High-tech Valley General Industrial Complex in Cheongju (Chungbuk)	January 05, 2023 ~ January 04, 2026	Temporary drainage	Length of temporary drainage 719M
		Sediment retention reservoir	2 sediment retention reservoirs

Developing Eco-friendly Technology

Eco-friendly certifications

Designated a GGBS* Star Champion by the Building and Construction Authority of Singapore

Since 2014, GS E&C has earned ‘Star Champion’ status by receiving the highest rating of the Green and Gracious Builder Scheme (GGBS). This is a company-unit environment certification system jointly operated by Building and Construction Authority, BCA in Singapore and GGBS – an environmental certification system operated by the Construction Authority of Singapore. GGBS evaluates and assigns a grade for companies that are working on construction projects in Singapore with criteria focusing on environmental policy, noise/vibration, handling of waste and complaints, and environment improvement activities. Earning an accolade from Singapore for 10 years in a row means that GS E&C has continuously consolidated its status as a global eco-friendly construction company. GS E&C will strive to engage in expanding eco-friendly certification systems and sustainable construction activities.

* GGBS is an environmental certification system operated by the Building and Construction Authority of Singapore and certified institutions. GGBS evaluates and assigns a grade for companies that are working on construction projects in Singapore with criteria focusing on environmental policy, noise/vibration, waste, and civil complaint handling



Awarded as the GGBS Champion

R&D Strategy

GS E&C is making continuous investments in R&D to prepare for the future by identifying sustainable values. Through the Research Institute for Future Technology (RIF Tech), the core research team in the company, and the Environment Solution Team, we focus on developing core technologies necessary for future business and technology innovations to differentiate conventional business and improve productivity. As part of our efforts, we enhance our competitiveness by securing the necessary technology quickly, improving productivity and work efficiency with digital-based technology support. Along with this, decarbonation, which is an axis of change across the industry, is applied to all parts of the business for the company-wide development of eco-friendly technology. GS E&C will search for promising technologies in the future to fulfill our role of leading the industry.

Organization and Major Responsibilities

Category	Major responsibilities
RIF Tech Planning	- Technology strategy (determine the directivity), /operation management (support affairs) - Planning and implementation of SMR R&D task
Second battery technology R&D center	- R&D for optimization technology of Eco-friendly/ high-efficiency recycling - Battery recycling/ R&D of material business advancement - R&D of battery reuse technology
Green & Energy Research Center	- Research to secure core technology on CCUS/Upcycling - Secure core technology to advance into new renewable energy business - Smart environment (water/waste) operation management, water treatment eco-technology, resource circulation technology
Architecture technology research center	- Eco-friendly architecture technology research and support technology (ZEB, noise vibration, indoor air quality, safety and disaster prevention, - Development of core technology of new business and supporting technology: Prefab (Steel, wood, PC), remodeling, etc. - Searching for future architecture convergence technology and securing original technology
Fundamental technology research center	- Technology development to secure business competitiveness, deteriorated water pipes, modular, TBM, segment - Improving business competitiveness by providing technical solution, advancement and application of smart architecture technology - Concrete materials/mixture/durability design and construction material technology development/ support
E/L Institute	Elevator control device and logic development, maintenance service development, embedded technology development to establish Smart Home IoT, elevator machine elements development, design and analysis of machine system, model development

Developing Eco-friendly Technology

Developing Eco-friendly Technology

GS E&C is making investments in developing low-carbon and eco-friendly technology as part of our continuous efforts to support the 2030 National GHG reduction goal and the 2050 carbon neutrality scenario. We are exerting efforts toward energy reduction, eco-friendly material development, and green hydrogen and solar power generation. Especially, our research is gradually expanding into eco-friendly material development such as recycled aggregate and waste plastic recycling technology. In line with this, GS E&C makes environmental investments for strengthening its R&D sector by adjusting the environmental management cost category to concentrate on environmental technologies investment and eco-friendly business development. We are currently performing various R&D in fields of green hydrogen, energy efficiency, environmentally friendly materials. For this, we invested KRW 8.72 billion in environment technologies and KRW 100.8 billion for eco-friendly business. For a sustainable future, GS E&C is committed to developing low carbon and eco-friendly technology and pursuing environmental conservation and economic growth at the same time.

Category	Task	Description
Green hydrogen	Development of water electrolysis system dynamic modeling	- Establishment of Aspen Hysys based dynamic modeling of alkaline water electrolysis - Derive the optimal design and optimal driving scenario including connection with economic analysis and renewable energy - Internalization through direct participation of our personnel in the model development and verification process
Eco-friendly materials	Development and research on lining wallpaper with functionality of mitigating radon exhalation	- Securing of technology to produce lining wallpaper with functionality of blocking radon - Evaluation of radon contribution by indoor wall condition and drawing up application plan
	Research on how to convert industrial waste and waste into resources	- Development of mortar grout as an alternative material of cement - Development of technology for effective treatment of fly ash and power plant on-site preparation (pretreatment)
Energy efficiency	Development of smart operation & management system for water & wastewater treatment center	- Implementing monitoring and asset management system in water & wastewater treatment plant (GSWaterS platform) - Optimizing water & wastewater treatment process and improving efficiency of operation & maintenance, thus reducing operating costs
	On-site water reduction technology	- The technology for the reuse of groundwater discharged from construction sites - GHG can be reduced by using recycled water as cleaning water to remove fine dust from the construction site
	Study on improving the performance and manufacturing efficiency of the stoker incinerator	- Strengthening in-house core competency of incineration plant - Reducing dependency on foreign technology licensor, shortening construction periods and cost saving
	Research element technology optimization to reduce energy to respond to ZEB 4 grade	- Securing functions and assessing applicability of element technology to achieve the ZEB 4 certification: minimizing reliance on new renewable energy - Improvement of insulation performance, window (glass) performance, airtightness performance, optimization of lighting density, and research on floor-type solar power etc.

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

ESG FACTBOOK

SOCIAL

- 061 Human Rights Management
- 063 Talent Management and Respect for Diversity
- 069 Strengthening Communication with Stakeholders through Digital Innovation
- 075 Strengthening Information Protection
- 078 Local Communities Development and Engagement

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

→ Human rights management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Human Rights Management

Human Rights Management

Human rights policy

GS E&C complies with international standards and guidelines related to human rights such as the Universal Declaration on Human Rights, and the UN Guiding Principles on Business and Human Rights to implement HR management. Our goal is to minimize violations of human rights that may occur from corporate activities by establishing a human risks management system based on the human rights charter. We conduct regular assessments, improve based on the results and share them with stakeholders. We identify human rights risk elements through human rights evaluation and due diligence on compliance and take corrective measures for worksites where human rights issues are found. We operate a grievance-handling system to promptly and rationally resolve human rights issues received through various on/offline reporting channels, guarantee the confidentiality of informants and victims during the resolution process, and ensure that the informants do not suffer any disadvantages for reporting. We strive to raise the human rights awareness of employees by incorporating human rights education into four subjects of legal compulsory education in the company and spread a healthy organizational culture by providing human rights education.

Principles of Human Rights Charter

Article 1	Prohibition on discrimination against employees	Article 4	Prohibition of forced labor and child labor	Article 7	Management of a sustainable supply chain
Article 2	Compliance with working conditions	Article 5	Guarantee of the freedom of association and collective bargaining	Article 8	Protection of the human rights of residents
Article 3	Humane treatment	Article 6	Guarantee of industrial safety	Article 9	Protection of customers human rights

GS E&C Human Rights Policy

Human Rights Risk Management System



Rights Violation Relief Procedure



Performance of Handling Opinions through Human Rights Grievance Channels*

Unit: Cases, %

Classification	2021	2022	2023
Number of opinions	21	27	23
Number of opinions handled	21	27	23
Handling ratio	100	100	100

* abuse of authority, verbal abuse, sexual harassment, etc



CEO Message
Business Overview
Business Portfolio

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

Minimizing Environmental Impact
Developing Eco-friendly Technology

Human Rights Management

→ Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through

Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Talent Management and Respect for Diversity

System for Securing and Fostering Key Talents

GS E&C provides equal opportunities to all applicants in compliance with its fair hiring system by operating the internship program. From 2023 to the first half of 2024, we are securing talented human resources preemptively. As part of this effort, for the first interview of applicants to permanent positions, we conduct blind interviews only by considering their job competencies, without providing any information about the applicant's background. The hiring process for new employees consists of a resume view, personnel and aptitude test, first interview, English interview, second interview and final hiring. We highly value candidates with excellent language skills. Those who are employed with us receive a talent development plan that stipulates the relevant competencies, qualifications and careers by major job duties and self-development guidelines to support their professional growth. In addition, we describe our hiring process and various job duties for those interested in working with us on our website, blogs, and YouTube channel.

“Professionals who actively communicate, perform and grow by themselves”



A talented individual
with active confidence to
become the best expert in
his or her field



A talented individual
creating achievements by
experiencing rather than
words



A talented individual engages in active communication with colleagues and confidently expresses his or her opinions



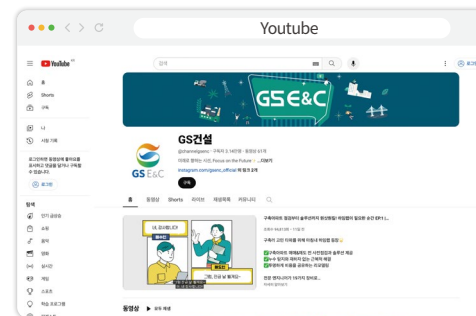
A talented individual who develops capabilities through continuous self-directed learning and is not satisfied with the present

Unit: persons, %

No. of recruitments		2021	2022	2023
Gender	Male	44	275	175
	Female	3	34	27
Female recruitment rate		6	11	13

In the ever-changing market environments, GS E&C firmly believes that it is necessary to foster and secure talents as a leading construction company in the industry. Therefore, as part of our efforts to prepare for the sustainable future, we establish a talent-centered strategy and operate various recruitment opportunities based on the systematic strategy to foster talents. Especially, 1:1 counselling channel is actively promoted to facilitate direct communication with applicants. By doing this, we increase transparency of the recruitment process and provide opportunities to approach applicants in a friendlier way. Through the year-round recruitment system, we respond to market changes quickly and increase flexibility of the organization. In line with this, individuals with multi-language skills are preferentially recruited to enhance our global competency. We also promote the GS brand value through various recruit-related channels such as YouTube, Blog, Instagram, and LinkedIn to establish a network with more talented people. Through this, GS E&C operates a platform to deliver the company's culture and recruitment information quickly and communicate with job seekers. GS E&C is committed to creating an environment where all employees can grow together, while strengthening transparency and fairness in recruiting and fostering talented persons.

GS E&C jointly holds the campus recruiting with GS Retail to recruit new employees to secure sustainable talents. The event is designed to introduce the vision, mission, values, business areas and future of GS E&C to future generations. Along with this, we also make our efforts to meet the requirements of the future generation with various counseling and events.



GS E&C YouTube channel



Campus recruiting activities

Talent Management and Respect for Diversity

Talent-Fostering System

The concept of talent at GS E&C is “a trusted person, who leads change and aims for the best.” We operate a talent-fostering system that offers 'leadership,' 'job competency,' and 'global competency' programs in line with this concept. Different curricula are provided to various employees depending on their ranks and duties. The leadership training for executives and team leaders is introduced to foster desirable leaders and induce their behavioral change. The training for middle management is expanded to a greater number of managers to increases their leadership competencies. A wide range of training is performed, such as training for transferred/ newly assigned employees, training in new business, Artificial Intelligence (AI) training, etc., to enhance job expertise and competencies of all employees. For executives and employees to grow as global talents, we provide foreign language education to improve their job competencies for overseas business. To provide efficient and systematic training, virtual training is expanded. In addition, we operate an internal public offering system and an internal recruitment system to provide various opportunities for employees through which they can enhance their expertise. The talent-fostering system is helping employees to respond to their changing environment and growing up at the same time.

Talent Fostering System in 2023

Program		Curriculum		Unit: Persons	
				No. of trainees	
Leadership	Pursuing growth as desirable leaders	Executives and team leaders	• Leadership diagnosis and training • Encouraging change in leadership behavior • Implementation of leadership training for the mid-level management	1,099	
Job competency	Job competency	Employees	• Improving employees' practical job competencies • Provision of training depending on the job competency level • Training for transferred/newly assigned employee • Training for new business areas • Artificial intelligence (AI) training	39,769	
Global	Global	Employees	• Improving job competencies for overseas businesses • Language training	2,581	

Talent Fostering Performance in 2023

Category		2021	2022	2023
No. of trainees		28,358	40,553	43,449
Total expenses		18.4	20.3	23.2
Training hours per person		46.3	40.9	34.9

Effective Utilization of Talents through the HR System

GS E&C operates a human resource system integrating information on employee appointment, education, assessment, and compensation, etc. to utilize their talents effectively. This system is regularly improved by applying users' feedback once or twice per year. To more effectively manage personnel, continuous advancements and updates to our achievement management system have been made in accordance with changes in relevant laws and policies on the employment insurance of special-type employees in 2023. GS E&C plans to continue to develop its human resources system to create synergies between employee and organizational growth, and will implement it further.

Language Training Program

GS E&C offers English training programs under the guidance of in-house language instructors to improve employees' English proficiency. We offer various programs, such as the Global Intensive Course (GIC), a one-to-two-month intensive group course and require employees to take the GS E&C Speaking Test, an English skills verification test developed by GS E&C in-house. In 2022, we provided four intermediate and four advanced offline GIC sessions and 1:1 online language training for employees dispatched overseas when they were unable to participate in offline training. In addition, a customized language curation mail subscription service was provided to encourage employees to improve their language skills. We plan to continue providing GIC courses, 1:1 language course, and language curation subscription services to help employees improve their international work capabilities. GS E&C will support employees in improving their professional skills to work more effectively wherever they are in the world.

Digital Transition (DX) Education

GS E&C is aware the fact that DX and AI are important factors in the construction industry. For this, we set a goal of improving our business competency by understanding DX and AI technologies. Since 2024, the DX team will lead an education group for employees to help them adopt new technologies more easily to increase their efficiency. We will continue to provide employees with learning opportunities and access to new technologies through education program that will change in response to technology development trends. GS E&C is committed to introducing and utilizing new technologies to keep up with technology development. It will enable us to enhance competitiveness in the construction industry and take the lead in innovation of our company through digital transition and AI technology.

Talent Management and Respect for Diversity

Employee Diversity

Equal Opportunity through Inclusive Hiring

GS E&C operates an inclusive hiring policy for disabled persons and veterans in order to provide them with equal opportunities. We conduct site-wise checks regarding compliance with the compulsory hiring system for persons with disabilities and make efforts to hire more persons with disabilities in cooperation with the Korea Employment Agency for the Disabled. In addition, we grant an additional point for hiring more persons entitled to veterans’ benefits upon hiring. GS E&C will pursue sustainable management that contributes to the realization of social values based on our fair and inclusive hiring policy.

Support for the Hiring and Career Advancement of Female Employees

GS E&C operates various policies to secure female employees and to support their growth. We provide equal opportunities for qualified applicants, with no gender discrimination against female applicants in our recruitment process. After hiring, we follow an equal HR management policy regardless of the employees’ gender, and all male and female employees of GS E&C receive the same salaries based on the same criteria. We also promote women employees’ growth by providing various kinds of education for improvement of their expertise and careers. There is no restriction on female employees working in profit-generating departments. As part of our efforts to reduce their burden of giving birth and bringing up children, a range of systems are introduced such as working hours reduction during the early stages of parenthood, providing congratulatory subsidies for children, childcare support system, infertility leave and family care leave.

Support for Foreign Workers’ Settlement

GS E&C has 1,074 foreign workers with various nationalities on its payroll as of the end of 2023. We have established and implemented an integrated HR policy for Global Permanents (GPs). We have been applying the same rights and responsibilities as Korean employees, except wages, to foreign workers based on employment type. GS E&C will create an environment where global talents are treated fairly and grow up together by increasing the welfare and benefits of foreign workers.

Job Transfer Support Service (Education)

GS E&C operates a job-transfer support program consisting of life and career design training, job placement service, finding jobs, and business establishment. The program covers various topics from searching for employment information to mental support for job seekers. Permanent employees aged over 50 years or older for more than one year, and contract employees aged 50 years or older for more than three years are subject to job transfer support service. We provide tailored services to actively assist the social adaptation of retired workers and workers whose employment contracts have expired. In 2023, 12 applicants out of a total of 53 candidates applied for the service. GS E&C will contribute to creating a sustainable labor market by minimizing shocks that aging workers experience from job transfer and providing smooth opportunities for finding jobs again.

Support for Voluntary Learning

Operation of ‘Study with ME’

GS E&C provides the “Study with Me (SWM)” program to cultivate a voluntary learning culture and help employees develop problem-solving skills. SWM is operated through study groups of three or more employees with the same interest to help them learn together. The program is conducted according to the study schedule and curriculum planned by employees and provided under various themes such as self-study as well as work-related topics.

‘Study with ME (SWM)’ Course and Number of Participants		Unit: Persons
Category	Courses	No. of participants
Tasks	Semiconductors, hardware, control system, LCA (Lowest Common Ancestor), etc.	21
Financial	Financial/Accounting analysis, feasibility analysis, developer process, etc.	60
DT/IT	Chat GPT, IT Tool(no-code, MS Tool), UX/UI, Primavera, BIM, etc.	105
Language	English, French	41
Others	Photos, Videos	20

Hackathon based on the Topic of Sustainable Development of the GS Group

The 2nd hackathon was conducted successfully in May 2023 under the theme of ‘Break Down the Walls.’ At the event, voluntary participants presented their ideas to break down business barriers of conventional business areas and way of working to promote digital innovation. ‘Hackathon,’ a compound word of hacking and marathon, is an innovation program in which employees from different fields work together as a team to solve problems in a short period of time and produce actual results through collaboration and design. It was a successful event, where 300 challengers from 18 participating GS Group affiliates focused on innovation through a combination of digital technologies with a strategy of using digital and eco-friendly as two axes of future values among employees and leading corporate culture. In 2024, GS E&C will create new innovations by holding hackathons beyond barriers among companies. We will share experiences and advice from key figures in the industry. We will also draw up more realistic ideas for commercialization through on-site mentoring by experts in various fields of smart walk, ESG, bio & health care, future commerce, mobility and smart plant, etc.

Talent Management and Respect for Diversity

Evaluation and Remuneration

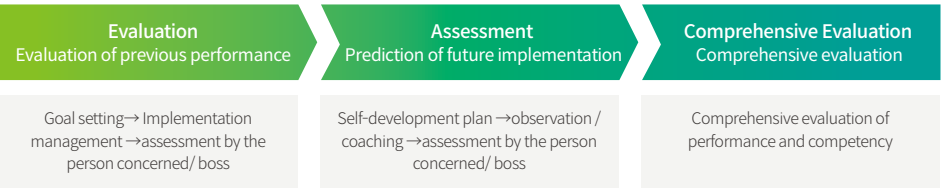
Fair and Objective Performance Evaluation using Various Methods

GS E&C uses various methods to evaluate employees’ performance fairly and objectively. Performance is divided into achievements and competencies for evaluation and management, and we utilize a variety of evaluation approaches, such as MBO, multi-faceted evaluation, and relative performance evaluation, to ensure fair assessments. Since last year, we have conducted training for appraisees to increase accuracy and transparency of the evaluation. Along with this, as part of our efforts to raise objectivity of an evaluation, evaluation grades are decided and monitored at the assessment adjustment meetings that all executives attend. GS E&C exerts its best efforts to advance the system continuously under the goal of the company-wide restructuring of the company, leadership, and improvement of core talent management of the company.

Reasonable Remuneration System without Discrimination

GS E&C operates a performance-based remuneration system to ensure reasonable remuneration for employees based on their abilities and achievements. Individual performance is reflected in employees’ salaries and promotions to keep them motivated, and feedback is provided to help them develop their competencies. We give additional rewards for organizations that accomplish outstanding results, encouraging them to consider not only individual achievement but also organizational performance. In order to improve social equity, GS E&C evaluates only individuals and organizations’ accomplishments, without considerations of gender or race.

Performance evaluation



Compensation system

GS E&C promotes to boost employees’ morale with a compensation system based on individual’s competency and performance.

Category	Basic annual salary	Allowance	Incentives
Description	Basic pay + overtime pay + holiday bonus	License allowance + site allowance + overseas allowance + position allowance	Whether to grant incentive awards or not and the amounts are determined in accordance with company's management performance and personal performance

Welfare Benefits for Employees

Creating a Great Work Environment

GS E&C spares no efforts to cultivate an advanced organizational culture with elements such as leaving work on time and casual office wear to create a desirable work environment. We have established a horizontal culture by introducing a title system of using the name of their duty for executives and the name of their responsibility for employees. The Stress Zero Program provides counseling and online mental health checkup services to help employees relieve work stress and improve their mental health, and this program can also be used by the immediate family members of employees. Insurance coverage for the actual medical expenses is provided for employees and their spouses to reduce the burden of medical expenses. In 2023, a total of 79 persons participated in 268 programs in total. As such, we support work and life balance of employees and their family members by providing counseling on individuals’ mental health, family and children. GS E&C will make every effort to increase health and welfare of our employees and their family members. Along with this, we will also create a work environment where everyone is happy by continuously improving the work environment and organizational culture.

Working Hours Management System

GS E&C complies with the 52-hour workweek and operates a working hours management system to guarantee work and life balance for employees. In order to vitalize the culture of leaving work on time, we configured employees’ computers to be automatically turned off after a certain hour, and a separate approval procedure is needed for extended work after this hour. GS E&C also operates a flexi-time system that allows employees to freely adjust their commuting hours (7:30-10:00, at 30-minute intervals) if they need to adjust their timings for reasons such as participation in self-improvement programs, work, and childcare. Furthermore, we have expanded the recommended leave system and sabbatical leave system to guarantee adequate rest for employees. This system will be applied into the vacation period in summer starting from 2024.

Family-Friendly Welfare Benefits

ES E&C has actively coped with many social problems by providing family-friendly welfare benefits to assist in resolving them. To address reduced birthrates, and career disruptions among women, we operate a range of policies such as reducing working hours, during the early stage of parenthood with the staggered office hours system, providing congratulatory subsidies for childbirth, childcare support system, infertility leave, and family care leave. Furthermore, we support employees with childbirth and childrearing, and employees can use parental leave for up to six months. In particular, we established a culture where male employees are encouraged to share the childcare responsibilities, so more male employees are now using parental leave. In recognition of these efforts, GS E&C received the Family-friendly Certificate from the Ministry of Gender Equality and Family. We have expanded the supporting system since February 2022 by allowing overseas employees who meet certain conditions to stay with their families at their job location. Furthermore, we make contribution to creating a mutual respect based organizational culture supporting their moving expenses and housing rent.

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

→ Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Talent Management and Respect for Diversity

Protection of Employee Rights

Labor-Management Cooperation

GS E&C has spared no efforts for sound development of labor-management relations and operated a labor union consisting of 363 full-time employees (25%). We hold wage negotiation annually with labor union and a collective agreement regarding the working conditions is formed every other year. In cases where material issues in the company's policy and system occur, we guarantee employees' right to work by having prior discussions with them. Based on close cooperation with the labor union, we strengthened understanding and trust between labor and management by engaging in various activities to facilitate communications such as a labor-management discussion and labor management workshop, and also operated the regular labor-management council in 2023.

| Labor-Management Council Performance in 2023

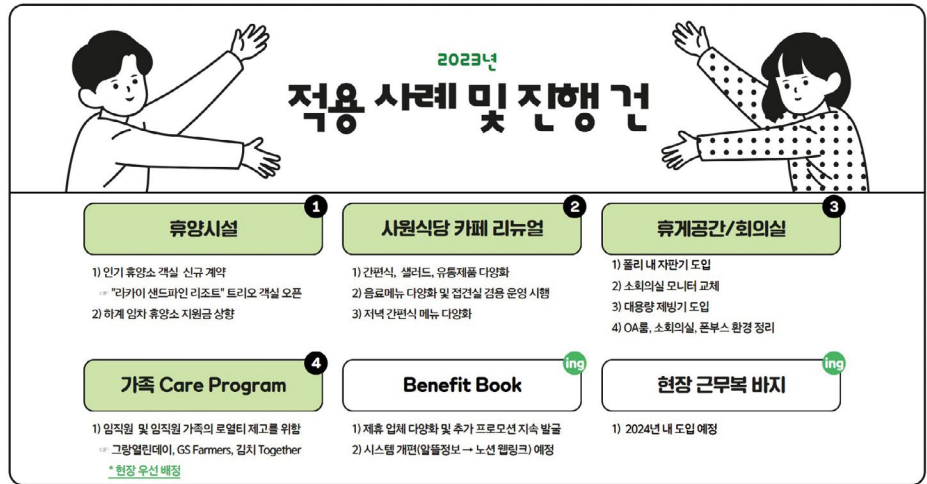
Regular meetings	Each quarter	Management of the grievance-handling ledger	Each quarter
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“VOE” and ‘Suri-Suri’ to Listen to Employees’ Voices

GS E&C actively operate “VOE (Voice of Employees)” and ‘Suri-Suri’ to show respect for the opinions of employees and promote company growth. With this system, we are committed to improving processes, and validating welfare systems and facilities. We analyzed 349 opinions collectively using big data to improve working environments and welfare. Among various opinions shared at headquarters, domestic and overseas sites, improvement of working offices and the benefit book system, and diversification of cafeterias were selected as priorities, and various activities were deployed to implement them. As part of our efforts, we have strengthened the conclusion of contracts with new popular resorts, diversified the menus in cafeterias, improved the conditions of lounges and meeting rooms, and implemented family-friendly programs. We also pursue diversifying the list of affiliated companies for benefit book and system improvement. GS E&C is committed to enhancing employee satisfaction and actively soliciting their opinions and complaints to ensure the sustainable development of the company.

| 2023 Report on Suri-Suri activities



Talent Management and Respect for Diversity

Revitalization of the Organizational Culture

Improving Organizational Competency

GS E&C encourages its employees to utilize their best competencies by showing mutual understanding and cooperation, and continuously improves organizational culture. On top of publishing our in-house promotional material, ‘Haewoobo’, we release ‘Stories of organizational culture.’ By doing this, we contribute to creating an open organizational culture by posting articles on the horizontal communication among employees. We also operate the ‘Stress Zero Program’ to support employee’s mental health so that they can handle their stress in and out of the workplace more effectively for healthy daily life. We will spare no efforts to create a healthy organizational culture where employees can better understand and support each other.

Organizational competency development education

Education name	Major course	No. of trainees
Introductory education for experienced employees	• Organization introduction, ethical management, information security, HR education	70
On-boarding education for experienced employees	• Goal of on-boarding for experience employees, guide for early adaptation • Recognition of changes and vision establishment in company • Design-thinking	79
On-boarding education for new employees from subsidiary of new business	• New business strategy, introduction of business model and issues • Introduction of organizational culture	31

Unit: Persons

2024 GS E&C Education System

	Common competency / Leadership	Job competency	Global competency
Executive level	GS course for senior executives GS course for new executives GS course for newly appointed executive-level employees		Language course for executives Virtual phone English
Employees	Course for newly appointed managers Reboot Camp (14 years of career) Newly established Reboot Camp (3 years of career) Newly established On-boarding for new employees	Job duty education by each area CM fostering course Newly established Recharge Camp (on-site engineer) Newly established	Virtual phone English GIC group course
GS EDU E-learning course			

CA (Change Agent) to Establish an Open Communication Culture

GS E&C operates the Change Agent (CA) system to improve its organizational competencies and promote internal communication. In this system, the CA is a person leading the change in GS E&C’s organizational culture through communication with various members. The CA collects employees’ opinions and plays the role of an agent. We contribute to the company’s development by planning competency-improvement activities of the organization and implanting them. If necessary, we hold workshops to share issues of labor-management discussion to strengthen internal communication. Through the CA system, GS E&C continues to improve the organizational culture and create an environment of a workforce where all employees engage and communicate.

Team-Building Workshop for Strengthening Intra-Organizational Cooperation

GS E&C runs a team-building workshop to improve cooperation and promote teamwork in the organization. Any new or reorganized groups, groups that have had a change in composition, or group that wants to improve cooperation and communication among employees, can take part in team-building workshops. Participating groups establish detailed visions and goals based on the Birkman Method and create rules to enhance cooperation and performance. As of now, 1,821 participants from 123 departments have attended team building workshops since 2022. Participants determine the vision and slogan for their respective teams and engage in communication and cooperation activities. We will continue to pursue the development of a sound organizational culture based on teamwork.



Team Building Workshop Major Program

Module name	Progress description
Vision	• Organization statement and slogan
Communication	• Understanding myself and my colleagues based on the results of the Birkman method • Enhance understanding/communication about leaders based on leader results analysis
Cooperation	• Activity to promote cooperation • Discuss matters for cooperation among the same industries/parts, Prepare for map on the strength of the organization

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
→ **Strengthening Communication with Stakeholders through Digital Innovation**

Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Strengthening Communication with Stakeholders through Digital Innovation

Digital Innovation (DX)

GS E&C has recently established the DX Team, which collects and analyzes field data to reduce inefficiency at construction sites based on data-driven solutions and creates a predictable environment. It has established a company-wide dashboard, fosters DX experts, and provides education about collaboration tools, on-site data collection, and improvements that it makes by identifying and solving on-site problems. In 2023, it solved various on-site problems by improving information flows, improving the Xi app's usability, and improving the experiences of residents in retirement towns. In 2024, it has been resolving on-site problems in various ways, such as establishing a hotline for issue reporting, communicating about safety to foreign workers, maintaining an issue dashboard, and establishing a company-wide project system (PMS-TF).

Dashboard establishment

The DX Team works to integrate dispersed data effectively through the project of establishing the dashboard, and providing consistent information on major indicators such as safety, quality, production cost, process, business management, etc. It will resolve problems of limitations of irregular reporting cycles and integrated information management, difficulties in understanding information between various departments, and the non-existence of systems for quick response. It will further increase management efficiency through data-based decision-making and contribute to sustainable management. GS E&C increases the efficiency and productivity of construction sites through digital innovation and creates a smart management environment.

GS E&C 119 chatbot

The DX Team also developed and implemented the 'GS E&C 119 chatbot.' The chatbot allows stakeholders to more easily share and learn information about on-site issues simultaneously for resolving them initially. Issue reporters, such as site managers, S&D, project managers, and the public relations team, send issues to the 119 chatbot simply through the internal chat system, 'Work chat.' This information is immediately posted to the GS E&C Committee's chat room and bulletin board for real-time discussion. The chatbot allows people to take follow-up measures and manage the history of quality issues. Finally, it uploads information to a digital dashboard to allow for continuous issue monitoring by project units. As such, the 119 chatbot has improved the company's ability to solve problems by informing relevant people of even small on-site issues. It does not add or conceal anything as a human reporter might and simply shares facts rather than rumors. GS E&C solves problems quickly and strives to increase company management transparency and efficiency.



Dash-board establishment

Flow of improvements for GS E&C's 119 reporting system

Safety Meeting Communication Project

The DX Team is committed to effective communication with on-site foreign workers by holding a 'Meeting for communication on safety,' and creating an environment where all employees can work safely. Foreign workers at construction sites account for 50% of all on-site employees and come from five to nine different countries. Therefore, as part of our efforts to improve working safety by sharing important information with foreign workers, we provide translation of safety information in various languages at meetings. DX Team translators do not miss any of the presenter's words and increase the quality of their translation by learning construction terms. In the first half of 2024, a prototype was rolled out for pilot and feedback from the site, and was incorporated in the program. Translation is now provided at all sites to improve communication with on-site foreign workers and in safety meetings and education. We have made two major changes to increase the quality of translation. First, we translated important issues into English, and then again into other foreign languages. Second, we apply the screen arrangements in which horizontal or vertical arrangements are all possible. Such efforts contribute to creating an environment where all employees can understand safety information and work safety.

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
→ Strengthening Communication with Stakeholders
through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Strengthening Communication with Stakeholders through Digital Innovation

AI Material Management Assistant

The DX (Digital Innovation) Team is doing its utmost to develop an AI management assistant that manages the quality of the on-site construction materials. The ‘AI material management assistant’ is a platform allowing on-site quality managers to search for legal requirements when determining which construction material to use when there is no clear legal standard. The platform allows users to review the legal criteria of the material with AI automatically and establish platforms that can be verified with data from other sites. Thereby, it can increase work efficiency by reducing repetitive work. The assistant also automatically organizes material-related documents and these data in real time. By doing so, we can search for clear-cut legal requirements, digitize and automate work functions, update legal standards, cloudify, share and distribute material information, and establish a dashboard that tracks material issues. This process is a product of GS E&C’s continuous search for more innovative, sustainable management methods. Our digital innovation effort increases quality guarantee of construction material and management efficiency, maintain consistency of legal standards, and company-wide material information-sharing and problem-solving.

DCX Academy

The DX Team operates the DCX Academy. It provides DCX education to employees to the point where they are DCX specialists. The first curriculum targets executives and managers for training on how to use collaboration tools and AI. Its curriculum includes basic Chat-GPT concepts, how to utilize Notion, and internal and external use cases. CX education focuses on the basic level of Design Thinking and how to think from the perspectives of customers. The second curriculum teaches applicants how to use Notion and Chat-GPT in practice in detail and how to produce images for use in videos and reports. CX education trains employees on how to write appealing articles for clients through UX writing and how to look at business processes in a new way through the Lego scum. The third curriculum teaches how to use the power platform tool in practice. CX teaches theoretical education and practice in the Design Thinking. The DCX Academy, which contributes to creating an innovative culture within the company, clearly demonstrates the willingness of GS E&C to realize sustainable management through customer-oriented thinking and digital transformation.

Facilitation of Communication with Customers and Markets

Customer Experience Innovation(CX)

GS E&C improves customers’ experiences based on their data by analyzing experiences of external and internal (employees) customers through the CX (Customer Experience Innovation) Team. Under the three goals of CX(Customer eXperience) management with design-thinking, BX(Brand eXperience) management based on data and improvement of EX(Employees eXperience), we manage and engage in a range of projects. Based on this, we improved on-site problems such as recycling safety helmets, pre-inspection for residents, heimlab marketing, etc. We are implementing a project of Xi rebranding, residents on-boarding, etc. in 2024.

Management of Customer Experience through Design Thinking

The CX Team in the GS E&C has engaged in various projects to improve customers’ experiences through innovation. In 2023, we analyzed customers’ experiences at a community cafeteria at Spring County Xi, a retirement home in Yong-In City, as part of a project predicting drinking water consumption and identified areas to improve customers’ experiences. Through another project improving residents’ visits to new apartments before moving in, we identified defects in new apartments that should be corrected. Both of these projects are part of our efforts to improve customers’ attitudes toward the brand Xi with its emphasis on the onboarding management of the Xi brand. We are committed to delivering innovation regarding the onboarding process of the Xi brand before, during, and after move-in. To this end, we conducted surveys at various stages of the move-in process, such as before moving in, and during the actual process, to understand how customers’ feelings and satisfaction changed throughout the process. We also innovate before and after move-in Xi brand onboarding process through introducing welcome kits, event improvement activities, improving Xi app. These efforts are helpful for GS E&C’s sustainable management and building a better brand image.

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
→ **Strengthening Communication with Stakeholders through Digital Innovation**
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Strengthening Communication with Stakeholders through Digital Innovation

Brand Management Based on Brand Experience (BX)

The CX Team is focused on data-driven management. It conducts in-depth analyses on customers' brand awareness to provide them with a better experience and instill positive images of the Xi brand in them. Through cooperation with other brands within the GS Group, it identifies factors that create synergies that can be leveraged to establish internal and external brand communication and management systems. The CX Team is committed to transforming the Xi brand through the Xi Re-ignite Project that will redefine the Xi identity and reestablish the brand's growth direction. As such, the team spares no effort in transforming Xi into a brand that will be loved and supported by consumers by overcoming negative market perceptions. The goal of the Xi Re-ignite Project is to strengthen the Xi brand by developing a new identity, BI, and brand design and establishing an effective communication strategy through which consumers will learn about the new concepts of Xi brand that internal and external consumers can emphasize with. This project is the core part of sustainable management by improving and innovating customers' experience. GS E&C will continue to provide more attractive and trustworthy brand images to consumers to establish a better market position.

Improve the Employee Experience (EX) and Support an Innovative Corporate Culture

GS E&C engages in various activities targeted at improving EX and establishing an innovative corporate culture. Our company-wide focus is on creating an environment conducive to the development of a customer-oriented innovation culture. We also support employees in developing problem-solving thinking and internalize these concepts into their corporate culture. We provide various programs, such as 52g Innovation Training, such as Catalyst, facilitator, hackathons, to identify and realize innovative ideas. In 2024, we inspired a sense of belonging on-site workers and employees by holding a New Year's kick-off ceremony through the EX-Communication Program and taught site managers how to improve employee's sense of belonging and site-focused management willingness. Such efforts led to positive results according to a survey of on-site workers. We also hold an onboarding ski program with new employees, their parents, and the CEOs to facilitate the new employees' adaptation to the organization and strengthen their sense of belonging and fellowship. The DCX Academy offers courses for executives, managers, new employees, and others from various business sectors. This course teaches them how to better understand customers and engage in customer-centered thinking. Students can learn how to think laterally and solve problems by seeing situations from diverse perspectives, which greatly enhances customer-oriented thinking. GS E&C implements sustainable management by equipping employees with innovative and customer-oriented thinking.



CX team workflow



디자인 생킹을 통한 고객여정 · 경험 관리

- 사전방문, 이시예와, 입주 등 긍정적인 온보딩 경험 제공을 위한 사례 이, 인터뷰 실시를 통해 고객의 경험 데이터를 수집합니다.
- 고객경험 데이터에 기반하여 자이 고객 인사이트를 분석합니다.
- 고객경험 혁신 아이디어를 발굴합니다.

CX(Customer eXperience)



데이터에 기반한 브랜드 관리

- 데이터에 기반하여 자이 고객의 브랜드 인식에 대한 인사이트를 분석 하고 로드맵을 수립합니다.
- GS그룹 내 브랜드들과 사너지 효과를 낼 수 있는 요소를 발굴합니다.
- 브랜드 커뮤니케이션 기획을 지원하고 중장기 전략을 제안합니다.

BX(Brand eXperience)



임직원 경험 개선 및 혁신문화 정착 지원

- 전사에 고객경험 혁신 문화 정착을 위한 환경을 조성합니다.
- 문제정의 워크숍을 진행하고 일하는 방식의 변화 · 디자인생킹 교육을 수행합니다.
- 문제 해결 방법론을 개발하고 내재화할 수 있도록 지원합니다.

EX(Employee eXperience)

Strengthening Communication with Stakeholders through Digital Innovation

Creative Customer Communication by Utilizing SNS

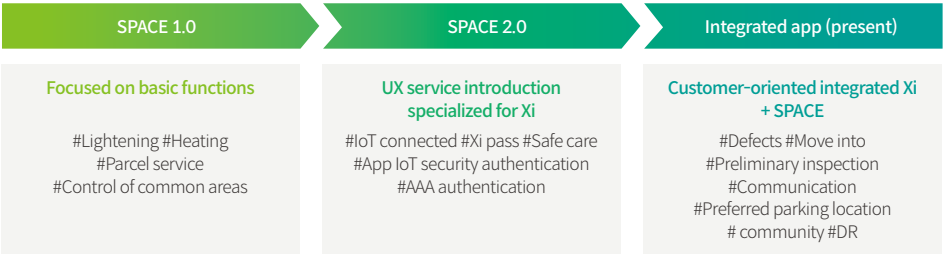
GS E&C continuously communicates with customers through social media. We are uploading a variety of contents tailored to customer needs via various social media channels including YouTube, KakaoTalk, Instagram, blogs etc. The official YouTube channel of GS E&C, “Xi TV,” has provided a range of contents on apartment sales information, completed the introduction of apartments, tips on taxation and interiors to about more than 650,000 subscribers, with a total cumulative number of 29,366,496 views. We operate a counseling service for apartment sales to 690,000 subscribers through the Kakaotalk and send informational messages to our contracted apartment customers at specific points of time. We also offer counseling service for 24 hours a day through the Kakao Chatbot. Recently, GS E&C has deployed various activities on the topic of ‘Rebuilding’ to recover customers’ trust and strengthen its relations with customers. We are also committed to contents development focused on new business introduction and organizational culture. In line with this, we plan to develop contents on domestic stakeholders and provide important information on recruitment. We will expand communication with foreign customers through LinkedIn. As such, GS E&C will make every effort to increase our brand value and trust in the market by innovating the way of communicating with various social media channels.

Advanced Customer Services using the Xi AI Platform

GS E&C has established the Xi AI Platform to introduce the home network system and community facilities to improve customers’ satisfaction with the residence units. We have made developments in various areas such as Smart-home app, Smart test-driving app, data analysis, AI development, etc. It analyzes data collected from Xi complexes and uses the analyses to provide various services to residents through the ‘GS SPACE’ App. In addition, we launched “Safe Care Service,” which sends guidance messages to a guardian upon the occurrence of an emergency situation and the ‘Parking Location Guidance’ service to provide the optimum parking location preferred by residents. In 2024, remote inspection tests were conducted for the home system before residents’ moving in and the data portal system and Xi app platform are now being developed. In addition, we are expanding the range of available services for residents in cooperation with various communication companies (SKT/KT/Kakao for AI Speakers) and IoT manufacturers (LG, Coway, Philips Hue, etc.), and we provide security at the level of financial institutions by applying a PKI-based authentication system to each device, and use encryption in all communications and databases. GS E&C has improved the quality of life for residents by strengthening convenience and safety of smart homes.

Xi Smart home “SPACE” Project

As the first in the industry, GS E&C advanced into App-based platform establishment in 2019. We are the only company which maintains the leading position in the industry based on our own competency.



No. of uses of Xi app		
Unit: Persons, households (units)		
Category	2022	2023
No. of app users	100,000	168,000
No. of subscribed households	42,000	56,977



Xi integrated app

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

→ Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

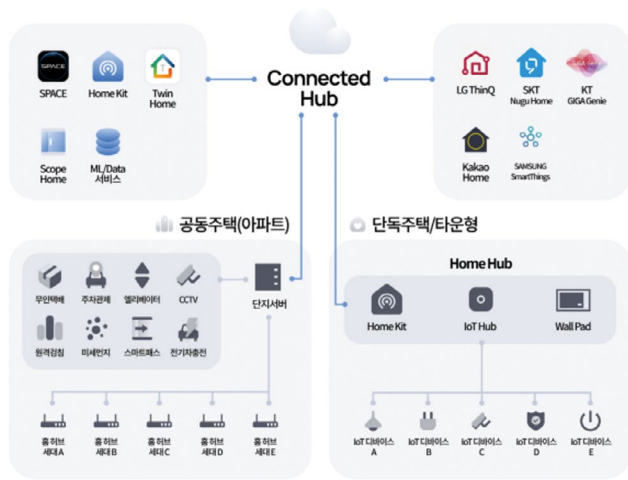
GHG Verification Summary

Independent Assurance Statement

Strengthening Communication with Stakeholders through Digital Innovation

Xi Connected Hub

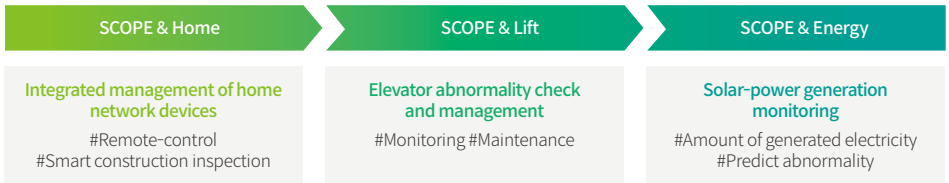
GS E&C develops and advances a connected hub and apartment complex server that connects each Xi apartment and app for free scalability of the integrated Xi platform.



Connected Hub Composition

Data-based Business Support Platform “SCOPE &”

The Platform Development Team plans and develops “SCOPE &,” a smart home management solution, and ‘SCOPE & Life,’ a solution for elevator monitoring and maintenance, and ‘SCOPE & Energy,’ a solution for monitoring solar energy and infrastructure. Furthermore, a project to establish a ‘data portal’ is being constructed for integrated management of external data and fragmented data in the company. We are making efforts to establish the data-integrated portal not only for data storage but also for easy utilization of accumulated data in the current business (data visualization, analysis and service).

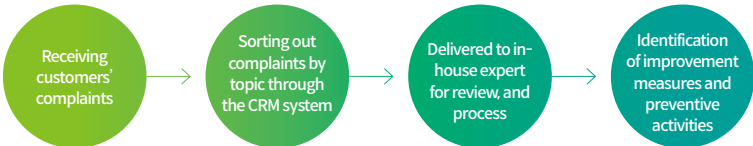


Customer-Satisfaction Management

Customer Service through Efficient Management of Complaints

GS E&C provides a service that allows customers to easily inquire about sales, design, and construction by accessing the Xi website or the GS E&C official website. This also helps us to collect and handle customer inconveniences efficiently. When an inquiry is received, the submitted opinions and complaints are collected and sorted efficiently subject-wise through the integrated Customer Relationship Management (CRM) System. Feedback and queries are delivered to in-house experts for review, to process the response as soon as possible. We strive to prevent customers’ inconveniences preemptively by identifying the appropriate improvement measure after collecting types of frequent complaints on a regular basis. When prospective residents visit their houses for inspection, they can submit complaints on defects and request repairs through the ‘Xi App.’ We use the App to show how defects are handled in real time before completion of construction. We check customer satisfaction with after-sales service through the Mobile Happy Call after defects are handled after residents’ move-in. As such, we strive continuously to improve our service. GS E&C seeks to improve reliability and work efficiency for the benefit of customers by actively responding to their complaints and managing any problems that may arise.

Process to handle disputes related to customers’ complaints



2023 Status of receiving and handling customers’ complaints

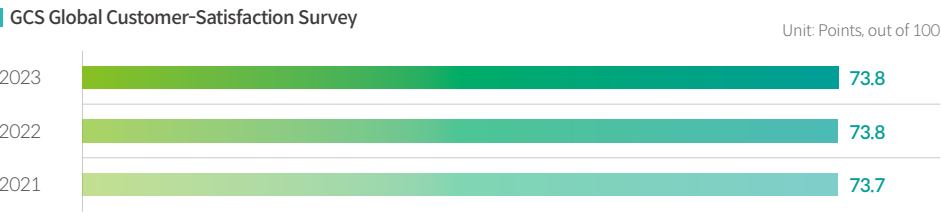
Unit: Cases, %		
Reception	Handling (Completed)	Handling Ratio*
7,593	7,286	95.5

* Above data was produced in 2023 and consumers’ grievances will be fully resolved

Strengthening Communication with Stakeholders through Digital Innovation

Ranked No. 1 in the Global Customer Satisfaction Index (GCSI) for 19 Consecutive Years

“Xi,” the apartment brand of GS E&C, achieved the No. 1 position in the 2023 Global Customer Satisfaction Index (GCSI) score for 19 consecutive years. GCSI is a system used to assess customer satisfaction. It is supervised by the Global Management Association, a research institution under the Ministry of Trade, Industry and Energy. GS E&C achieved the highest score in all four categories (customer satisfaction, customer value, global competitiveness, customer loyalty) as well as the overall score. We will provide value beyond customers’ expectations and enhance their general satisfaction.



Customer-Satisfaction Telephone Survey for Residents

GS E&C conducts an annual telephone survey of residents who have been living in their new apartments for more than six months, and engages in various channels to improve customer satisfaction. When we conducted the 2023 survey, we added questions about the Xi app, which began after sales service in 2022. The questions were on AS scheduling, responding to customer calls and after sales service processing. Responses about reservations, compliance with promises to customers, and surrounding damages have relatively good scores. They are categories of Xi membership and concierge services for residents. As such, we will continue to develop these contents to maintain high-levels of customer- satisfaction. However, scores for responding to consumers’ calls were relatively bad, so we will strive to improve customer satisfaction by engaging in customer-oriented management that they will feel. GS E&C dedicates to improving service quality continuously by actively reflecting customers’ opinions. We will win consumers’ trust by providing them with services beyond their expectations.

Corporate Client-Satisfaction Survey

GS E&C identifies the company’s strengths and weaknesses by collecting customers’ opinions, and conducts an annual satisfaction survey to establish measures for improvement. The survey was conducted on customer satisfaction at project sites with 13 items in three areas (project management, project workforce, and communication). The area with the highest positive opinion was project-performance for our abundant experience and outstanding capabilities. However, there were concerns over on-site major discussions underway due to quality issues that arose in 2023. GS E&C will take preventive measures with on-site focused efforts to cope with these issues. We will dedicate ourselves to becoming a company reflecting customers’ feedback to improve our activities.

Corporate Client Satisfaction Survey



* Due to data total error in the previous year, 2022 total satisfaction data was corrected from 82.7 to 82.5

** Survey targets: Corporate clients that ordered domestic and overseas projects that were implemented in the reporting period (Totals of 49 in 2021, 20 in 2022 and 24 in 2023)

Customer-rights goals

		Unit: %, Score			
Goals	Indicators	2023 (achievements)	2024	2025	2026
Defect-handling rate for reports received during pre-inspection by residents	Defect-handling rate before moving in	98.47	98.50	98.55	98.60
Corporate-Client Satisfaction Survey	Average score for 13 items	83.1	83.5 points or more	84.0 points or more	84.5 points or more

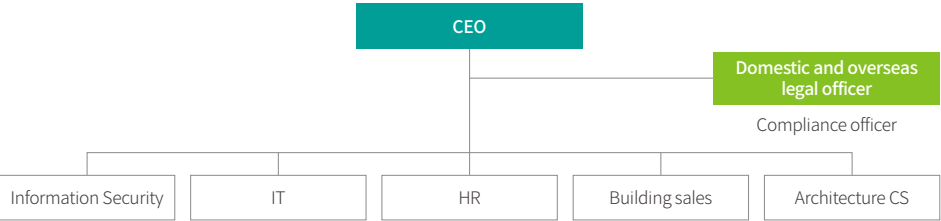
* QC: Quality-Control by construction phase

Strengthening Information Protection

Operation of a Company-wide Information-Protection System

GS E&C has established a company-wide information-protection policy and operates the “Information Protection and Personal Information Protection Committee” to prevent the leakage of personal information through thorough implementation of the policy. Executives of related organizations are appointed as members of the Committee to establish and implement a company-wide information-security policy. The information-protection policies include guidelines for various information-protection activities to strengthen the company’s information-protection capabilities as well as guidelines for reporting and responding to such incidents. GS E&C is committed to implementing the policy and guidelines rightfully by appointing a Chief Information Officer and a Chief Privacy Officer in accordance with the work and designation conditions such as the Information and Communication Network Act and the Personal Information Protection Act. Recently, we appointed a Chief Information Security Officer (CISO) for strategic information security management and strengthened the importance of information security within the organization.

Information Protection and Personal-Information Protection Committee



Roles and Responsibilities of Information Security Division

Category	Roles and responsibilities
Information security	- Establishing, managing, and operating the information-protection management system - Checking the information-protection status of the head office, subsidiaries, and related companies, and provide security guidelines - Establishment and implementation of the personal-information protection education plan - Monitoring of security system and responding to incidents upon information leaks
IT	- System authority related to the management of personal information - Implementation of system-security measures related to protection of personal information - Regulations for personal-information protection procedures
HR	- Management of applicants’ information upon recruitment and the disposal of information after the completion of recruitment - Request for consent regarding personal-information protection activity upon recruitment of employees - Management of employee information
Building sales	- Review of the Personal Information Protection Act and compliance with the Act in business activities - Management of on-site employees who handle customer information - Building a sales-management system, and the management of customer information
Architecture CS	- Management of the consignor company and its employees who handle customer information after moving in - Management of on-site employees who handle customer information

Strengthening Information-Protection Capacity

Information Protection and the Personal-Information Protection System

GS E&C strives to improve security levels and prevent damages caused by security incidents through systematic measures and activities for the protection of business information as well as personal information. In 2022, GS E&C obtained ISMS-P (Personal information & Information Security Management System) certification to increase the company’s public image. Since then, we have conducted strategic processes through annual inspections. In 2023, we obtained ISO 27001 and ISO 27701 certification (Personal information & Information Security Management System). The response procedures for personal information violation incidents are established based on the incident response manual of the Personal Information Protection Committee. There is a personal information manager who initially decides how to respond to information leaks, which can have various causes, such as hacking, information leaks by insiders, phishing and information exposure. The emergency actions are taken to notify affected people about the releases of personal credit information and a report is made in accordance with Article 34 of Personal Information Protection Act and Article 39(4) of the Credit Information Use and Protection Act. Next, damage relief to data subjects, is provided and measures to prevent recurrence is implemented. The Personal Information Protection Committee meets biennially. The Elysian Gangchon Country Club establishes the detailed guidelines to protect personal information of data subjects. The guidelines include six main categories such as general personal information collection, the purpose of processing such information, how long it will be retained, consignment of personal information, provision of personal information to third parties, and how people can request access. In addition, it also provides detailed guidelines on protecting rights of data subjects, and how related grievances should be handled.

Information-Security Management System

Category	External audit		
Audit body	KISA (Korea Internet & Security Agency)	BSI	Accounting Firms
Description	ISMS-P Evaluation	ISO 27001/27701 Evaluation	Computerized Audits (Internal control)
Cycle	Yearly	Yearly	Twice a year
Target	Information Security Team	Information Security Team	IT Team

Category	Internal audit			
Audit body	Information Security Team			
Description	Check of personal information status	Check of life security	Check of life security (Simulated hacking checks to identify IT infrastructure vulnerabilities, source code)	In the event of a security breach
Cycle	Half-yearly	Monthly	Occasional	Occasional
Target	All sites handling personal information (Sales Office, CS Center, Residence Support Center)	All employees	B2B/B2C System	All employees

Strengthening Information Protection

Protection of Information Assets

GS E&C operates an information-protection system thoroughly according to the IT service security-management guidelines for the protection of information assets. We fundamentally block unnecessary access to key information and control information leakage through the management of access rights and database access control solutions. We make every effort to prevent information leaks by storing access records (logs) automatically and monitoring. As a result of these efforts, GS E&C did not have any cases of technology and information leakage and personal information leakage in 2021, 2022 and 2023, respectively. In 2024, GS E&C will introduce a program to raise awareness of personal- information protection and information-protection with a solution for preventing phishing mail. As part of our efforts to strengthen security, GS E&C will continue to invest into information protection a certain share of budget for system development, maintenance and software maintenance.

Investment in Information Protection

After being recognized for investments and efforts in the information-protection area, GS E&C was selected as an *Excellent Information Security Investment Company through the expansion of information-security investment and invested KRW 40.5 billion in information technology and KRW 2.4 billion in information protection. Thanks to these continuous investments, we gained the grade AA in 2023. As information protection gains importance, we designate executives as CISO/CPO. In line with this trend, and we strive to expand investment and manpower in information protection through completion of education related to information protection, and registration management based on International Information Protection ISC2 CISSP certificate.

* An entity that has fulfilled all information-protection disclosure requirements among entities that have received grade AA or higher for Information Protection Management System Certification or Information Protection Readiness Evaluation

Investment in Information Protection in 2023

Category	Information technology investment (A)	Information technology investment (B)	B/A
Investment in Information Protection in 2023	40.51 billion won	2.44 billion won	6.0%

Preemptive Improvements Regarding Vulnerabilities through Security Inspections

GS E&C is improving the level of information security by identifying security vulnerabilities through regular security inspections and monitoring. We adopt improvement actions for the problems identified during the inspection process, and establish and implement measures to prevent recurrence through ISMS-P, ISO 27001/27701, inspections of sites handling personal information, and life security inspections for all employees. In particular, information-security checks are conducted on B2C and B2B systems to remain prepared for external hacking attacks through hacking simulation, checks on IT infrastructure vulnerabilities, and source code checks. We conduct mock training on hacking/phishing emails for employees to improve their awareness of information security on a regular basis. In 2023, we simultaneously acquired the ISO 27001 certification (Information Security Management System) and ISO 27701 certification (Privacy Information Management) that meet the international standards. We also maintain the ISMS-P certification (Personal Information and Information Security Management System) after obtaining it in November 2022 by undergoing recertification audits.

Information-Protection Activity in 2023

Category	Description
Information protection management system certification at home and abroad	Obtained ISO27001/27701 Certification (International Information Protection Certification)
	Obtained ISMS-P (Personal information & Information Security Management System) Certification
	Respond to mandatory disclosure of information protection
Strengthening the company-wide information security system	Strengthening security system supporting Cloud & Smart
	Check on IT infrastructure and secure-coding vulnerabilities
	Security support and inspection for new business, respond to external and internal information security
	Operation of the Committee for Information Security and Personal Information Protection
Enhancing personal information protection rights	Check on web security vulnerabilities of B2B and B2C
	Customer information protection such as house sales, CS, etc.
	Security check of the consignor company
	Subsidiaries (support Xi S&D, Elysian)/ consultation activities of working-level staffs in (personal) information protection
	Establishing the security system for common areas of Xi (security matters in 2024 are applied to a complex that was sold in 2023)

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through
Digital Innovation

→ Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Strengthening Information Protection

Report and Responses to Information-Security Safety Incidents

GS E&C organizes the Information-Violation Incident Response Team to respond promptly and minimize the damage from any information-safety incident. When an information-protection safety incident occurs or is suspected, it is immediately reported to the information-protection officer in accordance with the guidelines for responding to personal-information violation incidents and is processed in accordance with the safety incident response procedure. When an information safety incident occurs, the Information Violation Incident Response Team identifies the cause of the incident, investigates the related persons, and takes measures to destroy or retrieve the leaked information. We identify the cause of the incident in order to establish measures and prevent similar safety accidents in collaboration with outside experts, if necessary.

Response procedure for personal-information infringement incidents



Customer-Information Protection through Field Monitoring

GS E&C manages customers’ personal information using the personal-information system to protect customers’ personal information jointly with employees and suppliers. We share the personal information processing policy with the customers and receive consent for collection/use/provision of personal information upon the collection of customers’ personal information. A large amount of customers’ personal information is collected during the building sales process. We provide personal-information protection education for employees upon the opening of a sales office. Furthermore, the personal information is managed under encryption to protect customer information through the VPN Internet system and security software. Personal-information status is continuously monitored, not stored for longer than necessary and automatically destroyed by a systemized process. In all of these proceedings, information protection measures are strictly complied with. In the Apartment Sales Office, personal information protection training is the responsibility of the head of the office and photos taken during the training are stored for on-site semiannual inspection. Training results are reported to the Operations Committee to identify potential improvements. We are committed to improving our practices in cooperation with the legal and other related internal teams to prevent customer-information leaks.

Strengthening of Employees’ Information-Protection Competency through Information-Security Education

GS E&C provides information-security education to strengthen employees’ information-security competencies and prevent such accidents. The information security officer of each team completes the education and shares the know-how with the corresponding team so that all employees are aware of the contents of information-security education. In the first half of 2023, we provided information protection and personal-information protection education for the security officers and conducted information-security education for employees involved directly/indirectly in jobs related to the architecture performance HQ to strengthen the capabilities of employees. Both new and experienced employees are required to complete information-security training when they enter the company. GS E&C provides education to prevent the occurrence of information-security incidents by conducting case-focused education such as phishing and impersonating public institutions and police stations. We encourage all employees to submit the information-protection pledge to strengthen their recognition of the importance of information security.

Strengthening the Full-time Security System through ‘Security Practice Day’

GS E&C designated the “Security Practice Day” to raise awareness of information security and to encourage employees to practice security in their daily activities. Every department conducts self-inspection on security in daily activities. We verify compliance with the guidelines for security management of information assets in terms such as configuration of the screen saver, change of computer passwords, and deletion of employees’ personal information. In line with this, we implement the “Nine Habits of Security Practice” in daily activities to encourage employees to perform information security on a daily basis, and supporting a range of programs for information security such as a malicious-file blocking program that prevent ransomware through email attachments. These are activities that demonstrate our willingness to prevent information leaks preemptively and incorporate information-security into our corporate culture. We will do our best to ensure that employees can work in a safe and secure working environment.

Nine Habits of Security in the Daily Lives of Employees

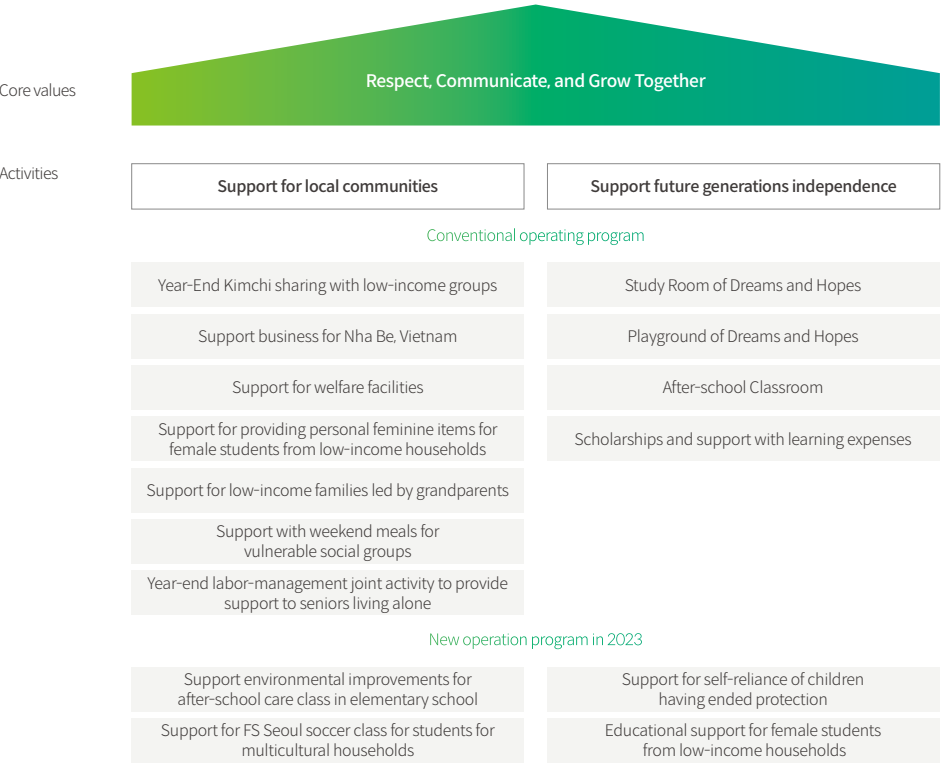
IT Security	Document Security	Working Environment
- Any acts that may cause leakage of corporate information and personal information are strictly prohibited. - Comply with the information-security guidelines and do not use illegal S/W. - Unnecessary files stored in the PC must be deleted immediately	- Minimize the printouts of documents. - Hard copies shall be disposed of appropriately once the reporting is completed. - Important documents must be stored in a safe storage cabinet.	- Maintain a pleasant working environment with proper arrangement - Look around before you leave the office - The third Friday of every month is designated as the ‘Daily life security day’

Local Communities Development and Engagement

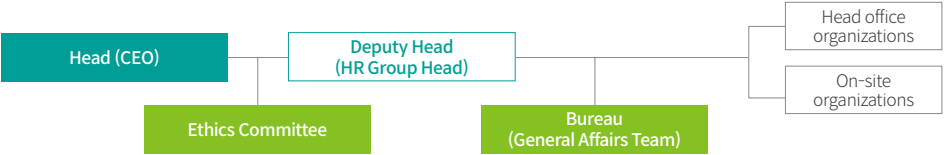
Social Contribution Promotion system

GS E&C has pursued sustainable development by deploying various social responsibility activities under the core values of “respect, communicate, and grow together.” As part of our efforts, we introduced the new program of supporting the independence of adolescents who leave childcare facilities. The program is meaningful because it provides psychological and emotional support for their educational expenses and culture activities. Through such support, children who will leave the foster care facilities after the termination of protection, can prepare for their self-reliance. Furthermore, GS E&C has forged cooperative relations with the Seoul Metropolitan Government to support children from multicultural households to enjoy sports activities. By doing so, we have broadened the scope of sustainable, socially responsible activities. GS E&C will strive to take on our corporate responsibilities and grow together with local communities.

GS E&C Social Contribution System



Social Contribution Promotion Organization



Major KPI Performance Data for Social Contribution Activities in 2023

Social contribution activities	No. of beneficiaries
Beneficiaries of social welfare programs*	141,043 persons
Playground of Dreams and Hopes (accumulated)	No. 46
Study room of Dreams and Hopes (accumulated)	No. 310
Support with female products from vulnerable households	6,000 persons
Support environmental improvements for after-school care class in elementary school	4,800 persons
Number of beneficiaries of education and culture program	53,906 persons
Number of students who received assistance with scholarships and learning expenses	60 persons
After-school classroom (accumulated)	No. 26
Support for self-reliance of children having ended protection	400 persons

* Calculation standard is changed compared to the previous report



COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

→ Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Local Communities Development and Engagement

Social contribution activities

Playground of Dreams and Hopes for Protecting Children’s Safety

GS E&C’s program of ‘Playground of Dreams and Hopes’ is focused on supporting children’s physical and emotional health. Recently, a greater number of playgrounds were established, resulting in a cumulative 46 playgrounds, increasing from 42 playgrounds in 2022. It provides various activities for children including theme-based playgrounds such as futsal playgrounds, camping sites, etc. Especially, it helps children to foster their sociability by participating in community activities such as friendly matches of futsal with executives of GS E&C. Before opening to children, all playgrounds have to pass the strict safety inspection. By doing this, GS E&C has created safe environments for children to play enjoyably in local communities. ‘Enjoyable after-school program’ also supports engagement of children in various experiences. These programs have been developed through GS E&C’s continuous social contribution activities.



Playground of Dreams and Hopes, 43rd (Youth Dream Center in Seoul)



Playground of Dreams and Hopes, 45th (Seongbuk Youth Center)

After-school Classroom Projects for a Better Educational Environment

GS E&C conducts the “After-school Classroom” project to improve the learning environment and provide better facilities for children low-income groups and to provide various materials. As part of this project, we repaired welfare facilities, supported the provision of necessary items for classrooms such as desks, chairs, beds, PCs, etc. and consumables. This project assists children by increasing their access to various forms of support required for their learning and growth along with the study room project, operating separately from after-school care class. Students aged 18 years or less, from 4th grade elementary students to 2nd grade high-school students, are all eligible for the program. GS E&C will dedicate itself to better learning of children through expansion and improvement of the ‘Enjoyable after-school project’



Susaek elementary school after-school care class



Myeonam elementary school after-school care class

Soft and Warm Hope Box for Girls from Families in Crisis

GS E&C promotes the “Soft and Warm Hope Box” project, which is designed as an initiative to hand out feminine hygiene products such as sanitary pads for female students experiencing financial difficulties. In 2023, we provided female hygiene products and other items that can be used for one year to 1,500 female students from low-income groups. The “Soft and Warm Hope Box” is delivered to the students’ homes rather than to schools to respect for their privacy. This project is conducted in cooperation with Good Neighbors, local self-governments, and Local Offices of Education. GS E&C will do its utmost to eliminate welfare blind-spots.

Support for Seniors Living Alone

GS E&C holds regular events to deliver gifts and food to seniors living alone to implement our social responsibility, on four occasions each year including Chinese New Year, Family Month, Chuseok, and year-end. In 2023, this project was carried out in cooperation with labor union and management of the company to contribute to creating values. GS E&C will expand our support for seniors who led the previous generations with a feeling of respect for the elderly.

Kimchi-Sharing with Low-income Families

GS E&C has been sharing kimchi with low-income families and welfare facilities since 2009. In 2010, the scope of participants in GS E&C’s kimchi-sharing event, in which the employees make and deliver kimchi in person, was expanded to include the employees’ families, adding value to the event. As GS E&C’s kimchi- sharing with low-income families is an important social contribution activity that fulfills our social responsibility, and strengthens emotional bonds among employees, we increase sharing by delivering kimchi to 8,000 needy people in 2023, following 3,300 persons in 2022.

Organizations and NGOs Cooperating on Key Social Contribution Activities

Category	Social contribution activities
Child Fund Korea	Study Room of Dreams and Hopes, Playground of Dreams and Hopes, Afterschool Classroom, Year-end Kimchi Support
Save the Children	Scholarships and support with learning expenses for outstanding students, Support for low-income families headed by grandparents
Happy people	Facility support for schools in Vietnam
Good neighbors	Support in providing personal feminine items for low-income groups
Seoul Sports Council	Support for athletics

Local Communities Development and Engagement

New operation program in 2023

Inspection body	Program		UN SDGs	Target	Cooperating agency
	Program name	Goal			
Support for local communities	Environmental improvements for after-school care class in elementary school	Creation of a safe and comfortable environment for after-school care classes		About 300 persons	- Child Fund Korea - Seoul Metropolitan Office of Education - JK Huh Foundation
	Football class for children from multicultural households	A culture of embracing multicultural households		111 persons	- FC Seoul - Seoul Metropolitan Government (Family center)
Support self-reliance of future generation	Support children with end of protection	Strengthening the self-reliance capabilities of children aging out of care		100 persons (less than 24 years old)	- Good Neighbors - Children protection facilities at each region
	Educational support for female students from vulnerable households	Inequality mitigation of children from vulnerable households		20 persons	- Good Neighbors - Local offices of education /schools

Community Management Goals

Category	Goal	Figure	2023 (achievements)	2024	2025	2026
Local communities	Employee volunteer activity hours	Voluntary activity hours	2,514	2,589	2,667	2,747
	Number of beneficiaries for the local community support program	Number of beneficiaries	194,949	198,848	202,825	206,881

Encouraging Social Contribution Activities by Employees

Employee Donation System

GS E&C encourages employees to participate in social contribution activities by operating an employee donation system. When employees donate a certain amount, GS E&C increases the amount of donation by making an additional grant matching the employees' donation. Donations raised are used for financial resources necessary for company's social contribution activities. A different donation rate is applied depending on the ranking of executives and employees for their fulfillment of social responsibility. Each employee can participate in donation activities voluntarily, with a preference for allocating donations towards the year's key tasks. The execution of donation is managed in a transparent way through the CEO's approval, individual execution by the head of each group, financial reporting by the compliance team, and an internal audit at the end of the month.

Donation and cost for social contribution activities

Unit: KRW 100 million			
Category	2021	2022	2023
Cost for activities	59.1	63.3	54.6

Project to Support for Nha Be district in Vietnam

As part of ES E&C's recent activities, we have performed the project for Vietnamese students by supporting classrooms for 15 students in total in the Nha Be district in Ho Chi Minh City, Vietnam by 2023. We also contribute to enhancing quality of life of residents by repairing their dilapidated houses in slums in farming areas of Ho Chi Minh City, and Nha Be district in cooperation with the Happy People Foundation, NGO. Additionally, through donation activities by executives and employees, we helped the local community by providing about KRW 400 million to the Ussuri Fund, about KRW 2 billion to public interest foundations, KRW 100 million to the Korea Foundation for Cooperation of Large and Small Business, Rural Affairs and KRW 1.16 billion to help disadvantaged neighbors at the end of the year. Through these sustainable social contribution activities, we contribute to development and welfare of local communities at home and abroad.

Local Communities Development and Engagement

Engagement of local communities

‘Meetings with Local Residents’ to Collect Opinions

GS E&C operates community consultation channels such as meetings with residents to listen to their opinions and enhance communication. We hold meetings with local residents to explain the progress of construction, and to request their understanding regarding any inconvenience that may be caused during the construction process. When there is a request for improvement and demands from residents during the construction process, we strive to conduct an interview with the person in charge of on-site work to reflect their opinions as much as possible and take countermeasures. We pursue sustainable development and welfare improvement at the same time. For this, we combine the environment management system of business sites with efforts for shared growth of local communities. GS E&C actively responds to a range of environmental issues such as air pollution, noise, vibration, waste treatment, groundwater contamination, etc. These activities are concentrated on resolving specific problems including sediment movement/loss, concrete elasticity, steel scrap, etc. In particular, at the construction site of Xi Dignity in Yeongdeungpo autonomous district, we conducted a preliminary inspection and environmental impact assessment. We continuously monitor any effects of noise, vibration and fine dust on the nearby elementary schools and kindergartens. Along with this, we manage the affected areas by introducing map-drawing and establishing a vibration control system, etc. As such, a range of measures are adopted to minimize environmental issues and inconveniences to residents. We lay the foundation for trust and mutual communication with local communities through activities for shared growth with them. GS E&C will dedicate itself to shared growth by having harmonious communication with stakeholders and local communities and taking our social and environmental responsibilities seriously.



Meeting with residents of Yeongdeungpo Xi Aparment



Discussion meeting with residents of the 4th complex of Buyong Apartment in Hwaseong, Dongtan City

Mitigation measures to reduce environmental impact of Yeongdeungpo Xi Apartment

Major environmental impacts	Air pollution	Complaints over noise		
Cause	Sediment accumulation and movement	Pile construction		
Major impacts	Scattering dust	Noise	Vibration	Scattering dust
Measurement indicator	• Ultra fine dust (pm2.5) • Fine dust (pm10)	• Equivalent noise • Instantaneous maximum noise	• Average vibration amplitude • Instantaneous maximum vibration	• Ultra fine dust (pm2.5) • Fine dust(pm10)
Mitigation measure	• Establishment of wheel-washing facility • Installation of automatic washing machines and dust protection covers • Prevention of car idling and driving too fast • Environmental inspections and taking action	• Low-noise construction method • Soundproofing of walls • Noise measurement		• Watering operation
Effectiveness assessment* (Dangjung Elementary School)	• Ultra fine dust (pm2.5) : 25ug/m³ • Fine dust : 51ug/m³	• Equivalent noise 48.6dB(A) • Instantaneous maximum noise 46.6dB(A)	• Average vibration amplitude : 34.3dB(V) • Instantaneous maximum vibration : 42.2dB(V)	
Compared to the threshold	• Ultra fine dust (pm2.5) : 35ug/m³(per day) • Fine dust (pm10) : 100ug/m³(per day)	• 05:00~07:00(A.M): 65dB(A)or less • 07:00(A.M)~18:00(P.M): 70dB(A) or less • 22:00(P.M)~05:00(A.M): 50dB(A) or less	• 06:00(A.M)~22:00(P.M): 70dB(V) or less • 22:00(P.M)~06:00(A.M): 65dB(V) or less	

* Effectiveness assessment: measured values of noise, vibration and fine dust by monitoring compared to the threshold

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through
Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

ESG FACTBOOK

GOVERNANCE

- 083 Establishment of Transparent Governance
- 087 Implementation of Responsible and Fair Ethical Management
- 091 Strengthening the Company-wide Risk Management

Establishment of Transparent Governance

Establishment of Transparent Governance

GS E&C has appointed the Board of Directors (BOD) to accomplish the goals of corporate growth through the creation of sustainable value with stakeholders under GS E&C’s vision of “Pursuing growth as a Sustainable Global Company.” We introduce appointment policies at the company-wide level to strengthen transparent governance as well as diversity and independence of non-executive directors. With this system, we increase expertise and efficiency of the BOD by considering expertise and various backgrounds of non-executive directors comprehensively. GS E&C has designated four subcommittees, namely: the Audit Committee; the Non-executive director Candidate Recommendation Committee; the ESG Committee; and the Compensation Committee (newly established in 2024). We also have formed the Internal Trade Committee, as a subcommittee outside the BOD. The roles and responsibilities of the subcommittees have been clarified through the operating regulations. In 2022, the operating regulations were revised to extend the deadline for agenda notification from 12 hours to one week before the subcommittees’ meetings, and to add provisions for assistance from outside experts for a more faithful operation of the subcommittees.

Composition of the BOD

The BOD of GS E&C consists of seven members including two inside directors, four non-executive directors, and one other non-executive director as of May 2024. The ratio of non-executive directors is maintained at more than a half (four out of seven), which satisfies paragraph 1, Article 542-8 of the Commercial Act that requires at least three non-executive directors constituting the majority of the total number of directors to ensure the independence of the BOD.

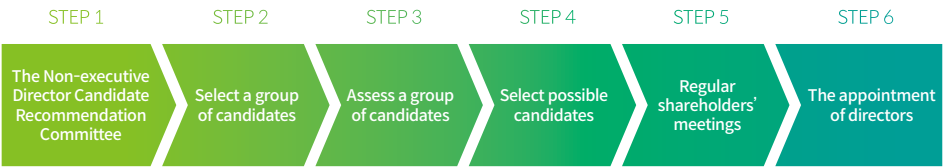
Independence of the Board of Directors

Candidates are selected by the BOD and the Non-executive Director Candidate Recommendation Committee, and the final appointment is confirmed as an agenda for the general shareholders’ meeting to ensure the independence of the BOD. Information such as important aspects of the final candidates’ background and relationship with the largest shareholder is provided to ensure the fairness of the non-executive director appointment process. Individuals appointed as non-executive directors are not allowed to hold more than two non-executive director’s positions so that they can concentrate on their work. To hold an additional position, they are required to receive approval from the BOD.

Board of Directors Appointment Process

GS E&C has operated a systematic and transparent process for the appointment of the BOD. As a first step, we operate the Non-executive Director Candidate Recommendation Committee, which selects a group of potential candidates by conducting a thorough inspection and multifaceted evaluation. Depending on the results, a list of possible candidates is selected and reported to the regular general meeting of shareholders for approval. It is part of our efforts to ensure the BOD’s expertise and credibility.

BOD Appointment Process



Expertise and Diversity of the BOD

GS E&C appoints non-executive directors with expertise in various fields to strengthen the diversity and wide expertise of the BOD, and selects persons with expertise in management, economy, law, construction industry, and technology for the positions of non-executive directors in line with the “Non-executive Director Independence and Diversity Policy” enacted on May 17, 2022 as well as Articles of Association and the Corporate Governance Structure Charter. Upon the appointment of directors, we consider diversity elements including age, gender, experience, and background to bring various perspectives to the BOD operations and prevent any imbalances toward specific backgrounds and occupation groups. Following the appointment of the female non-executive in 2021, the BOD of GS E&C is comprised of experts in various areas (architecture, law, accounting, management, etc.). In 2023, as part of our efforts to cope with a range of risks of much broader business sectors, a female financial expert was appointed as non-executive director in 2023.

Composition of BOD Competencies

* Based on the corporate governance report in May 2024

Category	Name	Construction industry	Finance and accounting	Management	Finance	Legal
Inside director	Chang-soo Huh			●		
	Yoon-hong Huh			●		
Other non-executive director	Jin-soo Huh			●		
Non-executive director	Ho-in Kang	●				
	Ho-Young Lee		●			
	Hyung-sook Choi				●	
	Chul-kyu Hwang					●

Establishment of Transparent Governance

ESG committee major resolutions and reports in 2023

Category	Performance in 2023	Plan in 2024
Supply-chain risk-management	• Provide consulting support for low-level suppliers in 2023 and reevaluate them • Conduct ESG evaluation for 100 suppliers and identify risks for each area • Risk impact, exploring possibilities for improvements to derive priorities - Engagement activities to improve suppliers' risks after review	• Continue activities to reduce identified risks of suppliers after reviewing risk impacts and possibilities for improvement
Human rights risks management	• Identify risks based on the results of human rights impact assessment • Establish and implement plans to mitigate human rights risks - Prepare for relief process: relief system promotion and case education - Non-discrimination of employment: labor inspection, welfare improvement for -contract workers, distress improvement for employees - Prohibition of forced labor: compliance with working labor and inspection of contract issuance, reflection of suppliers' compliance with the code of conduct in the contract	• Establish strategies for effective risk-management activities and complement the process • Phased implementation of tasks required for improvement to respond to regulations (disclosure, due diligence)
Response to climate change	• Establishment of carbon-neutrality strategy and measures for management - Re-estimation of BAU reduction target reflecting the mid- to long-term management plan - TCFD disclosure related to advancement of the climate-change scenario analysis	• Establishment and phased-implementation of low-carbon transition plan after considering situations inside and outside of the company
Establishment of ESG Data integrated-management system	• Status of data management by each subsidiary through the ESG Subsidiary Council and indicator setting • Establishment of subsidiaries' ESG Data management system (in progress) - Check internal process to secure raw data - Designation of dedicated organization by data and R&R • ESG Data will be managed and collected in full-scale as from 2024	• Establishment of Master Plan and data-management system to respond to regulations
Re-establishment of ESG risk-management system	• Implementation of the 1st ESG Council in April 2023 - ESG trends and tasks were shared (carbon-neutrality, supply chain, human rights) - Requests by each organization were shared • Implementation of the 2nd ESG Council in December 2023 - ESG assessment results and directions for improvement were shared - Key tasks in 2024 were shared	• Internalization of ESG management within the company by establishing the company-wide cooperative relations by sustainability issue

Compensation Committee

GS E&C recently established the Compensation Committee and its operating regulations to satisfy the requirements of its social responsibility. The Committee will engage in duties identified by the board of directors (BOD), improve governance, and decide on important matters related to the compensation of the CEO and those on the Executive Committee. The Compensation Committee increases the transparency of the compensation system and related policies. The limits on compensation for the BOD are set by Article 388 of the Commercial Act and the articles of incorporation of GS E&C. Their compensation is adjusted fairly and transparently after resolutions are passed in shareholders' meetings in accordance with relevant laws and regulations.

BOD Self-performance evaluation

GS has introduced self-evaluation requirements for the BOD to understand efficiency and importance. It comprehensively reviews the following items and various topics such as the BOD's roles and responsibilities, structure, and operating efficiency, and the extent to which it effectively executes the company's strategy. We are also considering introducing a system of mutual evaluation between the CEO and employees to lay the foundation for sound governance. We will continue to increase transparency and the company will meet its responsibility to enhance the BOD's competency and achieve its strategic goal.

BOD Self-performance evaluation	
I. Roles and responsibility of the BOD	
1.Roles of the BOD ① Does the BOD fulfill its duties fairly and faithfully? ② Does the BOD consider the positions of other stakeholders? ③ Does the BOD engage in smooth communication with management?	2. Responsibilities and Obligations ④ Does the BOD understand the management ideology and the long-term vision of the company? ⑤ Does the BOD regularly check financial statements and compliance of the company? ⑥ Does the BOD understand corporate ethics and social responsibility?
II. Structure	
1.Composition ① Is the size of the BOD appropriate? ② Does the BOD have a separate committee or procedure for deciding upon CEO candidates? ③ Does the BOD provide orientation for the new CEO?	2. Independence ④ Does the BOD have several independent non-executive directors? ⑤ Does the BOD understand and respect each other authority and responsibilities? ⑥ Does the BOD review agendas in advance?
III. Operations	
1.Operation Procedure ① Does the BOD meet regularly and faithfully fulfill its duties? ② Do BOD members attend meetings faithfully? ③ Does the BOD prepare for the operating regulations for its faithful operation accordingly? ④ Are details of BOD activities disclosed in reports and on the company's webpage?	2. Agendas ⑤ Are BOD meeting agendas provided in advance? ⑥ Are materials provided for developing BOD meeting agendas prepared faithfully? ⑦ Can the CEO utilize physical and human resources to review BOD meeting agendas?
IV. Subcommittees in the BOD	
1.Subcommittee Structures and Operations ① Is the current number of subcommittees in the BOD effective and appropriate for smooth activities? ② Does the head of each subcommittee run his or her subcommittee in full consultation with members of the BOD and management? ③ Does each subcommittee comply with regulations for BOD operations?	2. Audit Committee ④ Does the committee consist of more than three independent non-executive directors? ⑤ Are authorities and responsibilities of the committee stipulated clearly? ⑥ Are meetings of the Audit Committee held appropriately and frequently? ⑦ Are members of the Audit Committee provided with sufficient knowledge and training opportunities related to the internal accounting management system to enhance their expertise?

Education to enhance expertise of the BOD

GS E&C has continuously pursued internal and external education for enhancing expertise of the BOD. In 2023, we conducted 14 sessions of education in total including reporting results of consulting on the carbon neutrality and follow-up measures.

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

→ Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Establishment of Transparent Governance

Shareholder-friendly Management System

GS E&C's Shareholders

The total number of shares issued by GS E&C stood at 85,581,490 common shares as of December 2023; and 84,888,895 of them came with voting rights (692,595 treasury shares excluded). All of the shares issued by GS E&C are common shares, and we have introduced a single voting right system to apply the principle of one voting right per share. The current status is specifically disclosed in the Business Report.

2023 Shareholding Ratio



Shareholder Return Policy

GS E&C increased the dividend predictability related to shareholders and other investors by publishing a mid- to long-term dividend payout policy for the next three years from 2024 to 2026 on the electronic disclosure system. The dividend payout ratio is adjusted based on consolidated financial statements to reflect the characteristics of the construction company. It also aims to return more than 20% of the net profit of controlling shareholders. The mid- to long-term dividend policy can be changed after comprehensively considering the management and financial conditions of the company. Details on the dividends for each business year are determined through a resolution of the BOD.

Dividends per Share

Item	2021	2022	2023
Dividends per Share	KRW 1,300	KRW 1,300	* Dividends were not paid due to deficits caused by an accident in Geomdan, Incheon City, based on the consolidated financial statements.

Mid- to long-term dividend payout policy

Major contents	Period
- Return of more than 20% of the net profits of controlling shareholders. - Exclusion of exchange rate-related losses - Be subject to change after comprehensively considering management and financial conditions of the company	Three years (2024-2026)

Efforts to Guarantee Shareholder Activities

We place no restrictions on the proposals made by shareholders, in order to encourage them to propose agendas at the general shareholders' meetings in accordance with Article 363-2 of the Commercial Act (Shareholder's Rights to Make Proposals). The general shareholders' meetings are announced on the electronic disclosure system up to two weeks (in practice, four weeks) before the meetings, and shareholders can exercise their voting rights either directly or through proxy solicitation. GS E&C introduced an electronic voting system to enhance convenience for shareholders who wish to exercise their voting rights without attending the meeting.

Number of Institutional Investors' Meetings and Operation of the General Meeting of Sharehold

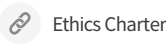
Institutional investors' meetings 212 times	General meeting of shareholders / Operation of an electronic voting system
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Implementation of Responsible and Fair Ethical Management

Ethics Management Process

Ethics Management System

GS E&C has published an ethics charter, code of conduct, practice guidelines, human rights policy and anti-trust policy, etc., on its webpage. The ethics charter contains our goal of advancing to become a globally respected company. We also establish clear standards leading to the code of ethics and practice guidelines to achieve this goal. GS E&C will engage in the ethics management activities with continuous interest in the ethical conflict which may occur in the process of business.

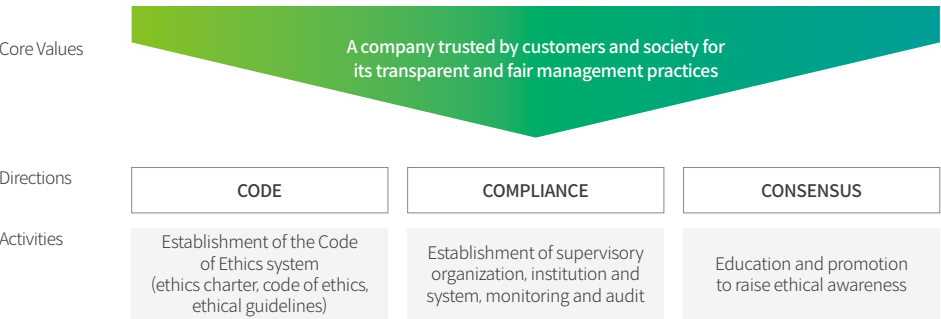


Ethics Charter

Ethics Charter Pursuing System

GS E&C endeavors to practice ethics management continuously based on the three core factors of ‘consensus by education,’ ‘code of conduct’ and ‘compliance organization.’ Since our enactment of the code of conduct in 1994, GS E&C has laid a firm foundation for ethics management. Since 2004, we have strengthened the function of the audit organization in the company to head off non-ethical behaviors of executives. We have also actively received reporting on cases of unethical behavior, not only from employees but also from stakeholders. In line with this, GS E&C implements ethics education for all employees of the company so that they can internalize ethical values and behavior standards through analysis of real cases and ideology education. We also seek detailed ethical guidelines. GS E&C will dedicate itself to fulfilling its social responsibility by continuously improving management transparency. Furthermore, GS E&C will pursue sustainable development through ethical management with our focuses on neighborhoods and society.

Ethical Management Pursuing System



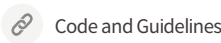
Directions

Activities	Policy to promote continuous ethics management and system improvement
	Management and supervision for a sound code of ethics for employees
	Ethics education and promotion to raise ethical awareness
	Establishment of a corporate culture by strengthening punishments for unethical behavior

Ethics Management Program

Code of Ethics and Guidelines

GS E&C defines six corporate social responsibilities, namely: the creation of customer value; respect for employees and duties of employees protection for shareholders and investors; compliance with the market order; environmental safety-focused management; and responsibilities towards the nation and society. The company determines the scope of its ethical guidelines by taking into account all stakeholders who have direct and indirect relationships with the company including employees, customers, suppliers, and local communities. GS E&C conducts ethics education and practices an ethical pledge every year for all employees to ensure the right implementation of the defined code of ethics and guidelines.



Code and Guidelines

Implementation of Responsible and Fair Ethical Management

Expansion of the Ethics Management Practice Culture

Operation of the Ethics Committee

GS E&C operates the Ethics Committee to integrate the ethics management system into every aspect of the decision-making process. The Ethics Committee performs deliberations and votes on issues related to ethical policy, reviews activities for the promotion of ethics management and results, and monitors the activities of the Compliance Officer to manage the legal risks. The head of the Management Support Division acts as the chairperson of the Committee and the executives in charge of each business HQ with extensive practical experience serve as members of the steering committee to perform the practical guidance/inspection/improvement activities related to compliance with the law, and business regulations — as well as expand the ethical management policy to each business HQ. In 2023, the Ethics Committee was held twice (once in the first and second halves, respectively) to discuss prevention and audit activities for ethical management.

Preventing Ethics Management Risks through On-site Investigation Activity

GS E&C implements ‘Patrol Inspection’ and ‘Issue Diagnosis’ during the on-site investigation activities each year to prevent ethical risks considering the characteristics of the construction business where on-site diagnosis of ethical status is crucial. We check business procedures, violations of compliance, and individual unethical behaviors, and take corrective actions immediately if any violations are found, and share matters requiring improvement with related teams at the headquarters to implement appropriate measures. In 2023, we conducted an adequacy check of serious accident safety inspection activities and activities to prevent workplace bullying to strengthen the management and prevention of social issues. In addition, we provided incentives to sites that showed outstanding performance based on the results of on-site patrol inspections and evaluations to enhance awareness of ethical management and encourage the voluntary participation of employees at worksites.

Patrol Inspection and Diagnosis of Issues in 2023

Unit: cases

Category	No. of cases	Notes
Patrol inspection	36	Selection and rewarding of three outstanding sites
Issue diagnosis	6	
Structure-technology safety inspections	28	Adequacy check of serious accident safety-inspection activities

Reporting Channels and Response to Ethical Violations

GS E&C encourages reporting on cases of ethical violations by establishing a range of reporting channels including the Online Company Reporting & Ethics Misconduct Channel as well as phone and fax lines, and operating the informant-protection policy to establish a sound and ethical corporate culture. The Online Company Reporting & Ethics Misconduct Channel can be accessed freely through the in-house Intranet, or GS E&C’s homepage, and the general civil complaints and reports submitted by mails/telephone/fax from the outside are classified and managed through the “VOC (Voice Of Customers) Management System.” In particular, we operate a system so that if a partner’s employee reports an ethical violation related to an employee of GS E&C, the informant is either rewarded or the informant’s company is selected as an excellent partner. The Compliance Office investigates immediately upon receipt of the report. If the report on ethical violation is found to be true, the employee involved and other relevant employees are subjected to disciplinary action according to the personnel regulations, and the partner will be imposed with sanctions according to the internal deliberation standards if they are involved in an act in violation of ethical standards. In 2023, a total of 46 reports were received, of which 26 cases were found to be true, and disciplinary actions were taken according to severity of the case. If a disadvantage to the informant occurs or is expected, GS E&C offers position change or aggravates punishment for retaliation to protect the identity of the informant and to increase the effectiveness of the reporting channel in accordance with the Code of Ethics and Ethical Guidelines.



Implement of Ethics Education for Employees

GS E&C utilizes various channels to provide ethics education programs to increase the ethical awareness of employees. For this, both online and offline education is employed to raise the ethical awareness of employees. In 2023, we provided 24 sessions of group education for 1,006 employees, including new/experienced employees and employees in major job duties in the company. Additionally, we also provided 24 sessions of on-site education for 503 on-site workers and 23 sessions of education for 206 on-site suppliers’ managers. As for online education, we conducted education for 5,026 employees to prevent bullying and abuse of authority in the workplace. We publish an ethics management newsletter to share ethical violation cases and ethical management issues to draw all employees’ interest, and strengthen their participation in ethics management. Following the previous year, we plan to disseminate information on the reward system related to ethical practice and educate employees on practical cases of repeated ethical issues in 2024.

Implementation of Responsible and Fair Ethical Management

Ethics Education for Suppliers

GS E&C conducts ethical education for suppliers via visiting on-site for shared growth with suppliers and inducing their active participation and sharing GS E&C’s ethical policies. Education is consisted of various topics such as a code of ethics system, ethical violation cases, reporting channel of unethical behaviors with its focus on preventing potential ethical risks. Suppliers are required to submit the Corporate Integrity Pledge when signing a transaction contract with us to prevent unfair trade practices, and commitment to the establishment of sound transaction practices with subcontractors is also part of the Code of Ethics and the related regulation.

Status of ethics education

Unit: Persons

Category		2021	2022	2023	Notes
Off-Line education	Group education	605	643	1,006	• Topics: ethical management and sharing of internal issues of the company, how to report ethical violation cases, etc. • Target: new/experienced employees and employees in major job duties On-site workers and on-site managers
	On-site education	267	964	736	
	Target for employees of the company	256	652	530	
	Suppliers	11	312	206	
On-Line education		5,842	5,014	5,026	Behaviors to prevent abuse of authority and bullying in the workplace (ethical organization culture)

Compliance

Compliance Program

GS E&C established the Compliance Program (CP) Team to operate the Compliance Program. We established a system that presents clear behavioral standards for compliance with fair-trade related laws in order to prevent the violation of law, as well as to identify and take measures on any violations. The system satisfies the eight elements of the Compliance Program recommended by the Fair Trade Commission. In addition, we implemented education on the CP system and the purpose of its introduction for all employees along with a recognition survey related to CP. All employees, including regular and dispatched employees at the head office, as well as personnel in professional positions and contract positions at each site, are required to take an ethical management and fair-trade pledge at the beginning of each year to establish a culture of compliance with the fair trade law within the organization



Compliance Guidelines

Internalization of CP

In 2023, GS E&C continues to improve policies and procedures through the establishment of measurable goals for CP operation and index management, reflection of CP promotion tasks on executive KPI, actualization of reward and punishment regulations for employees. In 2023, we obtained grade AAA in the CP Grade Assessment conducted by the Korea Fair Trade Commission, verifying that our performance for advancement was recognized. We will strive to increase the effectiveness of the CP operation, and internalize compliance awareness by holding compliance meetings and educating employees on the risk of legal violation.

Highlights of CP Promotion Performance in 2023

Activities to prevent violation of laws	Conducted cyber education on the fair-trade law for all employees (96% completed)
	Four in-depth education programs by risk sector
	Published CP Newsletter and activities to raise employees' awareness on CP
Risk management activities	Designation of departments with risks and distribution of guidelines
	Activities to prevent violations of the law through the business consultation system throughout the year (34 times in total) – review of housing sales advertising (24 times)
	Inspection activities to prevent violation of laws –compliance of risk departments, branches and sites
System (regulation) complementation	Reflection of fair-trade compliance items of all executives on strategic indicators
	Revision of CP operation regulations and company-wide autonomy
	Publishment of the compliance handbook (revised edit in 2023)

Results of CP Education in 2023

Category	Area	Target departments	No. of trainees
Online	Understanding the Fair-Trade Act	All employees	4,816
Group training	Subcontracts, cartels, internal transactions, and indication advertisements/ clauses	Subcontracts: Each CM team, Construction HQ and CS Team, Performance Support Team, Procurement Division	452
		Cartel: Building Sales Team, Urban Maintenance Team, Building/Housing/Infrastructure Estimate Budget Team, Environmental Business Team, Order Sales Team	396
		Internal transactions: New Business Planning Team, Procurement division, General Management Team	194
		Indication Advertisements/Clauses: Building Housing Marketing Team, Housing Sales Team, Sales Manager, Xi Gallery Staff	37

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

→ **Implementation of Responsible and Fair Ethical Management**

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

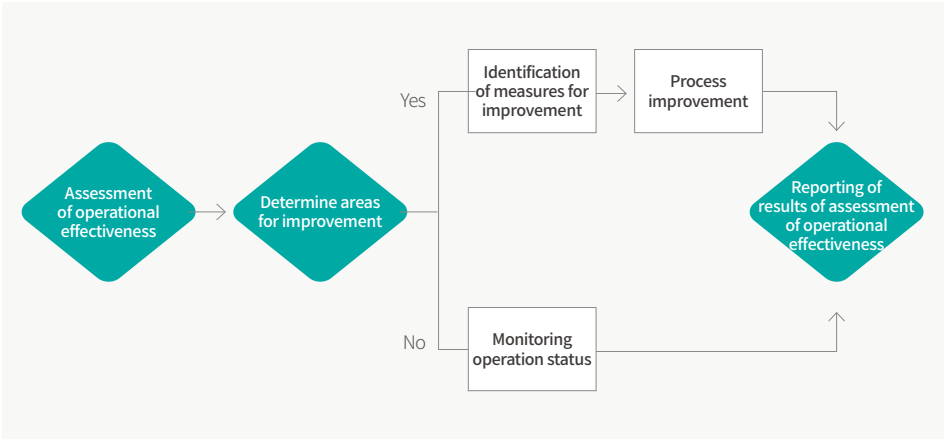
Independent Assurance Statement

Implementation of Responsible and Fair Ethical Management

Assessment of CP Operational Effectiveness and Improvement

GS E&C conducts monitoring of operational effectiveness of the conventional CP process and comes up with improvement measures to check data such as reduction of risks of violation of laws. Evaluation of CP operational effectiveness is conducted, and results are reported semi-annually (once in the first half of the year and once more during the second half of the year). The results are reported to the BOD and the Compliance Committee.

Assessment of CP Operational Effectiveness



Assessment of CP Operational Effectiveness

Category	Unit: Cases, %		
	2021	2022	2023
Consultation on preventing violations of the law	37	58	34
Utilization of guidance provided by the compliance program for departments with risks	58	73	74
Investigation of the CEO's commitment to practicing ethical management and the adequacy of company resource support	84	91	94

Company-wide Risk Management

GS E&C has established a comprehensive and organic risk-response system through close cooperation among each business HQ/group The company-wide risk areas — such as business, investment, law, environment, social, HR, ethics, new business, and fair trade — are reviewed and identified based on types of risk for management. We organized risk-management organizations such as subcommittees under the BOD, and the Investment Business Deliberation Committee, to maintain the company-wide risk management system at the BOD level.

Management of Business Risks

GS E&C conducts financial evaluations under supervision of the committee to assess the business feasibility of various projects. We manage all risks associated with each project through risk assessment and review by related departments during each project stage. We identify risks in the early stages and draw a conclusion through the correct decision-making process to promote the project systematically and efficiently. In doing so, we make use of a checklist for RM and establish a risk-deliberation procedure during each stage of the project — such as sales; bidding determination; estimation; report prior to bidding; report of bidding results; and project performance stage. In addition, a deliberation procedure is enacted at the stage of identifying new business to prepare the future growth engines for sustainable growth

Management of Business Environment Risks

Management of Business Environment Risks GS E&C establishes a BOD-level risk- management system for the management of environment risks including non-financial risks other than business risks. In particular, legal risks related to industrial accidents, as indicated by trends such as the adoption of the Serious Accidents Punishment Act, have increased recently. Monitoring of compliance with laws and regulations is implemented by compliance support organizations such as the Legal Affairs Team. The compliance control standards related to the Fair Trade Act are enacted and implemented by the CP team. In addition, the ESG Committee reviews non-financial risks through the exclusive ESG department. The Internal Transactions Committee and the Audit Committee establish a culture of ethical management and transparent organization through audits of the company's accounting and business practices, as well as audits of duty execution by directors, selection of external auditors, monitoring of compliance activity, and review on internal transactions, and manage the internal and external risks of the company for sustainable management

Appointment of Chief Risk Officer

GS E&C appointed the Chief Risk Officer (CRO) responsible for the company-wide risk management system of the company for systemic responses to risks. CRO inspects the company-wide risk-management leadership, governance, process (in normal times and during emergencies), and overall infrastructure, and supervises the entire risk management. By appointing a CRO, the Company exerts its best efforts to enhance competency to cope with organizational risks and raise awareness of them.

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

→ Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

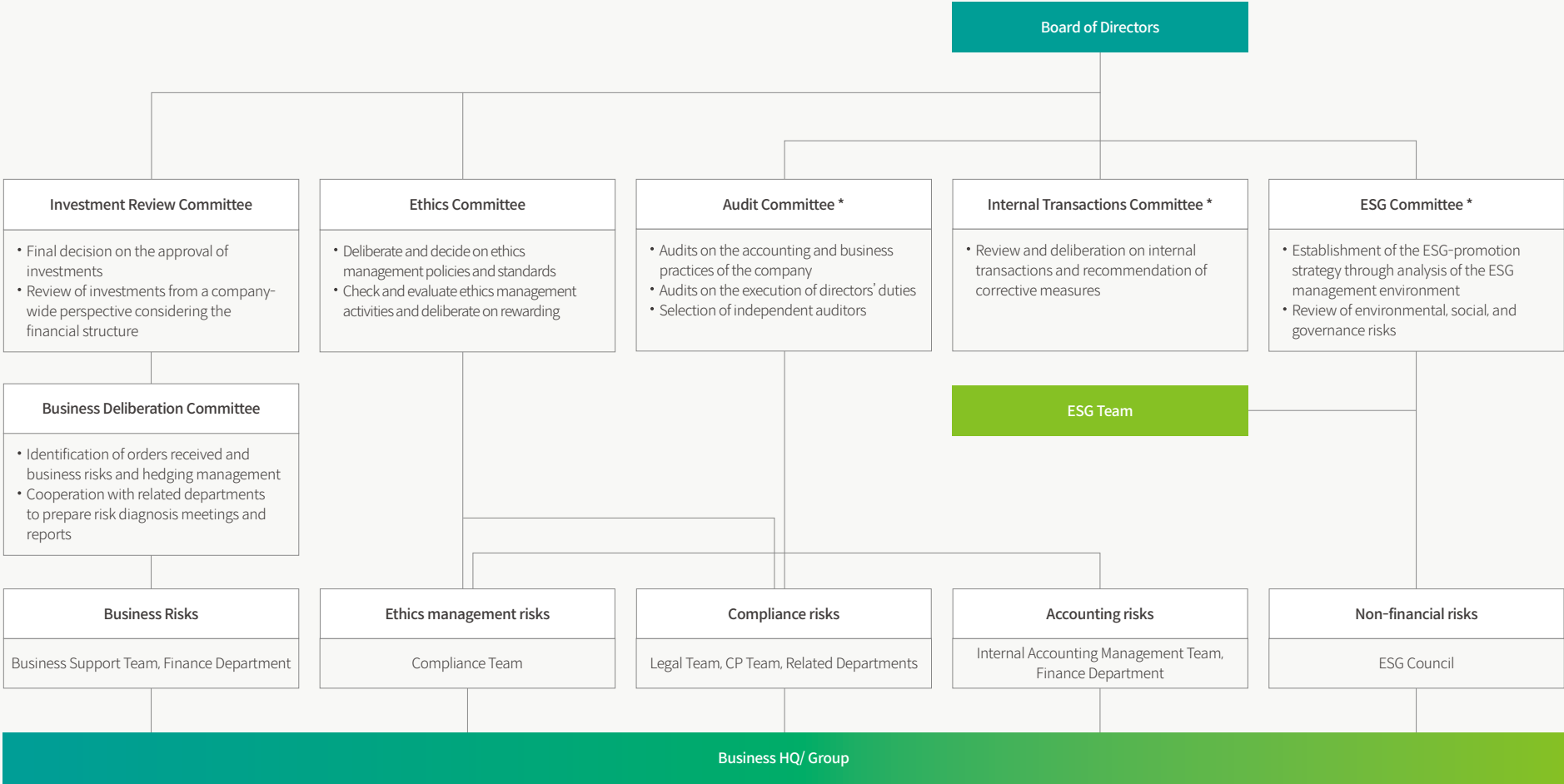
Membership Associations

GHG Verification Summary

Independent Assurance Statement

Strengthening Company-wide Risk Management

Company-wide Risk Management



* Subcommittees under the BOD

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management

→ [Strengthening Company-wide Risk Management](#)

APPENDIX

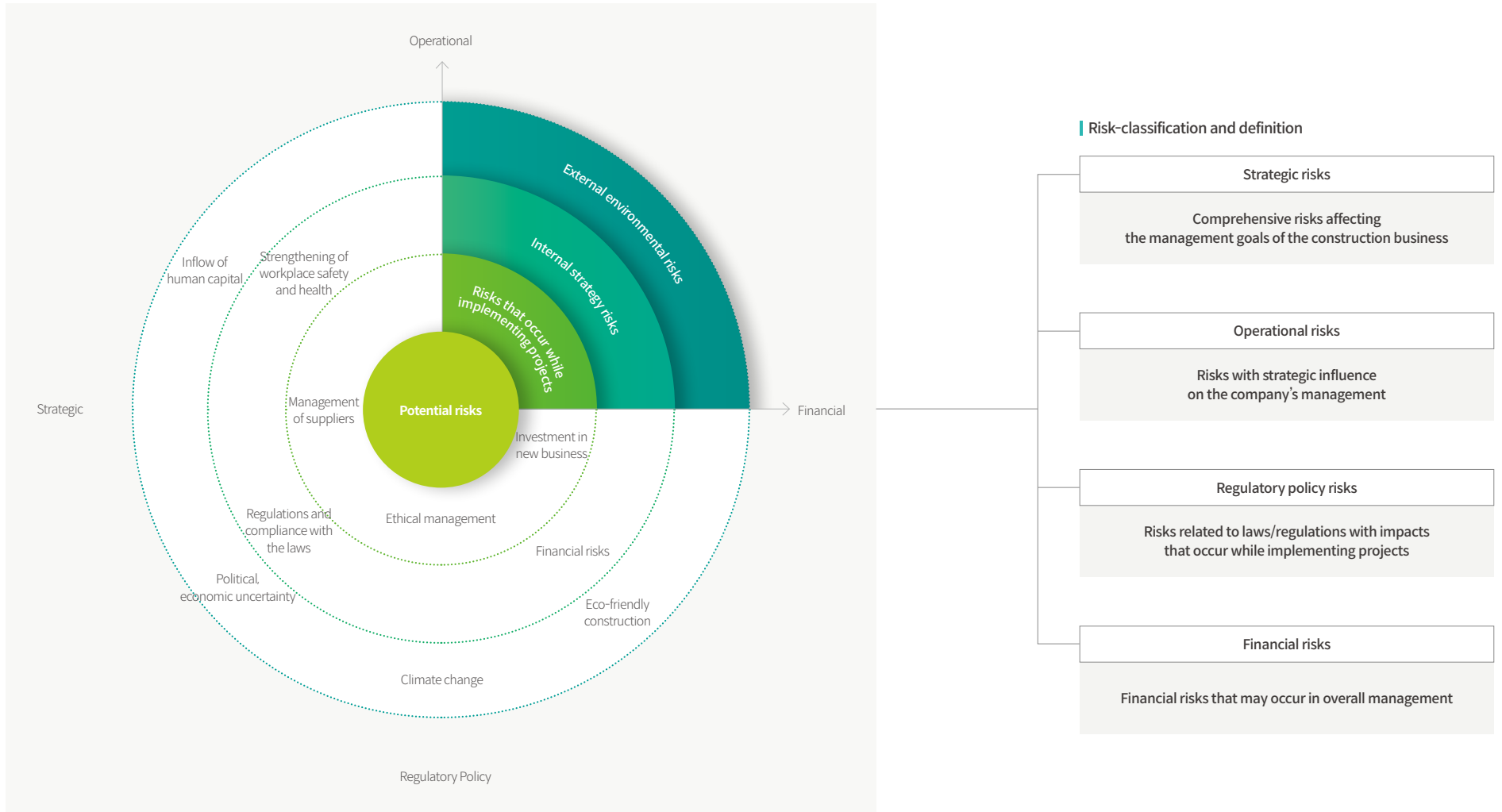
ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

Strengthening Company-wide Risk Management

Response to Risks

GS E&C classifies and defines the risks as strategic, operational, regulatory policy, and financial risks to respond to the core risks effectively from a company-wide perspective. Strategic risks refer to comprehensive risks affecting the management goals and strategic direction of the company. Operational risks pertain to risks related to personnel, process, technology, IT, and security threats that can affect the company management directly. Regulatory policy risks encompass external risks pertaining to laws, regulations due to climate change, and country risks associated with advancement into overseas markets. Financial risks include uncertainties regarding fluctuations in industry, exchange rate, and business risks. GS E&C prepares proper risk-response measures by each risk management organization within the company-wide risk-management system with regard to classified and defined risks.

Company-wide Risk Management System



COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

→ Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

Strengthening Company-wide Risk Management

Identification of Core Risks and Response Status

Classification of risks	Core risks	Definition of risks	Impact on business	Response activity
Strategic risks	Climate change	• Increase in environmental contamination caused by construction waste • Impact of climate-change on the construction sites	• Waste, wastewater, fine dust and GHG emissions lead directly to financial losses by causing environmental pollution at construction sites • Reduction of working days on account of adverse weather or occurrence of damage to safety and health due to climate change	• Establishment of a response strategy to accomplish carbon neutrality and address climate change • Strengthening of monitoring and the recycling of construction waste • Water reuse and reduction in the discharge of wastewater
	Investment in new business	• Lack of future growth engines • Competitors attracting more opportunities for new business	• Decline in corporate competitiveness owing to lack of future growth engines	• Enhancement and concentration of new business competencies • Acquisition of differentiated technologies based on future growth industries
	Eco-friendly construction	• Increased demand for the reduction of energy-consumption and GHG emissions in the building and construction field • Strengthening of regulations related to carbon neutrality	• Risk of deterioration in management performance and projects received in the energy business sector of GS E&C due to the decrease in demand	• Increased investment in renewable energy (Solar power, wind power) • Increased investment in eco-friendly R&D technologies • Establish a response strategy for carbon neutrality and climate change • Flexible assignment of workforce
Operational risks	Strengthening of workplace safety and health	• Accidents at workplaces • Industrial accidents due to scorching heat and cold waves	• The occurrence of industrial accidents is associated with possible breaches of the Serious Accidents Punishment Act • A workplace accident possibly causes a decline in the non-financial index assessment	• Strengthening of activities to prevent accidents associated with equipment • Strengthening of competencies for construction/safety personnel and implementation of training • Preventive management of heat/cold related diseases
	Suppliers management	• Suppliers' financial stability • Violation of ethical management by suppliers • On-site safety management • Misuse of superior status	• Financial losses due to suppliers • Damage to the corporate image due to the violation of ethical standards by suppliers • Losing reliable relationships and termination of agreements with suppliers due to the misuse of superior status	• Risk assessment and response for suppliers • Communication and consultation channels • Construction and safety support system • GS Partner and the online whistleblowing system
	Inflow of human capital	• Deterioration of youth employment • Workforce with insufficient skills • Decrease in employee diversity	• Labor force issues at the construction site • Increase of costs in accordance with the hiring of workforce	• Establishment of a human rights management system and the enactment of the Human Rights Charter • Support for the conversion of duty and workforce efficiency • Provide equal opportunities by expanding employee diversity and inclusive hiring
Regulatory policy risks	Regulations and compliance with laws	• Breach of the Serious Accidents Punishment Act • Responses to the changes in construction industry regulations	• Inability to comply with strengthened laws or regulations leads to disadvantages in the bidding process • Further, this brings the risk of reduced chances for winning contracts.	• Strengthening of the safety and health management system • Compliance with the regulatory policy (Serious Accidents Punishment Act and Occupational Safety and Health Act) • Monitoring of performance
	Performance of ethical management	• Violation of corporate ethical regulations • Non-compliance with the Fair-Trade Act	• Increase in the costs of responding to regulations such as fines and penalties, and the possibility of damage to the corporate brand image/reputation	• Practice of ethical pledge and strengthening of education on corporate ethics • Operation of reporting channels and adoption of strong response measures against unethical behaviors • Operation of the Compliance Program (CP team)
	Political and economic instability	• Recession in the global economy and political conflicts • Labor strikes	• Decreased demand for construction due to economic recession • Reduction in the number of working days due to labor strikes	• Strengthening the monitoring of domestic/overseas trends and risk management • Improvement of relationships with stakeholders and establishment of trusted relationships (Prevention of negative movements such as strikes, boycott, negative media reports)
Financial risks	Financial risks	• Fluctuations in the global economy, prices of raw materials, regulations, exchange rates, and oil prices	• Cost risks due to the increase of raw-material costs • Declined competitiveness within the capital market due to the increase of debt ratio	• Ongoing management of financial risks • Monitoring of the raw-material market and diversification of supply channels • Management of debt ratio by strengthening profitability-oriented housing business

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and
Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through
Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through
Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

APPENDIX

095	ESG Performance Data
104	GRI Standards 2021
107	SASB
108	TCFD · UNGC Advanced Level · Awards and Certifications
109	Membership Associations
110	GHG Verification Summary
113	Independent Assurance Statement

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

→ ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

ESG Performance Data

Economy

| [Summary] Consolidated Statements of Comprehensive Income

Category	Unit	2021	2022	2023
Sales	KRW 100 million	90,366	122,992	134,367
Cost of sales	KRW 100 million	76,858	110,126	131,745
Operating profits	KRW 100 million	13,508	12,866	2,622
Operating profit (loss)	KRW 100 million	6,465	5,548	(3,879)
Net profit before tax (loss)	KRW 100 million	6,579	6,649	(5,175)
Net profit (deficit)	KRW 100 million	4,288	4,412	(4,195)
Other comprehensive income	KRW 100 million	187	4	833
Total comprehensive income	KRW 100 million	4,475	4,417	(3,362)
Earnings per share		0	0	0
Basic earnings per share(consolidated financial statements for loss)	KRW	4,834	3,997	(5,677)
Diluted earnings per share (consolidated financial statements for loss)	KRW	4,815	3,997	(5,677)

| [Summary] Consolidated Statements of Financial Position

Category	Unit	2021	2022	2023
Current assets	KRW 100 million	81,951	94,116	94,820
Non-current assets	KRW 100 million	69,886	75,350	82,253
Total assets	KRW 100 million	151,837	169,466	177,073
Current liabilities	KRW 100 million	67,693	82,055	87,962
Non-current liabilities	KRW 100 million	35,417	33,849	40,259
Total liabilities	KRW 100 million	103,110	115,904	128,221
Issued capital	KRW 100 million	4,279	4,279	4,279
Capital surplus	KRW 100 million	9,513	9,427	9,420
Other equity	KRW 100 million	(368)	(368)	(368)
Other accumulated income (accumulated)	KRW 100 million	(1,228)	(1,620)	(650)
Retained earnings	KRW 100 million	34,057	36,598	30,464
Non-controlling interest	KRW 100 million	2,474	5,246	5,707
Total equity	KRW 100 million	48,727	53,562	48,852

※ Scope of data: A Headquarter/ B 143 Domestic sites/ C 1 Technology research institute/ D 7 Overseas branches / E 46 Overseas business sites / F 17 Overseas subsidiaries / G 742 suppliers

| [Summary] Consolidated Financial Stability

Category	Unit	2021	2022	2023
Current ratio	%	121	115	108
Liabilities ratio	%	212	216	262
Equity capital ratio	%	32.09	31.60	27.59

| Industrial value

Category	Unit	2021	2022	2023	Scope of data
Orders newly received from abroad	%	28.4	10.1	30.8	A-F
New overseas markets	Countries	1	0	0	

| Intellectual Value

Category	Unit	2021	2022	2023	Scope of data
R&D expenses	KRW million won	34,043	34,670	71,993	A, C
R&D investment rate*	%	0.38	0.28	0.54	

* R&D investment ratio: ratio of R&D expenses / sales

ESG Performance Data

Environment

| Environmental management integrated performance management

Item		Disclosure	Scope of data
GHG reduction	2023 goal	5.30 % reduction compared to BAU	A-C
	2023 achievement	7.19 % reduction compared to BAU	
Energy consumption	2023 goal	5.30 % reduction compared to BAU	
	2023 achievement	5.88 % reduction compared to BAU	
Re-use of water	2023 goal	More than 4.0%	
	2023 achievement	3.8%	
Waste recycling ratio	2023 goal	More than 98.0%	
	2023 achievement	97.8%	
Green purchase ratio	2023 goal	More than 10.5%	
	2023 achievement	8.2%	
Violation of environmental laws (Number of corporate dispositions)	2023 goal	Zero cases	
	2023 achievement	Zero cases	

| GHG*

Category		Unit	2021		2022		2023		Scope of data
			Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	
GHG emissions	Total	tCO ₂ -eq	3,816,958	70,310	3,502,822	59,535	4,938,875	43,814	A-C, E, G
	Scope 1 (Direct emissions)	tCO ₂ -eq	31,570	14,754	33,509	18,115	35,050	16,670	
	Scope 2 (Indirect emissions)	tCO ₂ -eq	63,524	2,670	66,565	2,571	72,665	995	
	Scope 3 (Other indirect emissions)	tCO ₂ -eq	3,721,864	52,886	3,402,657	38,849	4,831,161	26,149	
GHG Intensity / by Sales		tCO ₂ -eq/ KRW 100 million	49.86		41.63		53.13		

* Due to advancement of calculation method for Scope 2 overseas (emission factor by nation is corrected), Scope 3 (category expansion), the data for the previous two years, 2021, and 2022, differ from the statistics in the previous report.

※ Scope of data: A Headquarter/ B 143 Domestic sites/ C 1 Technology research institute/ D 7 Overseas branches / E 46 Overseas business sites / F 17 Overseas subsidiaries / G 742 suppliers

| Scope 3

Scope 3			Unit: tCO ₂ -eq					
Category			2021		2022		2023	
			Domestic	Overseas	Domestic	Overseas	Domestic	Overseas
Upstream	1. Purchased products and services	Construction material	1,297,359	0	1,597,708	0	1,810,380	0
		Suppliers' construction equipment	59,481	52,874	86,827	38,848	71,625	26,149
	2. Capital material	32	0	51	0	48	0	
	3. Fuel and energy	Purchased fuel	1,600	0	1,981	0	2,193	0
		Purchased electricity	4,936	0	5,179	0	5,646	0
	4. Transportation and logistics	44,341	0	52,511	0	51,050	0	
	5. Waste	21,907	0	37,810	0	27,560	0	
Downstream	6. Business trips	1,040	12	1,149	1	1,336	0	
	7. Employees' commute	3,769	0	3,569	0	3,610	0	
	11. Use of purchased products	2,286,417	0	1,615,231	0	2,856,494	0	
	12. Discarding of purchased products	981	0	641	0	1,219	0	
	Total	3,721,864	52,886	3,402,657	38,849	4,831,161	26,149	

| GHG reduction

Category		Unit	2021	2022	2023	Scope of data
GHG-reduction performance (Scope 1+2)	BAU reduction	tCO ₂ -eq	120,036	115,512	116,044	A-C
	Reduction goal	tCO ₂ -eq	6,249	6,078	6,150	
	Reduction	tCO ₂ -eq	24,942	15,347	8,329	

ESG Performance Data

| Energy

Category		Unit	2021		2022		2023		Scope of data
			Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	
Non-renewable energy consumption	LNG (city, natural)	TJ	98.8	0.0	112.6	0.0	92.1	0.0	A-C, E
	Kerosene	TJ	84.3	0.0	145.6	0.0	206.2	0.0	
	Diesel	TJ	276.2	208.4	235.6	251.4	218.5	233.3	
	Gasoline	TJ	23.4	3.0	22.2	3.2	21.5	1.5	
	Electricity	TJ	1,327.4	48.4	1,392.9	48.7	1,518.5	25.8	
	Others	TJ	15.6	0.0	18.5	0.0	16.5	0.0	
	Subtotal	TJ	1,825.9	259.8	1,927.3	303.4	2,073.3	260.6	
Renewable energy (thermal)	TJ	7.5	0.0	8.0	0.0	8.2	0.0		
Sum	TJ	1,833.4	259.8	1,935.3	303.4	2,081.5	260.6		
Total	TJ	2,093.2		2,238.7		2,342.1			
Energy intensity	TJ/KRW 100 million	0.03		0.03		0.02			

| Energy reduction

Category		Unit	2021	2022	2023	Scope of data
Energy reduction performance	BAU reduction	TJ	2,261	2,177	2,124	A-C, E
	Reduction goal	TJ	117	114	112	
	Reduction	TJ	448	264	68	

※ Scope of data: A Headquarter/ B 143 Domestic sites/ C 1 Technology research institute/ D 7 Overseas branches / E 46 Overseas business sites / F 17 Overseas subsidiaries / G 742 suppliers

| Water*

Category		Unit	2021	2022	2023	Scope of data
Amount of water used		ton	2,691,483	2,703,781	2,468,576	A-C
Water supply	Total	ton	632,549	666,927	969,564	
	Domestic sites	ton	N/A	N/A	703,040	
	Headquarters	ton	N/A	N/A	228,649	
	Other buildings	ton	N/A	N/A	37,875	
Groundwater	Total	ton	1,217,059	1,408,963	933,686	
	Domestic sites	ton	N/A	N/A	299,987	
	Headquarters	ton	N/A	N/A	281,106	
	Elysian (Gangchon + Jeju)	ton	N/A	N/A	339,434	
River water	Total	ton	841,875	627,891	565,326	
	Elysian (Gangchon + Jeju)	ton	N/A	N/A	565,326	
		ton	No performance	No performance	No performance	
Amount of water recycled	Total	ton	176,068	94,380	92,584	
	Domestic sites	ton	N/A	N/A	71,777	
	Headquarters	ton	N/A	N/A	20,807	

* No value for the previous year as amount of water used by business site and amount of recycled water have been calculated separately since 2023.

| Material

Category		Unit	2021	2022	2023	Scope of data
Amount of material used	Rebar/Steel	ton	333,482	364,306	433,560	A-C
	Ready mixed concrete	m³	3,757,029	4,423,284	5,228,354	
	Cement	ton	111,113	171,663	101,985	
	Ready mixed mortar	ton	199,143	309,089	144,564	
	Ascon	ton	133,599	96,437	114,562	
	PF board	m³	110,623	177,413	193,953	
	PHC	ton	267,380	395,369	170,684	
	Sand	ton	85,495	48,379	107,120	
	Aggregates	ton	869,008	792,886	281,026	
	Recycled aggregate	ton	74,169	13,623	46,524	
	Gypsum board	ton	32,946	53,758	59,239	
Amount of recycled raw materials		m³	74,169	13,623	46,524	

ESG Performance Data

Pollutant

Category		Unit	2021	2022	2023	Scope of data
Hazardous chemical materials (Waste oil, wasted paint, etc.)		ton	124	51	15	A (Elysian Gangchon and Jeju)
Water pollutants	Emissions	ton	1.0	1.2	1.3	
	COD	Discharge concentration	ppm	5.3	4.8	
		Legal criteria	ppm	20.0	20.0	
		Emissions	ton	0.3	0.4	
	BOD	Discharge concentration	ppm	1.6	1.6	
		Legal criteria	ppm	10.0	10.0	
		Emissions	ton	0.3	0.2	
	SS	Discharge concentration	ppm	1.3	0.8	
		Legal criteria	ppm	10.0	10.0	

Waste

Category		Unit	2021	2022*	2023**	Scope of data
Waste discharge	Total	ton	1,049,565	1,078,140	534,091	A-C
	Recycling	ton	1,048,286	1,077,798	522,127	
	Incineration	ton	620	136	2,225	
	Landfill	ton	659	206	39	
	Others	ton	0	0	9,701	
	Total	ton	1,044,987	1,072,872	521,431	
Construction waste	Recycling	ton	1,044,092	1,072,705	519,385	
	Incineration	ton	377	126	2,008	
	Landfill	ton	518	40	39	
	Others	ton	0	0	0	
	Total	ton	4,453	5,220	12,644	
Business site waste	Recycling	ton	4,158	5,054	2,733	
	Incineration	ton	155	0	209	
	Landfill	ton	140	165	0	
	Others	ton	0	0	9,701	
	Total	ton	124	49	15	
Designated waste (hazardous waste)	Recycling	ton	36	39	8	
	Incineration	ton	88	10	7	
	Landfill	ton	0	0	0	
	Others	ton	0	0	0	
Recycling ratio of total waste	Total	%	99.88	99.97	97.76	

* The amount has been recalculated due to errors in totaling waste in 2022 (business sites and designated sites are combined)

** Waste amount is calculated only for the construction sites from 2023

※ Scope of data: A Headquarter/ B 143 Domestic sites/ C 1 Technology research institute/ D 7 Overseas branches / E 46 Overseas business sites / F 17 Overseas subsidiaries / G 742 suppliers

Compliance with environmental laws

Category	Unit	2021	2022	2023	Scope of data
Number of corporate dispositions	Cases	0	0	0	A-C
Corporate fines	KRW million	0	0	0	

Environmentally friendly service

Category	Unit	2021	2022	2023	Scope of data
Total sales of eco-friendly products and services	KRW 100 million	8,366	10,368	12,725	A-C
Ratio of sales of eco-friendly products and sales	%	9.3	8.4	9.5	
Ratio of high-efficiency buildings	%	68.0	86.0	73.1	

Eco-friendly business investments

Category		Unit	2021	2022	2023	Scope of data
Green purchases	Total amount	KRW 100 million	938.2	1,010.9	1,074.2	A-C
	HB label	KRW 100 million	42.9	69.0	165.2	
	High-efficiency energy Machinery	KRW 100 million	285.7	256.9	200.2	
	Energy Consumption efficiency Grade 1-2	KRW 100 million	231.6	408.5	563.3	
	Eco-label	KRW 100 million	357.9	237.3	129.9	
	Certified wood*	KRW 100 million	0.0	0.0	0.0	
	Others	KRW 100 million	20.1	39.2	15.6	
	Eco-friendly R&D	KRW 100 million	34.9	60.6	82.7	
New Eco-friendly business investment		KRW 100 million	674.0	138.1	1,008.0	

* Certified wood: FSC, PEFC, SFI, CSA, Others

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

→ ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

ESG Performance Data

Social

| Employee status

Category		Unit	2021	2022	2023	Scope of data
Total number of employees		Persons	5,433	5,422	5,256	A-F
Ages	Below 30 years	Persons	429	543	597	
	30-50 years	Persons	3,419	3,222	2,851	
	Over 30 years	Persons	1,585	1,657	1,808	
Gender	Male	Persons	4,853	4,790	4,640	
	Female	Persons	580	632	616	
	Ratio of female employees	%	10.7	11.7	11.7	
	Ratio of female employees in STEM*	%	N/A	9.7	9.8	
Job type	Ratio of regular employees	%	71.8	70.2	70.6	
	Ratio of contract employees	%	28.2	29.8	29.4	
	No. of employees with disabilities	Persons	99	90	79	
	Ratio of employees with disabilities	%	1.5	1.7	1.5	
	No of foreigners	Persons	18	18	9	
	Minority employees	Total	Persons	1,265	1,391	
India		Persons	127	129	93	
The Philippines		Persons	148	110	98	
Nepal		Persons	14	3	4	
Bangladesh		Persons	364	664	570	
Egypt		Persons	20	8	3	
Vietnam		Persons	159	145	92	
Others		Persons	433	332	150	
No. of persons entitled to veterans' benefits		Persons	90	86	86	
No. of discharged commissioned officers		Persons	244	223	175	
No. of LGBT persons		Persons	0	0	0	
Total number of managers		Persons	5,433	5,422	5,256	
Number of female managers	Total	Persons	580	632	616	
	Basic	Persons	344	406	394	
	Intermediate	Persons	235	225	218	
	Senior	Persons	1	1	4	
Ratio of female managers		%	1.9	3.0	2.8	
Ratio of female management staff in profit-creating fields		%	4.4	2.4	1.5	

* The value of the previous year is absent because it has been calculated based on departments since 2022: science (research personnel, nurses, etc.), technology (IT, information protection, developer, etc.), engineering (electrical/ civil engineer, technician, etc.), and mathematics (accounting, finance, etc.)

※ Scope of data: A Headquarter/ B 143 Domestic sites/ C 1 Technology research institute/ D 7 Overseas branches / E 46 Overseas business sites / F 17 Overseas subsidiaries / G 742 suppliers

| Employee Classification by Age, Gender and Position

Category		Unit	No. of employees
Below 30 years	Executives (high-level position above managers)	Persons	0
	Manager (Team leaders)	Persons	0
	Normal employees (low-level positions)	Persons	174
	Subtotal	Persons	174
30-50 years	Executives (high-level position above managers)	Persons	41
	Manager (Team leaders)	Persons	84
	Normal employees (low-level positions)	Persons	2,009
	Subtotal	Persons	2,134
Over 50 years	Executives (high-level position above managers)	Persons	183
	Manager (Team leaders)	Persons	84
	Normal employees (low-level positions)	Persons	1,110
	Subtotal	Persons	1,377
Male	Executives (high-level position above managers)	Persons	220
	Manager (Team leaders)	Persons	167
	Normal employees (low-level positions)	Persons	3,024
	Subtotal	Persons	3,411
Female	Executives (high-level position above managers)	Persons	4
	Manager (Team leaders)	Persons	1
	Normal employees (low-level positions)	Persons	269
	Subtotal	Persons	274

| Hiring types in 2023

Category		Unit	Male	Female
Affiliation workers	Permanent position	Persons	3,441	274
	Temporary workers	Persons	1,199	342
Non-affiliation workers		Persons	13,930	1,048
Total		Persons	18,570	1,664

ESG Performance Data

| Performance evaluation*

Category	Unit	2021	2022	2023	Scope of data
Number of employees subject to performance evaluation	Persons	N/A	3,347	3,389	A-F
Performance evaluation history	Times	N/A	3	3	
Ratio of employees who received performance evaluations	%	N/A	97	92	

* No value for the previous year as it has been calculated since 2022

| Labor union

Category	Unit	2021	2022	2023	Scope of data
No. of labor union members	Persons	457	374	363	A-F
Ratio of employees who have joined the labor union	%	26.2	23.0	25.0	

| Parental leave

Category		Unit	2021	2022	2023	Scope of data
No. of employees eligible for parental leave	Male	Persons	1,349	1,035	1,102	A-F
	Female	Persons	149	138	109	
No. of employees who used parental leave	Male	Persons	130	78	78	
	Female	Persons	87	52	37	
No. of employees who returned after paternal leave	Male	Persons	32	24	42	
	Female	Persons	31	22	17	
No. of employees who worked for 12 months after parental leave	Male	Persons	23	25	21	
	Female	Persons	20	29	19	
Reinstatement rate after taking parental leave	Male	%	42.1	63.6	91.3	
	Female	%	50.0	63.2	94.4	
Employment retention rate after taking parental leave	Male	%	95.8	83.3	70.0	
	Female	%	87.0	96.7	90.5	

※ Scope of data: A Headquarter/ B 143 Domestic sites/ C 1 Technology research institute/ D 7 Overseas branches / E 46 Overseas business sites / F 17 Overseas subsidiaries / G 742 suppliers

| VOE(Handled Grievances)

Category		Unit	2021	2022	2023	Scope of data
No. of Grievances Handled	Total No. of violations	Cases	24	33	47	A-F
	Domestic	Cases	23	33	46	
	Overseas	Cases	1	0	1	

| Occupational Health and Safety

Category		Unit	2021	2022	2023	Scope of data
Ratio of Grievances Handled through Safe Complaint Handling Channel*		%	N/A	96.0	90.9	G
Critical injuries among suppliers	Total no. of deaths	Persons	1	0.51	0	
	Employees	Persons	0	0	0	
	Suppliers	Persons	1	0.51	0	
	Industrial safety accidents	Persons	1	0.51	0	
	Construction / Technology accident	Persons	0	0	0	
Industrial disasters	Employee LTIFR	Number/ million hours worked	0.12	0.14	0	A-G
	Partner LTIFR	Number/ million hours worked	2.96	2.72	3.02	
	Employee OIFR	Number/ million hours worked	4.78	5.95	4.35	
Safety Innovation School	No. of employees who have completed Safety Innovation School	Persons	1,341	1,618	2,256	
	Safety Innovation School's training visits	Times (Persons)	48(976)	89(1978)	76(2094)	
Executives' Safety and Health Management Activities	CEO's visits to sites	Times	10	10	79	
	CSO's visits to sites	Times	93	96	145	

* No value for previous year as it has been calculated since 2022

| Social contribution

Category		Unit	2021	2022	2023	Scope of data
No. of employees who have participated in social contribution activities		Persons	95	114	345	A-F
Investment in social contribution activities (Total)		KRW 100 million	59.1	63.3	54.6	
Number of social contribution beneficiaries*	No. of welfare beneficiaries	Persons	3,815	4,054	141,043	
	No. of education support beneficiaries	Persons	1,653	4,502	20,680	
	No. of cultural beneficiaries	Persons	16,238	365,884	33,226	
Employees' voluntary activity time		Time	2,589	2,667	2,747	

* Since 2023, data calculation standard has been changed compared to that of the previous year

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

→ ESG Performance Data

GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

ESG Performance Data

Governance

| Board of Directors

Category			Unit	2021	2022	2023	Scope of data
Average incumbency in BOD			Years	5.3	5.5	5.7	A-F
BOD self-performance evaluation (Out of 5)			Scores	4.8	4.7	4.7	
BOD operation	BOD meetings		Cases	8	8	12	
	No. of agendas discussed		Cases	22 deliberations/ 12 reports	19 deliberations/ 14 reports	28 deliberations/ 16 reports	
	Average attendance rate		%	98	93	91	
	Average attendance rate of inside directors		%	100	92	81	
	Average attendance of non-executive directors		%	98	93	97	
	Reelection rate		%	71	71	88	
Non-executive Director Attendance Rate by Committee	Non-executive Director Candidate Recommendation Committee		%	100	100	100	
	Audit Committee		%	100	94	100	
	ESG Committee		%	100	94	100	
Composition of the BOD	No. of directors	Total no. of directors	Persons	7	7	7	
		No. of female directors	Persons	1	1	1	
		Inside directors	Persons	2	2	2	
		Non-executive directors	Persons	4	4	4	
		Other non-executive directors	Persons	1	1	1	
		Directors for which the number of other positions is limited to less than four	Persons	4	4	4	
Concurrent Positions of Non-executive Directors and Non-executive directors	Non-executive directors who have experience in the construction industry		Persons	1	1	1	
	Number of other positions restricted for directors		Positions	2	2	2	

※ Scope of data: A Headquarter/ B 143 Domestic sites/ C 1 Technology research institute/ D 7 Overseas branches / E 46 Overseas business sites / F 17 Overseas subsidiaries / G 742 suppliers

| BOD Remuneration

Category	Unit	2021	2022	2023	Scope of data
Base salary of CEO	KRW	1,153,212,000	1,196,610,000	1,238,460,000	A-F
Average annual salary for employees, excluding the CEO	KRW	70,085,710	69,797,220	75,250,927	
CEO's remuneration compared to average employee's annual salary	Times	16.5	17.1	16.5	

| Ownership*

Category	Unit	2021	2022	2023	Scope of data
Ratio of shareholders holding 5% or more shares	%	N/A	17.8	16.3	A-F
Share ratio of the largest shareholder and its related parties	%	N/A	23.6	23.6	

* No value for the previous year as it has been calculated since 2022

| Ethical management

Category		Unit	2021	2022	2023	Scope of data
Individual violations	Total	Cases	12	21	31	A-F
	Dismissal	Cases	9	8	9	
	Demotion	Cases	0	0	2	
	Suspension	Cases	3	11	12	
	Pay cut	Cases	0	2	2	
	Reprimand	Cases	0	0	6	

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

→ GRI Standards 2021

SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

GRI Standards 2021

| 3. Supply-Chain Management and Shared-Growth

Topic	Index	Disclosure	Page
Disclosure of material topics	GRI 3-3	Management of material topics	17, 18, 37~40, 62
Supply-chain environment assessment	GRI 308-1	New suppliers that were screened using environmental criteria	39~40
	GRI 308-2	Negative environmental impacts in the supply chain and actions taken	39~40
Supplier Social Impact Assessment	GRI 414-1	New suppliers that were screened using social criteria	62
	GRI 414-2	Negative social impacts in the supply chain and actions taken	Not reported

| 4. Product safety and quality

Topic	Index	Disclosure	Page
Disclosure of material topics	GRI 3-3	Management of material topics	17, 18, 41~45
Non-GRI	-	-	-

| 5. Comprehensive Risk Management

Topic	Index	Disclosure	Page
Disclosure of material topics	GRI 3-3	Management of material topics	17, 18, 91~93
Non-GRI	-	-	-

| 6. Ethics and Anti-Corruption Management

Topic	Index	Disclosure	Page
Disclosure of material topics	GRI 3-3	Management of material topics	17, 18, 87~90
Anti-corruption	GRI 205-1	Operations assessed for risks related to corruption	89~90
	GRI 205-2	Anti-corruption Communication and training on anti-corruption policies and procedures	88~89
	GRI 205-3	Confirmed incidents of corruption and actions taken	103
Anti-competitive behavior	GRI 206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	107

| 7. Construction-waste management

Topic	Index	Disclosure	Page
Disclosure of material topics	GRI 3-3	Management of material topics	17, 18, 55~57, 98
Waste	GRI 306-1	Waste generation and significant waste-related impacts	55~57
	GRI 306-2	Management of significant waste-related impacts	55~57
	GRI 306-3	Waste generated	98
	GRI 306-4	Waste diverted from disposal	98
	GRI 306-5	Waste directed to disposal	98

| 8. Carbon-neutrality Strategy

Topic	Index	Disclosure	Page
Disclosure of material topics	GRI 3-3	Management of material topics	17, 18, 29~36
Emissions	GRI 305-1	Scope 1 emissions	96
	GRI 305-2	Scope 2 emissions	96
	GRI 305-3	Scope 3 emissions	96
	GRI 305-4	GHG emissions intensity	96
	GRI 305-5	Reduction of GHG emissions	96
	GRI 305-6	Emissions of ozone-depleting substances (ODS)	Not emitted
	GRI 305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Not emitted

| 9. Respect for Human Rights

Topic	Index	Disclosure	Page
Disclosure of material topics	GRI 3-3	Management of material topics	17, 18, 61~62
Non-discrimination	GRI 406-1	No. of discrimination cases and measures taken	61
Child labor	GRI 408-1	Business sites and suppliers with high risk of child labor	Not applicable
Forced labor	GRI 409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Not applicable

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

→ GRI Standards 2021

SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
Independent Assurance Statement

GRI Standards 2021

Non-material Topics

Topic	Index	Disclosure	Page
Economic performance	GRI 201-1	Direct economic value generated and distributed (EVG&D)	86
	GRI 201-2	Financial implications and other risks and opportunities due to climate change	34
	GRI 201-3	Infrastructure investments and services supported	Not applicable
	GRI 201-4	Proportion of spending on local suppliers	Not applicable
Market presence	GRI 202-1	Ratios of standard entry level wage by gender compared to local minimum wage	100
Indirect economic value	GRI 203-1	Infrastructure investments and services supported	78~81
Funding practices	GRI 204-1	Proportion of spending on local suppliers	38, 102
Raw materials	GRI 301-1	Materials used by weight or volume	97
	GRI 301-2	Recycled input materials used	97
	GRI 301-3	Reclaimed products and their packaging materials	Not applicable
Water	GRI 303-1	Interactions with water as a shared resource	53, 97
	GRI 303-2	Management of water discharge-related impacts	Not applicable
	GRI 303-3	Water withdrawal	53, 97
	GRI 303-4	Water discharge	Not applicable
	GRI 303-5	Water consumption	53, 97
Biodiversity	GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	57
	GRI 304-2	Significant impacts of activities, products, and services on biodiversity	57
	GRI 304-3	Habitats protected or restored	57
	GRI 304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	57
Employment	GRI 401-1	New employee hires and employee turnover	63, 100
	GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	66
	GRI 401-3	Parental Leave	101
Labor-management relations	GRI 402-1	Minimum notice period on operational changes	67
Training and education	GRI 404-1	Average hours of training per year per employee	100
	GRI 404-2	Programs for upgrading employee skills and transition-assistance programs	65, 68
	GRI 404-3	Percentage of employees receiving regular performance and career development reviews	66, 101
Diversity and equal opportunity	GRI 405-1	Diversity of governance bodies and employees	83, 99, 100
	GRI 405-2	Ratio of basic salary and remuneration of women to men	100
Freedom of association and collective bargaining	GRI 407-1	Operations and suppliers where the right to freedom of association and collective bargaining may be at risk	67
Security practices	GRI 410-1	Security personnel trained in human rights policies or procedures	61, 62

Topic	Index	Disclosure	Page
Rights of residents	GRI 411-1	Violation of rights of residents	Not applicable
Local communities	GRI 413-1	Operations with local community engagement, impact assessments, and development programs	78~81
	GRI 413-2	Operations with significant actual and potential negative impacts on local communities	80, 81
Public policy	GRI 415-1	Political contribution	Not applicable
Customers' health and safety	GRI 416-1	Assessment of the health and safety impacts of product and service categories	19~28
	GRI 416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	19~28
Marketing and labeling	GRI 417-1	Information related to products/services and conditions for labeling	Not applicable
	GRI 417-2	Non-compliance concerning information related to products/services and labeling	Not applicable
	GRI 417-3	Non-compliance with marketing communication	Not applicable
Protecting customer information	GRI 418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	75~77

COMMITMENT

CEO Message

Business Overview

Business Portfolio

ESG CORE

ESG Strategy

Stakeholder Communication

Double Materiality Assessment

Materiality Issue 1. Occupational Safety and Health Management

Materiality Issue 2. Response to Climate Change

Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth

Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact

Developing Eco-friendly Technology

Social

Human Rights Management

Talent Management and Respect for Diversity

Strengthening Communication with Stakeholders through Digital Innovation

Strengthening Information Protection

Local Communities Development and Engagement

Governance

Establishment of Transparent Governance

Implementation of Responsible and Fair Ethical Management

Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data

GRI Standards 2021

→ SASB

TCFD

UNGC Advanced Level

Awards and Certifications

Membership Associations

GHG Verification Summary

Independent Assurance Statement

SASB

The Sustainability Accounting Standards Board (SASB) standard is an industry-specific sustainability accounting standard issued by the Sustainability Accounting Standards Board. GS E&C has various businesses such as plants and infrastructure based on the construction business. We reported this page according to standards applicable to the Engineering & Construction industry.

Category	Code	Category	Metric	Description
Environmental Impacts of Project Development	IF-EN-160a.1	Quantitative	Number of incidents of non-compliance with environmental permits, standards, and regulations	GS E&C is fulfilling its legal responsibilities by complying with environmental regulations. As of the end of 2023, there were no corporate violations subject to fines under its corporate name
	IF-EN-160a.2	Qualitative	Discussion of processes to assess and manage environmental risks associated with project design, siting, and construction	GS E&C operates an environmental management system in accordance with procedures and guidelines for related fields based on the Environmental Manual. We conduct a preliminary impact assessment before construction, and evaluate and manage environmental risks to proactively support environmental issues to prevent risks. In addition, we conduct environmental management competency training for employees and suppliers to strengthen their environmental awareness.
Structural Integrity & Safety	IF-EN-250a.1	Quantitative	Amount of defect- and safety-related rework costs	As of 2023, the defect-and repair costs amounted to KRW 19.263 billion (based on consolidation) and are transparently disclosed in the 2023 Business Report.
	IF-EN-250a.2	Quantitative	Total amount of monetary losses as a result of legal proceedings associated with defect- and safety-related incidents.	As of 2023, no monetary losses associated with defect- and safety-related incidents were incurred.
Workforce Health & Safety	IF-EN-320a.1	Quantitative	Total recordable incident rate (TRIR) and fatality rate for (a) direct employees and (b) contract employees	Industrial accidents of employee are disclosed. In 2023, the number of deaths is three for employees, LTIFR 0.00 for employees, LTIFR 3.02 for suppliers, and OFIR 4.35 for employees.
Lifecycle Impacts of Buildings & Infrastructure	IF-EN-410a.1	Quantitative	Number of commissioned projects certified to a third party, multi-attributable sustainability standard and active projects seeking such certification	In 2023, a total of 19 construction sites received an eco-friendly certification. They were certified as buildings with energy efficiency in accordance with Article 17 of the 'Green Building Creation Support Act' and Article 11 (3) of the 'Rules for Certification of Building Energy Efficiency Rating and Zero Energy Buildings.'
	IF-EN-410a.2	Qualitative	Discussion of process to incorporate operational-phase energy and water efficiency considerations into project planning and design	GS E&C is practicing environmental management in all its business processes including design and operation. In particular, we proactively respond to key environmental fields related to the construction industry such as GHG emissions, energy efficiency, water resources, and waste. We achieved 26 cases of construction of waste-to-energy facilities, and 28 cases of operation by actively utilizing waste-to-energy technology.
Climate Impacts of Business Mix	IF-EN-410b.1	Quantitative	Amount of backlog for (1) hydrocarbon-related projects and (2) renewable energy projects	There are two renewable energy operation projects (SECI-IV Solar PV 300MM in India, and the Zakarpattia Solar PV 24MW in Ukraine). The amount of backlog is KRW 397 billion.
	IF-EN-410b.2	Quantitative	Amount of backlog cancelations associated with hydrocarbon-related projects	As of the end of 2023, no related projects were canceled.
	IF-EN-410b.3	Quantitative	Amount of backlog for non-energy projects associated with climate change mitigation	As of the end of 2023, no orders were received.
Business Ethics	IF-EN-510b.1	Quantitative	Number of active projects and backlog in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	As of the end of 2023, there were no projects from countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index.
	IF-EN-510b.2	Quantitative	Total amount of monetary losses as a result of legal proceedings associated with charges of bribery or corruption and anticompetitive practices	As of the end of 2023, no charges were incurred for (1) bribery or corruption and (2) anticompetitive practices.
	IF-EN-510b.3	Qualitative	Description of policies and practices for prevention of bribery and corruption, and anti-competitive behavior in the project bidding processes	On May 20, 2021, the Fair-Trade Compliance Program (CP) was introduced for fair and transparent corporate management. The CP operation regulations were established in terms of the Fair Trade Compliance Program. The regulations specify compliance policies for fair trade-related laws and regulations in all business activities such as bidding and trading, and stipulate sanctions for violations. In order to make employees aware of fair trade and the code of ethics more accurately, we request from them a pledge of ethical management and fair-trade practice.
Activity Metrics	IF-EN-000.A	Quantitative	Number of active projects	As of the end of April 2024, a total of 117 construction and housing sites, 36 infrastructure sites, 18 Eco sites, and 18 plant sites, are in progress.
	IF-EN-000.B	Quantitative	Number of commissioned projects	As of the end of December 2023, a total of 25 domestic sites and one overseas site were completed.
	IF-EN-000.C	Quantitative	Total backlog	As of the end of December 2023, the total backlog is KRW 54.1995 trillion (based on consolidation) consisting of the following: KRW 30.8051 trillion in construction and housing, KRW 12.5907 trillion in new business, KRW 497.9 billion in plant, KRW 6.100 trillion in infrastructure, KRW 1.8666 trillion in Eco and KRW 2.492 trillion in others.

Category	TCFD Recommendations	Page	CDP
Governance	Describe the board's oversight of climate-related risks and opportunities	29~30	C1.1, C1.1a, C1.1b.
	Describe management's role in assessing and managing climate-related risks and opportunities.		C1.2, C1.2a
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.		C2.1a, C2.3a, C2.4a
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	30~34	C2.1b, C2.2a, C2.3, C2.3a, C2.4, C2.4a, C3.4
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.		C3.1, C3.2, C3.2a, C3.3
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks		
	Describe the organization's processes for managing climate-related risks.	35	C2.1, C2.2
Risk Management	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.		
	Disclose the metrics used by the organization to assess risks and opportunities in line with its strategy and risk management process		C3.3
	Disclose Scope-1, Scope-2, and, if appropriate, Scope-3 greenhouse gas (GHG) emissions, and the related risks	36	C6.1, C6.3, C6.5
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.		C4.1, C4.1a, 4.2, 4.3, C4.1b

UNGC Advanced Level

Category		Principles	Page
Human Rights	Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and	61, 62
	Principle 2	Ensure that they are not complicit in human rights abuses.	17, 61, 62
Labour	Principle 3	Businesses should uphold freedom of association and the effective recognition of the right to collective bargaining	67
	Principle 4	Elimination of all forms of forced and compulsory labor;	61, 62
	Principle 5	Effective abolition of child labor; and	61, 62
	Principle 6	Elimination of discrimination in respect of employment and occupation	65, 66
Environment	Principle 7	Businesses should support a precautionary approach to environmental challenges.	31~36, 47~57
	Principle 8	Undertake initiatives to promote greater environmental responsibility; and	47~57
	Principle 9	Promote development and expansion of eco-friendly technologies.	58, 59
Anti-corruption	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.	87~90, 103

Awards and Certifications

2023 Awards				
NO,	Names of awards	Received from	Project participation	Names of prizes
1	2023 Money Today Overseas Construction Awards	Money Today	Singapore T301	Civil Engineering of the Year
2	The 17th Grand Prize in Apartment Brand by Asia Economy	Asian Economy	Eumseong X	Design Section
3	2023 Money Today Korea Residential Service Awards	Money Today	Yeoungdeungpo Xi dignity	Grand Prized in Design (Community Section)
4	2023 19th Well-Being Apartment Grand Prize	Hankyung Business	Pangyo Xi valley	Eco-friendly Section
5	27h Best Apartment Contest	Maeil Business Newspaper	Heukseok Xi	Redevelopment Section Special Prize
6	2023 Residential Housing Brand Awards	Newsway	Namchum Xi	Grand Prize in landscaping
7	Hankyung Residential Culture Awards in the first half of 2023	Korea Business News	Hwigyeong Xi Decencia	Grand Prize in well-being apartment
8	2023 DNEWS Smart Construction Awards	DNEWS	BIM	Grand Prize in Smart IT
9	2023 Korea's Representative Apartment Awards	Korea Economic Daily TV	Social Contribution Section	Social Contribution Sector
10	2023 Korea Luxury Housing Awards	Money Today	Unjeong Xi Signature	Prize in Apartments (Large)
11	18th Asia Construction Grand Prize	Asian Economy	Social Contribution Section	Social Contribution Sector
12	2023 Metaverse ESG Award	IT Chosun	ESG	ESG Sector
13	15th Korea Green Construction Awards	Asia Today	Social Contribution Section	Social Contribution Sector
14	2023 E-today Smart Construction Awards	ESG	Shared Growth Section	Award from Chairman of the Shared Growth Committee
15	2023 Eco-Friendly Construction Industry Awards	E-daily	Youngju Xi Signature	Well-being Apartment Sector
16	2023 Construction Industry Award	E-daily	Anyang Xi The Forest	Design Sector
17	2023 Social Contribution Grand Prize	Financial News	Social contributions	Social Contribution Sector
18	14th Korea Green Construction Awards	Seoul Daily	ESG part	Grand Prize in ESG Management
19	2023 Hankyung Residential Culture Awards in the second half of the year	Korea Business News	Grand-Prize in Well-being Apartment	Cheonggye Riverview Xi
20	Excellent Apartment to live Awards of Herald Economy	Herald Economy	Grand-Prize in Community Section	Cheonggye Riverview Xi

Membership Associations

| Membership Status

Business HQ						
Architecture and Housing	New Business	Plant	Infrastructure	Green Business	RIF Tech.	Management (others)
Korean Institute of Electrical Engineers	K-CCUS	Korea Plant Engineering Development and Research Council (EDRC)	Korean Society of Transportation	Korea Wind Energy Industry Association	Korea Industrial Technology Association	Korea Business Council for Sustainable Development
The Korean Institute of Illumination and Electrical Installation Engineers	Korea H2 Business Summit	International Contractors' Association of Korea	Korea Urban Railway Association	Korea Atomic Energy Industry Association (KAIF)	Korea Construction and Transportation Association	UN Global Compact Network Korea
Korea Institute of Construction Management	Korea Data Center Energy Efficiency Association (KDCEA)	Korea Plant Society	Korea Water Resources Association	Korea Nuclear Export Industry Association (KNA)	Korea Computational Structural Engineering Institute	Korea Federation of Construction Contractors
Korea Institute of Building Construction	Construction Association of Korea	Korea Plant Industries Association	Korean National Committee on Large Dams	Korean Nuclear Society (KNS)	The Korean Society for Noise and Vibration Engineering	Korea Federation of Employers
The Society of Air-conditioning and Refrigerating Engineers of Korea	Korea Construction Engineers Association	Korea PDS	Korean Geosynthetic Society	Korean Society of Water and Wastewater	Building SMART Korea	Korea Construction Company Personnel Management Council
Korea Green Building Council	Korea Construction Association	AIChE (American Institute of Chemical Engineers)	Korean Society of Road Engineers	Korean Society of Environmental Engineers	Korean Society of Road Engineers	Korea Chamber of Commerce and Industry
Korea Equipment Technology Association	Korea Professional Construction Mutual Aid Association	NACE (National Association of Corrosion Engineers)	Korean Roads Association	Korean Society of Combustion	Korean Society of Geo-environmental Society	Federation of Korean Industries
Korea Construction Machinery and Equipment Council	Korea Construction Mutual Aid Association	Korea Rotating Mechanical Engineers Association (KRMEA)	Korean Society of Coastal and Ocean Engineers	Korean Organic Resource Recycling Association	Korea Mechanical Society	KOREA Investor Relations Service
Korea Air Cleaning Association	Korea Engineering Mutual Aid Association	AACE International	Korean Society of Coastal Disaster Prevention	Korea Fluid Mechanical Society	Korea Electrical Contractors Association	Korea Listed Companies Association
Korean Institute of BIM	Korea Professional Construction Mutual Aid Association	IRCA (International Register of Certificated Auditors)	Korean National Committee on Irrigation and Drainage	International Contractors' Association of Korea		Seoul Patent Attorney Association
Korea Ecological Restoration Association	Korea Electrical Construction Mutual Aid Association		The Korea Railway Association			American Bar Association
Korea Institute of Ecological Architecture and Environment	Korea Fire Safety Institute		Korean Society for Railways			Korea Fair Competition Federation
The Korean Institute of Landscape Architecture			Korean Railway Construction Association			KOSHA 18001 Society
Korea Housing Association			Korea Rail Engineering Association			Construction Safety Manager Committee
Korea Remodeling Association			Korean Society of Civil Engineers			Construction Safety Association
Korean Architectural Association			Korean Geotechnical Society			Safety and Health Education Development Council
Korean Association for Real Estate Development			Korean Society for Rock Mechanics			Maekyung Safety and Environment Institute
Architectural Institute of Korea			Korean Tunneling and Underground Space Association			SEL Club
Korean Interior Design Society			Korean Society of Steel Construction			Construction Safety Executive Association
Korean Traditional Landscape Society			Korea Concrete Institute			Construction and Health Council
			Korea Society of Disaster & Security			Korea Society for Construction Quality
			The Construction Management Association of Korea			Korea Construction Quality Association
			Korea ITS Society			Construction Environment Association
						Construction Association of Korea
						Korea Construction Engineers Association
						Korea Construction Association
						Korea New & Renewable Energy Association
						Korea Fire Construction Association
						Korea Facilities Maintenance Association
						Korea Mechanical Construction Contractors Association
						Korea Electrical Contractors Association
						Korea Information & Communication Contractors Association
						Korean Society for Human Resource Development
						Korea Organization Management Development Association
						Korea International Trade Association
						Construction and Economy Research Institute of Korea
						Construction Industry Vision Forum
						Korea CFO Association
						National Academy Engineering of Korea

GHG Verification Summary

GS Engineering & Construction Corp.'s 2023 Scope 1+2 Greenhouse Gas Emissions for Domestic Sites

This Assurance Statement has been prepared for GS Engineering & Construction Corp

Terms of Engagement

LRQA was commissioned by GS Engineering & Construction Corp (GS E&C) to provide independent assurance on its Greenhouse Gas (GHG) Inventory Report for the calendar year 2023 (the report) against “the guidelines for target management” using “the verification guidelines for GHG emissions trading system”.

The report relates to direct GHG emissions and energy indirect GHG emissions.

Management Responsibility

LRQA's responsibility is only to GS E&C. LRQA disclaims any liability or responsibility to others as explained in the end footnote. The management of GS E&C is responsible for preparing the report and for maintaining effective internal controls over all the data and information within the report. Ultimately, the report has been approved by, and remains the responsibility of GS E&C.

LRQA's Approach

LRQA's assurance engagement has been carried out in accordance with our verification procedure using “the verification guidelines for GHG emissions trading system” to reasonable level of assurance.

The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- Visiting sites and auditing management system to control the data and records regarding GHG emissions and energy uses
- Interviewing the relevant persons responsible for managing and maintaining data and associated records
- Reviewing the historical data and information back to source for the calendar year 2023.

Level of Assurance & Materiality

The opinion expressed in this Assurance Statement has been formed on the basis of a reasonable level of assurance, and at the materiality of the professional judgement of the verifier and at the materiality level of 5%.

LRQA's Opinion

Based on LRQA's approach, we believe that the report is prepared in accordance with “the guidelines for target management” using “the verification guidelines for GHG emissions trading system” and the GHG emissions data in the Table 1 is materially correct.



Dated: 10 April 2024

IL-HYOUNG LEE

LRQA
2nd Floor, T Tower, 30, Sowol-ro 2-gil, Jung-gu, Seoul, Republic of Korea

LRQA Reference : SE000000614

Table1. Summary of GHG emissions

Unit: tCO ₂ eq	
Scope of GHG emissions	Year 2023
Direct GHG Emissions	35,050
Energy Indirect GHG Emissions	72,665
Total GHG Emissions	107,715

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
→ GHG Verification Summary
Independent Assurance Statement

GHG Verification Summary

GS Engineering & Construction Corp.'s Overseas Scope 1+2 (2021-2023) and Domestic & International Scope 3 Emissions

This Assurance Statement has been prepared for GS Engineering & Construction Corp. in accordance with our contract.

Terms of engagement

LRQA was commissioned by GS Engineering & Construction Corp. (GS E&C) to provide independent assurance on its greenhouse gas (GHG) emissions inventory for the calendar years 2021 ~ 2023 (here after referred to as “the report”) against the assurance criteria below to a limited level of assurance and materiality of 5% using ISO 14064-3:2019, ‘Specification with guidance for verification and validation of greenhouse gas statements.’

Our assurance engagement covered GS Engineering & Construction’s domestic and overseas operations and activities, and specifically the following requirements:

- Evaluating conformance with GHG Protocol: A Corporate Accounting and Reporting Standard, revised edition1
- Evaluating conformance with GHG Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard2
- Evaluating the accuracy and reliability of data and information for direct GHG emissions (Scope 1) and energy indirect GHG emissions (Scope 2) 3 at overseas sites
- Evaluating the accuracy and reliability of data and information for other indirect GHG emissions (Scope 3) at domestic and overseas sites.

The main activities of GS E&C include general construction and the GHG emissions have been consolidated using an operational control approach.

LRQA’s responsibility is only to GS E&C. LRQA disclaims any liability or responsibility to others as explained in the end footnote. GS E&C’s responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems

LRQA’s Opinion

Based on LRQA’s approach nothing has come to our attention that would cause us to believe that GS E&C has not, in all material respects:

- Met the requirements above; and
- Disclosed accurate and reliable data and information as summarized in Table 1, Table 2 and Table 3 below.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of 5%.

Note: The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

LRQA’s approach

LRQA’s assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Interviewing key people of the organization responsible for managing GHG emissions data and records;
- Reviewing processes related to the control of GHG emissions data and records;
- Visiting the headquarters of GS E&C and reviewing additional evidence made available by GS E&C; and
- Verifying historical GHG emissions

LRQA’s Recommendations

We recommend that GS E&C expand the accounting scope of other indirect GHG emissions (Scope 3) for its overseas sites in the future.

LRQA’s standards, competence and independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity assessment – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent

This verification engagement is the only work undertaken by LRQA for GS E&C and as such does not compromise our independence or impartiality.



Dated: 14 June 2024

Chan-Sik Yun

LRQA Lead Verifier
On behalf of LRQA
2nd Floor, T Tower, 30, Sowol-ro 2-gil, Jung-gu, Seoul, Republic of Korea

LRQA reference : SE000000617

GHG Verification Summary

GS Engineering & Construction Corp.'s Overseas Scope 1+2 (2021-2023) and Domestic & International Scope 3 Emissions

Table 1. Summary of GS E&C's Overseas Construction Sites, Scope 1 and Scope 2 GHG Emissions Inventory
2021 - 2023

Scope of GHG emissions	Tonnes CO ₂ e		
	2021	2022	2023
Direct GHG emissions (Scope 1)	14,754	18,115	16,670
Energy indirect GHG emissions (Scope 2, Location-based)	2,670	2,571	995

Note 1: Scope 2, Location-based is defined in the GHG Protocol Scope 2 Guidance, 2015

Table 2. Summary of GS E&C's Domestic Sites, Scope 3 GHG Emissions Inventory 2021, 2022

Scope of GHG emissions	Tonnes CO ₂ e	
	2021	2022
Other Indirect GHG emissions (Scope 3)	3,661,342	3,314,681
Purchased goods & services – production of deformed bars, section steels, ready-mixed concrete, cement, dry mortar, asphalt concrete, PF board, PHC pile, sand, aggregate and gypsum board	1,297,359	1,597,708
Capital goods - laptop computer, computer monitor, desktop computer	32	51
Fuel and energy related activities – upstream emissions of purchased fuels and electricity	6,535	7,160
Upstream transportation and distribution – transportation of deformed bars, section steels, ready-mixed concrete, cement, dry mortar, asphalt concrete, PF board, PHC pile, sand, aggregate and gypsum board	44,341	52,511
Waste generated in operations - treatment of wastes generated in construction sites	21,907	37,810
Employee commuting – commuting by subways, buses, trains and personal vehicles	3,769	3,569
Use of sold products – use phase of constructed buildings	2,286,417	1,615,231
End-of-life treatment of sold products – waste disposal generated at the end-of-life stage of buildings	981	641

Table 3. Summary of GS E&C's Domestic and Overseas Sites, Scope 3 GHG Emissions Inventory 2023

Scope of GHG emissions	Tonnes CO ₂ e
Other Indirect GHG emissions (Scope 3)	4,857,310
Purchased goods & services – (Domestic) deformed bars, section steels, ready-mixed concrete, cement, dry mortar, asphalt concrete, PF board, PHC pile, sand, aggregate and gypsum board – (Domestic and overseas) fuel consumption of subcontractors' construction equipment	1,908,153
Capital goods - (Domestic) laptop computer, computer monitor, desktop computer	48
Fuel and energy related activities – upstream emissions of purchased fuels and electricity	7,839
Upstream transportation and distribution – (Domestic) deformed bars, section steels, ready-mixed concrete, cement, dry mortar, asphalt concrete, PF board, PHC pile, sand, aggregate and gypsum board	51,050
Waste generated in operations - (Domestic) treatment of wastes generated in construction sites	27,560
Business travel – (Domestic and overseas) personal vehicles, trains, buses and flights	1,336
Employee commuting – (Domestic) subways, buses, trains and personal vehicles	3,610
Use of sold products – (Domestic) use phase of constructed buildings	2,856,494
End-of-life treatment of sold products – (Domestic) waste disposal generated at the end-of-life stage of buildings	1,219

1 <https://www.ghgprotocol.org>
2 <https://www.ghgprotocol.org>
3 Our assurance engagement covered carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) among GHGs.

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary
→ Independent Assurance Statement

Independent Assurance Statement

To readers of 2024 GS E&C Integrated Report

Introduction

Korea Management Registrar (KMR) was commissioned by GS E&C to conduct an independent assurance of its 2024 Integrated Report (the “Report”). The data and its presentation in the Report is the sole responsibility of the management of GS E&C. KMR’s responsibility is to perform an assurance engagement as agreed upon in our agreement with GS E&C and issue an assurance statement.

Scope and Standards

GS E&C described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR’s assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with GRI standards 2021 was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process. We also confirmed that the report was prepared in accordance with the TCFD recommendations and SASB.

- GRI Sustainability Reporting Standards 2021
- Universal standards
- Topic specific standards
 - GRI 205 : Anti-Corruption
 - GRI 206 : Anti-competitive Behavior
 - GRI 302 : Energy
 - GRI 305 : Emissions
 - GRI 306 : Waste
 - GRI 308 : Supplier Environmental Assessment
 - GRI 403 : Occupational Health and Safety
 - GRI 406 : Non-discrimination
 - GRI 408 : Child Labor

- GRI 409 : Forced or Compulsory Labor
- GRI 414 : Supplier Social Assessment

- SASB Sustainability Disclosure Topics & Accounting Metrics
- TCFD recommendations

As for the reporting boundary, the engagement excludes the data and information of GS E&C’s partners, suppliers and any third parties.

KMR's Approach

- To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:
- reviewed the overall Report;
 - reviewed materiality assessment methodology and the assessment report;
 - evaluated sustainability strategies, performance data management system, and processes;
 - interviewed people in charge of preparing the Report;
 - reviewed the reliability of the Report’s performance data and conducted data sampling;
 - assessed the reliability of information using independent external sources such as Financial Supervisory Service’s DART and public databases.

Limitations and Recommendations

KMR’s assurance engagement is based on the assumption that the data and information provided by GS E&C to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

COMMITMENT

CEO Message
Business Overview
Business Portfolio

ESG CORE

ESG Strategy
Stakeholder Communication
Double Materiality Assessment
Materiality Issue 1. Occupational Safety and Health Management
Materiality Issue 2. Response to Climate Change
Materiality Issue 3. Supply-Chain Management and Strengthening of Shared Growth
Materiality Issue 4. Pursuing Customer Satisfaction through Systematic Quality Management

ESG FACTBOOK

Environmental

Minimizing Environmental Impact
Developing Eco-friendly Technology

Social

Human Rights Management
Talent Management and Respect for Diversity
Strengthening Communication with Stakeholders through Digital Innovation
Strengthening Information Protection
Local Communities Development and Engagement

Governance

Establishment of Transparent Governance
Implementation of Responsible and Fair Ethical Management
Strengthening Company-wide Risk Management

APPENDIX

ESG Performance Data
GRI Standards 2021
SASB
TCFD
UNGC Advanced Level
Awards and Certifications
Membership Associations
GHG Verification Summary

→ Independent Assurance Statement

Independent Assurance Statement

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with GS E&C on the revision of the Report. We reviewed the Report’s final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity

GS E&C has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality

GS E&C has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness

GS E&C prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of GS E&C’s actions.

Impact

GS E&C identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 – Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with GS E&C and did not provide any services to GS E&C that could compromise the independence of our work.

June 2024 Seoul, Korea

CEO E. J. Hwang



GS E&C Integrated Report 2024

Address Gran Seoul, 33, Jong-ro, Jongno-gu,
Seoul, 03159, Republic of Korea
ESG Team, GS E&C

Tel 02-2154-5025

Email hsjang2@gsenc.com

www.gsenc.com



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