HD KOREA SHIPBUILDING & OFFSHORE ENGINEERING

BEYOND BLUE
FORWARD TO GREEN

HDKSOE Sustainability Report 2024

HD Korea Shipbuilding & Offshore Engineering / HD Hyundai Heavy Industries / HD Hyundai Mipo / HD Hyundai Samho

About this Report

Cover Story

"Future From the Ocean"

Based on HDKSOE's identity, symbolizing our continued innovation and challenges, this cover expresses our future vision as the leader of eco-friendly technological innovations and a sustainable marine industry.

Report Overview

This report includes sustainable management activities and performance of HD Korea Shipbuilding & Offshore Engineering (HDKSOE) and its shipbuilding subsidiaries (HD Hyundai Heavy Industries [HHI], HD Hyundai Mipo [HMD], and HD Hyundai Samho [HSHI]). As of the publication of this report in 2025, we have changed the name of the report from "Integrated Report" to "Sustainability Report." This Sustainability Report is designed to provide transparent disclosures to stakeholders regarding the financial and non-financial risks faced by the company, as well as the current operating status and plans for addressing such risks. HDKSOE and its shipbuilding subsidiaries have annually published a Sustainability Report (formerly called Integrated Report), and will continue to share management and sustainability information in a transparent manner and actively communicate with various stakeholders.

Reporting Standards and Frameworks

This report adheres to the requirements of the Global Reporting Initiative (GRI) Standards 2021, an international guideline for sustainable management reporting. To reflect key issues related to the shipbuilding and offshore engineering industry, the report complies with the framework of the Task Force on Climate-related Financial Disclosure (TCFD) and the sector disclosure metrics of the Sustainability Accounting Standards Board (SASB). In addition, this report employs the framework of "Governance – Strategy – Risk Management – Metrics and Targets" for each topic on environmental and social themes.

Reporting Period

This report covers the activities of HDKSOE and its shipbuilding subsidiaries from January 1 to December 31, 2024. To respect stakeholders' right to know and ensure more transparent information disclosure, the report includes some activities and achievements beyond the reporting period. The report also provides quantitative performance and metrics including financial information for the past three years from 2022 to 2024, allowing stakeholders to identify data trends.

Third-Party Assurance

This report has received third-party assurance from an external organization to enhance its reliability and quality. Detailed assurance statements can be found on pages 175-176 of this report.

Contact Information

For any inquiries or comments regarding HDKSOE Sustainability Report 2024, please contact the ESG Department at HDKSOE.

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Publication Date: July 30, 2025

Reporting Scope

This report covers HDKSOE, HHI, HMD, and HSHI. The financial performance data is presented in accordance with the Korea International Financial Reporting Standards (K-IFRS), and the non-financial activities and performances are limited to the domestic operations of HDKSOE and its shipbuilding subsidiaries. Some data includes HD Hyundai Marine Engine (HDKSOE subsidiary), HD Hyundai Engine (HHI subsidiary), and HD Hyundai Vietnam Shipbuilding (HMD subsidiary). To focus on the activities and performances in the shipbuilding and offshore engineering sectors, other subsidiaries within the consolidated disclosure scope are excluded from this report.

Reporting Scope of HDKSOE Sustainability Report 2024

Company Name	Reporting Scope[1]
HDKSOE	97.66%
HHI	99.93%
HMD	97.78%
HSHI[2]	100%

1) Based on FY2024 revenues on a consolidated basis
2) No subsidiaries to be consolidated

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Report Contents Outline

HDKSOE Sustainability Report 2024 represents HDKSOE and its shipbuilding subsidiaries' (HHI, HMD, and HSHI) commitment to sustainable management aligning with the future paradigm shift. To enhance user convenience and readability, the report is structured in the following order: Introduction of HDKSOE and its shipbuilding subsidiaries; ESG Management System; Environmental, Social, and Governance; Quantitative ESG data; and Appendix containing information disclosure index and third-party assurance statement. In accordance with the "systematic disclosure" guidance provided by ESG disclosure principles, standards, and guidelines, "Environmental" and "Social" themes follow the framework of "Governance – Strategy – Risk Management – Metrics and Targets." Meanwhile, the quantitative performance data for each section is disclosed under "ESG Factbook."

Interactive Guide

HDKSOE Sustainability Report 2024 can be downloaded from the HDKSOE website (http://www.hdksoe.co.kr/) in an interactive PDF format for your convenience.

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HD Hyundai Shipbuilding and Offshore Engineering Division

Introduction of Shipbuilding and Offshore Engineering Division

Overview

HD Hyundai's Shipbuilding and Offshore Engineering Division is a key business division of HD Hyundai. For more than 50 years since its foundation, significant contributions have been made to Korea's economic development. Starting from a single shipyard in 1972, the company has now become a global leader in the industry with remarkable feats as domestically producing LNG ships and developing HiMSEN engine with proprietary technology.

Currently HD Hyundai manages the shipbuilding business with HD Korea Shipbuilding & Offshore Engineering (HDKSOE) as an intermediate holding company, making synergies with the subsidiaries HD Hyundai Heavy Industries (HHI), HD Hyundai Mipo (HMD), HD Hyundai Samho (HSHI) along with the best R&D and engineering capabilities.

Market Outlook

Shipbuilding

New orders are expected to soften in 2025 compared to 2024, but continued demand is expected for the transition to eco-friendly and high-efficiency ships with dual fuels, driven by increasing global transport cargo, supply-demand imbalances, and stricter environmental regulations. In the mid-to-long term, environmental regulations are likely to become even stricter, resulting in greater demand for ships using eco-friendly fuel, which will drive new orders in the market.

HDKSOE and its shipbuilding subsidiaries are leaders in the shipbuilding sector and aim to further solidify this position in the dual-fuel market, including LPG, ethane, and methanol-powered ships. In addition, development continues for ammonia- and hydrogen-powered ships as part of efforts to strengthen market dominance through differentiated engineering capabilities.

Offshore Energy

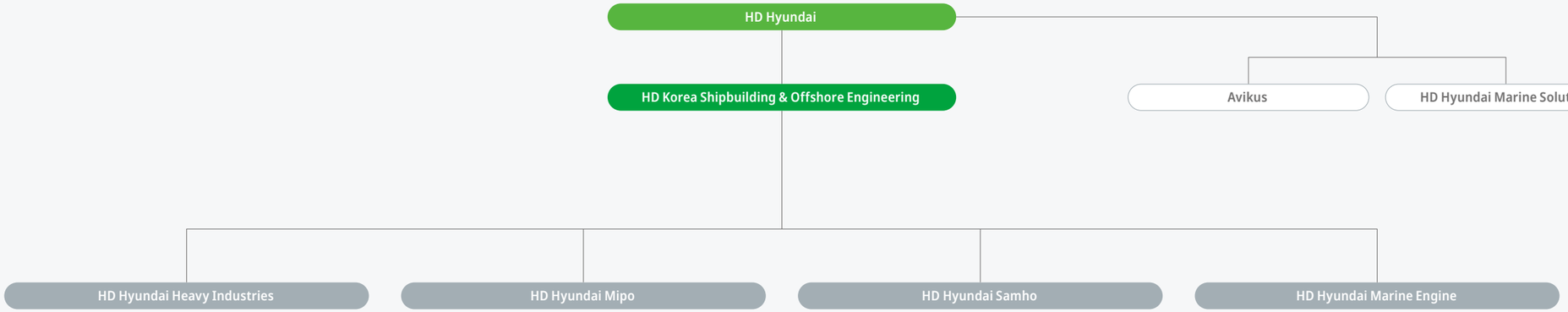
There will be more focus on energy security due to the geopolitical risks such as the Russo-Ukrainian War and increase in demand from non-OPEC countries, oil and gas prices will exceed the breakeven point and there will be increased investment into facilities. Traditional and renewable energy sources are expected to co-exist for the foreseeable future, and offshore energy industries will require facilities in the mid-to-long term. The business portfolio is also being expanded by participating in bids for the design and production of offshore wind power, SMR, and other renewable energy sectors.

Engine and Machinery

After 2021, the domestic shipyard received the highest number of orders in 13 years, supported by new orders for large containerships. In 2022, the order target was exceeded. From 2023, with the enactment of EEXI, CII, and other environmental regulations, demand continues for eco-friendly fuel engines, with greater focus on increasing engine efficiency and managing engine functionality through digital technology and IoT.

HDKSOE and **HHI** are leading the development of methanol- and ammonia-powered engines based on HiMSEN engine technology. A methanol-powered engine was piloted in 2022, and a supersized methanol engine was delivered in 2023. In 2024, the world's first ammonia dual-fuel engine using a high-pressure direct injection system was successfully developed. In 2025, with production of the first large ammonia-powered engine as the goal, R&D efforts are being expanded into hydrogen and zero-carbon-based technology and electric propulsion systems.

HD Hyundai Shipbuilding and Offshore Engineering Division Group of Companies



HD Korea Shipbuilding & Offshore Engineering Letter from the CEOs of HDKSOE

Green digital transformation of the ocean, HDKSOE will lead the way

HDKSOE CEO
CHUNG Ki-sun

HDKSOE CEO
KIM Sung-joon

Dear Esteemed Stakeholders,

Thank you for your strong interest and support for HDKSOE's sustainable management program. We continue to work toward our vision of leading the maritime mobility and eco-friendly energy industries and exploring new opportunities at the ocean. In 2024, HDKSOE posted strong performance with orders of USD 18,835 million, and we led the global eco-friendly shipbuilding market with a 21% market share. In addition, we continue to build our capabilities in the advanced eco-friendly energy market. We developed new technology to strengthen the stability of ammonia-powered vessels, and expanded our business portfolio by acquiring a global fuel cell company to enter into the hydrogen fuel cell market.

HDKSOE also focused on generating non-financial value along with financial performance, and continued to strengthen our sustainability management. Over the last few years, we built the foundation of our ESG governance framework, and now we are establishing even more ambitious targets and focusing on generating results. In 2024, as the first case in Korean shipbuilding industry, HDKSOE was included in the "Dow Jones Sustainability Indices (DJSI) World Index," demonstrating our world-class performance in sustainable management. We will continue to conduct our business responsibly by promoting initiatives to address climate change, responding to stricter global ESG regulations, and improving our ESG disclosures.

This year's ESG management focus is as follows:

First, we will strengthen our governance framework to address climate change.

We aim to strengthen our governance framework so that climate change-related decision-making can be systematically and effectively established as an integral part of our corporate management system. We will clarify our decision-making structure, from the working-level to C-level, and establish climate change-related roles for each key position. Specifically, we plan to enhance our carbon emissions reduction efforts and our ESG disclosures by forming a carbon emissions management council, establishing integrated energy monitoring system, and introducing internal carbon pricing system. In addition, we will standardize the Life Cycle Assessment (LCA) for ships and develop an LCA platform to ensure consistency, and produce reliable carbon emissions data to implement responsive measures. HDKSOE is committed to further developing our framework so that we can be proactive in responding to global climate change related regulations and realize carbon neutrality.

Second, we will proactively respond to stricter global ESG regulations.

HDKSOE will establish frameworks in preparation for new ESG regulations that will be enacted in the next three to four years, such as mandatory ESG disclosures and Corporate Sustainability Due Diligence Directive (EU CSDDD), and become a leader of ESG management in global shipbuilding industry.

To this end, we refined our human rights management system at our business sites, and established a roadmap to respond to these new regulations.

In 2025, we will continue to diligence human rights at our key business sites and manage ESG activities throughout our supply chain. In preparation for the mandatory ESG disclosures both domestically and internationally, we will establish disclosure items aligned with our ESG strategy and build a systematic disclosure response process to ensure the improved reliability of information. Amid the evolving ESG regulatory landscape, we will continue to pursue sustainable growth and responsible management, fulfilling our role as a leading global shipbuilding company.

Third, we will strengthen our ESG management capabilities and expand transparent disclosures.

In response to ESG disclosure standards and requirements from major domestic and international ratings agencies for more transparent disclosures and consolidated basis reporting, HDKSOE is continuing to expand the scope of reported ESG indicators and consolidated subsidiaries. We plan to launch an ESG data platform this year to systematically manage ESG indicators. In addition, we will monitor changes in ESG trends, as well as maintain and strengthen our external ESG ratings by proactively implementing improvements. Moreover, we will increase communications with our key stakeholders, and by expanding our external ESG communication program, we will provide more reliable and transparent ESG data. We will strengthen our sustainable management program for the sustainable future of our business, and further enhance our disclosure framework and information management.

HDKSOE will strive to become a global shipbuilder that leads the future maritime industry through sustainable management and technological innovation. We will continue to attain sustainable growth through an improved climate change response system, proactive measures to handle stricter global ESG regulations, and enhanced ESG reporting. We will also strengthen competitiveness by developing innovative technologies, providing tailored solutions for customers, and establishing safe and efficient shipbuilding systems. We appreciate your continued interest and support as HDKSOE faces challenges ahead and works toward a better future.

HD Korea Shipbuilding & Offshore Engineering

Introduction of HDKSOE

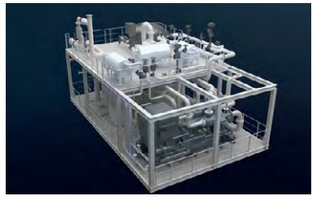
Overview

HDKSOE, an intermediate holding company managing the shipbuilding and offshore business division of HD Hyundai, seeks to evolve into a specialized shipbuilding and offshore engineering company equipped with R&D and engineering expertise in the areas of shipbuilding, offshore plant, marine engine and machinery, and energy. HDKSOE will continue to play a pivotal role in charting a course for the group's mid- and long-term development and devising its overall growth strategy. In addition, a key role will be fulfilled in recruiting and training talented research and technology professionals who will drive the company's future growth. Furthermore, new value will be created by maximizing synergies among affiliates and leading the growth of the group, subsidiaries, and contractors across the entire ecosystem.

Legal name	HD Korea Shipbuilding & Offshore Engineering Co., Ltd	**CEO**	Chung Ki-sun, Kim Sung-joon
Founding date	December 28, 1973	**Address**	477, Bundangsuseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
Key Business	Shipbuilding, offshore plant, engines & machinery, other	**Credit Rating**	A (Issuer Credit Rating)
Listing date	August 24, 1999	**Listing market**	Korea Exchange (KRX) KOSPI Market

Environmental Impact Reduction Systems

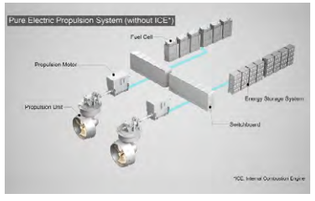
Based on our expansive product portfolio and extensive shipbuilding experience as the world's No. 1 shipbuilding company, HDKSOE provides optimized solutions for treatment of gas and machines to reduce environmental impact. In addition, ongoing development focuses on improving fuel efficiency and reducing GHG emissions by utilizing state-of-the-art technology. The goal is to be a trustworthy provider of high-quality solutions to customers through an engineering framework that covers the entire life cycle, from design to manufacturing, pilot test, and after-service.



Fuel supply system for LNG-fueled ship

Low- and Zero-carbon (LZC) Ship Propulsion Solutions

Led by the EP (Eco Propulsion) business, HDKSOE supports the transition to the clean shipping industry by providing innovative and sustainable eco-friendly, high efficiency hybrid and electric propulsion solutions for all types of vessels. We accelerate the journey towards achieving Net Zero carbon emissions by offering innovative solutions that reduce GHG emissions through the use of low- and zero-carbon fuels and achieve zero emission through electric propulsion system.



Configuration of Pure Electric Propulsion System

R&D

With the objective of becoming an integrated technology company with world-leading R&D and engineering capabilities, HDKSOE will continue to build on its R&D as a key driver of growth and strengthen its competitiveness as a leading technology company. To spearhead the group's growth and development, HDKSOE continuously endeavors to expand infrastructure and to secure and foster talented personnel, concentrating on distinct research areas of focus that do not overlap with those of its subsidiaries to maximize R&D efficiency and synergy across the group.

R&D for Future Technologies

Advanced Research Center (HDKSOE)

- Develop future ships with new technology, propulsion system package
- Develop environmental impact reduction system and integrated engineering solutions
- Develop smart manufacturing system, production technology utilizing new materials and new processes
- Develop hybrid electric propulsion system, autonomous navigation system, and digital twin technology
- Resolve group's key issues using AI and develop automated/intelligent AI agent
- Develop core solutions, systems, and key equipment for unmanned/ intelligent/ electrified vessels

HD Korea Shipbuilding & Offshore Engineering

Business Performance and Financial Status

Business Operations Overview

HDKSOE and its shipbuilding subsidiaries have extensive experience and expertise in shipbuilding, a diverse range of products, partnerships with prominent global clients, and project operation and management capabilities such as in-house production and procurement of equipment. We continue to keep pace with market changes by utilizing our technological strengths backed by our R&D infrastructure.

Orders From the Past Three Years

Category	2022		2023		2024	
	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)
Shipbuilding	196		159		177	
Tankers	28		45		75	
Container Ships	92		29		28	
LNG Carriers	45	240.4	39	212.9	9	195.0
LPG Carriers	14		39		27	
VLAC[1]	-		-		24	
Others	17		7		14	
Offshore Energy	-	0.2	1	12.9	1	14.2
Engine & Machinery	-	33.6	-	31.2	-	32.9
Plant	-	0.5	-	0.4	-	1.5
Total	**196**	**274.7**	**160**	**257.4**	**178**	**243.6**

1) VLAC orders are separately reported starting 2024

Orders in 2024

Category	Opening Contract Balance	New Contracts	Delivered	Closing Contract Balance
Shipbuilding	60,389,825	33,849,719	22,070,873	72,168,671
Offshore & Plants	2,011,138	2,277,052	658,442	3,629,748
Others	4,880,323	5,699,715	2,869,998	7,710,040
Total	**67,281,286**	**41,826,486**	**25,599,313**	**83,508,459**

Key Financial Data for the Past Three Years

(Unit: KRW million, consolidated basis)

Category	2022	2023	2024
Revenues	17,302,020	21,296,206	25,538,577
Shipbuilding	14,561,286	17,694,375	22,070,873
Offshore & Plants	890,474	1,268,297	658,442
Engine & Machinery	734,501	1,640,906	2,211,348
Others	1,115,759	688,628	597,914
Operating Profit(Loss)	(355,561)	282,261	1,434,090
Shipbuilding	(320,485)	119,859	1,266,712
Offshore & Plants	(208,945)	(66,660)	(123,763)
Engine & Machinery	183,452	286,283	398,030
Others	(9,583)	(57,221)	(106,889)
Net Profit(Loss)	(295,177)	144,930	1,454,580
Total Assets	**29,883,476**	**32,242,568**	**36,719,137**
Total Liabilities	**17,571,346**	**19,872,465**	**22,563,324**
Total Equity	**12,312,130**	**12,370,103**	**14,155,813**

HD Hyundai Heavy Industries Letter from the CEOs of HHI

HHI Will Chart a New Path in the Shipbuilding Industry through Sustainable Management

HHI President & CEO
LEE Sang-kyun

HHI President & CEO
NOH Jin-yul

Dear Esteemed Stakeholders,

We extend our sincere gratitude for your unwavering support and interest in HHI. 2024 was a fiercely competitive year, and HHI was able to secure new momentum for growth by defining a clear direction for our business. We have made some significant achievements that elevated HHI's reputation in the industry: We constructed the world's first large methanol-powered ultra containership, delivered the world's most advanced Aegis destroyer, "Jeongjo the Great," exceeded the 15,000 mark for the production of HiMSEN engines, and developed an ammonia dual-fuel engine.

2025 will be another important year for HHI to solidify its position as a global leader. Amid rapid changes in the business environment, such as shifting market demands and expanding ESG regulations, we will focus on establishing a stable and secure production system to ensure a competitive edge, while continuing to leverage our differentiated competitive advantages as a "first mover" advantage in the shipbuilding industry by developing technologies that reduce environmental impact.

In addition, we will continue to support not only our contractors, but also new foreign workers that have joined the HHI family, so that they can settle into the company and their local communities and be able to fulfill their true potential. Based on our extensive experience and technological capabilities, we will face the coming changes in the industry, and continue our path forward with our diverse workforce.

First, we will further strengthen our competitive advantage in environmental impact reduction technologies.

HHI is focused on advancing advanced technologies to lead the future Low- and Zero-Carbon ship market and create a "future from the ocean." In 2024, our leading-edge technology achieved significant milestones.

Our proprietary HiMSEN methanol engine was recognized as one of the Top 10 mechanical technologies in Korea, and we successfully completed class approval testing for our zero carbon, ammonia-powered engine that uses direct high-pressure ammonia fuel injection. Going forward, HHI will continue to invest in environmental impact reduction technologies. We will strengthen our R&D capabilities and cooperate with key domestic and global partners to provide differentiated technologies and solutions that will lead the global eco-friendly market.

Second, we will continue to actively promote sustainability throughout our supply chain.

HHI will support our contractors by sharing our systems and best practices, and support their implementation. Sustainable management generates greater value when practiced holistically—not limited to our internal operations but extended to our partners and the entire supply chain. Therefore, to help strengthen their competitiveness, HHI continues to support contractors with ESG education, and share our management know-how to our contractors, particularly focused on safety management, facilities management, and workforce management. Going forward, we will proactively prepare practical programs such as workforce management and technical instruction for our contractors, strengthen training and benefit programs tailored specifically for them and further build our partnerships with them. We are committed to realizing the value of mutual growth by providing technical and financial support to enable environmental management, social responsibility, and sustainable practices across our entire supply chain.

Third, we will establish a culture of safety based on fundamentals and principles.

Safety is a non-negotiable priority for HHI. We will encourage all employees to be accountable for collectively realizing our mid to longer term goal of "HHI Safety Vision 2027,"[1] and instill a culture of safety. With the aim to achieve "A workplace where everyone is safe" this year, we will implement our safety culture such as "Golden Safety Rules", and promote initiatives for individual employees to strengthen their capabilities in safety. We will also create a smart and safe workplace by using digital transformation (DT) technology, and introduce a more efficient safety management system through the latest technology. To this end, we will advance our "Safety Career Path" program to systematically manage the safety competencies of employees according to their roles, while also improving the reliability of our accident prediction systems and strengthening our data-based risk management framework. HHI is committed to fostering a culture of safety and creating a workplace where all employees can feel safe and secure.

HHI is committed to leading the future through relentless innovation and sustainable growth. We deeply appreciate the continued support of all our stakeholders and reaffirm our commitment to creating a better tomorrow together.

1) Safety Vision 2027: Safety objectives, strategy, initiatives to achieve △Industrial accident rate below 0.15 △Fatality rate below 0.29 △Safety Culture Index above 3.7 in 5 years to 2027

HD Hyundai Heavy Industries

Introduction of HHI

Overview

Since its establishment in 1972, **HHI** has evolved into the world's leading shipyard (based on ship orders and construction volume) within a decade and recorded groundbreaking achievements. For example, HHI reached 100 million GT in shipbuilding in 2012, and constructed 2,000 cumulative ships in 2015, making HHI the world's first shipbuilder to set records for the highest construction volumes within the shortest time frame. Currently, HHI has 10 large-scale building docks, 10 ultra-large Goliath cranes, the latest production facilities, a talented workforce, and advanced technologies. Moving forward, HHI aims to enhance its competitiveness through technological innovation to proactively meet diverse customer demands. Based on accumulated technical expertise in the shipbuilding sector, expansion has occurred into the offshore plant and engine & machinery businesses, evolving into a global heavy industries company and consolidating its status as a global leading company over the past 50 years. Looking ahead, we will focus on energy-efficient, low-carbon ship technologies and digital solutions in line with global technological transformations, while strengthening capabilities in the maritime mobility market.

Legal Name	HD Hyundai Heavy Industries Co., Ltd.	**CEO**	Lee Sang-kyun, Noh Jin-yul
Founding Date[1]	June 1, 2019	**Address**	1000, Bangeojinsunhwan-doro, Dong-gu, Ulsan, 44032, Republic of Korea
Key Business	Shipbuilding, Offshore & Engineering, Engine & Machinery	**Credit Rating**	A2 (Commercial paper), A+ (Corporate bond)
Listing Date	September 17, 2021	**Listing Market**	Korea Exchange (KRX) KOSPI Market

1) Established HHI through the physical division of HDKSOE

Shipbuilding Business

HHI builds and delivers a wide range of high-quality ships including LNG carriers, LPG carriers, ethane carriers, as well as drillships, and containerships.
In 2024, HHI successfully delivered the world's first methanol-powered ultra-large container ship, opening up a new horizon for the low and zero-carbon ship market. We will further solidify our status as the world's best shipyard by proactively and efficiently meeting demands of the market and our clients for energy-efficient, low- and zero-carbon ships and special offshore vessels.

Methanol-powered container ship

Offshore Energy Business

HHI implements projects involving the design, procurement, construction, transportation, installation, and commissioning of various types of fixed and floating production facilities for oil and natural gas extraction from offshore oil and gas fields. More than 170 projects have been successfully delivered to over 80 clients worldwide. Moreover, HHI participates in offshore wind power projects initiated by the government and private power developers and develops a renewable energy portfolio that includes carbon capture and storage, green hydrogen, the International Thermonuclear Experimental Reactor (ITER), small modular reactors (SMR), and space launch facilities.

SHN FPS (Shenandoah Floating Production System)

Naval and Special Ship Business

Starting from the development of South Korea's first domestically built warship in 1975, the Ulsan-class frigate, HHI has continued to develop advanced naval vessels using entirely proprietary technology, including Aegis destroyers and submarines, and supplied them to the South Korean Navy and Coast Guard. HHI has recently successfully exported a large-scale destroyer, making the company a truly global defence shipbuilding company. Expansion is also underway into the MRO market.
The Naval & Special Business Unit, designated as a defence contractor, is equipped with specialized personnel and cutting-edge facilities required for the design and construction of naval vessels. In addition, advanced technology expertise is held in special function and unmanned vessel areas such as AI-based smart unmanned/intelligent technology, new concept survivability enhancement technologies, improved stealth performance, structural analysis, and noise and vibration reduction capabilities.

1 million ton Aegis destroyer (Jeongjo the Great)

Engine and Machinery Business

Since starting in the engine business in 1978, HHI has developed a wide product portfolio of 2-stroke and 4-stroke engines (HiMSEN engines), environmental impact reduction products, and land-based power generation facilities. Leveraging years of accumulated technology and production experience, HHI has taken the lead in the industry as the world's largest engine maker. In 2024, important milestones were achieved, such as building ammonia fuel supply systems, developing the HiMSEN engine (H22CDF-LA)—the world's first ammonia dual-fuel engine that uses a high-pressure direct injection system—and successfully commercializing low-carbon and zero-carbon dual-fuel engines. Going forward, leading-edge technology for ammonia and hydrogen engines and low- and zero-carbon fuel engines will be enhanced, with the portfolio further expanded in engine development and new businesses to solidify its position in the global market. In line with environmental regulations and carbon neutrality trends, development is underway for engines using LNG and methanol fuels, as well as ammonia and hydrogen generation engines.

HiMSEN Methanol Engine

HD Hyundai Heavy Industries

Business Performance and Financial Status

Business Operations Overview

HHI maintains a leading position in the shipbuilding sector based on its extensive shipbuilding experience and know-how, diverse product portfolio, transaction history with globally renowned shipping companies, and in-house production and procurement of essential ship components. HHI has the world's best shipbuilding technology, which is leveraged to respond to market changes. In the offshore energy sector, HHI has secured cost and technical competitiveness through localization and standardization, while continuing to strengthen collaboration with clients and manufacturing contractors. HHI is leading the development of new engines such as methanol and ammonia dual-fuel engines and consistently investing in facilities and developing technologies to keep pace with industry changes.

Orders From the Past Three Years

Category	2022		2023		2024	
	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)
Shipbuilding	67		57		37	
Tankers	1		1		4	
Container Ships	27		5		6	
LNG Carriers	23	116.2	30	109.8	3	62.5
LPG Carriers	9		20		9	
VLAC[1]	-		-		14	
Other	7		1		1	
Offshore Energy	-	0.2	1	12.9	1	14.2
Engine & Machinery	-	33.6	-	31.2	-	32.9
Total	**67**	**150.0**	**58**	**153.9**	**38**	**109.6**

1) VLAC orders are separately reported from 2024

Orders for 2024

(Unit: KRW mil., based on orders between Jan. 1 and Dec. 31, 2024)

Category	Opening contract balance	New contracts[1]	Delivered	Ending contract balance
Shipbuilding	32,399,348	12,161,287	10,623,294	33,937,341
Offshore & Plants	2,011,138	2,267,762	649,152	3,629,748
Others	7,050,026	5,528,661	3,214,008	9,364,679
Total	**41,460,512**	**19,957,710**	**14,486,454**	**46,931,768**

1) Includes new orders, additional commitments, changes to contracted amounts, and variations from foreign currency exchange rates

Key Financial Data for the Past Three Years

(Unit: KRW mil, consolidated basis)

Category	2022	2023	2024
Revenues	9,045,480	11,963,926	14,486,454
Shipbuilding	6,467,204	7,901,471	10,623,294
Offshore Energy	785,228	1,269,740	649,152
Engine & Machinery	1,715,084	2,709,815	3,134,343
Others	77,964	82,900	79,665
Operating Profit (Loss)	(289,151)	178,640	705,223
Shipbuilding	(283,648)	(33,586)	461,896
Offshore Energy	(174,868)	(66,413)	(124,711)
Engine & Machinery	183,250	286,283	384,920
Others	(13,885)	(7,644)	(16,882)
Net Profit (Loss)	(352,065)	24,689	621,509
Total Assets	**16,289,398**	**17,133,618**	**19,390,946**
Total Liabilities	**11,001,579**	**11,926,178**	**13,686,498**
Total Equity	**5,287,819**	**5,207,440**	**5,704,448**

HD Hyundai Mipo Letter from the CEO of HMD

Creating New Value for Customers, HMD Will Steer Global Shipbuilding Industry

President of HMD
KIM Hyung Kwan

Dear Esteemed Stakeholders,

As HMD celebrates its 50th anniversary, we would like to extend our deepest appreciation to all our stakeholders that have supported us during these past 50 years. Your trust and support have allowed us to overcome challenges and secure a strong foothold in the shipbuilding industry. 2024 was a significant turning point, even in the face of fierce competition and economic uncertainties. We ended the long years of losses and ultimately turned a profit in 2024, creating a stable financial foothold. We are also currently building the world's largest liquefied CO_2 (LCO_2) carrier, the first of its kind in Korea, and implemented leading sustainable shipbuilding practices.

Now we must create a foundation for the next 50 years. HMD seeks to expand beyond traditional shipbuilding to become a technology-focused engineering solutions provider in the marine mobility market. We will innovate our thinking, technology, and systems to lead the change for a sustainable future in the ever-evolving environment. In 2025, under the group vision of "Future From the Ocean," HMD will strive to achieve our "2030 ESG Strategic Objectives," and to be an even more trusted company in the global shipbuilding industry with our sustainable management practices.

First, we will create a workplace where everyone is safe through companywide HSE management solutions.

In 2024, some serious accidents occurred, serving as a wake-up call for HMD employees and stakeholders on the importance of safety. We have learned from these lessons and are committed to creating a safer workplace environment by establishing a more robust safety management system, revising our policies, and removing risk factors.

To this end, we will establish an integrated HSE (health, safety, environment) system that encompasses all areas of safety, health, and environment to improve operational convenience for frontline departments, enhance safety awareness, and mitigate legal risks.

In line with the AI era, we also plan to introduce an AI-based safety and health management system to build a more sophisticated and efficient safety management framework. To improve the understanding of safety and health regulations among our employees and in-house and external contractors, we will develop a "Safety and Health Regulations AI Chatbot" by training the AI by using deep learning on major accident case studies and regulations, for all employees to access. Through these initiatives, we aim to strengthen our prevention-focused safety and health management system and create a safe workplace where everyone can work with peace of mind, with the goal of achieving zero serious accidents in 2025.

Second, we will implement HMD's own environmental management program.

Companies are increasingly required to disclose their environmental management initiatives and outcomes by the IMO's environmental regulations, EU's CSRD[1], and KSSB[2] within the Korea Accounting Standards Board.

As a result, companies need to collect systematic and transparent environmental data, and refine their environmental management systems to comply with the disclosure requirements. In response to this, HMD plans to introduce a companywide energy measurement, analysis, and management system. The system will remotely monitor the use of electricity, industrial water usage, and gas at all our business sites. We will upgrade the system, which currently only allows monitoring of total usage, to be able to analyze the usage in specific areas. We will also build a system that will allow us to control these utilities. To minimize the physical risks to the business sites due to climate change, we will develop a sophisticated environmental management system by building a platform that shares real-time weather information, such as temperature, humidity, and wind direction, via mobile and web, based on our proprietary weather observation system.

Third, we will establish a governance framework and company manual to implement human rights management practices.

With stricter supply chain due diligence regulations, particularly in EU member states, and the growing trend among U.S. global brands to enhance supply chain management, expectations for human rights management from our partner companies are also on the rise. In response, HMD plans to establish a companywide human rights management system.

To achieve this, we will develop a human rights management manual, prepare human rights impact assessment indicators and guidelines, and conduct human rights impact assessments. To enhance transparency, we will publish a Human Rights Management Report that includes identified improvement tasks and HMD's response measures. To establish a governance framework for human rights management, we will revise our Declaration of Human Rights Management, devise relevant policies, and build a more systematic foundation for implementation. To instil an awareness of human rights management, we will develop human rights training materials for the group and conduct training to ensure that all employees are familiar with materials. As a responsible corporate citizen, we are committed to fostering a corporate culture that respects human rights and realizing comprehensive and sustainable human rights management across our entire supply chain.

If the last 50 years were a time of challenges for HMD, the next 50 years will be a time for new value creation through change and innovation, and a time to pave the way for a new phase of growth. HMD is committed to lead the future through continued changes and innovation, and become a trusted company through sustainable growth and responsible management.

1) CSRD: Corporate Sustainability Reporting Directive
2) KSSB: Korea Sustainability Standards Board

HD Hyundai Mipo

Introduction of HMD

Overview

HMD's competitive advantages are its excellent design professionals, high level of production efficiency, and systematic management capabilities. It is well recognized by numerous ship-owners based on its competitiveness, which has been developed in the medium-sized ship sector under the principle of "High Quality, Timely Delivery." HMD has maintained an absolute comparative advantage in small and middle-sized petroleum tankers and continues to expand market share by developing high-specification, high-efficiency ships in the small- and medium-sized container ship market. In addition, HMD has successfully entered the high-added-value ship market, including LPG carriers, LNG bunkering vessels, and CON-RO ships, with all efforts focused on securing stable workloads. HMD is enhancing its competitiveness by expanding the application of fuel-saving technologies for all ship types. Activities are concentrated on securing orders for future strategic ship types such as small and medium-sized LNG carriers, combined gas carriers, and car ferries. Adaptation to market changes is ensured by actively responding to ship owners' demands for ships powered by LPG, LNG, and methanol as well as electric-powered ships.

Legal Name	HD Hyundai Mipo	**CEO**	Kim Hyung-kwan
Founding Date	April 28, 1975	**Address**	100, Bangeojinsunhwandoro, Dong-gu, Ulsan, Republic of Korea
Key Business	Shipbuilding	**Credit Rating**	A3+ (Commercial paper)
Listing Date	December 20, 1983	**Listing Market**	Korea Exchange (KRX) KOSPI Market

Key Products

Petroleum Tanker

- Based on the Measurement Tonnage (MT)
  25K, 37K, 49K, 50K, 75K class ships


Petroleum Tanker

Container Ship

- Based on Twenty-foot Equivalent Unit (TEU)
  1,000TEU, 1,800TEU, 2,500TEU, 2,800TEU class ships


Container Ship

Gas Carrier

- LPG Carrier
  Based on cargo capacity (m^3) 22K, 23K, 38K, 40K class ships
- LNG Bunkering Vessel
  Based on cargo tank capacity (m^3) 7.5K, 12K, 15K, 18K class ships


Gas Carrier

Car Carrier

- Car/Truck Carriers
  Based on the number of cars, 3,900-unit, 6,500-unit, 7,700-unit class ships
- Container RoRo Ship
  Based on the Measurement Tonnage (MT) 12.4K, 24.4K, 26K, 31.3K class ships


Car Carrier

Bulk Carrier

- Bulk Carrier
  Based on the Measurement Tonnage (MT) 63K, 82K class ships
- Open Hatch General Cargo (OHGC) Carrier
  Based on the Measurement Tonnage (MT) 49.9K, 50.7K class ships


Bulk Carrier

Special Purpose Ship

- Asphalt Carrier
  Based on load weight tonnage (TON) 6K, 12K, 30K, 37K class ships
- Special ships such as Ro-Pax Vessel, Juice Carrier, Platform Supply Vessel (PSV)


Ro-Pax Vessel

HD Hyundai Mipo

Business Performance and Financial Status

Business Operations Overview

HMD has been securing significantly more orders centered on mid-sized gas carriers, container ships, and petroleum tankers. Driven by strong orders for LNG, LPG, and methanol-powered ships, we have achieved an annual order of USD 3.6 billion. As a leading company in the mid-sized ship market, HMD is focusing on profitability by responding to the increasing orders and demand for new ships that are compliant environmental regulations from the International Maritime Organization (IMO). We are primarily achieving this through our dual-fuel propulsion vessels, whose technological competitiveness is unparalleled. Efforts are also being made to secure improved ship prices that reflect rising raw material costs and increased interest rates. Starting from mid-sized petroleum tankers in 2003, a total of 15 types of products have been selected as world-class products certified by the Korean Ministry of Trade, Industry, and Energy, including mid-sized container ships, Container/RoRo Carriers, asphalt carriers, mid-sized LPG carriers, car carriers, juice carriers, ethylene carriers, and more. These products have gained recognition for excellent quality and technological strengths.

Orders From the Past Three Years

Category	2022		2023		2024	
	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)
Shipbuilding	81	37.9	60	36.5	97	61.4
Tankers	27		38		62	
Container Ships	43		5		6	
LNG Carriers	-		-		-	
LPG Carriers	5		11		18	
Others	6		6		11	

Key Financial Data for the Past Three Years

(Unit: KRW million, consolidated basis)

Category	2022	2023	2024
Revenues	3,716,861	4,039,066	4,630,049
Operating profit (Loss)	(109,066)	(152,916)	88,528
Net Profit (Loss)	(43,767)	(138,953)	113,249
Total Assets	**4,748,245**	**4,909,071**	**5,108,867**
Total Liabilities	**2,572,982**	**2,893,858**	**3,002,436**
Total Equity	**2,175,264**	**2,015,213**	**2,106,431**

Orders in 2024

(Unit: KRW mil., based on the orders between Jan. 1 and Dec. 31, 2024)

Category	Opening Contract Balance	New Contracts	Delivered	Ending Contract Balance
Shipbuilding	8,140,537	9,285,793	(4,630,049)	12,796,281

1) Includes new orders, additional commitments, changes to contracted amounts, and variations from foreign currency exchange rates

HD Hyundai Samho Letter from the CEO of HSHI

A Global Leader of Green & Smart Technologies in Shipbuilding and Offshore Engineering, HSHI Will Lead the Way for a Greener Future

HSHI CEO
KIM Jae-eul

Dear Esteemed Stakeholders,

Thank you for your continued interest and support for HSHI. Over the past year, we continued to implement our sustainable growth program, even while facing obstacles such as unstable supply chain, high interest rates, and economic slowdown. Among our notable achievements, we've concluded an MOU on developing a LCA model, and received the Prime Minister's Commendation for Energy Efficiency Improvement, thus earning recognition domestically and internationally for our sustainable management program. In addition, we were able to post revenues of 7.31 trillion KRW and operating profits of 723.6 billion KRW, a solid financial performance based on our innovation and responsible management practices.

In 2025, HSHI seeks to continue our sustainable growth, with stable process management and initiatives for the future as our key priorities. We will expand our use of renewable energy, as well as increase our efforts to achieve carbon neutrality by verifying GHG emissions measurements. In addition, we will construct a comprehensive safety platform to create a safe and healthy workplace, and promote sustainability in our supply chain by working closely with our partner companies on ESG management. Going forward, HSHI will continue to tackle new challenges toward a sustainable future, and create new growth opportunities through innovation.

First, we will implement systematic measures to achieve carbon neutrality.

HSHI is implementing a variety of strategies to reduce carbon emissions as countermeasures to climate risks and to lead the sustainable transition of the global shipbuilding industry. For this energy transition, we plan to construct self-generation facilities to achieve carbon neutrality. In 2025, we installed a 1.8MW solar power generator in the parking lot of our business site, and we are reviewing other empty lots such as factory rooftops and neighboring parcels of land for future facilities. Going forward, we plan to implement a comprehensive energy management strategy, taking into consideration not only generation capacity, but also efficiency and profitability of the land, and maintenance cost and effort.

We are also using our energy control center to monitor energy use at business sites in real time and to improve efficiency and reduce GHG emissions. With a focus on energy transition and energy efficiency, we will continue to transform our company into a pioneer in creating a sustainable shipbuilding ecosystem and achieving carbon neutrality.

In 2025, we will conduct a lifecycle assessment (LCA) project for two LNG DF CNTRs, in preparation for compliance with IMO and other key environmental regulations. By doing so, we will be able to enhance our competitiveness in the eco-friendly ship market, and proactively meet our clients' demands.

Second, we will implement external ESG communication and strengthen relationships with our stakeholders.

HSHI does not limit ESG management within the company, but goes beyond by actively engaging with customers, investors, contractors, local communities, and various other stakeholders to distribute the value of sustainability. Responsible management goes beyond mere data disclosures and requires companies to collaborate with stakeholders to create real change. To this end, we are systematically managing ESG data, as well as strengthening our transparency by establishing a disclosure framework that conforms to global standards.

In 2025, we will further collaborate with contractors and promote sustainability throughout our supply chain. We will expand our contractor ESG training program and share our best practices to enhance the sustainability practices in our supply chain and raise the overall standards of the entire industrial ecosystem.

Moreover, we will continue to contribute to the growth of our local communities. We will continue to create a foundation for the mutual growth of our company and local communities by conducting social contribution activities tailored for each local community, such as implementing initiatives to protect the environment and support the citizens. HSHI will continue to build trust in our ESG management through open communication with external stakeholders.

Third, we will practice socially responsible management and create a sustainable corporate culture.

HSHI practices responsible management centered on people and has created a working environment that prioritizes the safety and health of our employees. We are strengthening our voluntary safety framework which involves identifying risk factors at worksites and eliminating them, and working to instill a culture of practical safety focused on worksites.

In 2025, we plan to establish a sophisticated safety management system, by introducing a "safety forecast system" based on big data which will analyze worksite risk factors in real time, and focus on preventative measures. By doing so, we will transform our practices from being responsive to accidents to taking preventative actions based on forecasts. In addition, we will upgrade our in-house medical system and establish a "one-stop medical assistance system," which will provide diagnoses more efficiently and in a systematic manner.

In addition, we are continuing to implement benefits to help improve the quality of life and mental health of our employees. We are working toward creating an organizational culture of acceptance where everyone is respected and everyone can grow, by providing psychological consultation programs and family-friendly programs. We will continue to fulfill our corporate social responsibilities and work to build a sustainable future in which both our people and worksites thrive together.

In the rapidly changing industrial environment, we are continuously reflecting and working on how to achieve sustainable growth while practicing responsible management. Going forward, we will continue to communicate with our stakeholders, build trust, and create positive change in both industry and society through ESG management.

We ask for the continued interest and support of all our stakeholders as they accompany us on this journey.

HD Hyundai Samho

Introduction of HSHI

Overview

HSHI, established in 1998, is a shipbuilding company with a capacity of 3.8 million GT and the capability to construct about 40 merchant ships annually, including super-sized container ships, VLCCs and other tankers, LNG and LPG carriers, PCTCs (Pure Car Truck Carriers), and bulk carriers. In 2022, HSHI became a part of HDKSOE and integrated operations of sales, R&D, procurement, and after-sales service, maximizing the synergistic effects of its companies. Recognition has been earned from customers for high product quality and technological excellence. By focusing on developing its capabilities in energy-efficient, low-carbon ships, HSHI built the world's first LNG-powered crude oil carrier in 2018, constructed the world's first LNG-powered container ship and bulk carrier in 2020, and built the world's largest LPG-powered ship (90,000 cbm class) in 2021. Based on this extensive shipbuilding experience, HSHI is continuing to develop its business by entering the equipment manufacturing sector to develop overseas oil wells.

Legal Name	HD Hyundai Samho	**CEO**	Jae-eul Kim
Founding Date	Nov. 4, 1998	**Address**	93 Daebul-ro, Samho-eup, Yeongam-gun, Jeollanam-do, Republic of Korea
Key Business	Shipbuilding, Production of Industrial Facilities	**Credit Rating**	A- (Corporate bond)
Listing Date	N/A	**Listing Market**	N/A

Key Products

LNG Carrier

LNG Carriers compress, liquefy, and transport methane gas, and they require special technology for their cargo holds to maintain cryogenic conditions below -163°C. HSHI builds high-performance and high-quality ships employing energy improvement technology during ship operation and re-liquefaction technology for evaporative emissions.

LPG Carrier

LNG Carriers compress, liquefy, and transport propane or butane gas, requiring a special cargo hold to maintain cryogenic conditions below -42°C. After completing the special cargo hold at a pre-loading site, HSHI uses One Tank loading method to ensure efficiency and stability.

Containership

Containerships are specially designed to transport containers. HSHI recently built LNG-powered container ships with Membrane LNG fuel tanks mounted. HSHI is also constructing methanol-powered ultra-large container ships.

Tanker

HSHI mainly constructs oil carriers (COT, VLCC), which transport crude oil, and oil tankers (PC), which transport refined petroleum products. Recently, HSHI built the world's first LNG-powered crude oil carrier.

Bulk Carrier

Bulk carriers transport unpackaged cargo such as grain, ore, and coal. HSHI mainly constructs 325,000 DWT-class bulk carriers, and recently built and delivered the LNG-powered bulk carrier.

PCTC (Pure Car Truck Carrier)

PCTCs (Pure Car Truck Carrier) are designed to transport passenger cars and trucks. HSHI is currently constructing ultra-large car carriers (8,000 Unit PCTC) with efficient load space and stable resilience.

HD Hyundai Samho

Business Performance and Financial Status

Business Operations Overview

HSHI's production capacities include Dock 1 (two 600-ton Goliath cranes), Dock 2 (820-ton and 1,000-ton Goliath cranes), and an onshore construction yard (600-ton and 1,200-ton Goliath cranes). HSHI has also secured a competitive edge that ensures the highest quality and timely delivery of ships and facilities for its customers, based on an optimal location safe from typhoons, efficient yard layout considering logistics flow, synergies from integrated procurement and R&D at the group level, and a high-level quality control system across the entire design, construction, and delivery processes. Active responses are being made to trends in marine environmental protection and greenhouse gas reduction by applying technologies that reduce harmful ship emissions and improve energy efficiency, as well as boil-off gas reliquefaction technologies, primarily for LNG carriers. Efforts are also underway to secure a competitive edge by focusing on developing patents related to load-out systems for onshore construction yards to enhance its competitiveness in LNG carrier construction.

Orders From the Past Three Years

Category	2022		2023		2024	
	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)	No. of ordered ship (units)	Amount (USD 100 mil.)
Shipbuilding	48		42		43	
Tankers	0		6		9	
Container Ships	22		19		16	
LNG Carriers	22	86.3	9	66.6	6	71.1
LPG Carriers	0		4		0	
VLAC[1]	-		-		10	
Others[2]	4		4		2	
Industrial facilities	-	0.5	-	0.4	-	1.5

1) VLAC orders are separately reported from 2024
2) Other ships include ULEC

Orders for 2024

(Unit: USD mil., based on the orders between Jan. 1 and Dec. 31, 2024)

Category	Opening Contract Balance	New Contracts[1]	Delivered Amount	Ending Contract Balance
Shipbuilding	19,876,956	12,149,758	7,003,139	25,023,575

1) Includes new orders, additional commitments, changes to contracted amounts, and variations from foreign currency exchange rates

Key Financial Data for the Past Three Years

(Unit: KRW million)

Category	2022	2023	2024
Revenues	4,646,421	5,958,697	7,003,139
Operating profit (Loss)	17,717	301,693	723,571
Net profit (Loss)	2,892	211,165	684,107
Total Assets	**5,588,328**	**7,457,336**	**8,386,198**
Total Liabilities	**3,927,364**	**5,625,561**	**5,901,086**
Total Equity	**1,660,964**	**1,831,775**	**2,485,112**

ESG Management

HD Hyundai ESG Management System

ESG Management Through Technological Advancement

HD Hyundai ESG VISION

HD Hyundai is based on a holding company structure focusing on developing eco-friendly, digital and safe technologies, and conducts ESG management based on these technologies. Our ESG Vision "Future From the Ocean" expresses our commitment to realize a sustainable future from the ocean, which is the foundation and beginning of HD Hyundai's business portfolio. Our ESG slogan, "Beyond Blue Forward to Green," expresses our identity and credo of pursuing technological innovation in line with future paradigm change (Beyond Blue). In line with this, we are pursuing transition to innovative business with advanced technologies and to become a leader in sustainable management (Forward to Green).

To move forward with our strategic directions, "Blue Ocean with Green Tech", we will continue to increase investing into developing environmental impact reduction technologies and proactively increase our efforts in strengthening climate risk management and reducing environmental impacts by increasing use of renewable energy, investing in high efficiency facilities, and managing carbon credits. For "Green Together with People & Society", we will strengthen systems to manage the safety, human rights, and ethics issues throughout the supply chain, including our business sites. In addition, under the strategic direction of "Green Leadership with Responsibility", we will continue to our efforts in improving disclosures of operational information including ESG management, and enhancing our internal control and risk management framework.

HD Hyundai ESG VISION Framework

HD Hyundai ESG Governance

The ESG Committee under the **HD Hyundai** BoD reviews the key ESG policies and strategies from the perspective of the holding company and management. It also oversees the progress and performance of the Group's key priority tasks. The Chief ESG Officer of the Group oversees the ESG management program of the HD Hyundai Group, and is responsible for designing plans and managing the progress to implement key agenda items such as establishing Group ESG policies and strategy, disclosure of consolidated ESG data, climate change responses, implementing human rights management, and managing supply chain risk. Through these efforts, we are strengthening the Group's ability to implement ESG initiatives and internalizing the ESG mindset across the Group.

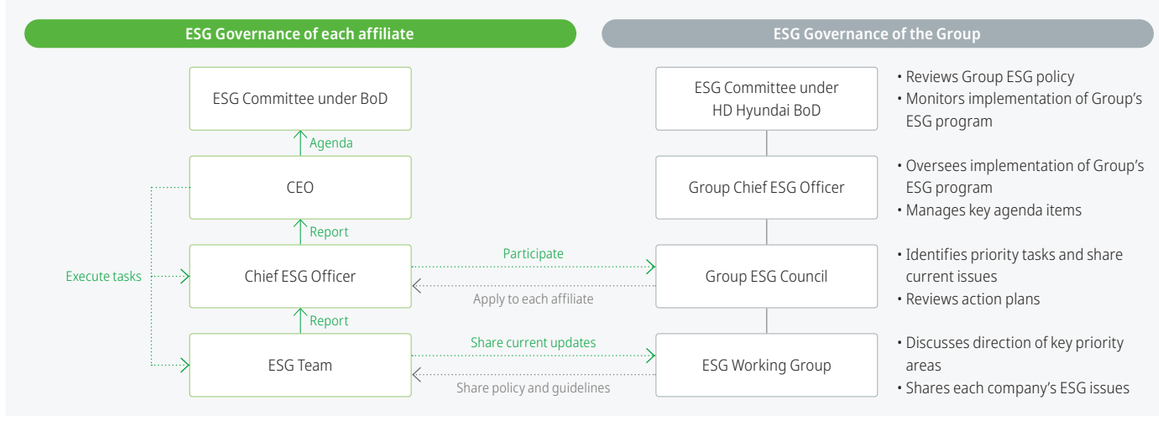
The "Group ESG Council" is a consultative group that includes the ESG Chief Officers from each group company and is chaired by the Group Chief ESG Officer. They share the ESG issues of each group company, identify priority tasks, and review implementation plans, driving the Group's ESG program forward. The Group ESG Council ensures consistency and promotes implementation of ESG strategies across the group's subsidiaries, and enhances sharing of performance and creates synergistic values among the subsidiary companies.

Each subsidiary company within the group establishes its own governance framework in line with the group's ESG strategies and policies, formulates detailed strategies tailored to its business characteristics and industry environment, enhances its management systems, and conducts ESG performance measurement and improvement activities. Through these efforts, we are working to advance sustainable management across the Group.

Group ESG Council Activities for 2024

Date	Key agenda items
February 27 (1st)	• 2023 key performance and 2024 plans by company • Discussed direction of Group ESG strategy
August 28 (2nd)	• Progress of carbon neutrality roadmap by each company • Introduction to human rights management and its direction • Discussed need for Group ESG platform and direction
December 20 (3rd)	• (Special lecture) ESG impact outlook post U.S. presidential election • 2024 GHG emissions and reasons for increase or decrease

ESG Governance of the Group and each affiliate



HDKSOE ESG Management System

Strengthen ESG Management for the Shipbuilding and Offshore Business Sector

ESG Management Plans for 2025

As a leading global shipbuilding and offshore engineering company, **HDKSOE** continues to strengthen its ESG management system to meet the requirements of ESG regulations and stakeholders. The priority objectives for 2025 are enhancing the climate change response system; proactively responding to ESG-related trade regulations; and improving the management and disclosure transparency of consolidated ESG data. For each of these objectives, we are establishing and implementing action plans.

HDKSOE aims to advance climate change response framework by systematically monitoring carbon credits, GHG emissions and energy use in the shipbuilding business, as well as considering in-house carbon pricing in the decision-making process.

HDKSOE is also expanding support programs for contractors to reduce carbon emissions across the value chain and promote co-prosperity. Additionally, we plan to standardize and computerize the life-cycle assessment (LCA) methodology, reflecting the characteristics of the shipbuilding business to enhance the reliability of LCA data.

For enhancing our human rights management system, we are implementing human rights due diligence and improvements for key business sites based on the group's standard human rights process. We plan to strengthen risk management on human rights and environment throughout the value chain by reviewing risks in the supply chain and implementing improvement measures.

In addition, we plan to establish an ESG indicator management framework and launch an ESG platform to enhance transparency of ESG data disclosures.

HDKSOE Key ESG Priorities for 2025

Area	Advance climate change response framework	Strengthen human rights management system	Enhance transparency of ESG disclosures
Strategic direction	Establish carbon management governance framework	Establish standardized process for human rights management	Establish integrated Group ESG indicator management framework
Key activities	**Establish carbon management governance framework** • Enhance management and monitoring of carbon credits and GHG emissions • Establish integrated energy monitoring system • Introduce in-house carbon pricing **Reduce carbon emissions across the value chain** • Increase support for contractors on reducing GHG emissions **Enhance LCA process** • Standardize methodology that reflects characteristics of shipbuilding industry • Establish platform to increase reliability	**Establish and manage human rights management system** • Establish human rights management and due diligence policies • Establish standard human rights management process **Conduct human rights due diligence and manage improvement actions** • Strengthen due diligence on human rights management • Implement action to reduce risks regarding human rights **Strengthening supply chain ESG risk management** • Conduct assessment and diligence on supply chains in shipbuilding • Advance risk management process	**Manage consolidated ESG indicators** • Define scope and calculation criteria of ESG indicators • Expand ESG data disclosures to subsidiary companies **Upgrade Group ESG data platform** • Launch integrated Group platform and enhance functionality through pilot testing **Respond to mandatory ESG disclosures** • Carry out tasks related to climate disclosures

ESG Organizational Structure

As the intermediate holding company that oversees the Group's shipbuilding and offshore engineering business, **HDKSOE's** ESG Committee under the BoD reviews and deliberates on key ESG strategies and direction that encompasses all the subsidiary companies. It also oversees implementation and performance of key tasks. The ESG Committee is chaired by an outside director, and the committee undertakes regular training sessions to enhance their expertise and capabilities.

HDKSOE's CEO also acts as the Chief ESG Officer and is the key decision-maker for the shipbuilding and offshore engineering business's ESG management program, from establishing ESG policies to implementation and managing performance. The Chief ESG Officer sets the direction for the ESG strategies and comprehensively reviews and monitors implementation and key performance. It is also the role of Chief ESG Officer to demonstrate a company-wide leadership to effectively operate the ESG management of the shipbuilding and offshore business.

HDKSOE's ESG Department is responsible for the implementation of the Group and the shipbuilding and offshore engineering business's ESG program. The department establishes ESG strategies and policies that comprehensively reflect the characteristics of the business and requirements from external parties, and plans and manages the operational aspects of the ESG program. In addition, the department manages the ESG management performance of all the shipbuilding subsidiaries, and continuously works to improve ESG implementation while also strengthening alignment with the group-wide strategic direction. In collaboration with other functions as IR, PR, Sales,etc., the department enhances communication with investors, customers, and other key stakeholders on ESG matters, and incorporates external requirements to enhance trust in the group's ESG management program.

From a more holistic perspective, we have established and operate a governance system that encompasses the entire group, including the Group ESG Council, Working Group, Human Rights Management Committee, and Carbon Management Committee. Through this system , we enhance the consistency and execution of group-wide strategies and actively promote the sharing of ESG performance and the creation of synergies among the subsidiary companies.

HDKSOE ESG Management Organizational Structure

* Publishes separate Sustainability Report

HHI ESG Management System

Advance ESG management system and enhance execution capability

ESG Management Plans for 2025

In 2024, **HHI** actively deployed ESG management initiatives across all areas. We signed a "Voluntary Agreement on Fine Dust Reduction," implemented a total solution for contractor support, and increased support for births/childcare/family care. We also installed a Compensation Committee, conducted self-evaluations for the Board of Directors, and strengthened policies in each ESG area. Furthermore, in 2025, we have established an ESG management plan centered on our 3 key strategies—enhance climate change responsiveness, implement socially responsible management, and strengthen ESG communications program—and their implementation is underway.

For enhancing climate change responsiveness, we plan to improve our carbon credit management framework, as well as adopt shadow carbon pricing as a decision-making tool toward achieving carbon neutrality goals. This framework will be used when investing in facilities and devising emissions reduction plans. In addition, we will advance our human rights management system, increase support for ESG management throughout our supply chain, and work to establish a culture of autonomous safety management. Moreover, we will raise employee awareness on ESG management through information sessions, and promote exchanges and cooperation with rating agencies, investors, and other external stakeholders to advance our ESG management program.

2025 HHI ESG Management Plan

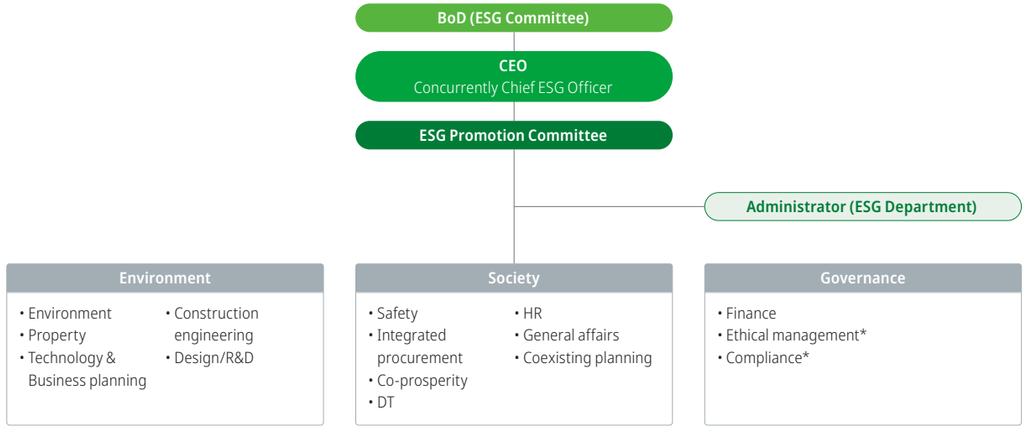
Area	Meet Global ESG Requirements and Advance the ESG Management System		
Strategic direction	Enhance climate change responsiveness	Implement socially responsible management	Strengthen ESG communications program
Key activities	**Improve carbon credit management framework** • Establish emissions trading process **Adopt shadow carbon pricing** • Publish carbon emissions feedback report when investing in facilities **Strengthen biodiversity management** • Identify biodiversity preservation activities in local communities	**Advance human rights management system** • Establish human rights management system, conduct human rights impact assessment and monitor results **Increase support for ESG management in supply chain** • Assess level of ESG practices throughout the supply chain and provide support for ESG management **Establish a culture of autonomous safety management** • Advance "Safe career path" program and strengthen data-based risk management framework	**Prepare for consolidated ESG disclosures** • Phased disclosure of subsidiaries' ESG data **Plan ways to internalize ESG values among all employees** • Conduct ESG learning sessions for relevant departments **Promoting ESG exchange and cooperation** • Enhance collaboration with group companies on ESG issues and strengthen ESG engagement with stakeholders.

ESG Organizational Structure

HHI's ESG organizational structure is centered on the ESG Committee under the BoD, and it involves the Chief ESG Officer, the ESG Promotion Committee, ESG executives, and ESG-dedicated departments. The ESG Committee is responsible for determining the company's ESG strategic direction, plans, and implementation-related matters. Meanwhile, the ESG Promotion Committee, which is made up of people from dedicated ESG departments and other relevant departments, discusses key objectives and detailed tasks and strategies, including performance management based on ESG KPIs, implementation of the carbon neutrality roadmap, supply chain ESG management, and ESG education and campaigns. In addition, the dedicated ESG department is responsible for establishing ESG implementation strategies to fulfill environmental and social responsibilities linked to HHI's business strategies, determining detailed tasks based on the needs of internal and external stakeholders, and supporting implementation of tasks.

The ESG Department consults and supports relevant departments to carry out and manage ESG management initiatives, which ultimately strengthen the effectiveness of ESG management. Each department relevant to society, environment, and governance conducts activities to mitigate ESG risk and generate performance. The progress on these activities is regularly shared and discussed to identify ways for improvement.

HHI ESG Management Organizational Structure



* Integrated support from HDKSOE

HMD ESG Management System

Implementing 2030 ESG Roadmap

ESG Management Plans for 2025

HMD established a 2030 ESG Roadmap that aligns with HD Hyundai's ESG Vision, and has set KPIs for each key activity and monitors implementation. Key focus areas required for the ESG Roadmap are identified by analyzing trends of ESG related regulations and policies in the U.S., Europe, and other major markets, issues raised by global ESG guidelines and initiatives, and ESG evaluation ratings.

In 2025, we are focused on generating tangible results, and have selected 5 key projects: "Expand resource recycling program," "Reduce GHG emissions," "Realize zero accidents," "Practice human rights management," and "Practice environmental management."

We have also initiated establishing an integrated HSE program to better manage waste generated from worksites, control energy monitoring utilizing company-wide energy measurement and analysis systems, improve efficiencies in safety, health, and environment tasks, and preemptively address potential risks.

In addition, we have established and are implementing detailed plans to establish a human rights management system and framework and strengthen our capabilities to address environmental risks.

ESG Organizational Structure

The ESG Committee under the **HMD** BoD reviews and deliberates on matters related to enhancing shareholder value and corporate social responsibility, and also receives reports on the plans and progress for ESG activities.

The ESG Promotion Committee convenes twice per year and holds more sessions as necessary. It is chaired by the CSO (executive in charge of safety, environment, facilities), ESG managers from various divisions including environment, safety, HR, education, coexisting cooperation, and procurement participate in meetings.

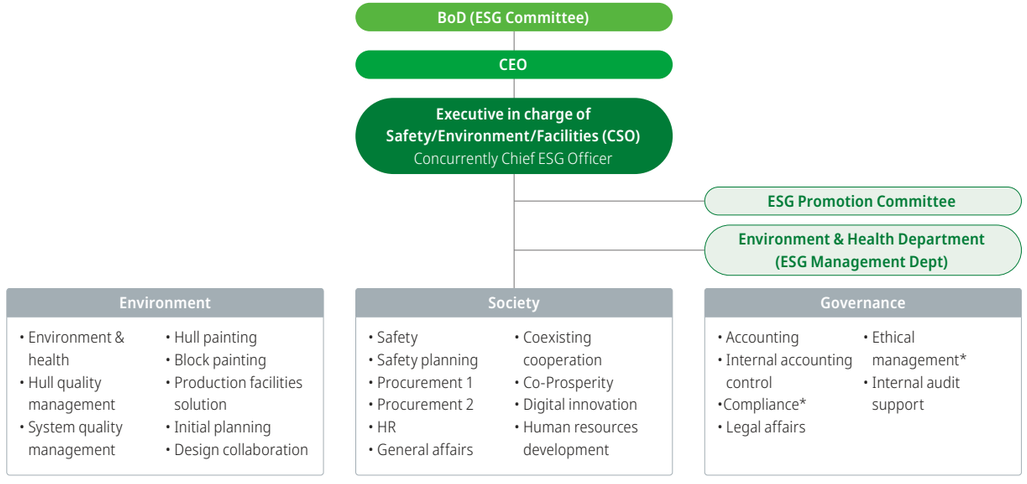
The ESG Promotion Committee discusses ways to mitigate risk and improve performance in each ESG area, and manages and oversees plans and key activities.

The Environment & Health Department (ESG Management Department) under the oversight of the executive in charge of safety, environment, and facilities (CSO) acts as the dedicated ESG department, and is responsible for setting ESG policies and goals, analyzing external trends, responding to evaluation agencies, reviewing general matters, and identifying tasks. This department also collaborates with other relevant departments on each key ESG area including reducing carbon emissions, developing environmental technologies, advancing safety and health, and strengthening human rights management. The Environment & Health Department also provides support where needed to ensure that each activity is effectively and efficiently carried out according to plan.

2025 HMD ESG Key Priorities

Target	Implement Carbon Neutrality Plan and Lead Global ESG Management		
Strategy	Climate change response	Address Global ESG regulations	Advance company-wide ESG management practices
Key Activities	**Establish company-wide energy management framework** • Manage data with the use of energy SCADA system, and create detailed reduction targets **Create GHG inventory for overseas subsidiaries** • Create GHG inventory for overseas subsidiaries and prepare for emissions trading **Establish climate change disclosure framework** • Set process for physical and transition risks from climate change	**Establish a consolidated ESG management system** • Expand scope of consolidated ESG data managed by installing a dedicated ESG department at overseas subsidiaries **Establish human rights management system and framework** • Include overseas subsidiaries for human rights management impact assessments and publish human rights management report **Strengthen capabilities for response measures to environmental risks** • Prepare to address international agreements and domestic and international regulations, build hazardous chemical management system	**Raise employee awareness of ESG topics** • Plan to run campaigns for all employees once every six months • Plan to run campaign for workers in Vietnam (Annual) **Establish an integrated HSE program** • Establish integrated HSE program for comprehensive management of safety, health, environmental matters **Improve ESG governance framework** • Hold ESG Promotion Committees and improve operations

HMD ESG Management Organizational Structure



* Integrated support from HDKSOE

HSHI ESG Management System

Generate Shared Value through Sustainable Management

ESG Management Plans for 2025

HSHI continues to generate shared value in all areas including economy, environment, and society based on our sustainable management program. In 2024, we conducted a variety of ESG initiatives, including: introducing new facilities to enhance productivity and improve the working environment, analyzing climate risks and opportunities, improving environmental facilities, introducing renewable energy, initiating ship LCA, and starting energy efficiency programs. We have successfully reduced our greenhouse gas and energy intensity, increased social contribution activities, increased volunteer hours, and reduced serious accident and accident rates.

In 2025, with the objective of elevating our sustainable management program and capabilities overall, we have established our ESG management plan centered on three key goals: implement carbon neutrality plans, create a healthy corporate culture, and advance disclosure framework.

On the environment side, we are introducing renewable energy and verifying emissions to reduce greenhouse gases at business sites, and we have also started LCA for our major vessels. On the social side, we are actively working on improving safety and health, diversifying our social contribution program, and activities to ensure mutually beneficial relationships with stakeholders across our supply chain. In addition, we are working to advance our information disclosure framework by publishing our Sustainability Report, establishing our human rights management process, and reporting on our activities.

2025 HSHI ESG Management Plan

Target	Implement Carbon Neutrality Plans and Advance Sustainable Management Program		
Strategy	Implement carbon neutrality plans: manage greenhouse gases and increase use of renewable energy	Establish autonomous safety system and diversify social contribution activities to create a healthy corporate culture	Advance disclosure framework by responding to external evaluations and diversifying self-assessments
Key Activities	**Increase use of renewable energy** • Introduced 2.4MW of renewable energy using on-site PPA **Advance Scope 1, 2, 3 emissions** • Verify Scope 1, 2, 3 emissions, review potential development of emissions monitoring systems **Establish LCA Process** • Initiate LCA for key ships, build LCA process DB	**Autonomous safety and healthy workplace** • Create comprehensive safety platform, strengthen workplace safety program **Diversify social contribution activities** • Expand types of social contribution activities and increase volunteer hours, expand collaboration with local organizations **Mutually beneficial cooperation with supply chain and foreigners** • Support to enhance ESG practices across contractors' external supply chain, and assist foreign workers to adjust quickly	**Advance ESG disclosures and evaluations** • Strengthen climate change information disclosures, respond to external evaluations, and conduct benchmarking **Publish 2024 Sustainability Report** • Fulfill disclosure requirements such as double materiality assessment, IMO regulations compliance, greenwashing prevention **Establish human rights management process** • Establish annual process to respond to requirements such as human rights due diligence regulations

ESG Organizational Structure

HSHI is committed to advancing our ESG management system, with the active participation of the executive management and the BoD, and collaboration with relevant ESG departments.

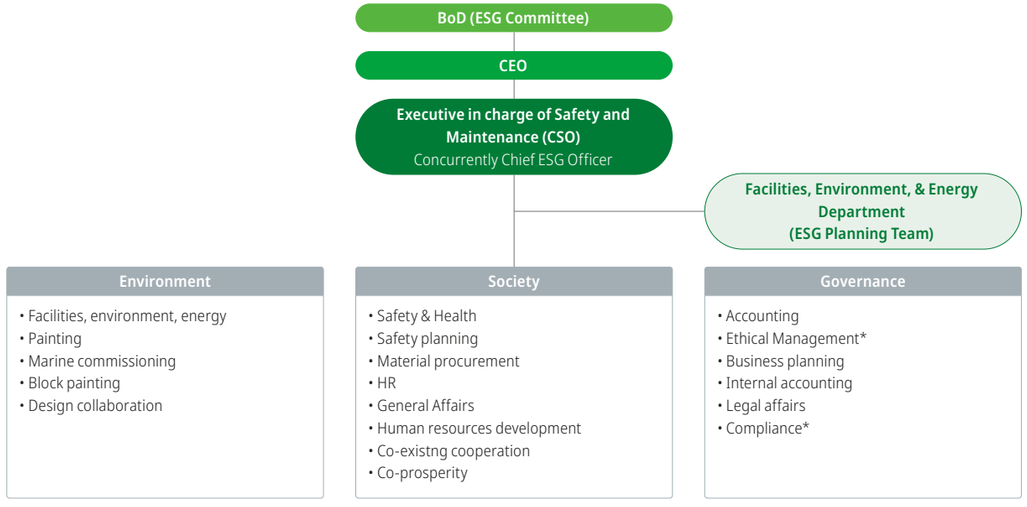
The ESG Committee under the BoD determines the company's ESG strategic directions and monitors performance, and also approves plans and monitors progress related to carbon neutrality in the shipbuilding and offshore business sectors, safety and health, human rights management, and supply chain ESG.

The agenda items reviewed by the ESG Committee related to the company's mid to long-term business strategy, large-scale investments, changes to management practices and organization, are presented to the BoD.

HSHI's Executive in charge of Safety and Maintenance (CSO) serves as the Chief ESG Officer, and is responsible for managing and overseeing a range of ESG related activities: these include identifying company-wide ESG risk factors and devising mitigation strategies, establishing ESG management plans, monitoring performance, and promoting and internalizing the company's ESG management program.

The ESG Planning Team within the Facilities, Environment, and Energy Department reviews key ESG KPIs, performance for each ESG activity, external evaluations, and self-assessments to identify annual tasks, and discusses with relevant departments on environment, society, and governance in regard to task implementation plans.

HSHI ESG Management Organizational Structure



* Integrated support from HDKSOE

Double Materiality Assessment

Double Materiality Assessment Process

Creation of Issue Pool

HDKSOE and its shipbuilding subsidiaries reviewed the list of ESG requirements from ESG disclosure initiatives (GRI, SASB, TCFD, etc.), domestic and international ESG ratings indicators (DJSI, MSCI, Sustainalytics, KCGS, etc.), and sustainability-related laws and regulations (ESRS), and created an ESG issue pool that is relevant to HDKSOE and its shipbuilding subsidiaries (long list). From the long list, we considered our industry sector, main products, value chain, and enterprise-wide risk management processes to create our own issue pool for HDKSOE and its shipbuilding subsidiaries (short list).

Analysis of Risk and Opportunity Factors

From the short list, we identified risks, opportunities, and the overall impact these issues may have on the business operations of HDKSOE and its shipbuilding subsidiaries. The risk and opportunity factors are used as the basis for measuring significance of each issue, and as reference for stakeholders during the survey stage to help understanding of the issues.

Measurement of Likelihood

In order to measure the likelihood of each issue, we analyzed the ESG trend reports published by the OECD, WEF, and other global ESG related organizations, and then identified issues that have a high probability of occurring in the mid to long-term, or are expected to occur. In addition, we analyzed approximately 1,800 news articles related to HDKSOE and its shipbuilding subsidiaries, and conducted a stakeholder survey to collect different perspectives and opinions.

Measurement of Impact Materiality

We calculated the impact materiality of each issue based on scale, scope, and irremediability. The evaluation was done by a comprehensive review of requirements from global disclosure and evaluations, impact of stakeholder within the value chain, and laws related to each issue. In addition, we conducted a stakeholder survey[1] to incorporate perspectives from external parties.

Impact Materiality Calculation Method

Category	Methodology
Scale	• Analysis of global initiatives • Stakeholder survey
Scope	• Analysis of stakeholder impact within value chain • Stakeholder survey
Irremediability	• Maximum fines or punishment in relevant laws and regulations

Measurement of Financial Materiality

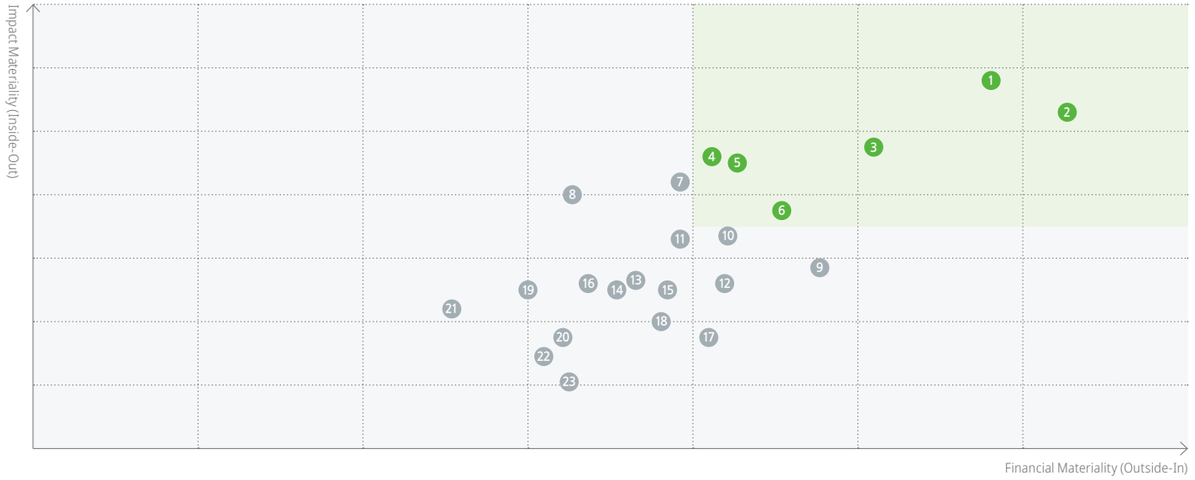
We calculated the financial materiality of each issue based on scale. We incorporated the frequency of issues identified in global disclosure and evaluation requirements and conducted stakeholder surveys[1]. In addition, we analyzed stewardship activity reports from global financial institutions to evaluate the level of engagement on each issue.

Financial Materiality Calculation Method

Category	Methodology
Scale	• Analysis of global initiatives • Analysis of investor stewardship activity reports • Stakeholder survey

1) Survey period: March 27 – April 2, 2025

Double Materiality Assessment Results



Identified Double Materiality Issues

Double Materiality Issues	1 Occupational Safety and Health	3 Climate change response	5 Labor-Management relations
	2 R&D and products with less environmental impact	4 Workplace environment	6 Supply chain ESG management
Other issues	7 Energy management	13 Sound governance	19 Resources recycling
	8 Human resources management	14 Human rights and diversity	20 Biodiversity and ecosystem
	9 Information protection	15 Business ethics	21 Protection of shareholder rights
	10 Creation of economic value	16 ESG management system	22 Protection of local community rights
	11 Pollutants and hazardous waste management	17 Water resources management	23 Social contribution activities
	12 Product quality and accountability	18 Enterprise risk management	

Double Materiality Assessment

Analyzing Impact of Material Issues

❶ Occupational Safety and Health (OSH)

Significance of Material Issues

Stricter regulations to protect the safety of workers have become a global trend. In Korea, the enactment of the Serious Accidents Punishment Act in 2022 clearly placed the obligation of industrial accidents prevention on the chief executive officer of the company. In addition, international norms including the UN Guiding Principles on Business and Human Rights (UNGPs) and OECD Guidelines for Multinational Enterprises clearly state that it is a company's responsibility to ensure workers' safety and human rights at business sites and across the supply chain. Recently enacted CSDDD also addresses a company's OSH risk management capabilities as a key factor.

As a leader in the shipbuilding and offshore engineering industry, **HDKSOE and its shipbuilding subsidiaries** consider our responsibility toward safety very seriously. Considering the labor-intensive nature of the business and the strengthening trend of safety and health regulations, OSH management is no longer just a legal requirement: it is a key priority in the management of our business, making continuous improvements and proactive measures critically important.

Business Impacts of Material Issues

OSH-related accidents may have significantly negative impacts on business operations and long-term corporate value creation. Serious accidents may cause not only short-term interruptions in our processes, but can result in a number of financial and non-financial losses including reduced competitiveness in winning orders, reputational risk and the imposition of fines and penalties.

Business Strategy to Material Issues

HDKSOE and its shipbuilding subsidiaries operate a company-wide safety and health management system for a systematic approach to OSH issues. Based on the company's safety and health policies and guidelines, we established key initiatives and risk management plans, and allocated resources and budget for implementation. We also proactively identify and rectify all potential hazardous factors or risks at the business sites, as well as thoroughly review and implement corrective actions for work processes, methods, and results. Through a management cycle that includes regular reviews by the Chief Safety Officer, we continuously evaluate and improve the effectiveness and adequacy of our safety and health programs.

More details are available on pages 68 to 74 of this Report.

Targets and Achievements

HDKSOE and its shipbuilding subsidiaries establish respective short-term safety and health targets every year, and disclose related achievements and performance in the Sustainability Report. All shipbuilding subsidiaries have set "Zero serious accidents" as a common goal, and additionally set separate short term goals based on the nature of the business site and operational conditions to systematically monitor safety management performance.

To create safer workplaces, **HHI**, **HMD**, and **HSHI** have set mid-to long-term goals and strategic directions focusing on key safety indicators including accident rate and fatality rate. Through this, we are strengthening our safety management performance from a long-term perspective. More details are available on pages 73 to 74 of this Report.

Incentive-linked KPIs for Executive Management in Relation to Material Issues

Category	Executive Management KPIs
HDKSOE	• Accident rates (Zero serious accidents)
HHI	• Accident rates (Zero serious accidents)
HMD	• Accident rates (Zero serious accidents)
HSHI	• Accident rates (Zero serious accidents)

External Impacts of Material Issues

External impacts of OSH issues arise throughout shipbuilding and related production processes, which are the core business activities of **HDKSOE and its shipbuilding subsidiaries**. These impacts occur not only in the physical work environments of our headquarters and shipyard sites, but also externally, impacting participants in the key processes within the supply chain. Key stakeholders related to OSH are the employees in the worksite including employees of contractors, and scope of impact includes workers' physical safety, right to health, working conditions, and incidence rate of accidents.

Due to the nature of the shipbuilding business, there are many high risk processes, and accidents can cause serious external impacts that directly impact workers' lives. As contractors' employees also work at the shipyards, safety accidents can escalate into social responsibility issues across the entire supply chain. Therefore, OSH is a very important issue for external stakeholders from the perspective of worker safety and human rights, and it is considered a key issue that involves legal and social responsibility.

Double Materiality Assessment

Analyzing Impact of Material Issues

❷ R&D and products with less environmental impact

Significance of Material Issues

In the global trend toward decarbonization and stricter environmental regulations, the technology for energy efficiency and emissions reduction for ships is the key factor in securing a company's sustainability and competitiveness in the shipbuilding industry. The IMO has set a target for the global shipping industry to reach net-zero GHG emissions by 2050. To achieve this goal, the IMO introduced a fuel standard as a technical measure and a carbon levy as an economic measure, with these regulations approved in April 2025. Additionally, from 2025, the European Union is applying the EU Emissions Trading System (EU-ETS) to the shipping industry and implementing the FuelEU Maritime regulation, thereby promoting the transition to low-carbon fuels in maritime transport. As environmental regulations on ships continue to strengthen and expand, technologies that reduce environmental impact, such as ships powered by low- and zero-carbon fuels, energy-saving technologies for ships, and emission reduction devices, have become critically important for corporate competitiveness.

Business Impacts of Material Issues

Following changes in the external environment, including stricter carbon emissions regulations by the IMO, increased demand for ships with less environmental impact by global shipping companies, and stringent ESG standards from key stakeholders and financial institutions, the ability to develop Low- and Zero-Carbon (LZC) ships has a significant impact on competitiveness and corporate value. **HDKSOE and its shipbuilding subsidiaries** can secure a competitive advantage and ensure the sustainability of our company by leading the effort to increase R&D on technologies with less environmental impact and supplying highly energy-efficient and low-emission ships with our differentiated technology.

Business Strategy to Material Issues

HDKSOE and its shipbuilding subsidiaries are focused on developing LZC fuel propulsion ships, starting from LNG propulsion to more prospective energy sources such as ammonia, hydrogen, and SMRs. As a "Total Solution Provider" that can meet the diverse needs of the market, we seek to expand our portfolio of eco-friendly vessels, research and develop engines and propulsion systems that use LZC fuels, and develop technologies to improve ship operation efficiency to enhance our competitiveness. More details are available on pages 41 to 47 of this Report.

Targets and Achievements

HDKSOE and its shipbuilding subsidiaries have established and are implementing Leading-Edge Technology Development Roadmap to achieve carbon neutrality by 2050 as set by the international shipping industry. This road map will also aid us as we proactively take action on the global shipbuilding and shipping industry's shift toward eco-friendly practices and the tightening environmental regulations. As a "Total Solution Provider," we have introduced our progress on each key technology area. More details are available on page 47 of this Report.

Incentive-linked KPIs for Executive Management in Relation to Material Issues

Category	Executive Management KPIs
HDKSOE	• Develop low- and zero-carbon ship • Develop low- and zero-carbon fuel system • Develop fuel cell and electric propulsion system
HHI	• Develop low- and zero-carbon ship • Develop low- and zero-carbon fuel engine
HMD	• Develop low- and zero-carbon ship
HSHI	• Develop low- and zero-carbon ship

External Impacts of Material Issues

Impacts of R&D and products with less environmental impact issues arise through the ships made by **HDKSOE and its shipbuilding subsidiaries** and the fuel powered systems that are installed on the vessels. These impacts can be considered throughout the entire process from ship design and engineering, procurement, shipbuilding, and sea trials. In this regard, the key stakeholders are shipowners and our customers, regulatory authorities, and local communities. The use of technologies with less environmental impact is expected to have positive impacts on the marine environment and key stakeholders.

To further spread this positive impact, we have established a systematic R&D team in each subsidiary company. We continue to monitor the development of technologies with less environmental impact, and manage metrics such as number of patents applied and number of patents registered.

Double Materiality Assessment

Analyzing Impact of Material Issues

❸ Climate Change Response

Significance of Material Issues

Abnormal weather events, typhoons, and rising sea levels due to climate change increase the risk of flooding and damaging facilities in the coastal regions where shipyards are located. All major shipyards in Korea are located along the coast, and any interruptions in process or property damage from abnormal weather events can bring risks such as delivery delays, disruption in production, and increased costs. As carbon neutrality becomes a key topic around the world, environmental regulations in shipbuilding are also rapidly changing. Therefore, the shipbuilding and offshore engineering industry must work to effectively manage and reduce carbon emissions not only in the shipbuilding process, but also across the entire value chain including raw material procurement, equipment supply, and logistics. To secure a competitive advantage in the future, it will be necessary to set integrated management of climate risks and greenhouse gas reduction strategies as core management tasks for the entire company and to implement them systematically.

Business Impacts of Material Issues

Impacts from climate change issues are expected to have a multifaceted impact on the costs and profits of **HDKSOE and its shipbuilding subsidiaries**. Regarding physical risks, abnormal weather events and rising sea levels will increase risk of flooding in the coastal regions where the shipyards are located, and cause damage to production facilities. Extreme weather events such as extreme heat and heavy snow can cause delays in production due to decreased efficiency. This can lead to a decline in reliability and delivery delays, which can lead to financial losses. Regarding transition risks, with the IMO's decarbonization regulations taking effect, securing low- and zero-carbon ship technology and reducing emissions have direct impact on the company's competitiveness to win orders. Without proper response measures, there can be adverse impacts such as penalties from regulatory violations, loss of customers, and reduced investment. On the other hand, investing in technology and process innovations to address climate change can lead to new markets and opportunities for profit.

Business Strategy to Material Issues

To address climate change risks, **HDKSOE and its shipbuilding subsidiaries** have established three major strategies: GREEN SHIPYARD, GREEN PRODUCT, and GREEN PARTNERSHIP. The GREEN SHIPYARD strategy is aimed at achieving carbon neutrality by 2050 and reducing emissions from business sites through our FOS (Future Of Shipyard) project. With the GREEN PRODUCT strategy, we are developing ships that are powered by low- and zero-carbon fuels that will reduce emissions during ship operations. Through the GREEN PARTNERSHIP strategy, we are collaborating with stakeholders throughout our shipbuilding value chain to respond flexibly to climate change. In addition, we are implementing ways to identify physical risks such as abnormal weather events, typhoons, and rising sea levels beforehand to prevent or minimize interruptions to processes or property losses. More details are available on pages 37 to 38 of this Report.

Targets and Achievements

HDKSOE and its shipbuilding subsidiaries established a carbon neutrality roadmap that conforms to the global target of limiting global warming to 1.5℃ above pre-industrial levels. The roadmap was created in consideration of domestic and international laws and regulations, trends in the market and technological developments, customer demands, progress of other companies in the same industry, and connection to our business strategy. It also includes targets for 2030, 2040, and 2050, based on the recent climate science and data. More details are available on page 30 of this Report.

Incentive-linked KPIs for Executive Management in Relation to Material Issues

Category	Executive Management KPIs
HDKSOE	• Greenhouse gas (GHG) emissions targets and GHG emissions intensity based on the carbon neutrality roadmap
HHI	• Greenhouse gas (GHG) emissions targets and GHG emissions intensity based on the carbon neutrality roadmap
HMD	• Greenhouse gas (GHG) emissions targets and GHG emissions intensity based on the carbon neutrality roadmap
HSHI	• Greenhouse gas (GHG) emissions targets and GHG emissions intensity based on the carbon neutrality roadmap

External Impacts of Material Issues

External impacts of climate change response issues arise across the entire process of **HDKSOE and its shipbuilding subsidiaries**' main business operations, from ship design, procurement of materials and equipment, shipbuilding, and sea trials, as well as across the supply chain and ship operations. In this regard, the key stakeholders are customers, regulatory bodies, supply chain, local community, and investors, and key impacts are climate change due to emissions, response measures to environmental regulations, supply chain responsibility, and the company's reputation and credibility.

HDKSOE and its shipbuilding subsidiaries are working to achieve not only carbon neutrality at our business sites but also to reduce emissions from our supply chain and product use.

These efforts contribute to reducing the global climate risk and also have a wide range of external impacts, including fulfilling our environmental and social responsibilities, earning a good reputation and credibility in the global market, and meeting our stakeholders' expectations.

Stakeholder Communications

Communication with Stakeholders

Sector	Topics of Interest (Survey Results)	Other Topics of Interest	Main Communication Channels	Response Activities	2024 Highlight
Customer	• Product quality and accountability • R&D and products with reduced environmental impact • Business ethics • Climate change response	• Enhancing product and technology competitiveness • Developing products with reduced environmental impact and high-added value • Improving product quality and safety • Increasing quality satisfaction	• Expositions, exhibitions, and forums • Overseas branches • Sales meetings and visits to customers • Customer satisfaction surveys	• Participation in expositions, exhibitions, and technology forums • Visits to customers and promotion of technologies • Enhancing management of customer satisfaction • Strengthening initial equipment/ technology risk management	• Hosted HD Hyundai AI Forum • Participated in CES 2024 • Attended major shipbuilding and shipping exhibitions including Posidonia 2024
Shareholders/ Investors	• R&D and products to reduce environmental impact • Occupational safety & health • Product quality and accountability • Labor-Management relations	• Increasing shareholder value • Generating stable business performance • Managing business opportunities and risks • Ensuring transparent corporate governance	• Annual General Meetings (AGMs) • Corporate briefings • Public disclosures and posting on website • Investor meetings and conference calls	• Quarterly earnings announcements and providing IR materials • IR activities for analysts and institutional investors • Disclosing key information such as BoD decisions and orders received • Publishing the corporate governance report	• Issued monthly/annual IR News (13 times) • Issued IR Presentations and corporate value enhancement plans (9 times)
Contractors	• Occupational safety & health • Supply chain ESG management • Creation of economic value • Climate change response	• Promoting co-prosperity activities • Strengthening fair trade • Skills training for contractors • Sharing market information and enhancing communication	• Meeting with contractors • Regular VOC feedback • Contractors site visit and interview • Co-prosperity Council • Unfair Trade Reporting Channels for contractors	• Operating the integrated procurement system (HiPRO) • Providing online and offline training and recruitment-linked training • Financial support for contractors • Support for technology protection • Quality assessment and technical support for contractors	• (External Contractors) Held New Year HD Hyundai Integrated Council Meeting • (External Contractors) Held HHI Council, HMD Council, HSHI Council (Quarterly or biannually) • (In-house Subcontractor) Held Co-prosperity Council (Quarterly or biannually)
Local Community	• Social contribution activities • Protection of local community rights • Workplace environment • Energy management	• Vitalizing the local community • Attracting industry and creating jobs in the region • Protecting and improving the local environment • Community-centered social contribution activities • Communication with the local community	• Local government councils • Visits to local public institutions • Meetings with local community organizations • Meetings with local volunteer groups • Local community events • Local community welfare coordination meetings	• Social contribution with employee participation including volunteer activities • Formation and participation in local community councils • Talent development programs for the local community • Investment into local community development • Support and participation in local community events • Monitoring local community welfare surveys and indicators	• (HHI) Held local community welfare councils(2 times) • (HMD) Held local community communication channels (at least once a quarter) • (HSHI) Held local community welfare councils(2 times)
Employees	• Occupational safety & health • R&D and products with reduced environmental impact • Climate change response • Workplace environment	• Fair evaluation and compensation • Increasing employee welfare and benefits • Strengthening employee capabilities • Labor relations and communication • Sharing business operational updates • Operating safe workplace	• Labor-Management council • Grievance handling and reporting System • Intranet and internal newsletters • Internal CATV broadcast • Meetings with management • Management status briefings	• Quarterly Labor-Management council • Conduct meetings with the CEO • Internal newsletter and webzine • Communication channels on intranet • Talent development programs	• Held quarterly Labor-Management councils at each company • (HHI) Conducted Management Status Briefings quarterly
Government/ National Assembly	• Creation of economic value • Human resources management • R&D and products with reduced environmental impact • Climate change response	• Legislative amendments • Safety and labor issues • Participation and support in government events • Support for industry and business information • Current issues in the regional local economies	• National Assembly and government ministries • National Assembly audits • Participation in economic organization activities • Policy meetings • Local government council	• Regular and ad-hoc meetings with relevant standing committees and institutions • Attending regular National Assembly audits and ad-hoc hearings • Participating in key economic organization seminars and forums • Engaging with local government councils and communicating with civic groups • Providing surveys and requested data to external organizations	• Participated in ESG Committee by the Korea Enterprises Federation • Participated in business forums and events organized by economic organizations
Media	• Occupational safety & health • Workplace environment • Labor-Management relations • R&D and products with reduced environmental impact	• Business performance and industry issues • Major company-wide issues • Strategic direction of key businesses	• Press release • Media Center on company website • Media meetings	• Timely provision of press releases • Support for journalist coverage • Media briefings	• Press releases published on the website https://www.hd.com/en/newsroom/ https://esg.hd.com/en/news

Environmental

A roadmap has been established to achieve carbon neutrality by 2050, and industry-specific implementation strategies are being put into action.

Climate Change Response

Governance

Climate Change Response Governance

Management and Oversight by the BOD and the Executive Management

Roles of the BOD

The ESG Committee under the Board of Directors of **HDKSOE and its shipbuilding subsidiaries** receives reports on the carbon neutrality roadmap, GHG emissions reduction targets and implementation plans, risks and opportunity assessments based on climate change scenarios, and tasks to calculate and reduce GHG emissions. The Committee oversees that these climate change responses are conducted in an optimal manner and procedure.

The roles and authorities of the BOD are stipulated in the "Operational Regulations of the ESG Committee," which include review and deliberation on the following: the establishment and implementation of company-wide climate change responses and ESG strategies, matters related to social responsibility; and support required to develop and internalize ESG capabilities including climate change responses.

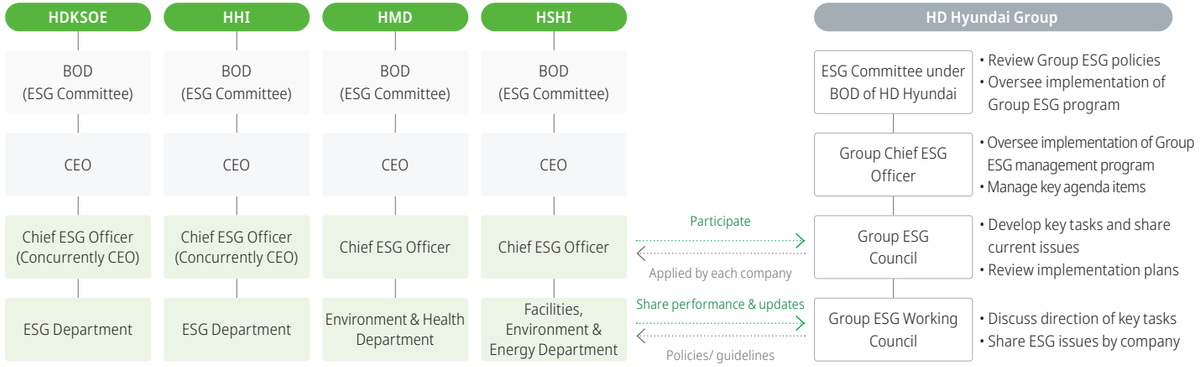
Roles of the CEO

The CEO plays a leading role in reviewing and managing carbon neutrality strategies, GHG emissions reduction plans, energy efficiency improvement measures, and climate change responses. In addition, the CEO identifies climate change opportunity factors to develop new growth engines and analyzes risk factors for effective responses. Among the climate change response issues reported to the CEO, items that are expected to significantly influence business competitiveness are put on the agenda for the BOD (ESG Committee).

Role of Chief ESG Officer and ESG Executives

The Chief ESG Officer and the ESG management team are responsible for establishing carbon neutrality strategies and managing the implementation of GHG emissions reduction activities. They also assess and manage climate change risks that are expected to have significant impact on business operations, and then devise policies and strategies based on the climate change scenario analysis.

Climate Change Response Governance of HDKSOE and its shipbuilding subsidiaries



Roles of Operational Departments

The departments in charge of climate change responses at **HDKSOE and its shipbuilding subsidiaries** seek various measures to respond to domestic and international climate change-related regulations, policy directions, and responses to industrial trends while exploring initiatives to attain reduction targets according to the carbon neutrality roadmap. Furthermore, they cooperate with other related departments such as business planning and R&D to respond to company-wide transition and physical risks related to climate change.

Relevant departments also play their roles in expanding LZC ships (reduction of Scope 3 GHG emissions, etc.) by developing technologies to use alternative fuels, enhance the efficiency of ship engines, and improve ship structures. On top of that, they perform activities including the establishment and operation of energy management system, and optimization of facilities for energy saving and GHG emissions reduction. They are also developing measures to respond to transition risks such as building new zero-carbon sea trial facilities, as well as measures for physical risks such as heat waves and floods.

Roles and Discussions of Group ESG Council

The Group ESG Council, composed of Chief ESG Officers from HD Hyundai Group and its subsidiaries, oversees and manages the establishment and implementation of climate change response strategies. In 2024, the Council discussed the carbon neutrality roadmap and its implementation progress, response measures to carbon and human rights management regulations, and an integrated Group ESG metrics management platform.

Roles and Discussions of ESG Working Council

The ESG Working Council, under the Group ESG Council, discusses strategic planning and detailed action plans for climate change responses at the working level. In 2024, the Working Council discussed measures to implement carbon neutrality, procure renewable energy for the group, advancing the ESG governance framework, and operation of the Internal Carbon Pricing system.

Operation of Climate Change Response KPIs

HDKSOE and its shipbuilding subsidiaries introduced KPIs for environment and climate change responses, in accordance with the ESG KPIs system, on which the CEOs, responsible executives, and operational departments are based for their evaluation.

The KPIs for the CEOs and responsible executives include "Achieving GHG emissions targets based on the carbon neutrality roadmap" and "Building integrated energy monitoring system." Working-level department leaders and team leaders are evaluated based on the climate change response KPIs for the executives and cascading goals tailored to the roles and responsibilities of each department and team.

Climate Change Response KPIs of HDKSOE and its shipbuilding subsidiaries

Category	Key KPIs	Use for Evaluation
CEO	• Achieve GHG emissions targets based on the carbon neutrality roadmap • Establish integrated energy monitoring systems	Use KPIs for performance evaluation and calculation of remuneration
Executives in charge		
Department and team leaders	• Based on executives' KPIs and cascading[1] goals for each department and team - Reduce GHG emissions - Save energy use - Introduce renewable energy - Establish targets for construction of monitoring system - Establish investment plans in measurement infrastructure facilities	

1) KPIs for executives in charge, department leaders, and team leaders may differ, depending on the conditions of each company, department, and team.

Climate Change Response

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Directions for Carbon Neutrality

GLOBAL LEADING NET ZERO SHIPBUILDER

HDKSOE and its shipbuilding subsidiaries strive to evolve into a Global Leading Net Zero Shipbuilder based on advanced shipbuilding and offshore technologies, as well as rich shipbuilding experience and capabilities.

To this end, we will implement the 2030 FOS (Future of Shipyard) project to enhance productivity, shorten lead time, and achieve zero waste. This will require the company to reduce Scope 1 and 2 GHG emissions through improved energy efficiency, transition to low-carbon fuel, and increased use of renewable energy. Furthermore, we will strengthen our cooperation with various stakeholders including customers and contractors in order to measure and reduce GHG emissions throughout the entire shipbuilding value chain.

To actively respond to global standards on ship GHG emissions reduction and the growing demands of customers on new ships to meet environmental regulations, focus is placed on developing and commercializing LZC ship technologies. The commercialization of these LZC ships is expected to contribute to the reduction of not only Scope 1 emissions but also Scope 3 (Category 11: Use of sold products) GHG emissions.

Charting Pathways to Carbon Neutrality

Our outlook on the future of shipbuilding and shipping was based on the scenarios presented by the IEA, the Intergovernmental Panel on Climate Change (IPCC), and global research institutions (Clarksons Research, DNV, etc.)

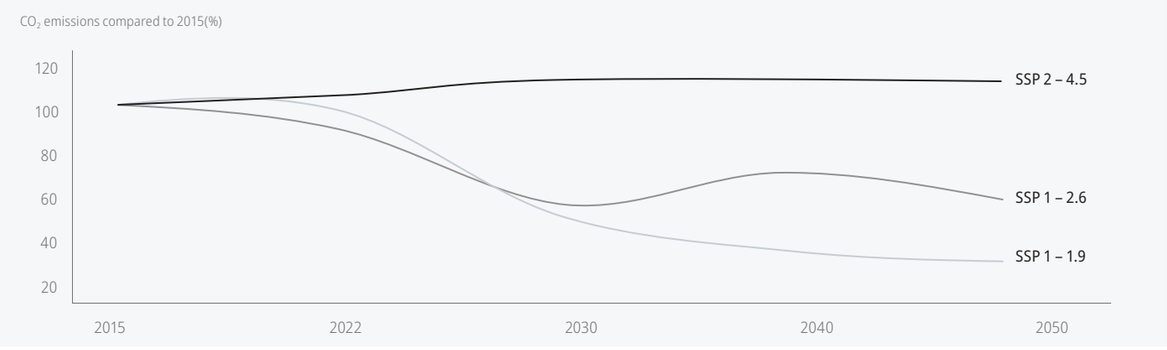
Based on this outlook, pathways to carbon neutrality were established in alignment with South Korea's 2050 carbon neutrality scenario, the 2030 national GHG emissions reduction target, and the goal of limiting global warming to 1.5℃ (compared to pre-industrial levels) under the Paris Agreement.

Establishing Carbon Neutrality Roadmap (Scope 1, 2)

HDKSOE and its shipbuilding subsidiaries reported and approved the carbon neutrality implementation roadmap at the BOD (ESG Committee) meeting held in the 1st half of 2023 and made the roadmap public with the "2050 Carbon Neutrality" declaration in May 2023. Targets for 2030, 2040, and 2050 were also set in consideration of domestic and international climate change-related laws and regulations, market and technology development trends, customer demands, implementation status within the shipbuilding industry, alignment with business strategies, and the latest climate science data.

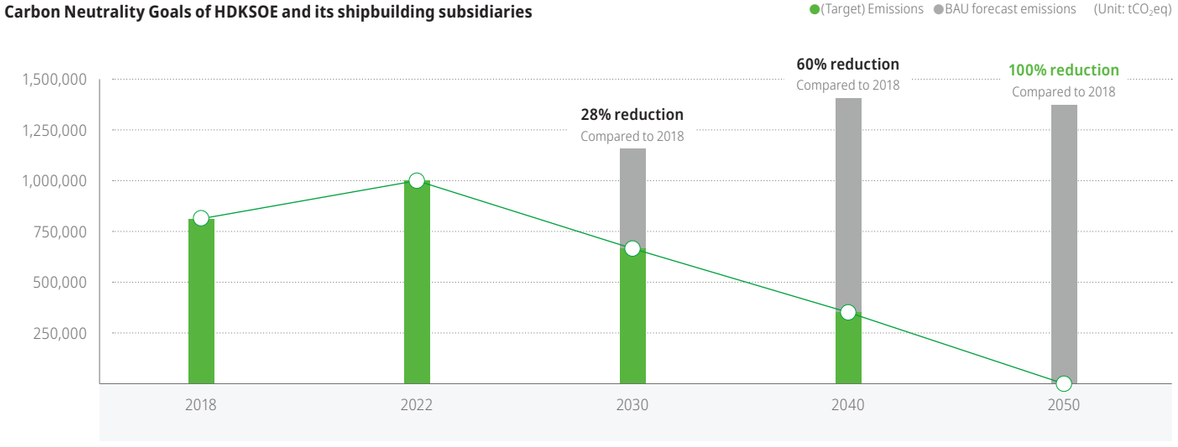
To achieve carbon neutrality, the plan aims to reduce Scope 1 and 2 emissions by 28% compared to 2018 levels by 2030, 60% by 2040, and 100% by 2050. The carbon neutrality roadmap follows a similar emissions trend to the IPCC SSP (Shared Socioeconomic Pathways) 1-1.9 scenario, which limits global warming to 1.5℃ by 2100 compared to pre-industrial levels.

IPCC SSP Scenarios



Scenario category	Ground Surface Temperature Changes between 2021 and 2040		Ground Surface Temperature Changes between 2041 and 2060	
	Best estimate (℃)	Very likely range (℃)	Best estimate (℃)	Very likely range (℃)
SSP 1 – 1.9	1.5	1.2 to 1.7	1.6	1.2 to 2.0
SSP 1 – 2.6	1.5	1.2 to 1.8	1.7	1.3 to 2.2
SSP 2 – 4.5	1.5	1.2 to 1.8	2.0	1.6 to 2.5

Carbon Neutrality Goals of HDKSOE and its shipbuilding subsidiaries



Climate Change Response

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Climate Change Response Strategies

Carbon Neutrality Implementation Strategies

Establishing a Climate Change Response System

To pre-emptively respond to changing external conditions such as new climate change related regulations, **HDKSOE and its shipbuilding subsidiaries** will implement activities to mitigate climate change risks, and at the same time, continue to explore business opportunity factors.

Collaboration with customers and supply chains is promoted across the entire value chain to achieve carbon neutrality and identify efficient carbon reduction measures. Participation in external greenhouse gas reduction projects is under review as a hedge against risks related to carbon credits.

A carbon management governance framework will be established, including the operation of a Carbon Credit Management Working Meeting, to systematically implement emissions reductions and manage risks associated with emissions allowances. In addition, we will build an integrated energy monitoring system to monitor and control energy use data in real-time, developing sustainable reduction strategies.

Detailed actions related to the carbon neutrality roadmap, along with risks and opportunities from climate change, will be transparently disclosed to stakeholders in accordance with domestic and international disclosure regulations and guidelines such as TCFD.

Management of Scope 1 & 2 GHG Emissions

Although **HDKSOE** is not subject to the GHG Target Management System (TMS) or Emissions Trading Scheme (ETS), HDKSOE voluntarily calculates and manages GHG emissions according to the domestic guidelines on GHG emissions calculation. GHG emissions are monitored monthly at all major business sites including research buildings, hotels, and theaters. From 2024, third-party verification of emissions data has been introduced to ensure accuracy and transparency.

HHI operates a GHG management system called Hi-GMS, based on international standards such as IPCC Guidelines and domestic guidelines on GHG emissions calculation. Hi-GMS is used for effective response to the ETS. It measures system-based GHG data, analyzes expected emissions, calculates BAU emissions, and manages trading and allocation of carbon credits, In addition, using the Hi-GMS, HHI enhanced the completeness of our emissions calculation plans by monitoring managing renewable energy use and heat (steam) transfers. Third-party verification ensures the accuracy and transparency of GHG emissions data.

Using the GHG inventory based on IPCC Guidelines, **HMD** monitors GHG emissions for each emitting facility and reports the monitoring results at the executive management meetings. Third-party verification is conducted to ensure the effective operation of the GHG inventory and the reliability of collected data.

HSHI also calculates GHG emissions by using the IPCC Guidelines and has identified factors to reduce energy use and emissions through a real-time internal data monitoring system called Twin-Fos. Moreover, HSHI ensures accuracy and reliability of GHG emissions data through third-party verification.

Establishing Energy Management System

To improve energy use efficiency and implement systematic energy management, **HDKSOE and its shipbuilding subsidiaries** plan to build an "integrated energy management system" that will transition energy measurement and management framework from the current business site-based approach to a factory- and process-based approach. As the first step, we are establishing and reviewing short-, medium-, and long-term investment plans for metering infrastructure covering major energy sources such as electricity and city gas. The scope of management will then be expanded to include other utility gases and fuels.

HHI upgraded the integrated energy management system (Hi-Energy) and is monitoring real-time energy use for each factory and building. Through Hi-Energy, HHI introduced energy saving targets to systematically manage energy consumption targets and progress of each team and organization. In addition, an "Energy Keeper" initiative has been implemented, which manages cases of energy waste, and energy-saving idea contests are held to promote energy saving company-wide and encourage employee participation.

HMD has newly established a monitoring system for energy-intensive equipment, and built a real-time data-based management framework by integrating all major energy facilities, allowing energy use to be monitored by item. In addition, a new monitoring system is being established for city gas, water, and other utilities. Through system upgrades, such as regular inspections of IoT devices and improvements to communication errors, the energy efficiency of facilities is being optimized.

HSHI is operating a "Energy Control Center" within the integrated control center and established a data-based management system using FEMS. Progress is being made in building a system to monitor electricity, CO_2, and LNG use by area.

Energy Efficiency and Energy-saving at Business Sites

HDKSOE analyzes energy usage patterns and actively searches for ideas to improve energy efficiency and reduce energy consumption. Optimal heating and cooling, automatic lights-out, automatic power-saving of monitors, and shared services are currently in use.

HHI actively promotes various energy efficiency improvement initiatives and transitions to low-carbon fuels, such as enhancing the efficiency of air compressors, introducing gas hot air blowers for post-painting drying of ships, optimizing painting facility operations, and upgrading crane control systems. In addition, we are improving energy efficiency by reusing waste heat generated from incineration facilities internally or selling it externally.

HMD built an automatic control system for energy-intensive equipment in the painting process by linking factors such as operating times based on the type of paint used, indoor temperature and humidity of factory, and screen doors. This system is expected to reduce annual GHG emissions by 2,225 tons and NOx emissions by 1.2 tons. In addition, a trial run was conducted for a heat pump on the hot water heater in the office buildings, which reduced city gas consumption by 119,206 Nm^3 and annual GHG emissions by 62.68 tons. Heat pumps are planned to be installed in all office buildings by 2025 to improve energy efficiency.

HSHI installed ESS (Energy Storage Systems) and reduced energy consumption during the week, and reduced use of electricity by installing timers on the preheating pads used for container ship welding. In addition, for the HVAC system at painting facilities with high energy consumption, various energy-saving measures are being implemented, such as stricter winter temperature control standards to reduce operating hours, improving air piping for more efficient operation of air compressors in summer, and introducing blowers.

Energy Management System Third-Party Certification

Category	Certification Standard	Certifying Agency	Validity Period
HHI	ISO 50001:2018	SGS	November 2022 – November 2025[1]
HMD	ISO 50001:2018	LRQA	June 2024 – June 2027
HSHI	ISO 50001:2018	DNV	September 2023 – September 2026

1) Validity period to be changed after renewal in November 2025 (November 2025 to November 2028)

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Carbon Neutrality Implementation Strategies

Transition to Low- and Zero-Carbon (LZC) Fuels

HDKSOE and its shipbuilding subsidiaries plan to transition from fossil fuel-based (diesel, heavy oil) devices and equipment to electric or hydrogen energy-based ones. In line with the IMO's 2050 carbon neutrality regulations for the shipping sector, there will be transitions to ships fueled by LZC energy sources such as ammonia, hydrogen, and electricity, and it is expected that this transition will reduce emissions during sea trials.

We will continue to reduce emissions with shortened sea trials by taking advantage of digital twin technology and by using onshore power during mooring trials.

Introduction of Renewable Energy

In line with the plan to use 100% renewable energy by 2050, **HDKSOE and its shipbuilding subsidiaries** are working to transition grid electricity to renewable energy by introducing self-generating equipment and expanding offsite purchases and investments into renewable energy. Solar and other generation facilities are planned to be constructed and operated centered on areas that present good conditions for renewable energy, and the use of the renewable energy generated will be expanded.

Moreover, various market mechanisms including Power Purchase Agreements (PPA[1]), Renewable Energy Credit (REC[2]), and renewable energy procurement through equity investments in renewable energy producers will be reviewed, and then optimal strategies will be established to purchase and invest in renewable energy through cost-benefit analysis.

In 2024, **HHI** entered into the first renewable energy PPA, and in 2025, approximately 2MW of solar energy is planned to be procured from the Ulsan factory. The company plans to gradually expand the use of renewable energy through various methods such as external PPAs and REC purchases.

1) PPA: Power Purchase Agreement
2) REC: Renewable Energy Credit

HMD installed approximately 144 kW of solar panels on rooftops and upper structures within its business site, and is currently reviewing the construction of additional facilities. To achieve carbon neutrality by 2050, the company is also actively considering the introduction of renewable energy through off-site Power Purchase Agreements (PPAs).

HSHI completed the installation of a 1.8 MW solar power generation facility in 2025 on an external parking lot site (8,600 m^2) in Yeongam, Jeollanam-do. In addition, the company is reviewing plans to install an additional 2.2 MW facility by 2026.

Calculating Scope 3 Emissions

HDKSOE and its shipbuilding subsidiaries are developing and applying the Scope 3 calculation methodology tailored to the domestic shipbuilding industry based on the standards and guidelines on the calculation of Scope 3 emissions in the GHG Protocol.

We calculate and make public the emissions of 10 categories of Scope 3 emissions, and calculated Scope 3 emissions using internal data and external indicators that align with calculation methodology for each category.

The scope of data collection required to calculate Scope 3 emissions will continue to be expanded in cooperation with customers and the supply chain, and a commitment to disclose reliable information will be upheld by advancing the calculation methodology.

Verification of Scope 3 Emissions

HDKSOE and its shipbuilding subsidiaries receive third-party verification for Scope 3 emissions calculation procedures and results every year.

This verification process has been conducted in line with international standards for voluntary GHG emissions monitoring and reporting (ISO 14064-1, ISO 14064-3), and GHG Protocol Standard and Guidance for GHG emissions measurement and management.

Additionally, it examines the characteristics and detailed figures of the data used in the calculation, the methodologies and procedures for calculation (including formulas and emissions factors), and checks for any significant errors or omissions in the estimation used for the calculation.

Support for Contractors' Reduction of GHG Emissions

HDKSOE aims to go beyond addressing the gap between large companies and SMEs and achieve mutual growth and at the same time contribute to the national GHG reduction. To this end, support programs are being implemented for shipbuilding industry contractors in their GHG emissions reduction efforts, through public and private collaboration.
(In April 2024, HDKSOE, Korea East-West Power, and Korea SMEs and Startups Agency signed an MOU)

Various programs such as replacing high-efficiency equipment and consumable items, and installing monitoring systems to manage GHG reductions are supported. Programs will be expanded to more contractors and more reduction initiatives will be implemented each year.

BUSINESS CASE

High-Efficiency Air Compressor Replacement Project

Project Overview

Replace old air compressors at shipbuilding contractors' business sites to high-efficiency inverter air compressors to maximize energy saving and obtain carbon credits

Expected results

Strengthen win-win cooperation between large and small companies, reduce contractors' Scope 1 and 2 emissions and our Scope 3 emissions at the same time to contribute to achieving carbon neutrality by 2050.

- In 2024, supported 13 contractors in the first project. Expect to secure approximately 5,600tCO_2eq over 10 years (Preparations for second project underway in 2025)

High-Efficiency Air Compressor Replacement Project Process (Annual)

Analysis of GHG Emissions in the Value Chain

Scope 3 GHG emissions in 2024 (5.2%)	(Unit: tCO_2eq)
HDKSOE	40,970
HHI	3,500,753
HMD	1,227,497
HSHI	2,157,089

Scope 1, 2 GHG emissions in 2024 (0.8%)	(Unit: tCO_2eq)
HDKSOE	8,408
HHI	671,156
HMD	166,913
HSHI	276,473

Scope 3 GHG emissions in 2024 (94.0%)	(Unit: tCO_2eq)
HDKSOE	818,877
HHI	59,552,116
HMD	27,543,449
HSHI	37,990,640

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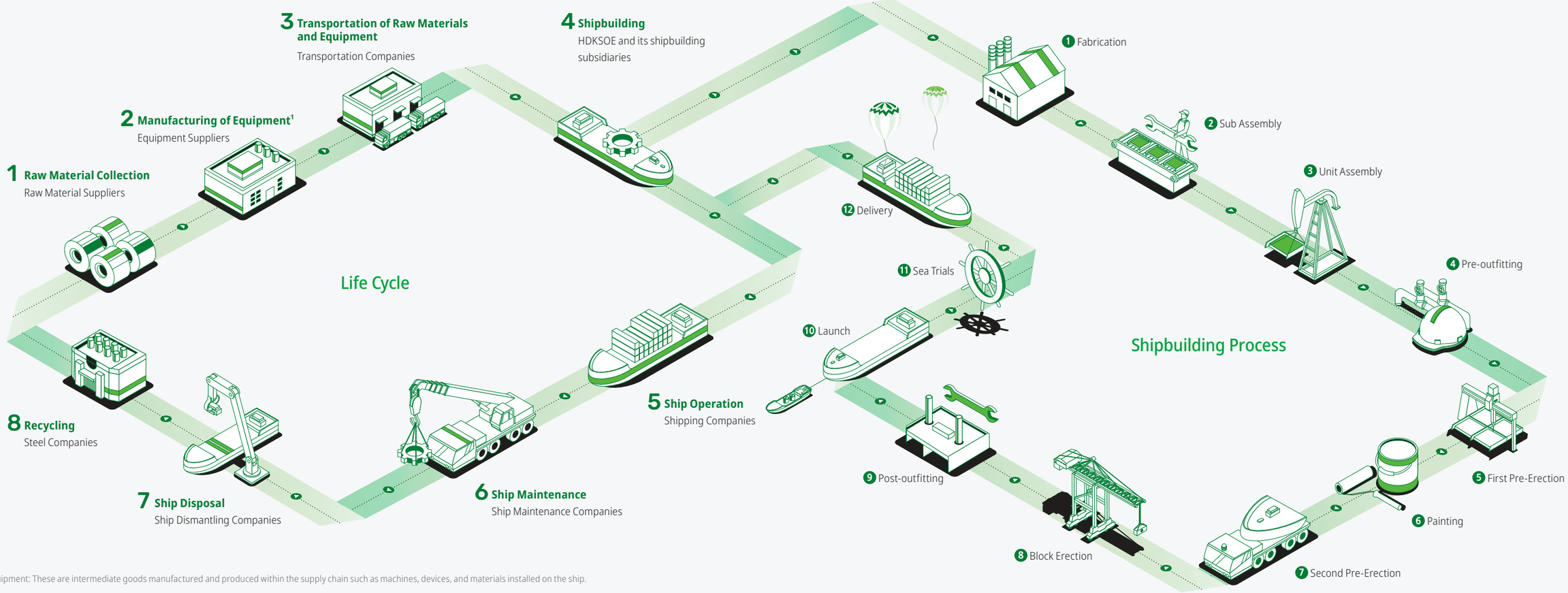
Strategies for Carbon Neutrality

Shipbuilding Process and Life Cycle



1) Equipment: These are intermediate goods manufactured and produced within the supply chain such as machines, devices, and materials installed on the ship.

Climate Change Response

Strategy

Climate Change Response Strategy

BUSINESS CASE **Life Cycle Assessment (LCA)**

Background and Importance of LCA

HDKSOE and its shipbuilding subsidiaries conducted a Life Cycle Assessment (LCA) to calculate GHGs emitted throughout the entire value chain, from raw material extraction and procurement to production, use, disposal, and recycling. This important information will be used to establish GHG emissions reduction strategies for the whole value chain.

In July 2023, the 80th meeting of the IMO's Marine Environment Protection Committee (MEPC) raised the carbon emissions reduction target for the shipping sector from 50% to 100% compared to total emissions in 2008, and at the same time, adopted LCA for marine fuels. With the recent revisions in the "Guidelines for Reviewing Environmental Labels and Advertisements," regulations relating to the life cycle of products have become more stringent, placing greater importance on LCA.

In line with these events, **HDKSOE** and **HHI** conducted LCA on one 174K LNG carrier in 2023 and 2024, **HMD** conducted LCA on one 2100TEU container ship, and **HSHI** conducted LCAs on 7900TEU and 15600TEU container ships. Through the LCA, we measured GHG emissions generated from the whole life cycle of ships from raw material extraction and transportation to shipbuilding, operation, dismantling, recycling, and disposal. In particular, we collected data on the actual materials and energy used during the shipbuilding process and used actual operation and maintenance scenarios of ships to increase the reliability of the LCA. Following the 2024 LCA of key ship types—including LNG DF LNG carriers, LNG and Methanol DF container ships—we aim to extend the assessment to all products going forward.

LCA Methodology

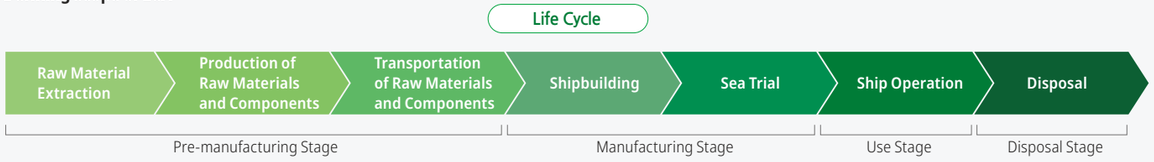
HDKSOE and its shipbuilding subsidiaries used the Full-LCA methodology to calculate GHGs emitted throughout the life cycle of the ships in accordance with the international standards related to LCA such as the GHG Protocol and ISO 14040 (Principles and Framework for Life Cycle Assessment), and ISO 14044 (Specific Requirements and Guidelines for LCA).

The life cycle assessment includes four stages: pre-manufacturing stage, which covers raw material extraction and the production and transportation of raw materials and components; the manufacturing stage, which includes shipbuilding and sea trials; the use stage, which involves the operation of the ship; and ship dismantling and disposal.

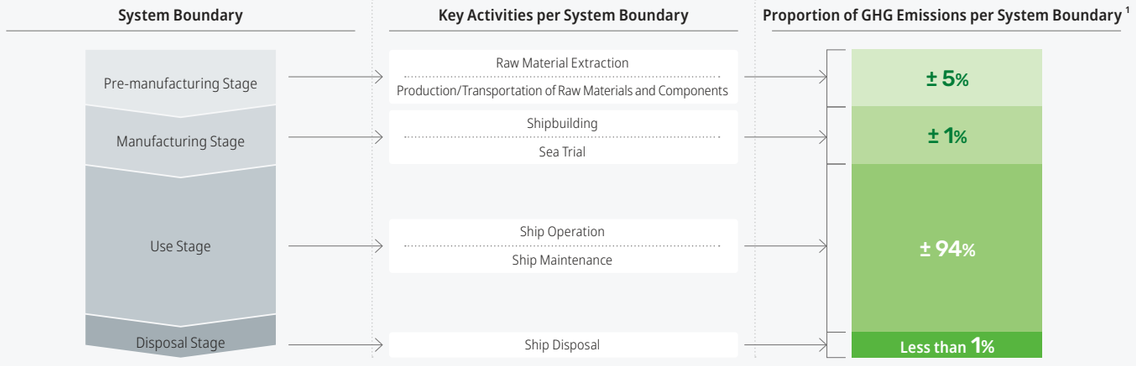
LCA Procedures

Definition of Goals and Scopes	• Defining goals • Setting system boundaries • Determining functional units
Life Cycle Inventory	• Identifying system-affecting items • Pre-processing and quantifying input data • Reviewing data quality
Life Cycle Impact Assessment	• Selecting modeling types and principles • Selecting impact ranges and indicators
Interpretation and Report of Results	• Evaluating contributions and analyzing uncertainties • Reporting final results

Defining Scope of LCA

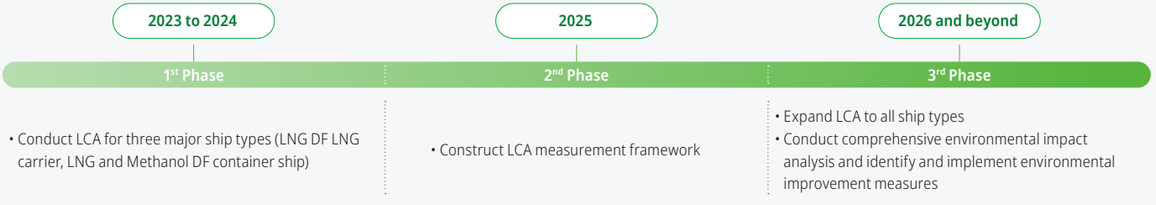


LCA Results



1) Average GHG emissions per system boundary of 4 LCAs conducted by HDKSOE and its shipbuilding subsidiaries

LCA Implementation Plan



Climate Change Response

Risk Management

Climate Change Risk Management

Climate Change Risk Management Procedures

Risk Identification

HDKSOE and its shipbuilding subsidiaries analyzed domestic and international regulations and policies, as well as climate change scenarios to correctly identify risk factors and opportunity factors that may arise due to climate change. We examined trends in the IMO, the U.S., and the EU, and referred to the national standard climate change scenario (Korea Meteorological Administration) and statistical data from research institutes in the regions where our business facilities are located. The scenario analysis included scenarios from IEA NZE, SDS, STEPS and IPCC RCP.

Based on an analysis of the regulations, policies, and scenarios, potential or highly probable risk factors (those having negative impacts on business and financial performances), and opportunity factors (those having positive impacts on financial performance through new technologies, products, and services) were identified for each issue.

Risk Assessment

HDKSOE and its shipbuilding subsidiaries conduct business impact assessments on risk factors and opportunity factors for each issue identified based on the analysis of regulations, policies, and scenarios. Risks are assessed by comprehensively considering the likelihood of risk and opportunity factors, as well as the scale of impact and resilience when such factors occur.

The company's response capabilities to risk factors and opportunity factors for each issue are also reflected in the risk assessment. The response capability assessment is conducted to check the company's ability to immediately respond in the event of risks, the resilience to mitigate impacts, and the ability to pioneer new markets and secure new growth engines when capturing opportunity factors.

Moreover, expanding climate change risk identification and assessments from just business sites to the entire value chain including upstream and downstream industries is being considered.

This will enable us to identify direct and indirect impact factors related to climate change, and comprehensively analyze risks across the entire business operations including our supply chain.

Risk Management

HDKSOE and its shipbuilding subsidiaries determine priority issues related to climate change and develop strategies to manage risk and opportunity factors by comprehensively considering the risk assessment results, risk acceptability, and level of risk management capabilities.

Response strategies are established and implemented, and risk and opportunity factors that significantly affect business operations and financial performances are continuously monitored. For those risk and opportunity factors with less impact or with low benefits compared to response costs, changes are continuously monitored.

Climate Change Risk Management Procedures

Management Stages	Risk Identification			Risk Assessment		Risk Management	
	Analysis of Regulations, Policies, and Scenarios	Identification of Risk Factors	Identification of Opportunity Factors	Evaluation of Risk Factors	Evaluation of Opportunity Factors	Risk Management Types	Integrated Risk Management
Key Activities	• Utilize national regulations and policies, standard scenarios, and statistical data from research & academic institutions > IEA scenarios - NZE, SDS, STEPS > IPCC RCP scenario - 4.5, 8.5	• Analyze intensifying regulations and systems in the regions where business is operated • Review large-scale investment and business restructuring due to energy transitions • Analyze potential physical damage types caused by climate change	• Analyze climate change opportunity factors to consider when implementing mid- and long-term business strategies • Forecast new markets and changing customer demands due to climate change	• Identify the likelihood of risk factors resulting from climate change • Check the magnitude and resilience of risks • Assess the capability for quick response and mitigation of financial impacts when risks arise	• Identify the likelihood and magnitude of opportunity factors resulting from climate change • Seek opportunities for business creation regardless of the impact assessment of opportunity factors • Confirm the capability to develop new technologies and explore new business areas when opportunities are certain	• High & Moderate: Develop and monitor risk response strategies • Low: Continuously monitor changes	• Operate an integrated risk management system to manage and monitor risk impacts • Conduct periodic risk impact assessments and revise response strategies based on results • Utilize ESG advisory groups for professional and objective risk judgments
Key Considerations	• Which scenarios best represent the climate and environmental characteristics of the regions where the businesses are operated or business facilities are located?	• What climate change-related regulations, market changes, and physical damages negatively impact business operations and financial performance?	• What risks does global society face due to climate change, and what products and services address these issues?	• What impacts do risk factors have on business operations and financial performance?	• Does the company secure the human resources and investment budget to respond to opportunity factors?	• What is the risk level that the company can manage or accept regarding risk and opportunity factors?	• Can the processes and operational methods of the enterprise-wide integrated risk management system include climate change risks?
Implementational Organizations	• ESG Teams > Discuss with Group ESG Working Group, refer to the Group ESG Working Council, report to Chief ESG Officer					• Chief ESG Officer > Discuss with Group ESG Working Council, refer to the BOD, report to CEO > Integrated management of non-financial risk	• BOD and its ESG Committees > Integrated management and oversight of financial and non-financial risks > Deliberation on significant financial and non-financial strategies

Climate Change Response

Risk Management

Climate Change Risk Management

Transition Risk Management

Identification of Transition Risks and Opportunities

HDKSOE and its shipbuilding subsidiaries identified transition risks based on climate change-related policies and regulations, markets, technology, and reputation, and established a strategic system to pre-emptively respond to risks by identifying risk and opportunity factors.

We also strive to actively respond to rapidly changing market demands due to climate change, and take the initiative in the market through the development of new technologies for mitigation and adaptation, as well as make the transition to low- and zero-carbon products. Recognizing the increasing need for climate change-related information disclosures from stakeholders, we make our best endeavors to communicate with stakeholders in a transparent manner.

Climate Change related Transition Risks and Opportunities

Category	Issue	Financial Impact	Possible Occurrence Period [1]	Risk Factors	Opportunity Factors
Policies and Regulations	Increase in Carbon Tax and Carbon Pricing	High	Short-term, Mid-term, Long-term	• Increased energy and material procurement costs • Increased costs to trade GHG emissions	• Reduction in operating costs and improvement in production efficiency through the transition to high-efficiency energy equipment • Generation of non-operating income through the sale of surplus emissions allowances in the emissions trading market
	Strengthening of GHG Emissions Regulations	Medium	Short-term, Mid-term	• Increased costs for technology and product development due to global regulations (IMO, EU, etc.) • Growing demand from customers for ships that reduce air pollution and GHG emissions	• Increased orders for Low- and Zero-Carbon (LZC) ships and high-efficiency & high-value-added ships in accordance with growing demand for replacing old ships
Market	Changes in Energy Sources	High	Mid-term, Long-term	• Decreased sales of fossil fuel-carrying ships • Decreased orders for offshore plants	• Increased orders for new energy source (hydrogen, CO_2, etc.) carrying ships • Expansion of new business portfolio in renewable energy
	Rapid Changes in Ship Demand Patterns	High	Short-term, Mid-term	• Increased costs for developing Low- and Zero-Carbon (LZC) ships	• Increased orders for Low- and Zero-Carbon (LZC) ships
	Growing Demand for Production Methods to Minimize Environmental Impacts	High	Short-term, Mid-term	• Increased demand for raw materials that minimize environmental impact, such as green products • Strengthened requirements to reduce GHG emissions from product manufacturing	• Increased demand for production technologies that improve energy efficiency and reduce GHG emissions
Technology	Increased Demand for Technological Advancement	Medium	Short-term	• Increased investment costs for technology advancement	• Increased sales through the transition to low-pollution, high-efficiency ships
	Increased Need for Next-Generation Technology Development	High	Short-term, Mid-term	• Increased costs for technology development • Decreased market share due to delays in new technology development	• Entry into the Low- and Zero-Carbon (LZC) market and pre-emptive market share acquisition • Expansion of new business portfolio
Reputation	Changes in Stakeholder Requirements	Medium	Short-term, Mid-term	• Increased costs to comply with investment institution standards and respond to global initiatives	• Securing competitiveness in orders by providing transparent climate change related information and various solutions that meet stakeholder requirements

1) Short-term (1-2 years), Mid-term (3-5 years), Long-term (5+ years)

Climate Change Response

Risk Management

Climate Change Risk Management

Transition Risk Response Strategy

GREEN PRODUCT

To pre-emptively respond to changes in the ship market and meet customer needs, **HDKSOE and its shipbuilding subsidiaries** actively focus on developing technologies to construct ships powered by low- and zero-carbon fuels.

For LNG DF (dual fuel) propulsion ships, engine efficiency is being improved and the development of methane slip technology that prevents the release of not-fully-burned methane into the atmosphere is being promoted. In addition, GHG emissions reduction for large ships is being pursued through the development of zero-carbon fuels such as ammonia and hydrogen, and hi-tech development related to large-capacity fuel cells and electric propulsion. Furthermore, leadership in the era of carbon neutrality is being pursued by combining related technologies such as ship electrification and automation, and energy efficiency-specialized hull form, propeller, and wind-assisted propulsion system.

We also make tireless efforts to develop technologies related to On Board Carbon Capture & Storage (OCCS) and LCO_2 (liquefied carbon dioxide) carrier to dominate the CCUS (Carbon Capture, Utilization & Storage) market, which has emerged as a way to achieve carbon neutrality.

GREEN PARTNERSHIP

Recognizing that effective climate change response requires the collective efforts of the entire shipbuilding value chain, **HDKSOE and its shipbuilding subsidiaries** actively pursue cooperation with domestic and overseas supply chains to develop low-carbon steel for ships, low volatile organic compound (VOC) paints, and low- and zero-carbon fuels. In particular, **HMD** has strengthened the partnership with supply chain contractors by supporting the verification of small and medium-sized producers of electric propulsion equipment mounted on electric-powered ships.

GREEN SHIPYARD

HDKSOE and its shipbuilding subsidiaries are implementing the FOS (Future Of Shipyard) project to promote digital-based management of raw materials and optimize production processes. In particular, industrial IoT technology is used to measure the flow rate, status, and pressure of energy sources as LNG, while big data is analyzed to cut energy costs and prevent safety accidents. We will continue to explore and implement effective GHG emissions reduction initiatives based on real-time measurement and data analysis of diverse energy resources and GHG emissions.

BUSINESS CASE **Transitional Risk Response Activities**

GREEN PRODUCT

Developed HVAC system using LNG refrigerant and received ABS AIP (November 2024)

Started construction of the world's first mid-sized ammonia-fueled ship (December 2024)

GREEN PARTNERSHIP

Signed MOU with Seoul National University to advance sloshing technology and eco-friendly ship technologies (January 2024)

Signed MOU with Infineon Technologies to develop technologies for ship electrification using semiconductor technology (March 2024)

Signed MOU with Korea Marine Equipment Research Institute to develop eco-friendly ammonia (June 2024)

GREEN SHIPYARD

Successful completion of Korea's first pilot vessel using autonomous navigation technology (March 2024)

Signed MOU with Dassault Systèmes to "develop a virtual twin-based integrated design-production platform" (November 2024)

Climate Change Response

Risk Management

Climate Change Risk Management

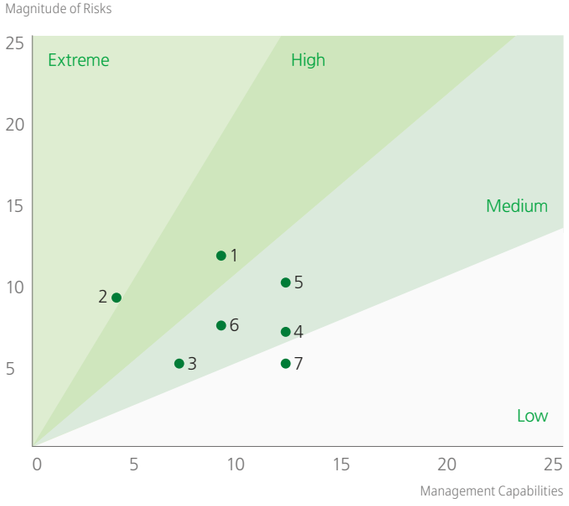
Physical Risk Management

Identification of Physical Risks

HDKSOE and its shipbuilding subsidiaries analyzed scenarios to identify types of physical risks resulting from climate change, estimate potential damages for each type of physical risk, and establish response measures. We defined the types of physical risks based on the research report of the regional research institute (Ulsan Research Center) where our business facilities are located, and the climate change forecast for the Korean Peninsula prepared by KMA according to the national standard climate change scenario. Then, the likelihood of physical risks and their impacts on business sites were analyzed. The results of the risk analysis and the capabilities to manage the risks were also evaluated based on four risk classifications: very high, high, medium, and low.

The simulator provided by the Korea Ocean Environment Corporation was used to identify expected rises in sea level and potential flooding areas according to the IPCC (Intergovernmental Panel on Climate Change) RCP (Representative Concentration Pathways) 4.5 and RCP 8.5 scenarios, and the property damages on and around the business sites were assessed. Based on this analysis, response measures are being devised to minimize potential damage.

Physical Risks Assessment Results



Physical Risk Response Strategy

Establishing Response Measures to Physical Risk Factors

Among the climate change physical risks, **HDKSOE and its shipbuilding subsidiaries** are exposed to risks such as typhoons, heavy rain, strong winds, and flooding due to rising sea levels. When any of these risks occur, there might be potential damage to ships and structures, as well as casualties and property loss, which will have negative impacts on business operations and performance.

To prepare for these physical risks, HDKSOE and its shipbuilding subsidiaries have established a system to prevent and quickly respond to possible damage. Based on the weather forecast system and typhoon management system, weather conditions are forecasted to minimize damage and support efficient work performance. Furthermore, these systems are used to predict strong winds, heavy rain, heavy snow, and cold waves in advance, and pre-emptive response measures are implemented and action plans are provided to employees in case of emergencies.

We also conduct typhoon drills and developed a company-wide manual to ensure the prevention of damage, systematic management, and prompt recovery in case of typhoons. **HHI**, **HMD**, and **HSHI** have obtained certifications as Excellent Weather Management Companies from the KMA and continue to implement pre-emptive measures to actively respond to physical risks due to climate change.

Excellent Weather Management Companies Certification

Physical Risks Assessment Results and Response Measures

No.	Climate Factors	Exposure Location	Potential Events	Expected Damage	Risk Level	Response Measures
1	Typhoon – Heavy rain	Facilities	Flooding due to poor drainage	Casualties and property damage	High	• Introduce and operate the in-house weather forecast system • Establish manual for typhoon and heavy rain response • Operate command and control room, emergency system during natural disasters such as typhoons • Conduct regular inspections of frequently flooded areas and typhoon and heavy rain related facilities
2	Typhoon - Strong Winds	Facilities	Damage to Ships	Property damage, project delays	Very High	
3	Typhoon - Strong Winds	Facilities	Structural damage	Property damage, project delays	Medium	
4	Typhoon - Strong Winds	Coast	Low-lying area flooding	Casualties and property damage	Medium	
5	Extreme heat	Facilities	Heat related illness	Casualties	Medium	• Extend break times during heatwaves, strengthen heat related illness prevention training, provide cooling equipment and products to help with extreme heat
6	Sea Level Rise	Coast	Coastal erosion and loss	Property damage	Medium	• Conduct regular inspections of breakwater structures and identification and management of flood-prone areas
7	Heavy snow, cold waves	Road traffic	Traffic accidents	Casualties	Low	• Introduce and operate the in-house weather forecast system, conduct regular inspections of frequently icy areas, installation of heating cables on walkways

1) A company-wide typhoon management system has been established to systematically manage typhoon information and prevention measures, share real-time information on typhoons, and manage statistics on damages and recovery, thus ensuring prompt response and follow-up actions in the event of an actual typhoon.

Climate Change Response

Risk Management

BUSINESS CASE

Internal Carbon Pricing (ICP)

HDKSOE and its shipbuilding subsidiaries use an internal carbon price to respond to climate-related regulations and to analyze climate change risks and opportunities for use in investment decisions.

The internal carbon price has been calculated by considering both short- and long-term prices for climate disclosure purposes, reflecting IEA scenarios and the NDC implementation rates of major countries, and practical applicability within the company.

Going forward, an operational and governance framework for the internal carbon price will be established and utilized for various investment decisions. Through this, low-carbon investments will be promoted and energy efficiency will be improved, driving behavioral change within the organization and accelerating the achievement of carbon neutrality goals.

To meet the requirements of internal and external stakeholders and to promote carbon emissions reductions, as well as low-carbon investments and technology development, **HHI** has introduced and is operating an internal carbon pricing system that uses a notional carbon price to facility investments to assess their financial impact (shadow carbon pricing). When making facility investment decisions, we issue a Carbon Pricing Report (CPR) that includes information such as carbon emissions and costs by investment item, potential carbon leakage points, and expected benefits. This system is used to establish a GHG regulatory response framework, support rational decision-making and risk assessments for GHG reduction investments, identify low-carbon opportunities to improve energy efficiency, and encourage employees to reduce emissions. Currently, the ICP is applied to facility investments in consideration of our business conditions, and we plan to expand its scope to R&D and business investments, and also develop a digital system.

With the aim of establishing a strategic investment decision-making framework for GHG reduction and climate change response, **HMD** has been reviewing the use of ICP since 2023.

The system was piloted for selected facility investments, and starting in 2025, the effectiveness of the system is planned to be evaluated based on the pilot test results and the operational standards will be improved to implement a more refined system. Based on this, the ICP is planned to be applied to major facility investments and the scope of analysis and application will be gradually expanded. Analyses of energy consumption and GHG emissions will be conducted from the initial stages of investment planning, and economic feasibility reviews reflecting the internal carbon price will be carried out. Through this, a rational and sustainable investment decision-making framework that incorporates climate risks will be established.

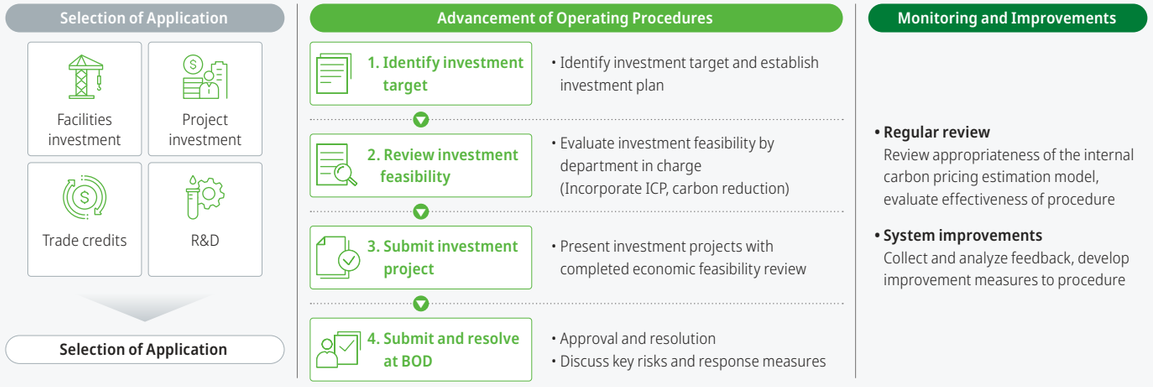
To respond to climate risks and reduce carbon emissions, **HSHI** is actively pursuing facility investments, including energy efficiency improvements and equipment upgrades. From 2025, an "Energy Review" process is planned to be piloted and operated, which incorporates the internal carbon pricing system, to review and deliberate on the energy use and greenhouse gas emissions impacts of investments prior to making the investment.

Through this process, the impact of facility investments on energy efficiency, associated changes in energy costs, and GHG emissions will be analyzed, and the actual benefits of investments will be calculated and rationally reflected in investment decisions.

ICP Application Criteria

Category	Details
Objective	• Expand low-carbon investments, promote energy efficiency, and drive behavioral change
Type of ICP	• Shadow Price
Scope of GHG emissions	• Scope 1, 2
Scope of Application	• Company-wide
Price per ton	• Short- and Mid-term: KRW 27,263/tCO_2e, Long-term: KRW 118,553/tCO_2e
Price Calculation Methodology	• Developed internal scenario based on IEA scenarios, NDC implementation scenarios of major countries, and domestic carbon credit prices, and verified the feasibility through expert advice from research institutions, academia, and industry bodies.

Procedures for setting and operating the internal carbon price



Climate Change Response

Metrics & Targets

Climate Change Metrics & Targets

GHG emissions and Energy Consumption Targets and Performance

Key achievements in reducing GHG emissions and energy consumption

HDKSOE actively works to advance energy management to reduce energy consumption. We save energy through optimal heating and cooling, automatic turn-off of unnecessary lights, and automatic transition to power-saving mode for monitors, and we continue to identify and implement energy-saving ideas.

HHI has reduced GHG emissions by transitioning from fossil fuels, introducing high-efficiency facilities, and utilizing solar energy and waste heat (steam). In line with the carbon neutrality roadmap, HHI has set a GHG emissions reduction target of 635,198tCO_2eq[1] in 2025. To achieve this target, initiatives that align with the carbon neutrality strategy continue to be identified and implemented, which include expanding renewable energy procurement and use, enhancing energy efficiency and electrification, and transitioning to LZC fuels. In addition, HHI is working to achieve the goal to "Reduce energy intensity by 1%" in 2025.

1) Target may vary, depending on production volume and changes to roadmap

HMD built an automatic control system for energy-intensive equipment in the painting process by linking factors such as operating times based on the type of paint used, indoor temperature and humidity of factory, and screen doors. We expect this system to reduce annual GHG emissions by 2,2225 tons, and NOx emissions by 1.2 tons.

In addition, a trial was run for a heat pump on the hot water heater in the office buildings and city gas usage was reduced by 119,206Nm^3 and annual GHG emissions were reduced by 62.68 tons. Heat pumps are planned to be installed in all office buildings in 2025 for efficient energy use, and efforts to reduce GHG emissions continue to be made.

HSHI continues to identify and promote initiatives to reduce GHG emissions. We are making advancements to ship trial methods and conducting simultaneous sea and gas trials for LNGC and LNG DF ships. Furthermore, to achieve the K-EV100 initiative, 100% of the vehicles for business use are planned to be transitioned to zero-emissions vehicles by 2030.

In addition, construction of a 1.8MW solar power generation facility was completed in the outdoor parking lot (8,600m^2) in Yeongam, Jeonnam Province. This is expected to reduce electricity costs and the amount of carbon credit purchases. An energy control center and digital inverter welding system were also installed to improve energy efficiency.

Scope 1 & 2 Emissions and Targets

(Unit: tCO_2eq)

Category	2022	2023	2024	2024 Target
HDKSOE	8,191	7,286	8,408	7,286
HHI	549,552	639,878	671,156	684,586
HMD	160,988	163,100	166,913	169,465
HSHI	239,869	266,223	276,469	282,172

Energy Consumption and Targets

(Unit: TJ)

Category	2022	2023	2024	2024 Target
HDKSOE	167	149	172	149
HHI[1]	9,887	11,511	11,891	Reduce energy intensity by 1%
HMD	2,900	2,905	3,009	3,068
HSHI	4,095	4,552	4,802	4,878

1) Improved energy intensity (total energy consumption/revenue) by 14.7% in 2024 compared to 2023

Environmental Impact Reduction Technologies

Governance

Governance of Environmental Impact Reduction Technology

Roles and Responsibilities

Roles and Responsibilities of R&D Organization

HDKSOE and its shipbuilding subsidiaries have established R&D governance for each company, and formed area-specific professional groups to maximize the efficiency of R&D efforts. To drive the future of the shipbuilding and offshore industries, R&D talent and related infrastructure will continue to be developed.

HDKSOE's Advanced Research Center is focused on developing innovative technologies that will lead our future growth, such as decarbonized ships, low and zero carbon future energy, and digital twin. The center is also developing the Group's common core technologies such as intelligent and autonomous solutions and engineering solutions to resolve design and manufacturing process problems. In addition, we are focusing our capabilities to develop new concept innovative shipbuilding technologies and to secure future core technologies.

HHI's Corporate Research Institute operates two research centers (Ship & Offshore Research Institute, Engine Research Laboratory) and one Naval Ship Technology Center. Research areas include ship design and analysis technologies, development of ship components, eco-friendly product design technologies, enhancement of stealth performance and optimal design technologies for warships.

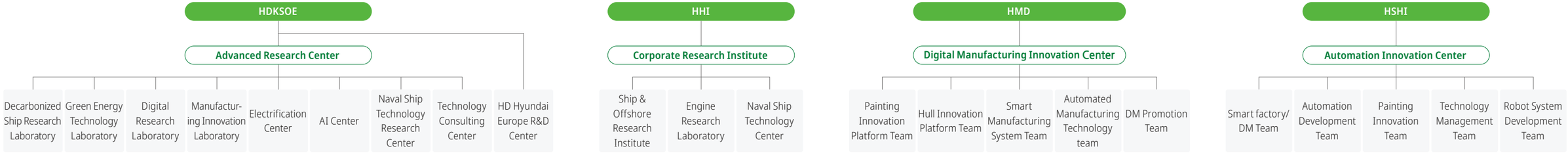
HMD's Digital Manufacturing Innovation Center is not only focused on research and development of high value-added ship types and manufacturing technology of ships, but also on innovative digital manufacturing technology to transform the shipbuilding process and manufacturing methods.

HSHI's Automation Innovation Center is researching into automation of welding and equipment processes, outfitting, painting, and pre-treatment. The center is also working to make progress in the mechanization and automation of production processes, which includes the development of new welding methods, and jigs and fixtures production. These research activities are aimed at demonstrating and applying innovative manufacturing technologies and customized production and building technologies that can be immediately deployed on site.

R&D Activities by Group company

Category	Key R&D Achievements in 2024
HDKSOE	• Built R&D demonstration facilities for ship carbon neutrality • Successfully developed Korea's first LV VFD for ships
HHI	• Improved functionality of aluminum rotor and developed composite rotor sail • Completed mock-up of a liquefied hydrogen cargo tank and the design of a 2,000 m^3 class cargo tank for a test vessel
HMD	• Introduced on site DM-based welding robot system for small assembly • Developed and applied autonomous lug manufacturing system
HSHI	• Developed crane-type collaborative robot system • Developed advanced equipment for processing outer edges of scaffold bracket

R&D Governance for Each Group Company



- Realization of decarbonized ship technologies
- Production, storage, and application technologies of future low- and zero-carbon energy
- Digital twin technology and next-generation ship operation systems
- Establishment of smart yard and leading-edge production technologies
- Development of leading-edge electrification technologies for products across group affiliates
- Development of intelligent and autonomous solutions and AI platforms
- Naval ship automation and development of unmanned ships
- Engineering solutions for the prevention and resolution of design and production process issues
- Expansion of overseas R&D networks for the group

- Development of optimal design and analysis technologies for ships and marine structures
- Development of external ship components
- Development of product design technologies including diesel/DF engines and water electrolysis
- Enhancement of stealth performance and optimal design technologies for warships

- Creation of integrated platform for design and production data consistency
- Realization of Digital Manufacturing specialized for shipbuilding
- Development of DM based manufacturing technology and optimize production site
- Realization of multi shipyard based on digital twin virtual shipyard

- Development of robotic welding systems
- Automation and mechanization development for welding and painting
- Improvement and development of assembly methods
- Development of new welding techniques and composite material processes
- Digital Manufacturing and development of jigs and fixtures

Environmental Impact Reduction Technologies

Strategy

Technology Development Strategies to Reduce Environmental Impact

R&D/New Business Strategy

Total Solution Provider

As "Total Solution Providers," **HDKSOE and its shipbuilding subsidiaries** focus capabilities on developing not only low-carbon ships such as LNG DF and methanol DF vessels, but also zero-carbon fuel-powered ships using ammonia and hydrogen, which are being touted as fuels of the future. We are also accelerating the production of engines powered by low- and zero-carbon fuels, expanding into new renewable energy businesses such as small modular reactors (SMRs) and offshore wind power generation, and developing technologies to improve ship operational efficiency. In doing so, the aim is to grow as an innovative leader.

To lead future markets, HDKSOE and its shipbuilding subsidiaries have established strategies for R&D and new business sectors. Efforts are being focused on core R&D areas such as eco-friendly fuel-powered vessels, unmanned remote control technology, and electric propulsion for large ships. At the same time, the equipment line-up will be expanded in low- and zero-carbon sectors, including gas fuel supply systems, electric propulsion systems, and greenhouse gas reduction devices. In addition, the development of the new fuel cell business is being pursued by investing in original technologies, acquiring companies with leading solid oxide fuel cells (SOFCs) technology, launching a new company, and developing a proprietary business model in the fuel cell sector.

Strategies for R&D/New Business Sectors

Key R&D Activities

- Realize eco-friendly and state-of-the-art mobility
  - Ships using eco-friendly fuel
  - Unmanned remote control
  - Electric propulsion for large ships
- Construct smart yard
  - Autonomous control, Production automation
  - Accident prevention system

Expand line-up of Eco-friendly Equipment

GAS	• Gas fuel supply system • Gas management and storage system
DIGITAL	• Electric propulsion system • Energy management system
GREEN	• Energy reduction device • Greenhouse gas emissions reduction device

Enter New Fuel Cell Business

Invest in original technology	elcogen (Fuel cell technology) • Specialized cell and stack manufacturing company
Acquire leading business	CONVION • Owning leading SOFC technology
Establish new company	HD HYDROGEN • Develop proprietary model
Win orders	• Enter domestic hydrogen generation market

BUSINESS CASE

Implementing "Hydrogen Dream 2030 Roadmap"

Since announcing the "Hydrogen Dream 2030 Roadmap" in 2021, **HD Hyundai** has been working to develop a hydrogen value chain, from production, transportation, storage, and usage. The entire Group is focusing on establishing a clean hydrogen ecosystem by implementing integrated strategies, from water electrolysis-based hydrogen production, transportation and storage technologies, and fuel cell-based applications.

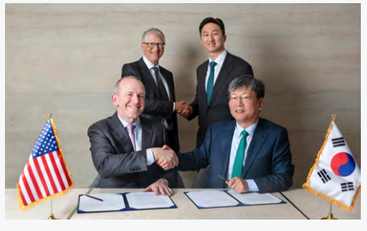
HDKSOE is enhancing eco-friendly marine technology by leveraging maritime technology expertise to develop hydrogen production systems and fuel cell-based vessels. In the field of liquefied hydrogen tank technology for ships, approvals from major classification societies such as DNV have recently been obtained for vacuum insulation technology and standard welding procedures. Proprietary vacuum insulation technology is used to maintain a stable vacuum state even at the ultra-low temperature of -253°C, minimizing losses of liquefied hydrogen. In addition, the vacuuming process period has been shortened from several months to just a few days, enhancing both commercialization potential and transportation efficiency. On the fuel cell side, to strengthen the fuel cell business, an investment was made in Elcogen, a European company specializing in cell and stack manufacturing. We also established our subsidiary, **HD Hydrogen**, which is developing a third-generation solid oxide fuel cell (SOFC) based onshore power generation system. Building on this, we plan to expand into the development of propulsion and power generation systems for ships. HD Hydrogen has further accelerated the business by acquiring Convion, a European company specializing in SOFC and SOEC systems and securing core technologies.

HHI is accelerating the development of a water electrolysis system that uses electricity generated from offshore wind power to electrolyze seawater. In particular, an anion exchange membrane (AEM) method is being developed, which has the advantage of directly utilizing seawater and can respond to the volatility of wind power generation. In addition, plans are in place to commercialize AEM-based water electrolysis technology as a package with marine plant equipment, and then expand the business into fuel cell-based applications by linking it with hydrogen and ammonia engines in the future.

Development of Small Modular Reactor (SMR)

HD Hyundai is strengthening cooperative relationship with global partners to secure and commercialize SMR technology, which is known as the next-generation zero-carbon energy source. In 2024, we jointly led the establishment of Nuclear Energy Maritime Organization (NEMO), and secured an order from TerraPower, a U.S.-based next-generation nuclear reactor development company, to manufacture the reactor vessel for the "Natrium" project, which is an SMR based on 4th generation sodium-cooled fast reactor (SFR) design. The design and manufacturing of this equipment are being led by **HHI**. HHI is participating in the design and production of this key SMR equipment based on its precision manufacturing capabilities accumulated through our participation in advanced nuclear fusion projects such as KSTAR and ITER.

In 2025, **HHI** signed a "Strategic Agreement for Manufacturing Supply Chain Expansion" with TerraPower and began establishing a production system for key equipment for the commercialization of the Natrium reactor. By doing so, we are securing our supply capacity to respond to the expected global increase in demand and laying the foundation for advancing and standardizing SMR manufacturing processes. Compared to large nuclear power plants, SMRs produce less nuclear waste, are safe, and provide installation flexibility as a zero-carbon energy source. Following the trend of energy transition, these characteristics have led to rapid growth in global demand. Accordingly, HHI plans to establish a commercialization foundation for the Natrium reactor and create new growth opportunities in the global SMR market.



Signed "Strategic Agreement for Manufacturing Supply Chain Expansion" with TerraPower

Environmental Impact Reduction Technologies

Strategy

Technology Development Strategies to Reduce Environmental Impact

Low-Carbon and Zero-Carbon Ship

LNG DF Ship

LNG DF ships use both bunker C oil and Liquefied Natural Gas (LNG). LNG has the advantage of reducing sulfur oxide (SOx) emissions by 99%, nitrogen oxide (NOx) emissions by 90%, and carbon dioxide emissions by 30% compared to conventional bunker C oil. In light of stricter maritime regulations, LNG DF ships are currently viewed as the most practical alternative, considering the speed of technology development and fuel supply port infrastructure.

Key Achievements

- Built R&D demonstration facilities for ship carbon neutrality
- Completed the system design and improvements to domestic regulations for reducing BOG (Boil Off Gas) emissions and recycling as city gas during the construction of LNG dual-fuel ships

Methanol DF Ship

Methanol DF ships are vessels with dual fuel engine that can use both bunker C oil and methanol. Methanol produces 25% less GHG emissions than bunker C oil, 99% less sulfur oxide (SOx) emissions, and 80% less nitrogen oxide (NOx) emissions. Methanol DF ships can store and transfer fuel at ambient temperature and pressure, resulting in lower facility investment cost than LNG DF ships, and are practically superior in terms of usability.

Key Achievements

- Received classification certification for coating performance evaluation rating in methanol fuel tank environments
- Passed Type Approval Test (TAT) for HiMSEN methanol DF engines

Ammonia DF Ship

Ammonia DF ships that can alternatively use ammonia and bunker C oil as fuel are being touted as ships that can satisfy IMO's emissions regulations. Ammonia does not produce any carbon emissions in the fuel combustion process, and compared to hydrogen, storage and transportation is relatively simple, making it economically advantageous. We are a leader in the ammonia-fueled ship market, successfully developing ammonia DF engine and ammonia fuel supply system ahead of schedule.

Key Achievements

- Completed demonstration of absorption ARMS system linked to the HiMSEN ammonia DF engine
- Passed Type Approval Test (TAT) for HiMSEN ammonia DF engine

Electric-powered Ship

Electric-powered ships are driven by motors powered by electricity stored in electric sources (generator, batteries), making them the next-generation future ships that can meet environmental regulations. Direct current-based technology for the electric propulsion system is gaining attention as a solution for achieving high efficiency. **HDKSOE** and **HMD** successfully built "Ulsan Taehwa," Korea's first direct current-based hybrid electric propulsion ship, utilizing Low Voltage Direct Current (LVDC) system. Moreover, **HDKSOE** and **HHI** plan to collaborate with the American Bureau of Shipping (ABS) to establish international standards for medium-voltage direct current (MVDC) systems, which are the core technology for next-generation electric propulsion ships.

Key Achievements

- Successfully developed Korea's first LV VFD for ships
- Obtained AIP from LR for a high-efficiency contra-rotating electric propulsion system for LNGCs

Hydrogen carrier and Hydrogen-fueled ships

Hydrogen carriers utilize the hydrogen system installed on the ship to use the evaporative gas generated during navigation as fuel for an electric propulsion system consisting of hydrogen engines and fuel cells. In September 2024, **HDKSOE** received an Approval in Principle (AIP) from DNV for the 80,000m^3 scale electric propulsion liquid hydrogen carriers. HDKSOE plans to collaborate with global energy companies, Shell and Woodside. and lead development of hydrogen transport technology using ships.

Key Achievements

- Completed full-scale demonstration of vacuum-insulation system for liquefied hydrogen tank technology
- Received AIP for 80K liquid hydrogen carriers

LNG DF Ship


Methanol DF Ship

Ammonia-fueled Ship


Electric-powered ship

Hydrogen carrier and Hydrogen-fueled ships

Environmental Impact Reduction Technologies

Strategy

Technology Development Strategies to Reduce Environmental Impact

Engine and Ship Propulsion Technology

Global Engine Manufacturer

HHI is the world's largest manufacturer of engines, with state-of-the-art precision processing, assembly, and commissioning facilities, supplying ship engines and land-based power generation engines to the global market.

The HiMSEN engine, a medium-sized four-stroke engine that was developed with proprietary technology in 2000, features high output and an efficient design. A wide line-up of models capable of operating on both diesel and natural gas is available.

In 2024, we produced a total of 15,000 HiMSEN engines, solidifying our position as the world's number one engine manufacturer. In line with ever stricter environmental regulations, we are focused on developing eco-friendly engines powered by fuels such as methanol and ammonia.

In addition to HiMSEN engines, we have been developing and supplying eco-friendly products for ships and contributing to the development of the marine industry. HHI continues to develop and supply various products including generation facilities for containerships and eco-friendly onshore generation facilities.

Eco-friendly Engine Production Expansion

HDKSOE and **HHI** aim to increase production of eco-friendly engines that will lead the decarbonization of the shipbuilding industry and respond to stricter maritime regulations. By increasing production of LNG and LPG dual fuel engines and commercializing ammonia engine technology, we plan to achieve the production share of 85% for eco-friendly 2-stroke engines and 65% for 4-stroke engines by 2027.

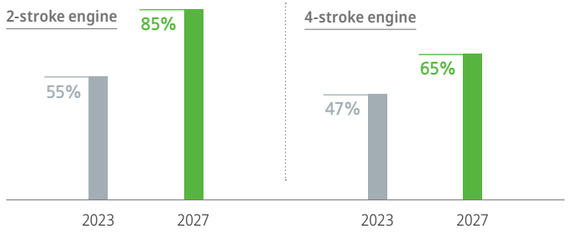
In addition, by leveraging the dual-fuel engine production capabilities of **HD Hyundai Marine Engine**, which was newly incorporated into the Group in July 2024, the growing demand for various eco-friendly engine-powered vessels will be addressed, and the position in the global ship engine market will be further solidified and competitiveness strengthened.

Methanol Dual-Fuel HiMSEN Engine

The methanol dual-fuel HiMSEN engine developed by **HHI** in September 2022 can optionally use methanol and diesel fuels. It uses the "high pressure direct injection" approach, which lights the pilot fuel and then injects high pressure methanol to increase output and efficiency. Although the high pressure fuel pump and double shaft design are technically more complicated than other methods, it is characterized by its high efficiency and low emissions of harmful GHG emissions. Methanol dual-fuel HiMSEN engines and nitrogen oxide reduction devices are being supplied in a package to container ships built at Korean, Chinese, and Japanese shipyards, proving its outstanding competitiveness.

The engine is acknowledged as a state-of-the-art technology in the engine space, and in November 2024, it was selected as one of "Korea's Top 10 Mechanical Technologies of 2024" By the Ministry of Trade, Industry and Energy (MOTIE).

Eco-friendly Engine Production Expansion Targets



1) 2-stroke: Propulsion engines for mid-sized and large ships
2) 4-stroke: Power generation engines for mid-sized and large ships and propulsion engines for small-sized ships

HiMSEN Ammonia Dual-Fuel Engine

HHI developed the HiMSEN ammonia dual-fuel engine, the world's first to utilize a high-pressure direct injection system for ammonia fuel. In October 2024, the engine received type approval from seven major classification societies. This engine utilizes the same "high pressure direct injection" method used by the methanol engine, and not only has high output and high fuel efficiency, but also the advantage of reducing nitrous oxide (N_2O) and other GHG emissions.

Competitiveness has been maximized by independently developing an ammonia pressurizing device, which is a core component technology, thereby ensuring scalability for the use of various fuels. By applying a self-developed electronically controlled diesel fuel injection system, the timing and duration of pilot fuel injection have been optimized, maximizing the combustion efficiency of ammonia. Furthermore, by using a Selective Catalytic Reduction (SCR) system, the amount of nitrogen oxides and unburned ammonia in the exhaust gas is minimized.

HiMSEN ammonia engine

HiMSEN hydrogen engine (conceptual design)

LNG/Hydrogen Hybrid HiMSEN Engine

HDKSOE and **HHI** tested the performance of the 1.5MW LNG/Hydrogen Hybrid HiMSEN Engine that was independently developed in December 2022, and in May 2023, a demonstration was held to prove the stability of this hydrogen hybrid engine. The LNG/Hydrogen Hybrid HiMSEN Engine allows selecting diesel and LNG, or a blend of LNG and hydrogen, as fuel, thus reducing emissions of SOx, NOx, CO_2, and fine dust. In the performance test, the engine satisfied the requirements of Tier 3, the strictest level of IMO's NOx regulations, proving its superior effectiveness in reducing CO_2 emissions and methane slip.

In particular, when this engine is applied to liquefied hydrogen carriers, the evaporative vapors generated during navigation can be reused as fuel and the loss of hydrogen minimized, thus maximizing the efficiency of ship operations.

Low-carbon Electric Propulsion System for Large Ships

HDKSOE and **HHI** independently developed zero-carbon electric propulsion system for large ships such as 170,000 ton gas carrier and 300,000 ton super-sized tanker, and obtained classification certification. This system combines dual-fuel power generation engines and large-capacity fuel cells and provides higher propulsion efficiency than larger engines, all without any carbon emissions. Compared to the existing system, this system improved power quality by 40% and integrated energy efficiency by 20%. In recognition of this outstanding performance, basic design certification for the system was obtained from LR in October 2023. **HDKSOE** and **HHI** plan to complete land-based demonstration by 2027, and commercialize the system by 2028.

Environmental Impact Reduction Technologies

Strategy

Technology Development Strategies to Reduce Environmental Impact

Development of Technologies to Enhance Ship Operational Efficiency

Hi-ALS

Hi-ALS (Air Lubrication System) is a next generation air lubrication system developed with Korean technology by **HHI**. The Hi-ALS is an energy-efficient device that supplies air to the surface of the hull and reduces resistance, which reduces fuel consumption and carbon emissions. Hi-ALS injects air in a parallel direction to the surface of the water to create an air layer, thereby allowing superior lubrication, even with a minimal amount of air.

Hi-eGAS

HDKSOE and **HHI** have jointly established and currently operate Hi-eGAS (High-efficient Gas Supply System), a next-generation LNG supply system aimed to reduce fuel consumption and carbon emissions for LNG propulsion ships. LNG propulsion ships heats -163°C LNG to use as fuel, but the drawback is that the heating process creates additional fuel consumption and carbon emissions. Ships with Hi-eGAS save on fuel by heating LNG with the waste heat from ship engines, reducing carbon emissions by approximately 1.5% and lowering unnecessary fuel consumption.

Hi-PSD

HHI's Hi-PSD (Pre-Swirl Duct) is a proprietary energy reduction device to enhance fuel efficiency. It is installed to the front of the propeller and effectively controls the inflow to reduce energy loss cause by the propeller. This can improve fuel efficiency.

Hi-ERSN

Hi-ERSN (Economical Re-liquefaction System N2) is a system that utilizes nitrogen refrigerant to liquefy boil off gas (gaseous LNG) generated in the LNG cargo tanks and reinjects it back into the LNG cargo tank. Hi-ERSN is not merely a simple improvement to the re-liquefaction system: it is developed to be linked with the fuel supply system, improving energy efficiency by over 20%.

Hi-Rotor

HHI's Hi-Rotor is a type of rotor sail, a wind-assisted propulsion system. It is installed on the ship's deck in a cylindrical form and functions as a sail. The Hi-Rotor implements technology that rotates the cylindrical form with an electric motor to generate the Magnus Effect, creating additional propulsion power. This can reduce fuel consumption, which in turn reduces carbon emissions.

HVAC

In November 2024, **HDKSOE** and **HHI** developed the world's first HVAC (Heating, Ventilation & Air Conditioning) that uses LNG refrigerant, and received approval in principle from American Bureau of Shipping (ABS). This system utilizes refrigerant generated from the vaporization of LNG. When applied to ships, this system can reduce the amount of electricity needed for heating and cooling, thereby lowering greenhouse gas emissions during ship operation.

Shaft Generator System

HDKSOE developed a shaft generator system that can enhance the efficiency of ship operations and reduce fuel costs. The motor of the system is linked to the main engine that propels the ship to generate electricity, and uses a VFD (Variable Frequency Drive), which adjusts frequency to ensure stable power generation, to supply a consistent amount of power.

HDKSOE collaborated with HD Hyundai Electric and HD Hyundai Plaspo to develop Korea's first LV VFD in October 2024. By succeeding in developing VFD in-house, we were able to further enhance the company's technological competitiveness. The newly developed LV VFD uses innovative technology to enhance energy efficiency, and enables precise control of the motor without a separate sensor.

Hi-Rotor(New concept eco-friendly sail)

AIP certification for HVAC system

Environmental Impact Reduction Technologies

Risk Management

Inspection and Expansion of Environmental Impact Reduction Technology

Development Process of Environmental Impact Reduction Technology

Establishing Technology Development Procedures and Implementing Projects

In order to become the "Global No.1 Net-zero Shipbuilder," centered on transitioning to decarbonization in ocean mobility, **HDKSOE and its shipbuilding subsidiaries** adopted an environmental impact reduction technology development process and are utilizing it for identifying, developing, and applying innovative technologies that can lead the market.

We continuously monitor both domestic and international regulations related to environmental impact reduction, demands from shipowners and other market participants, and technological developments in the same industry, and create a list of technologies required to respond to the changes in the market environment.

Based on implementation strategies and roadmap for each technological development, we derive detailed implementation tasks, and then establish quantitative targets for what we aim to achieve through technological development, such as carbon reduction in ships. In addition, we formulate plans for managing the investment portfolio required for technology development. The outcomes of technological development are applied and optimized in ships, and any improvements identified during the application process are incorporated in real time. Through technology development council meetings, we share the progress and status of projects and technological developments, as well as communicate about key deliverables and outcomes.

Development Process of Environmental Impact Reduction Technology (Activities by Stage)

01 Analyzing market and technology trends	02 Consulting methods and items for technology development	03 Establishing strategies and roadmap for technology development	04 Developing tasks and reviewing selection	05 Implementing and applying technology development tasks	06 Conducting mid-term and final reviews
• Identifying environmental impact-related regulations and market needs • Continuous monitoring of technology in the same industry/ other industries • Identifying production process related environmental issues related to production process and business activities	• Conducting workshops for environmental reduction technology development • Discussing responses to regulations on future fuels • Internal discussions among R&D organizations and develop list of technologies	• Designing the direction of technology development and operating a council for task implementation • Establishing strategies and R&R for each technology development item • Drawing a roadmap based on the implementation plan for each technology development item	• Developing detailed implementation tasks based on technology development strategies • Establishing quantitative targets as a result of technology development such as carbon reduction • Managing investment portfolios for each technology development item	• Conducting specific tasks and managing outputs • Applying technological achievements to ships • Optimizing application and reflecting improvements on a real-time basis	• Conducting tasks and sharing development progress • Interacting about progress and outcomes

Application of Environmental Impact Reduction Technology

Steel pre-treatment and cutting	Assembly	Preliminary Painting	Dock/ quay work	Inspection	Sea trials
• Automating the pre-treatment painting process • Applying steel-cutting simulation techniques	• Advancing LUG management to improve recycling rates • Applying high-efficiency welding techniques	• Developing and applying low volatile organic compound (VOC) paints • Introducing clean room in paint factory, establishing integrated control system • Reducing VOC materials and amount of paint through development of smart spray gun	• Expanding the application of dust collection/ ventilation systems within ships • Developing and applying shatter-proof equipment and technologies and outdoor surface treatment	• Minimizing wastewater by changing pressure testing methods • Replacing radiographic testing with PAUT (Phased Array Ultrasonic Testing)	• Using onshore high/low voltage power facilities during docking sea trials • Enhancing operational efficiency by optimizing boiler air-fuel ratio • Minimizing GHG emissions and fuel consumption during ship operations by investing in an integrated digital control center

Common measures

•Minimizing power consumption by using LED lighting •Optimizing heavy equipment fuel usage through virtual simulation
•Establishing an integrated control system for air compression facilities •Operating in-house navigation systems

Construction of Environmental Impact Reduction Technology R&D demonstration facility

In April 2024, **HDKSOE and its shipbuilding subsidiaries** constructed a "Marine Innovative Decarbonization R&D Facility" to capture the future eco-friendly ship market. The R&D demonstration facility for carbon-neutral ships is used to predict actual performance implemented at sea by building a series of cargo operation systems on land, which would then be installed on ships. While existing demonstration facilities were limited to verifying specific performances such as LNG fuel supply and LNG re-liquefaction facilities, the new demonstration facility for carbon-neutral technology can demonstrate the entire process of cargo transportation from loading to operation and unloading in sequence, allowing for taking a look at the overall operation of a cargo system that applies carbon reduction technology.

Plans have been made to verify eco-friendly facilities to be mounted on ships in advance by utilizing the demonstration facilities, thereby enhancing the stability of newly developed ship types and technologies. Technologies of future eco-friendly ships, including liquefied carbon dioxide carriers, ammonia carriers, methanol-powered vessels, multi-gas carriers (CO_2, ammonia, LPG, etc.), hybrid electric-powered ships, and hydrogen carriers, are planned to be verified by 2026.

Completion Ceremony of Marine Innovative Decarbonization R&D Facility

Environmental Impact Reduction Technologies

Metrics & Targets

Environmental Impact Reduction Technology Development Targets

Enhancing Competitiveness of Environmental Impact Reduction Technologies

Expand Orders for Low and Zero-Carbon Ships

HD Korea Shipbuilding and its shipbuilding subsidiaries are making relentless efforts to enhance order competitiveness by developing low- and zero-carbon ships, in line with the global shipping industry's transition toward sustainability. To respond to the IMO's strengthened and accelerated greenhouse gas emission regulations and achieve carbon neutrality goals, the company has established the Leading-Edge Technology Roadmap and is systematically implementing it. In particular, the company is on the challenge to apply low- and zero-carbon energy sources such as ammonia, fuel cells, hydrogen, and SMR to ships. Based on this systematic plan and continuous innovation, we aim to realize carbon neutrality in the shipping industry by 2050.

Leading-Edge Technology Development Roadmap

Leading-Edge Technology	Key Goals and Directions	Short-term	Mid-term	Long-term
GHG Emissions Reduction from Ships	• Commercialize new and existing ship businesses through developing proprietary models for ship environmental facilities • Enhance competitiveness of environmental impact reduction solution technologies	• Develop and validate methane slip reduction devices	• Validate and commercialize proprietary models for wind-assisted propulsion systems	
Ammonia propulsion	• Secure technological superiority in ammonia-fueled ships to achieve Net-Zero	• Develop medium and large-sized ammonia engines • Develop ammonia fuel supply and cargo handling system • Develop AI Safety package	• Develop high-efficiency ammonia engine and optimize commercial model • Commercialize ammonia fuel supply and cargo handling system	
LCO_2 Carrier	• Gain technological leadership in LCO_2 Carrier to achieve Net-Zero	• Commercialize LCO_2 CHS technologies (Cargo Handling System)		
Electric-propulsion	• Lead the ship propulsion solutions market by developing the next-generation high-efficiency electric-powered systems	• Commercialize shaft generator system • Develop high-efficiency 4 stroke engine	• Commercialize hybrid electric-propulsion systems	• Commercialize electric-propulsion systems for large ships and all-electric ship
Fuel cell- propulsion	• Preoccupy the next-generation power generation/ propulsion systems for ships • Maintain super gaps in the LZC ship market	• Design DC-based ship power system		• Develop fuel cell-propulsion systems for large ships
Hydrogen Carrier	• Build hydrogen carriers through differentiated technology • Enter into new businesses in the hydrogen economy with core hydrogen technology development	• Develop and validate hydrogen hybrid and hydrogen engines •Develop liquefied hydrogen storage tanks	• Validate liquefied hydrogen storage tanks and hydrogen-powered systems	• Commercialize large-scale liquefied hydrogen storage tanks
SMR	• Preoccupy the market for SMR-applied maritime propulsion/power generation systems	• Develop next-generation SMR application technology for maritime use		• Validate next-generation SMR application technology for maritime use

Digital Transformation

Governance

Digital Transformation Governance

Roles and responsibilities

Role of the CEO

The CEOs of **HDKSOE and its shipbuilding subsidiaries** oversee and support the planning, execution, and outcomes of the smart shipyard project (Future of Shipyard, "FOS"), which is an initiative to secure digitally driven and unrivaled shipbuilding technology. The CEOs are responsible for reviewing and approving matters related to investments and other types of support related to the digital transformation project.

In December 2023, the CEOs attended the FOS Project Phase 1 Results Presentation and shared overall outcomes and experiences of each company and discussed the plans for the second phase (until '26).

Digital Production TFT

HDKSOE and its shipbuilding subsidiaries actively operate a "digital production TFT," which aims to build a digital automated production system that uses standardized data from vessel design to production.

In January 2024, over 50 representatives across the HD Hyundai group, including the CEO of HMD, Head of Shipbuilding & Offshore Business at HHI, Head of Design at HSHI, and technical advisors from HDKSOE participated in a meeting to present each company's progress on building an integrated design-production platform and their vision for an automated system linked to the platform. HDKSOE and its shipbuilding subsidiaries plan to integrate the systems developed by each company and complete a digital twin-based production platform that encompasses the entire process from design to production.

DT Innovation Office

HDKSOE and its shipbuilding subsidiaries have each appointed a Chief Digital Officer (CDO) who is responsible for overseeing the digital transformation initiatives. HDKSOE's DT Innovation Director is also HD Hyundai Group's CDO, and leads the group's digital transformation projects, including establishing a smart yard and vessel monitoring system utilizing advanced digital technology such as automation, mobile technology, IoT, cloud technology, and drones.

We enact continuous efforts to directly apply digital technology to our production sites and products. By implementing integrated monitoring systems for equipment and machinery and next-generation smart ship solutions, we continue to enhance the safety and convenience of the entire ship life cycle, from building to operation.

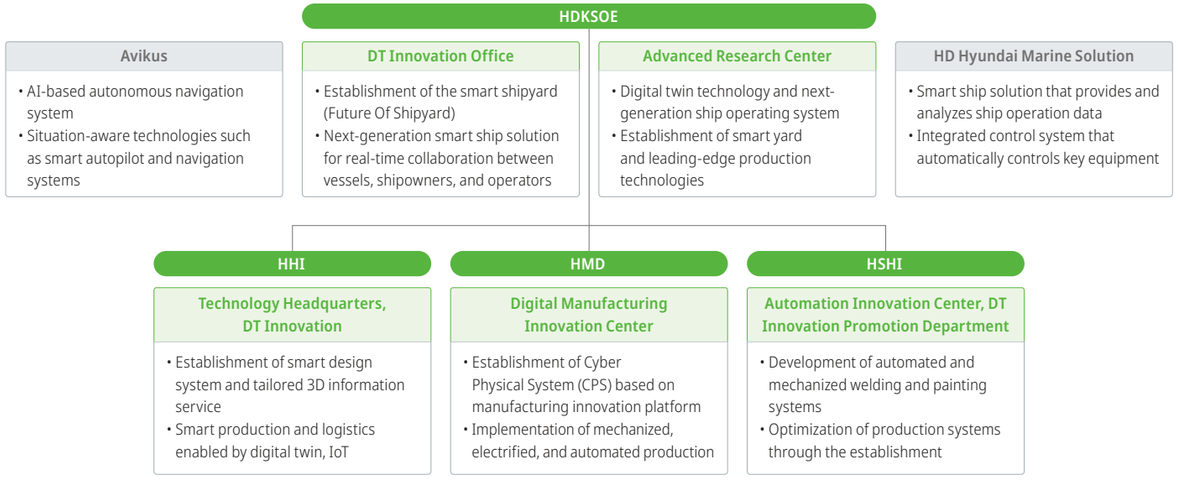
Dedicated Teams at Shipbuilding Subsidiaries

In line with the FOS roadmap, **HHI**, **HMD**, and **HSHI** actively carry out digital smart shipyard projects, led by each company's respective DT Innovation teams.

HHI, led by the Technology Headquarters and DT Innovation Division, is working on the Smart Shipyard project, and aiming to build an optimized digital twin operating system based on 3D design data and real-time production performance.

HMD's Digital Manufacturing Innovation Center, which comprises experts in design, production, DT, and automation, is working on joint development projects (JDP) for digital manufacturing innovations and building integrated design-production platforms. At **HSHI**, mechanization and automation projects are undertaken by the Automation Innovation Center and the DT Innovation Promotion Department, which consolidate the previously dispersed functions related to production technology. These teams are also working on manufacturing system innovations through the development of equipment tailored to on-site needs and building virtual factories.

Group Digital Transformation Governance



Strengthening External Collaboration for Digital Production Innovation

In order to realize the "Autonomous Shipyard" by 2030, **HDKSOE and its shipbuilding subsidiaries** have been collaborating closely with SIEMENS DISW (SIEMENS Digital Industries Software) since 2022. In February 2024, we shared progress on the development of integrated design to production platform and future strategies, and in July 2024, **HMD** shared their progress on platform development and the next steps. In the same month, we held a technical committee meeting to review joint projects including **HMD's** "small sized block assembly robot simulation," "panel line production optimization," **HSHI's** "SIEMENS marine design platform," and "Industrial Metaverse (Teamcenter X, NVIDIA Omniverse) System."

Joint Development Agreements for Integrated Design-Production Platform

HDKSOE and its shipbuilding subsidiaries have entered into MOUs and are carrying out projects with global technology companies such as Siemens, Dassault Systèmes, AVEVA, NAPA, and CADMATIC to develop an integrated design-production platform that consolidates 3D design CAD, Product Life Cycle Management (PLM), and Digital Manufacturing (DM) into a unified framework. The integrated design-production platform is a key task in creating a digital production environment for a smart shipyard, and is expected to enhance the quality of the vessels and efficiency of the shipbuilding process.

Digital Transformation

Strategy

Direction of Digital Transformation

Establishing the Smart Shipyard (Future Of Shipyard)

2030 Smart Shipyard Strategy

HDKSOE and its shipbuilding subsidiaries are working together on the "FOS (Future Of Shipyard)" project to build a state-of-the-art, digital smart shipyard that utilizes Big Data, AR/VR, robotics, intelligent automation, and artificial intelligence. This production innovation will transform the shipbuilding industry. In 2023, we completed the first phase of FOS, "Visible & Understandable" shipyard, and aim to complete Phase 2, "Connected & Optimized," by 2026, and Phase 3, "Autonomous," by 2030. Once completed, this project is expected to enhance productivity by 30% and shorten lead time by 30%.

2030 Targets

- Build Cyber Physical System (CPS) for all stages of the shipbuilding process
- Operate intelligent technology with minimal human intervention and increase productivity and create a safe working environment
- Enhance productivity, reduce lead time, and achieve Zero Waste in processes and resources

[~2023] Visible & Understandable Shipyard

HDKSOE and its shipbuilding subsidiaries successfully completed the first phase of FOS in late 2023, with the construction of the "Visible and Understandable" shipyard using "Twin FOS," a digital twin integrated information platform. Twin FOS provides full visuals of the actual conditions of the work site (factory), ships and blocks under construction, facilities, and logistics, and shows metrics and indicators of the process, materials, quality, safety, and management. The system helps executives to make data-driven decisions swiftly, managers to implement efficient strategies and directives, and workers to access material information, fostering a continuous cycle of collaboration across the production process. Twin FOS, as a digital platform that integrates and manages all the assets and information of the shipyard, is a key part of the infrastructure for the transformation into a smart shipyard.

As part of the FOS project, we created a digital work order system for each part of the shipbuilding process, which allows us to consolidate information such as production plans, work orders, and safety instructions, and thereby enhance productivity. With the introduction of the mobile digital work order system, viewing information and working collaboratively have become easier since this enables workers to access model data and work instructions regardless of their locations. Moreover, we have established an integrated monitoring system for key facilities and equipment such as cranes, transporters, and forklifts, which monitors operations in real time to ensure optimal efficiency.

[~2026] Connected and Optimized Shipyard

HDKSOE and its shipbuilding subsidiaries plan by 2026 to complete FOS Phase 2, a "Connected and Optimized" shipyard which will bring a transformative leap in productivity and cost competitiveness. The key to Phase 2 is the optimization of processes based on AI, machine learning, and big data analysis. In this phase, we develop decision-making technologies that minimize human intervention by integrating and linking data accumulated in Phase 1 and derive optimal solutions through AI and big data simulations. This will reduce idle time and waste, make processes more efficient, and allow preemptive risk management, which will provide operational strategies for each area and an optimal cost structure.

To this end, HDKSOE and its shipbuilding subsidiaries have continued to strengthen the foundation of the "Visible and Understandable" shipyard by advancing the Twin FOS, improving the 3D design information service, and expanding visualization of materials and logistics.

Furthermore, we are working on projects such as interconnected systems, automatic check on defect-free design data, automated production planning linking preceding and subsequent processes, and the generation of optimal block transport routes. We plan on expanding the application of Palantir Foundry for AI-driven big data analysis, and focus on strengthening our infrastructure using advanced digital technologies such as mobile, IoT, drones, and ultra-high-speed communications to support optimization across various fields.

[~2030] Autonomous Shipyard

Through FOS Phases 1 and 2 (by 2026), **HDKSOE and its shipbuilding subsidiaries** aim to provide timely monitoring of yards and unit worksites, optimally operate production factors such as workforce, materials, capital, schedules, and facilities based on AI Big Data analysis, and achieve a Logical Automation (LA) system enabling rational and swift decision-making on management issues.

We aim to build an "Autonomous" shipyard by 2030, a completed model of FOS where the LA System and Physical Automation (PA) factors such as advanced robots and automated facilities are perfectly connected and integrated.

The intelligent autonomous shipyard will ensure optimal operation through sophisticated communication between highly trained logical and physical systems, minimizing human intervention and creating a safe and efficient work environment.

When FOS Phase 3 is complete, HDKSOE and its shipbuilding subsidiaries will increase productivity, shorten lead time, and achieve Zero Waste in process and resources.

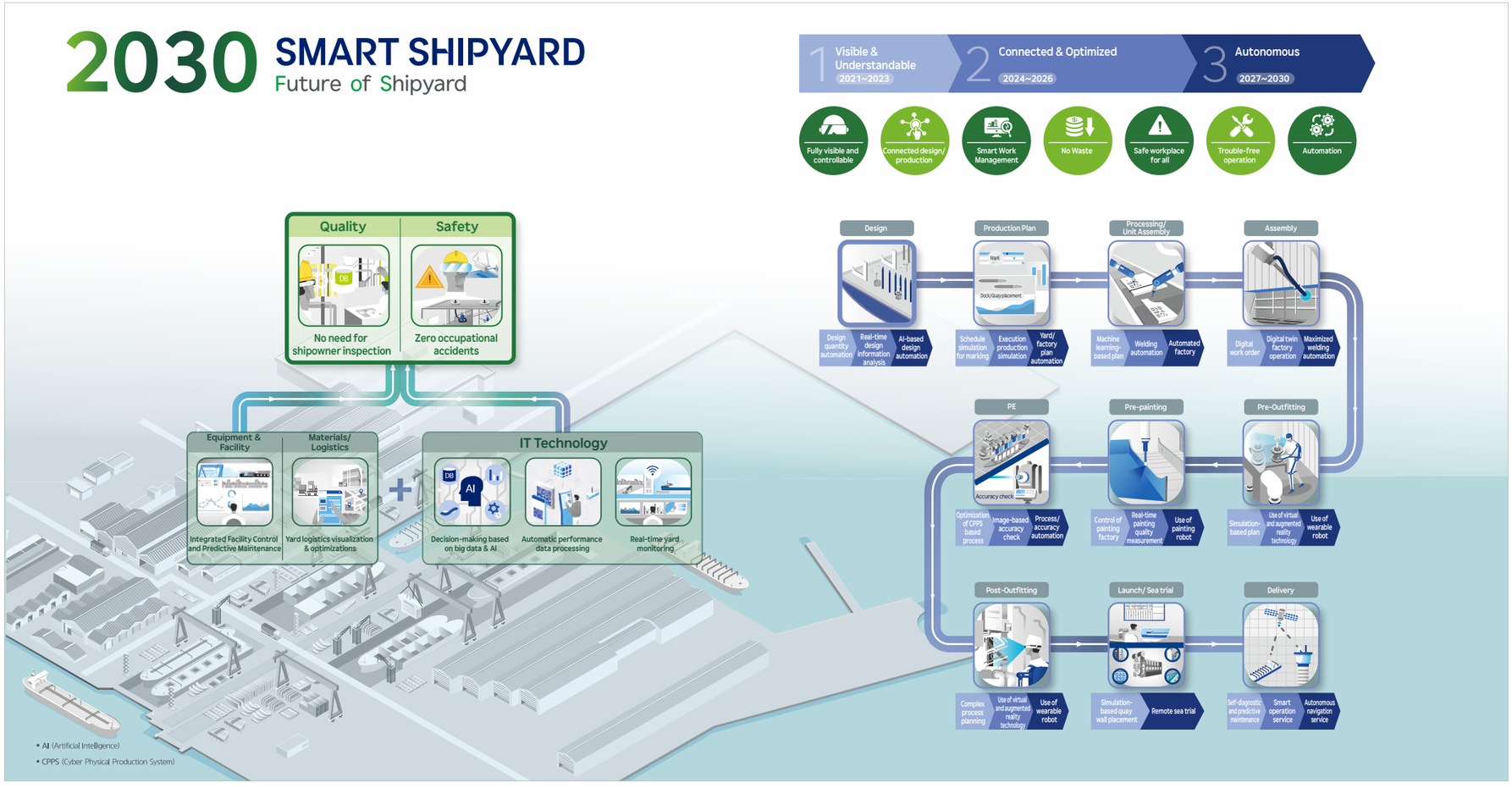
Digital Transformation

Strategy

Direction of Digital Transformation

Establishing the Smart Shipyard (Future Of Shipyard)

2030 Smart Shipyard Blueprint



[FOS Achievement] Mobile Work Order System

HHI built a mobile work order system in order to increase collaboration between production sites and design functions and enable easier access to information. This system allows real-time access to design information, work details, and safety inspection items from any place. The 3D design information customized for each production department allows easier understanding, real-time access to individual work items enhances work efficiency, and access to safety requirements for each work item helps prevent safety accidents. In addition, a multilingual translation application that includes shipbuilding terminology and dialects helps facilitate collaboration with foreign workers.

[FOS Achievement] WMS in In-house Warehouse

HMD established a smart warehouse management system (WMS) within the in-house warehouse in order to digitize the management of materials. The entire process, from receiving and storing to picking and shipping, is handled in real time using mobile devices and IoT technology. The system has also improved the accuracy of inventory reconciliation between physical items and the digital system, simplified operations, and enhanced the accuracy of logistics. By linking the WMS with the Transportation Management System (TMS), we can mark and share the status and location of requested materials on a GIS (Geographic Information System), thereby improving production support. Going forward, we plan to advance the logistics system by providing 3D drawing information and necessary data to external block and manufacturing vendors, and by enhancing the performance input system.

[FOS Achievement] Intelligent Storage Yard Analysis System

HSHI enhanced the accuracy of block storage status by using an intelligent yard analysis system that integrates drones and AI. The AI automatically interprets aerial views of the yard captured by drones and matches them with GIS (Geographic Information System) data, enabling real-time tracking of block locations and occupancy status. This has improved logistics efficiency, optimized space utilization, and increased the precision of decision-making. Going forward, we aim to resolve on-site challenges by comparing actual conditions with process data and identifying AI-driven tasks focused on external work sites.

Digital Transformation

Strategy

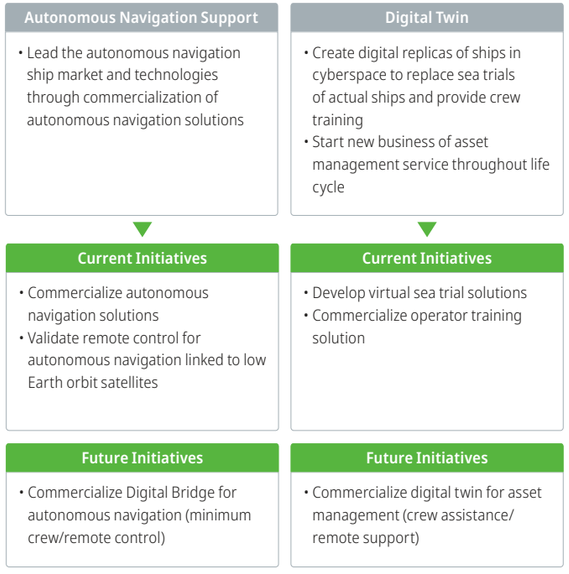
Direction of Digital Transformation

Smart Ship Development

Direction of Smart Ship Development

HDKSOE and its shipbuilding subsidiaries continue to strengthen the efficiency and safety of the ship's navigation process by integrating shipbuilding and ICT capabilities. While we are focused on developing a smart ship using autonomous navigation solutions, at the same time, we are also advancing AI-based safety monitoring and condition diagnosis solutions. We aim to establish ourselves as the premium shipyard leading the future era of digital vessels.

Direction of Smart Ship Development



Next-Generation Smart Ship Solution (ISS 2.0)

HDKSOE and its shipbuilding subsidiaries are working to develop the Next-Generation Smart Ship Solution (ISS 2.0) to comprehensively enhance vessel safety, operational efficiency, and environmental responsiveness. The ISS 2.0 is being advanced on a phased roadmap which includes data visualization and real-time monitoring (View), data-based decision-making support (Recommend), and establishment of autonomous navigation environment (Autonomous). Currently, we are focused on technological applications related to navigation data analysis and decision-making support. The ISS 2.0 platform enables real-time data connectivity and collaboration among vessels, shipowners, and operators through optimization using navigation data, energy management, and modernization of data platforms.

AI-based Carbon Emissions Monitoring (OceanWise)

HDKSOE, in collaboration with HD Hyundai Marine Solution, has developed a carbon emissions monitoring solution called "OceanWise" built on the ISS 2.0 infrastructure. This solution enhances effective management of Scope 3 greenhouse gas (GHG) emissions and supports our customers' ESG requirements.

OceanWise is a big data-based solution that uses a virtual ship performance prediction model to monitor carbon emissions during voyages and provide guidance for emissions reduction. It has been commercialized through supply contracts with companies like POSCO, contributing to the expansion of digital services in the shipbuilding and maritime sectors. This integrated digital smart ship strategy not only advances ESG systems for ship manufacturing but also for the entire shipbuilding industry. It will play a key role in realizing HDKSOE's vision of "Ocean Transformation."

AI-based Machinery and Safety Automation

HDKSOE and its shipbuilding subsidiaries are working to enhance operational efficiency by installing AI-based machinery and safety automation solutions onto ships. A key example is HiCBM, which uses data already collected on the ship without any additional sensors and enables real-time diagnosis and management of critical equipment such as the engine, compressor, and pump. The system utilizes AI to detect the signals of a malfunction during navigation and take measures before problems occur.

Another example is Hi-CAMS, which uses onboard CCTVs to detect and analyze safety-related events in real time using AI, enabling fast and accurate responses to dangerous situations. It continuously monitors crew safety, and has specialized detection features for major incidents such as fires, allowing for quick identification of early warning signs and prompt action.

These two solutions function as "AI crew members," and complement the roles of engineers and deckhands. They have officially been recognized for their safety and reliability through the Product Design Assessment (PDA) certification from the American Bureau of Shipping (ABS).

Autonomous Navigation Solution (HiNAS)

HDKSOE and its shipbuilding subsidiaries install the large-vessel autonomous navigation solution (HiNAS) by Avikus, a subsidiary of HD Hyundai, on ships, in order to strengthen competitiveness in orders and to enhance safety, convenience, and environmental responsiveness.

HiNAS is an intelligent navigation assistance system that enables autonomous ship operation. It supports crew decision-making and enables autonomous navigation by integrating camera-based video information, various onboard sensor data, and AI-based data analysis technologies to handle diverse situations during navigation.

HiNAS consists of four solutions, HiNAS Navigation, which improves forward situational awareness; HiNAS Control, which automatically controls maneuvering and speed based on the situation; HiNAS SVM (Surround View Monitoring), which provides a 360˚ top-down view of the ship and its surroundings; and HiNAS Cloud, which allows real-time video-based monitoring from the shore.

This autonomous navigation technology supports safe and efficient ship operations. It automatically controls the ship according to optimal operating conditions based on weather and various maritime situations, which helps reduce fuel consumption. HiNAS has demonstrated its fuel-saving effects compared to conventional navigation through trials with several shipping companies, thereby contributing to carbon emission reduction.

Digital Transformation

Risk Management

Digital Transformation Risk Management

Risk Identification and Response

Digital Transformation Risk Factors

HDKSOE and its shipbuilding subsidiaries are currently advancing the FOS project and smart ship project, both of which integrate IT (Information Technology) and OT (Operational Technology). As such, we face IT security threats, operational accident risks in the OT process, and other such risks. As more of the equipment and devices become connected to the internet network, there is a growing risk of leakage of confidential information such as process data and ship technology, as well as exposure to malicious attacks that could disrupt the shipbuilding process or cause ship operation accidents.

To address such diverse risks that may arise during the digital transformation process, HDKSOE and its shipbuilding subsidiaries actively implement technical and managerial measures including access control, data protection, blocking of unauthorized programs, continuous checks on the security procedures, infrastructure management, and the establishment of incident prevention and response systems. Information security measures during business operations can be found on pages 124–126.

Development of Ship Cyber Resilience Technology

HDKSOE and **HHI** have developed cybersecurity technology for ships based on the International Association of Classification Societies (IACS) standard "UR E26 (Ship Cyber Resilience)," the first in the global shipbuilding industry, and obtained Approval In Principal (AIP) from the Korean Register (KR). With the recent increase in use of advanced ICT technologies, IACS established the common cybersecurity rule "UR E26" and decided to mandate its application to ships contracted for construction after January 2024.

HDKSOE and **HHI** designed a cyber resilience network focusing on key ship systems, as well as established process and methodologies for response systems based on the UR E26 framework of Equipment Identification–Protection–Attack Detection–Response–Recovery. With cybersecurity being critical for smart ships and autonomous ships in the future, we were able to demonstrate our advanced technological capabilities by receiving verification and certification of the validity, safety, and suitability of our ship cyber resilience design.

Opening of the Cyber Security War Room

In order to protect the company's digital information at the group level, **HD Hyundai** appointed HDKSOE's DT Innovation Director as the group Chief Information Security Officer (CISO) and established an Information Security Center to protect the company's digital information. With the acceleration of digital transformation increasing the importance of information security, the Information Security Center opened the "Cyber Security War Room" in January 2025 as a strategic space to detect potential security threats and prevent data leaks and breaches.
By opening this optimized integrated monitoring environment that monitors various security events occurring in networks and key systems, **HDKSOE and its shipbuilding subsidiaries** are able to conduct rapid analysis and response to security threats.
Going forward, we plan to introduce AI-based analysis capabilities and automated response systems and develop a more advanced security control center.

Acquired AIP for Cyber Resilience of Ships

Opening of Cyber Security War Room

Digital Transformation

Metrics & Targets

Digital Transformation Targets

Smart Technology Roadmap

Establishing Smart Shipyard

HDKSOE and its shipbuilding subsidiaries are accelerating the development of a digital twin yard equipped with intelligent production automated systems that integrate advanced technologies, such as AI, drone, and IoT, in order to enhance both production efficiency and precision simultaneously. The digital twin yard is a system that creates a virtual version of the shipyard and establishes the optimal working condition by running simulations of variable factors. As of 2024, we have successfully completed building a simulation- based integrated yard operating system. In particular, we introduced automated systems using intelligent robots for core processes that may decrease production time while increasing quality output.

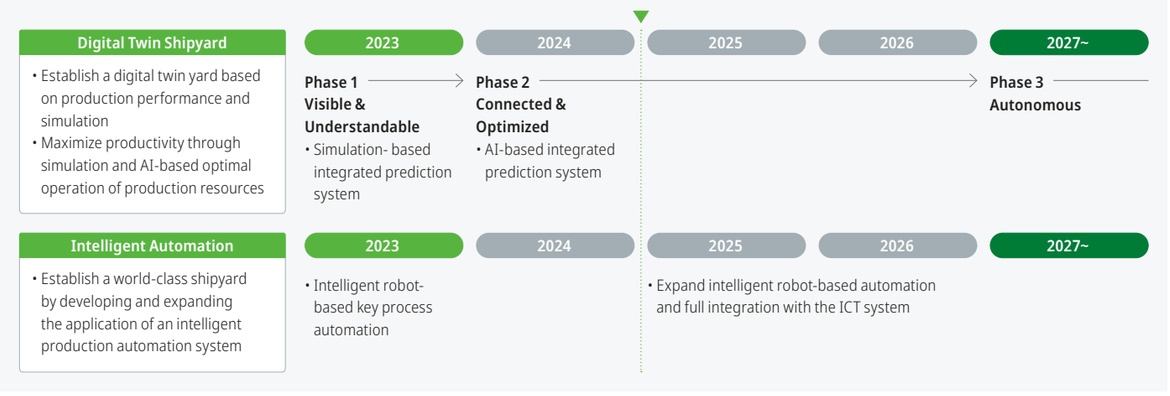
From 2025, we will further develop the digital twin system into an AI-based integrated predictive system that will minimize human intervention. In addition, intelligent robot-based automated systems will be expanded, and we will create a smart production system that will be fully integrated with the ICT system, which will then lead to a "smart shipyard" that is integrated with AI, drones, and IoT. This digital transformation strategy will be a key driver in creating a sustainable production environment that minimizes waste of resources and realizes a safer environment for workers.

Commercialization of Smart Ships

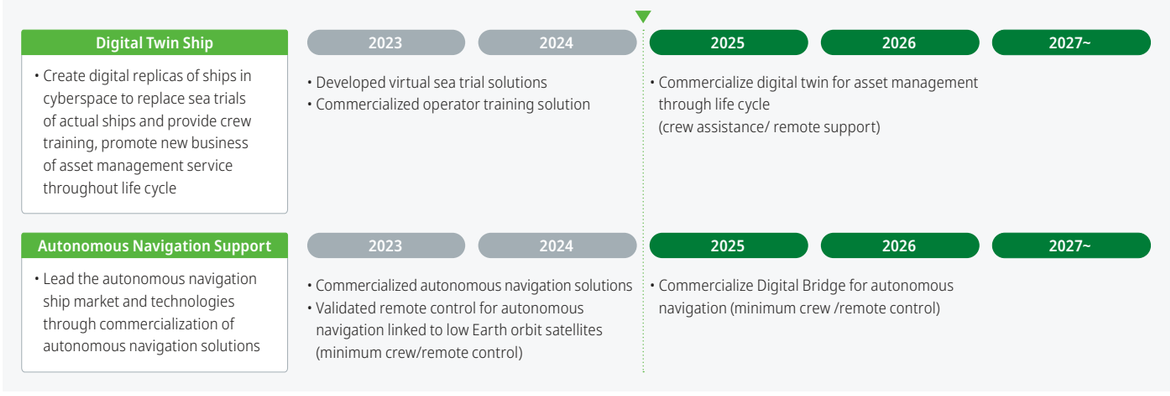
HDKSOE and its shipbuilding subsidiaries lead innovations in the smart ship sector with our digital transformation. As of 2024, we successfully developed virtual sea trial solutions and commercialized operator training solutions, which contribute to the enhancement of safety and efficiency before the actual operation stage. In addition to commercializing the autonomous navigation solution, we demonstrated remote control for autonomous navigation solutions using low Earth orbit satellite connection.

Going forward, HDKSOE and its shipbuilding subsidiaries aim to commercialize digital twin asset management solutions that can provide integrated management of a vessel throughout its life cycle and strengthen crew assistance and remote support. We also aim to commercialize a digital bridge for autonomous navigation and create a fully autonomous navigation environment with minimal crew and complete remote control. Based on these technologies, we plan to become a global leader in the next-generation autonomous ship market, which is expected to take off in earnest around 2030, when regulations by the International Maritime Organization (IMO) are established.

Smart Shipyard Roadmap



Smart Ship Roadmap



Environmental Management

Governance

Environmental Management Governance

Roles and Responsibilities

Role of the BOD

HDKSOE and its shipbuilding subsidiaries have established a systematic environmental governance structure, stretching from the BOD, the management, and to operational departments. BODs at each company (or ESG Committees under BODs) review strategic directions and action plans for environmental management and supervise the goals and performance related to GHG emissions reduction, waste management, and pollutant reduction. In addition, the BODs oversee the implementation of environmental management activities conducted by the management and operational departments, and then provide reviews and approvals for matters that have significant impacts on corporate business activities.

Role of the Management

The CEOs and executives in charge of environmental management at **HDKSOE and its shipbuilding subsidiaries** establish strategic goals to implement environmental management initiatives, and they hold the responsibility and authority to monitor the implementation of each activity and execute funds. The executives also receive reports on environmental management policies, action plans, and the progress of those plans, and make decisions on key issues.

Environmental Management Performance Evaluation Criteria

Category	Description
HDKSOE	• Environmental indicator evaluation for entire organization (bi-annually) • Environmental impact assessment per process (annually) • Annual ESG goals for department heads and team (10%)
HHI	• KPIs for CEO and executives - Achieve GHG emission reduction targets • Entire organization - Energy saving targets and initiatives, number of environmental violations
HMD	• ESG KPIs for department heads - ESG improvement task progress, HSE-related law violations, ESG campaign participation • Business ESG KPI (management, executives) - Energy-saving performance (intensity) - Waste recycling rate
HSHI	• KPIs for CEO and executives - Achieve GHG emission reduction goals • Annual ESG evaluation for department heads - Energy management - ISO 14001 management

Dedicated Environmental Management Organizations

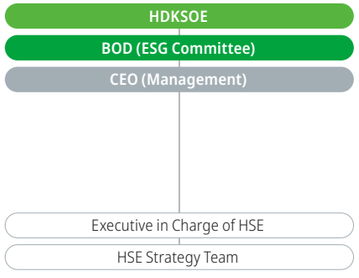
HDKSOE's HSE Strategy Team, led by the HSE executive, is responsible for environmental management tasks. This team acquires and maintains environmental management system certifications as well as establishes and revises environmental management-related guidelines. In addition, the team analyzes environmental opportunity and risk factors and any other environmental issues that may arise in the course of business, as well as the causes and strategies to address these issues and establish efficient management strategies.

At **HHI**, the ESG Department, Energy Management Department, and Green Resources Department are dedicated to addressing environmental management issues. The ESG Department is responsible for the following tasks related to the overall environmental management system: planning environmental policies and systems; establishing business plans and carbon neutrality strategies; developing and managing environmental KPIs; devising response measures against environmental regulations; managing environment-related permits and licenses; managing environmental equipment and facilities; and maintaining the environmental management systems (ISO14001) certification. The Energy Management Department is in charge of tasks related to energy management systems such as planning energy policies and systems and formulating business plans. The Green Resources Department takes responsibility for managing waste treatment and operating and managing incineration facilities.

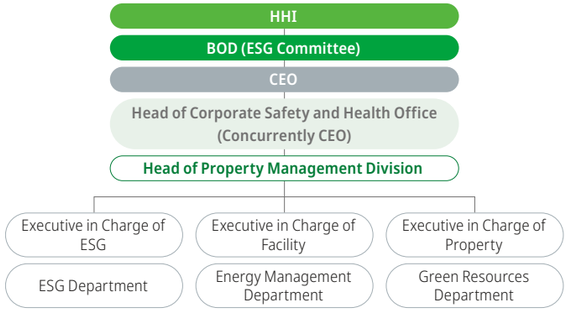
At **HMD**, the Environment & Health Department, the System Quality Management Department, and the Production Facility Solutions Department are designated as dedicated environment management teams. These departments are responsible for planning environmental management policies and ESG systems, formulating business plans, obtaining and managing ISO 14001, operating environmental facilities, and managing waste. In addition, the departments also handle tasks such as responding to the GHG Emission Trading Scheme (ETS), planning energy projects, obtaining and managing ISO 50001, and managing energy equipment, facilities, and water usage.

At **HSHI**, the Facilities and Environmental Energy Department serve as a dedicated department for environmental management. The department is responsible for obtaining and managing ISO 14001, establishing and revising environmental policies, and responding to GHG ETS. In addition, the department is also in charge of environment management-related permits, managing air and water pollutants and other waste, obtaining and managing ISO 50001, and managing energy and water use facilities.

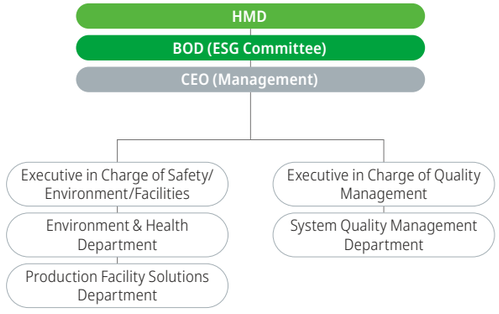
HDKSOE Environmental Management Organizational Structure



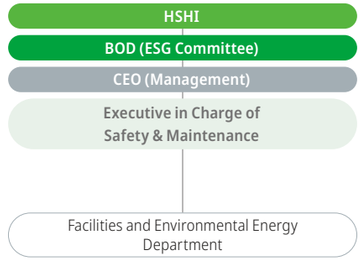
HHI Environmental Management Organizational Structure



HMD Environmental Management Organizational Structure



HSHI Environmental Management Organizational Structure



Environmental Management

Strategy

Environmental Management Strategy

Laying the Foundation for Environmental Management

Environmental Management Declaration

HDKSOE and its shipbuilding subsidiaries have announced a Manifesto for Environmental Management in response to the increasing focus on the topic both internally and externally. This declaration clearly expresses our vision and specific commitment to environmental management. Each company's declaration contains our commitment to sustainable growth and environmental preservation for future generations, as well as our pledge to fulfill our corporate social responsibility as a global enterprise.

- HDKSOE Manifesto for Environmental Management
- HHI Manifesto for Environmental Management
- HMD Manifesto for Environmental Management
- HSHI Manifesto for Environmental Management

Full text of "Manifesto for Environmental Management"

On the pathway to achieving green and sustainable growth through low-carbon and eco-friendly management that brings clean and hopeful futures for the next generation, all of us shall pledge to take our Seven Commitments of Environmental Management into real practices as follows:

❶ We will achieve carbon neutrality to address climate change.
❷ We will drive eco-friendly technologies for ships forward to low carbon green growth.
❸ We will comply with domestic and international environmental laws and regulations.
❹ We will strengthen our key pillars of environmental management based on ISO 14001.
❺ We will take the lead in efficient use of resources through saving and recycling.
❻ We will minimize pollutants in the production process.
❼ We will make transparent disclosure of environmental information and establish good corporate culture for environmental management.

Funding for Environmental Investment

HHI utilizes various channels such as green bonds to secure funds for environmental investment. The funds raised through these green bonds are utilized for constructing and developing technologies for low- and zero-carbon ships. The details of green bond fund investments and impact report are disclosed on the HHI website.

- HHI Green Bond Green Bond Allocation and Impact Report

Projects for Green Bond Investments

Category	Details
Low- and zero-carbon ship business	• Reduce air pollutants such as CO_2, SOx, NOx by using LNG dual-fuel and methanol dual-fuel ships
Investment in facilities and technology development for low- and zero-carbon ships	• Research and development into clean ships by developing technologies and investing into facilities related to ammonia/methanol dual-fuel engine, ammonia/hydrogen propulsion vessels

Environmental Management Training

HDKSOE conducts training on proper handling of chemical substances for employees and contractors. In addition, environmental facilities managers receive emergency response training on environmental incidents such as pollutant leaks and breakdown of environmental facilities.

HHI trains employees and contractors on chemical substances to provide basic concepts of chemical substances and responses to potential accidents, ensuring that the employees can respond to unexpected chemical accidents. Workers who handle hazardous chemical substances are required to complete dedicated training before undertaking work. Furthermore, HHI provides continuous information on new laws and environmental systems for personnel in charge of environmental facilities.

HMD conducts environmental education and training on chemical substances and the prevention of marine pollution for employees and contractors. These education and training programs consist of basic concepts of chemical substances and responses to potential accidents, supporting relevant employees in responding to unexpected chemical accidents. In addition, we regularly conduct environmental training to enhance employees' awareness of environmental issues and create a sustainable environmentally friendly workplace.

HSHI provides regular training sessions to keep employees updated on environmental laws, regulations, and international agreements in line with recent technical trends. Moreover, HSHI conducts environmental training for safety managers from in-house subcontractors, ensuring extended environmental management. In addition, employees and contractors undertake chemical substance training to ensure they are able to act appropriately in case of chemical accidents.

Environmental Management Training Courses

Category	Target Group	Content
HDKSOE	Employees and contractors	• Proper treatment of chemical substances
	Environmental facility managers	• Regular environmental training
HHI	Employees and contractors	• Chemical substance training including fundamentals of chemical substances, how to act in case of accidents • Hazardous chemical substance handler training
	Environmental facility managers	• New regulations and environmental management system training
HMD	Employees and contractors	• Chemical substances and prevention of marine pollution • Heighten environmental awareness of employees
HSHI	All employees	• New environmental regulations and international agreements
	Employees and contractors	• Chemical substance training including fundamentals of chemical substances, how to act in case of accidents
	Safety managers from in-house subcontractors,	• Prevent chemical incidents and how to respond to them

Environmental Management

Risk Management

Environmental Management Risk Management

Environmental Management Risk Management System

Establishing an Environmental Management System

HDKSOE and its shipbuilding subsidiaries have established systematic environmental management systems for each company to respond to environmental risks faced by the company and effectively manage environmental management-related performance indicators such as air and water pollutants, chemical substances, and waste.

Environmental Management System Certification and Internal Assessment

HDKSOE and its shipbuilding subsidiaries have obtained the environmental management system certification (ISO 14001) to implement environmental management at the companywide level. Each certified business site is subject to regular assessments conducted by accredited certification bodies, and the certification is renewed every three years. In addition, we provide training on operating the environmental management system to the employee responsible from each department, and employees who have completed the ISO 14001 internal auditor training program conduct internal assessments. Through these efforts, we continue to strengthen the administration of the environmental management system.

Reviewing Environmental Risks for Investment Projects

HDKSOE and its shipbuilding subsidiaries perform extensive prior reviews on each potential investment project. This includes not only financial risks such as strategy, legal issues, and profitability, but also environmental risks. Through internal preliminary reports and discussions, each company identifies environmental risk factors of new investment projects and then determines whether to proceed with the investment.

HHI has established an environmental impact improvement plan, considering the environmental impacts of all business activities (R&D, design, production, etc.) across the company, and implemented improvement activities according to the plan. Dedicated environment-related departments review the necessity and technical feasibility of new investment projects at the company level. The review examines relevant risk and opportunity factors, including environmental pollution risks, whether there are pollution risk reduction measures in place, and the need to obtain permits and licenses according to environmental laws.

HMD considers and reviews environmental risks and opportunity factors when reviewing new investment projects. For investments into new equipment, an environmental impact assessment statement is done to decide whether the investment is appropriate, as well as whether new equipment will replace old equipment or if there is already a similar investment. Moreover, HMD reviews technical performance, compliance with relevant laws and regulations, and conducts technical review that considers safety and environmental impacts before making the final decision on a new investment.

HSHI also evaluates and reviews environmental risks and opportunity factors when considering new facilities investment. The company first assesses investment suitability and checks the need for replacement and the possibility for investment overlap. In addition, HSHI reviews technical performance, compliance with relevant laws and regulations, and technologies with safety and environmental considerations before finally deciding on the new investment.

Environmental Management Communication

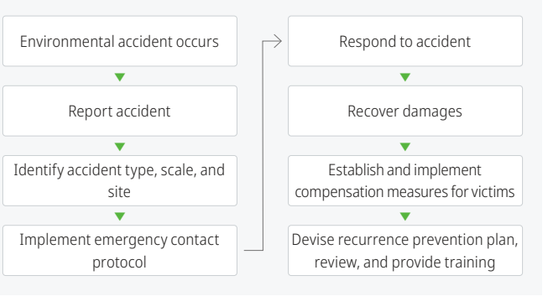
HDKSOE and its shipbuilding subsidiaries actively communicate with stakeholders on positive and negative environmental impacts that may arise from our business operations. We listen to and respect the suggestions and concerns of various stakeholders including employees, contractors, and local communities, thereby sharing roles and responsibilities related to the environment.

HHI joined as a member in the Chemical Safety Management Committee, organized by Dong-gu Office of Ulsan Metropolitan City, and discussed chemical safety management for the local community together with government and private organizations. Since 2024, HHI has participated in the private-public joint response council for chemical accidents, organized by the Nakdong River Basin Environmental Office, to establish a cooperation mechanism for prompt first response in case of chemical accidents within Ulsan.

Response to Environmental Accidents

HDKSOE and its shipbuilding subsidiaries have conducted regular self-assessments on environmental facilities to prevent potential environmental pollution accidents during business operations. In preparation for potential chemical spills, we conduct hazard assessments on chemical products to be handled and provide guidelines and training for safe use. **HHI**, **HMD**, and **HSHI** conduct preliminary inspections on high-risk processes in terms of marine pollution and carry out periodic marine pollution prevention training.

Environmental Accident Response System



Third-party Certification Status for Environmental Management System

Category	Certification Standards	Certifying Body	Validity Period	Scope of Certification[1]
HDKSOE	ISO 14001:2015	DNV	December 2022 – December 2025	100 %
HHI	ISO 14001:2015	DNV	March 2024 – March 2027[2]	95 %
HMD	ISO 14001:2015	LRQA	June 2024 – June 2027	100 %
HSHI	ISO 14001:2015	DNV	July 2023 – April 2025	100 %

1) HDKSOE: Certified worksites - GRC Headquarters, Ulsan Research Building
HHI: Ratio of employees in certified sites (product design, manufacturing, etc.)
HMD: Certified worksites - Headquarters, Yongyeon Plant, Onsan Plant, Mohwa Plant
HSHI: Certified worksites - Headquarters, Daebul 1 Plant
2) Validity period changed after renewal in 2025 (May 2024 – May 2028)

Environmental Management

Risk Management

Environmental Management Risk Management

Water Usage Reduction

Water Consumption Management

HDKSOE conducts monthly water usage checks at GRC Headquarters, Ulsan Research Building, and Gyedong Office in Seoul, and strives to improve the effective use of water resources.

HHI has installed water-saving devices in most of its facilities, conducts periodic inspections, and promptly installs devices if any are missing. HHI conducts energy saving activities each month, and inspects for any wastage of water and other resources. We also minimize water usage by reducing drain use to prevent the freezing of quay walls or docks during winter. HHI is also building a water and energy consumption monitoring system (Hi-Energy System) to use for advanced analysis and management of water usage.

HMD manages and analyzes trends of monthly water usage data for Ulsan headquarters and offsite factories. To save water use, HMD minimizes water leaks by repairing and replacing old pipes. In 2025, HMD built a SCADA[1] system for water pressure monitoring which allows real-time monitoring of water pressure and usage in each area of our facilities.

HSHI keeps records and manages daily use of domestic and industrial water at Yeongam headquarters and Daebul plant. In addition, HSHI reuses water through a wastewater reclamation system, and in 2023, HSHI established a remote monitoring system for water facilities. In 2024, we invested in pipes, pumps, and other utilities and improved the quality of wastewater in order to increase our reclaimed water reuse rate.

1) SCADA: Supervisory Control and Data Acquisition

Water Recycling and Reuse

HMD reduces water usage by recirculating industrial water used for the strength test required to manufacture cargo tanks for the construction of the LPG Carrier. We set targets based on the number of ships constructed and manage its performance.

Status of Industrial Water Reuse

Category	2022	2023	2024
Target	119,233 ton	131,156 ton	44,391 ton
Performance	152,122 ton	152,037 ton	22,105 ton
Performance as of target	127.6 %	115.9 %	49.9%

HSHI introduced the water reclamation system in 2010 and established a water reuse circulation system. Through this system, wastewater generated from the yards is reprocessed and used for ballast water or yard cleaning, instead of being discharged. In 2024, we installed facilities and carried out improvement activities to expand the use of fire fighting and industrial water. We plan to expand the usage of recycled water in 2025.

Status of Reclaimed Water Reuse

Category	2022	2023	2024
Reclaimed water usage	234,681 ton	202,801 ton	164,661 ton
Cost-saving effects	KRW 833 million	KRW 790 million	KRW 595 million

Water Resources Risk Management

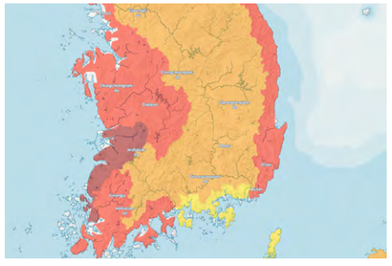
HDKSOE and its shipbuilding subsidiaries analyze water resources risks near the business sites based on the guidelines of the World Resources Institute (WRI) and use the results to seek effective management strategies.

According to the analysis, there is a high level of water quantity physical risk at all our business sites. This means that our business sites may be greatly affected by natural disasters such as flooding and tsunami because our shipyards are located near the sea. HDKSOE and its shipbuilding subsidiaries plan to consider such analysis to respond to water resources risks.

Water Resources Risks Exposure Level

Category	Physical Risk – Water Quantity	Physical Risk – Water Quality	Transition Risk
HDKSOE	Medium-high (2-3)	Low-medium (1-2)	Low (0-1)
HHI	High (3-4)	Low-medium (1-2)	Medium-high (2-3)
HMD	High (3-4)	Low-medium (1-2)	Medium-high (2-3)
HSHI	High (3-4)	Low-medium (1-2)	Low (0-1)

WRI Water Risk Atlas



Physical Risks - Quantity

Physical Risks - Quality

Regulatory and Reputational Risk

Environmental Management

Risk Management

Environmental Management Risk Management

Reduction of Pollutant Emissions

Management of Water Pollutants

HDKSOE manages wastewater generated from experiments at Ulsan Research Building. The generated wastewater is stored in a wastewater collection tank, and once a certain amount is accumulated, a licensed wastewater treatment company collects the water from the tank upon request.

HHI treats the wastewater from its worksites, in accordance with the Water Environment Conservation Act, using permitted methods for each discharge source. Wastewater treated at the in-house treatment facility flows into the Water Quality Improvement Office at Bangeojin, Ulsan. To manage emissions of specific hazardous substances, water quality analysis is regularly conducted based on the legal cycle for each facility. When the treatment of wastewater is outsourced, it is done legally by a professional wastewater treatment company. Wastewater treatment is managed by a government-run electronic transfer management system.

HMD manages the emission concentration of water pollutants by applying its own standards to within 50% of the legal emission allowance standard. To precisely measure the concentration of emissions, HMD commissions external professional organizations to analyze components at least once a quarter, and then the results are recorded in HMD's own management system for monitoring. In addition, HMD enhances the efficiency of wastewater treatment and maintains the optimal state of facilities by investing in replacing outdated facilities at the wastewater treatment site.

HSHI strives to minimize pollutant emissions by identifying environmental impacts arising throughout entire business operations such as procurement, production, and disposal. To this end, HSHI manages pollutants on a real-time basis by installing water pollution prevention facilities and an automated water quality measurement network. Moreover, it has computerized all environment-related tasks and shared the monitoring status between the environment and production departments, thereby maintaining the optimal state of its facilities.

Management of Air Pollutants

To comply with the permissible discharge limits for air pollutants, **HDKSOE** conducts a full investigation of every air pollutant from its facilities and identifies new air pollutants. We also commission certified professional organizations to measure pollutant emissions periodically. Moreover, HDKSOE strives to improve air quality by regularly replacing old dust collection facilities and additional machinery.

HHI installs pollution prevention facilities that are most appropriate for each type of site, and conducts periodic measurement to manage pollutant emissions. Based on the internal standards for each process and facility, HHI conducts repair and maintenance for facilities exceeding the standards. We continue to carry out initiatives to reduce the emissions of pollutants in accordance with the Special Act on the Improvement of Air Quality in Air Control Zones.

HMD manages its emissions to below 30% the legal permissible discharge limits for air pollutants. To this end, HMD complies with the legal self-measurement cycle for each facility and regularly measures air pollutants. Moreover, to identify any failures in the facilities and pipe leaks, HMD conducts visual inspections every week. For facilities exceeding its emission limits, HMD replaces bag filters and conducts thorough repair and maintenance, thereby stabilizing operations of the facilities. In case of equipment malfunctions or leaks in the piping, HMD immediately address and manage the issues using the on-site feedback system (One-Stop Yard Care).

HSHI maintains its emissions below 30% of the legal permissible discharge limits for air pollutants. To this end, HSHI conducts self-measurement of air pollutants in accordance with the legal requirements. The operation logs and self-monitoring results are reported to the Air Emission Management System (SEMS) on a monthly basis. In addition, HSHI calculates confirmed emissions biannually to strictly manages the data on air pollutant emissions.

BUSINESS CASE

Reducing Volatile Organic Compounds (VOCs)

HDKSOE and its shipbuilding subsidiaries developed low VOC paint technology in order to reduce emissions of VOCs, which are emitted during the painting process, and continued to expand its uses. Recently, we collaborated with KCC to co-develop EH4600(HS), a paint that reduces the effect of VOCs emissions. This product was recognized for its minimal impact on the environment, and obtained the eco-label certification from the Ministry of Environment. The EH4600(HS) paint is currently used in the internal living spaces in ships, and we plan to expand its application.

Management of Volatile Organic Compound (VOC)

HHI reduces VOCs by installing adsorption facilities and regenerative thermal oxidizers (RTO) at painting sites with less than 50,000m^3 capacity. We placed the RTOs, which are steel pre-treatment painting devices, with new devices over four years (2020–2023). Also, HHI installed VOC reduction facilities at large painting facilities with 50,000m^3 or larger capacity to reduce harmful air pollutant (HAP) emissions. In addition, we monitor total hydrocarbon (THC) concentrations at facilities with biannual measurement of levels, and we promote the use of low-VOC paints.

HMD conducts regular measurements of THC concentrations every six months to manage the concentration of VOC emissions. Additionally, HMD regularly monitors and regenerates the absorbents (zeolite) charged in reduction facilities to enhance the efficiency of VOC reduction. HMD also introduced low-VOC paint and has expanded its use. From 2025, we will submit a VOC management plan and performance record to the National Institute of Chemical Safety every five years, and use this data to guide our annual management efforts.

HSHI captures and processes the VOCs generated from large painting sites, using catalytic oxidation facilities. Furthermore, HSHI sets its own internal standards within the legally permissible discharge limit and conducts biannual self-assessments. Lastly, we are planning to utilize low-VOC paints.

Environmental Management

Risk Management

Environmental Management Risk Management

Reduction of Waste Emissions

Management of Chemical Substances

In line with relevant chemical substance related laws and regulations, **HDKSOE** identifies harmful or hazardous properties of incoming chemicals through pre-inspections. HDKSOE regularly provides relevant training to employees on safe handling of chemical substances such as Material Safety Data Sheets.

HHI conducts preliminary hazard assessments for the chemical products handled in the work sites to decide whether to bring them in. We have a strict chemical management system in place: departments handling hazardous chemical substances provide guidance on chemical labeling and the use of protective gear to ensure the safe handling of chemicals. We require handlers of hazardous chemicals to complete training, have installed facilities that comply with the relevant laws, conduct self-inspections, and undergo periodic reviews by external organizations.

HMD conducts hazard assessments on the chemical products that are handled or expected to be handled in business sites. Based on the assessment results, HMD provides separate handling guides for the chemicals assessed as safe. In addition, in order to prevent harmful chemical spills, HMD conducts regular internal inspections and regular checks by external experts.

HSHI conducts hazard assessments before chemicals are delivered to effectively oversee the chemical substances that are brought into the worksites. If the chemicals are found to be unsuitable, alternative chemicals are used. In addition, HSHI conducts weekly inspections on the proper handling of hazardous chemicals. HSHI also receives regular external inspections on the hazardous chemical handling facilities every two years.

Management of Waste

HDKSOE outsources waste treatment to external specialists. HDKSOE conducts regular inspections and provides instructions to prevent illegal treatment of waste and reports new types of waste to the relevant authorities and ensures waste is treated in line with the regulations.

HHI transports and sorts wastes from its worksites in a legitimate way, and treats the waste through professional companies. To fulfill the obligations of an emitter, HHI manages the entire process of transporting and treating waste in a transparent manner and regularly monitors the facilities of the waste treatment companies. HHI has strengthened its waste sorting activities to promote the reusing and recycling of resources. HHI supplies incineration waste heat to areas requiring heat energy, reuses engine packaging, and conducts design optimization and other activities to promote efficient use of resources.

HMD sorts the wastes from its worksites according to the relevant laws, and employs the services of specialist waste treatment facilities to recycle, incinerate, or bury the waste. In particular, HMD has a focused process in place to manage designated wastes to prevent leakage of leachate to the outside. In addition, HMD continues to expand the items of recyclable waste such as transparent PET bottles and waste rope.

HSHI thoroughly manages the waste in various ways including collection, sales, outsourcing, sorting, and storing. Since the shipyards are adjacent to the sea, HSHI has prioritized minimizing potential marine pollution by strictly managing offshore facilities and quay line processes. HSHI spares no effort to ensure waste oil and harmful chemicals are treated in line with all laws and regulations.

BUSINESS CASE

Establishment of Recycling System for Waste Hand Towels

In January 2024, **HD Hyundai** entered into a cooperation agreement with Yuhan-Kimberly, and started the "BI:CYCLE" campaign, aimed at establishing a recycling system for all the waste hand towels generated at the GRC headquarters across the entire HD Hyundai group. Waste hand towel collection receptacles were installed in all areas of GRC, and stickers and posters providing waste separating guidelines to encourage employee participation. The collected hand towels are sorted and transported, and used as raw materials for hand towels.

HDKSOE, **HHI**, and **HMD** collected and recycled approximately 7,007kg of waste hand towels in 2024 from the GRC headquarters, which has reduced 7,252kgCO_2eq[1] of greenhouse gas emissions, according to Yuhan-Kimberly's LCA Certificate. In addition to this campaign, we will continue to engage in other activities to establish a sustainable resource recycling framework and achieve Zero waste.

1) 7,252 kgCO_2eq (=7,007kg x 103.5 kgCO_2eq/100kg)

Cooperation agreement with Yuhan-Kimberley to establish a recycling system for waste hand towels

Recycling of Waste Styrofoam

Since April 2023, **HSHI** has implemented a project to recycle Styrofoam (used to cushion ship equipment) by turning it into regenerative ingot. Through this project, HSHI has reduced micro-plastics generated in the course of incinerating waste Styrofoam and enhanced the recycling rate of Styrofoam, thereby creating a resource recycling ecosystem. In 2024, we produced 34 tons of ingot, contributing to environmental protection and increasing resource recycling.

Recycling of Scrap Metal

HHI sorts scrap metal generated during production at the resource recovery facility, and reusable scrap is either reused by departments requiring metal or outsourced to external processing vendors for reworking according to its intended purpose, then recycled back into our internal processes. In 2024, 10,712 tons of processed scrap metal was used as engine casting material and 1,734 tons of discarded LUG was recycled into new LUG.

HMD and **HSHI** are taking the lead in resource recycling by obtaining official recognition for scrap metal recycling implemented by the Ministry of Environment. **HMD** has registered metal as a designated recyclable resource and continuously put efforts to improve its recycling rate. Meanwhile, **HSHI** started as the first case in the industry to obtain the scrap metal recycling certification in 2022. It established a steel-saving system and held eco-friendly campaigns, resulting in a 0.07% increase in scrap metal recycling in 2024, compared to the previous year.

HMD's Recyclable Resource Designation Certificate

HSHI's Resource Recycling certification

Environmental Management

Metrics & Targets

Environmental Management Metrics & Targets

Environmental Management Progress

Environmental Target Management

To strengthen our companywide environmental management framework, **HDKSOE and its shipbuilding subsidiaries** have set target metrics for pollutants, waste, and other environmental areas, and manage performance through specific criteria and processes. Each company establishes its own environmental performance framework, based on the group ESG KPI guidelines and changes in the operating and business environment.

These performance indicators are finalized by the approval from management, BoD, and ESG Commitee (under BoD). The rate of achievement is reflected in the performance compensation of the relevant executives and departments (teams).

Water Pollutant Management Targets

	2024 Targets and Performance	2025 Targets
HDKSOE	• (Target) ZERO administrative violations • (Performance) ZERO administrative violations	• (Target) ZERO administrative violations
HHI	• (Target) Manage annual average water pollutant emissions within 30% of permissible discharge limits • (Performance) Annual emissions were managed within 30% permissible discharge limits	• (Target) Manage annual average water pollutant emissions within 30% of permissible discharge limits
HMD	• (Target) Emission targets under TOC 52.2 kg, SS 83.51 kg • (Performance) TOC 7.67kg, SS 1.37kg	• (Target) Emission targets under TOC 51.34kg, SS 82.14kg
HSHI	• (Target) Manage annual average water pollutant emissions within 50% of permissible discharge limits • (Performance) Annual average water pollutant emissions were managed within 50% of permissible discharge limits (BOD: 1.8ppm, SS: 1.2ppm)	• (Target) Manage annual average water pollutant emissions within 50% of permissible discharge limits

Air Pollutant Management Targets

	2024 Targets and Performance	2025 Targets
HDKSOE	• (Target) Manage air pollutant emissions from work processes within 30% of legally permissible discharge limits • (Performance) Maintained air pollutant emissions within 30% of legally permissible discharge limits	• (Target) Manage air pollutant emissions from work processes within 30% of legally permissible discharge limits
HHI	• (Target) Reduce fine dust emissions by 40% and above compared to base year (2016) • (Performance) Reduced fine dust emissions by 40% and above compared to 2016	• (Target) Reduce fine dust emissions by 5% and above compared to base year (2023)
HMD	• (Target) Fine dust emissions: below 19,763kg, NOx emissions: below 6,824kg • (Performance) Fine dust emissions: 3,629kg, NOx emissions: 8,119kg	• (Target) Fine dust emissions: below 16,407kg, NOx emissions: below 8,898kg
HSHI	• (Target) Manage average annual air pollutant emissions within 30% of legally permissible discharge limits • (Performance) Maintained air pollutant emissions from worksites within 30% of legally permissible discharge limits	• (Target) Reduce fine dust emissions by 10% and above compared to base year (2023)

Waste Management Targets

	2024 Targets and Performance	2025 Targets
HDKSOE	• (Target) Waste emissions intensity (compared to revenues): below 1.63 tons/KRW billion • (Performance) 0.07 tons/KRW billion	• (Target) Waste emissions intensity (compared to revenues): below 0.38 tons/KRW billion
HHI	• (Target) Circular use ratio: 32.41% and above, Terminal disposal ratio: below 30.92% • (Performance) Circular use ratio: 48.78%, Terminal disposal ratio 10.99%	• (Target) Circular use ratio: 37.61% and above, Terminal disposal ratio: below 30.11%
HMD	• (Target) Circular use ratio: 48.25% and above, Terminal disposal ratio: below 16.77% • (Performance) Circular use ratio: 55.75%, Terminal disposal ratio 10.31%	• (Target) Circular use ratio: 56.88% and above, Terminal disposal ratio: below 14.37%
HSHI	• (Target) Circular use ratio: 68.24% and above, Terminal disposal ratio: below 16.07% • (Performance) Circular use ratio: 77.52% and above, Terminal disposal ratio: below 8.65%	• (Target) Circular use ratio: 73.74% and above, Terminal disposal ratio: below 15.29%

Chemical Substances Management Targets

	2024 Targets and Performance	2025 Targets
HHI	• (Target) Conduct monthly self-inspections of facilities that handle hazardous chemical substances to prevent chemical accidents (Zero chemical accidents) • (Performance) Conducted monthly inspections (Zero chemical accidents)	• (Target) Conduct monthly inspections of facilities that handle hazardous chemical substances to prevent chemical accidents, review chemical accident prevention management plan and comply with laws and regulations
HMD	• (Target) Conduct monthly self-inspections and weekly patrol inspections of facilities that handle hazardous chemical substances to prevent chemical accidents • (Performance) Conducted monthly and weekly inspections (Zero chemical accidents) • (Target) ethylbenzene emissions: under 141 tons, xylene emissions: under 664 tons • (Performance) ethylbenzene: 153 ton, xylene: 791 tons	• (Target) Create and comply with chemical accident prevention management plan • (Target) Conduct self-inspection of facilities that handle hazardous chemical substances to achieve zero chemical accidents (Monthly self-inspections / weekly patrol inspections) • (Target) ethylbenzene emissions: under 131 tons, xylene emissions: under 601 tons
HSHI	• (Target) Obtain licenses to legally manage hazardous chemical substances • (Performance) Obtained three types of business licenses for handling hazardous chemical substances permits (use, storage, sale)	• (Target) Conduct quarterly self-inspection of facilities that handle hazardous chemical substances to prevent chemical accidents, review chemical accident prevention management plan and comply with laws and regulations

Environmental Management

Metrics & Targets

Environmental Management Metrics & Targets

Environmental Management Progress and Targets

Environmental Target Management

BUSINESS CASE

Mid- to Long-Term Targets for Environmental Management (HHI)

HHI has set mid-to long-term environmental targets and is employing various strategies to achieve them. In particular, GHG emission targets are managed through KPIs assigned to the CEO and executives. For environmental management system certifications and emissions of chemical substances, detailed annual strategies are developed to help drive efforts in achieving these targets.

Key Environmental Targets

Category	Target Year	Targets
ISO 14001 (Environmental Management System) certification	2027	100% certification
Emissions of chemical substances	2030	Reduce emissions by 10% compared to 2021 emissions
Carbon neutrality (Reduction of GHG emissions)	2050	Reduce emissions by 100% compared to 2018 total emissions (Scope1+2)

ESG GOAL TO 2030 (HMD)

HMD recognizes the importance of ESG management and has established "ESG GOAL TO 2030," which outlines our commitment and vision to ESG management, and details our mid-to long-term environmental, social, governance targets. Our environmental plan is categorized into 5 targets: addressing climate change risk, achieving GHG reduction and energy efficiency, optimizing water usage, minimizing resource consumption, and protecting biodiversity. We have established specific strategies for each goal and set KPIs for each item.

Key Environmental Targets

(Unit: tCO_2eq, TJ)

Category	2025	2030	Note
Scope 1, 2 emissions	162,645	105,252	Compared to 2022 levels
Scope 3 emissions	27,332,399	25,893,851	
Energy use	2,974	1,923	
Renewable energy use	9%	60%	-

VISION 2028 (HSHI)

HSHI has established a mid to long-term plan, "Vision 2028," aimed to create a safe work environment throughout all business sites, and has set four key targets to create an eco-friendly worksite. We have also established 9 strategies that will help achieve our 4 key targets, including supporting businesses to achieve our target incineration waste recycling rates, installing equipment and systems to increase recycling rate of wastewater treatment facilities, and building on-site solar power generation systems to transition to renewable energy. HSHI is committed to carrying out our strategies effectively to achieve "Vision 2028."

Key Environmental Targets

Key Environmental Targets (by 2028)
• Achieve 100% recycling of incinerated waste following disposal off-site - Launch initiative to support incinerated waste recycling business
• Achieve 20% reduction of carbon emissions - Transition to renewable energy (PPA 10%, self-generation 10%)
• Achieve 100% recycling of treated water at wastewater treatment facilities

Biodiversity

Governance

Biodiversity Conservation Governance

Roles and Responsibilities

Role of the BOD

The Board of Directors (ESG Committee) of **HDKSOE and its shipbuilding subsidiaries** receives reports, and reviews and deliberates on important matters such as establishing and revising biodiversity protection policies, devising and implementing action plans, analyzing risks, and conducting internal and external communications.

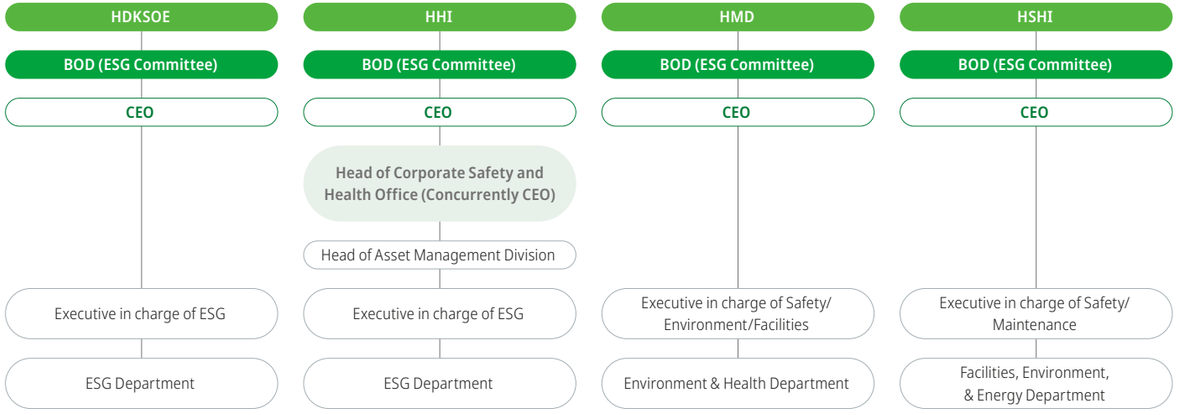
Role of the Executive Management

The Executive Officer of Safety, Health, Environment, or ESG at **HDKSOE and its shipbuilding subsidiaries** receives reports on the monitoring results of the policy development and implementation on biodiversity conservation and forest protection to make important decisions on significant issues. The executive officers of R&D at each company oversee the development of technologies to reduce adverse impacts on marine ecosystems, which may occur in the process of ship operations.

Role of Operating Departments

The ESG departments at **HDKSOE and its shipbuilding subsidiaries** are responsible for establishing and revising biodiversity protection policies, devising and implementing action plans, analyzing risks, and promoting internal and external communications. The departments performing safety, health, and environmental tasks have secured systems to pre-emptively respond to marine pollution and potential damage to the ecosystem that may result from their business operations, as well as ensure their capabilities to promptly respond to accidents. The R&D departments monitor technology trends to reduce impacts on the marine ecosystem caused by ship operations and develop technologies that comply with international regulations or certification systems for application to ships.

Biodiversity Conservation Organization



Strategy

Biodiversity Conservation Strategy

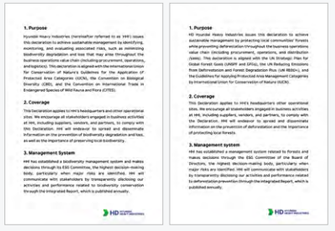
Direction for Biodiversity Conservation

Biodiversity Conservation and No-deforestation Commitment

HDKSOE and its shipbuilding subsidiaries officially declared commitment to biodiversity conservation and no-deforestation initiatives, and minimize any negative impact to natural capital caused by business activities. This declaration includes not only the business sites of all the affiliate companies, but also suppliers and other business partners across the entire value chain. We are also recommending to the stakeholders within our value chain to restrict business activities in areas where there are global and nationally significant biodiversity.

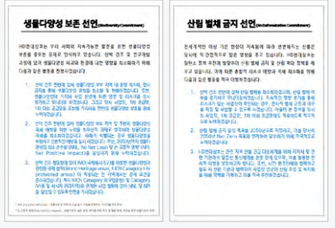
The company continues to monitor the impact of operations on the biodiversity and forests, and plans to continue making practical efforts to prevent deforestation and achieve no net loss (NNL) or net positive impact (NPI) on biodiversity, in line with the net zero by 2050 carbon neutrality (Net Zero) target. To achieve this, we aim to develop concrete implementation strategies, including avoiding new developments in key ecological habitats, conducting restoration activities for unavoidable impacts, and implementing mitigation measures to minimize ecosystem damage. Additionally, HDKSOE and its shipbuilding subsidiaries will comply with guidelines from international agreements such as the International Maritime Organization (IMO) and the International Union for Conservation of Nature (IUCN). We will also establish collaboration systems with local governments, non-profit organizations, and other external stakeholders to continuously strengthen implementation efforts for biodiversity conservation and responsible supply chain management.

HDKSOE Biodiversity Conservation and No Deforestation Commitment

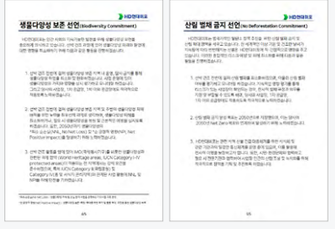


HHI Biodiversity Conservation Declaration

HHI Deforestation Prevention Commitment



HMD Biodiversity Conservation and No Deforestation Commitment



HSHI Biodiversity Conservation and No Deforestation Commitment

Biodiversity

Strategy

Biodiversity Conservation Strategy

Biodiversity Conservation Activities

Biodiversity Impact Management

HDKSOE and its shipbuilding subsidiaries work to minimize negative impacts to biodiversity and apply the concept of biodiversity mitigation hierarchy to effectively manage natural capital and the impacts from business activities. The steps of the mitigation hierarchy, applied in operating our business are: avoid, reduce, restore, and regenerate.

In principle, business activities are avoided altogether in ecologically sensitive regions, and if that is unavoidable, reduction measures are taken to minimize damage to the ecosystem. For areas that are already damaged, ecosystem restoration activities are conducted. Beyond that, regeneration programs are being reviewed to make the region's biodiversity more abundant. Through this staged approach, biodiversity loss is minimized, and a net positive impact is pursued in the long term.

Mitigation Hierarchy

Category	Activities
Avoid	• Conduct environmental impact assessment to estimate and analyze the environmental impacts of factors caused by construction, modification, expansion, and closure of facilities on the lives of residents and the natural environment. • Select assessment sectors, including air, water, land environments, animals, and plants • Use assessment results to identify reduction measures and establish key impacts
Reduce	• Monitor underwater radiated noise and develop noise reduction technology • Received silent E-Notation for underwater noise notation system • Entered partnership agreement for ship painting technology and acquired eco-label certification for EH4600(HS) ship interior paint • Launched HHI Dolphin Citizen Squad for Disaster Control to minimize pollution damage to ensure prompt responses in case of marine pollution near business sites • Developed and employed ballast water treatment system "HiBallast," and removed microorganisms and pathogens contained in the ballast water. • Co-developed "Ballast Free" containership that does not discharge ballast water, and received Approval in Principal certification.
Restore	-
Regenerate	• "One Company, One River" initiative, including seasonal planting of flowering plants and removal of invasive species from streams • Protected habitat of the endangered flying squirrel and carried out removal of invasive species in Tancheon River

Construction of Low-noise Ships

HDKSOE and its shipbuilding subsidiaries recognize the impact of Underwater Radiated Noise (URN) generated during ship operations on marine organisms. Special efforts are made to mitigate the propeller noise from ships as it overlaps with the sound frequency range of marine mammals such as dolphins.

HDKSOE, **HHI**, and **HMD** have been cooperating with the Korea Research Institute of Ships & Ocean Engineering (KRISO) and the Ministry of Trade, Industry and Energy (MOTIE) since 2020 and have developed the 'URN Monitoring and Reduction Technologies for marine environmental protection. Currently, advanced versions of the technology are under development.

In 2021, **HSHI** successfully delivered a 115,000-ton crude oil tanker, which became the world's first merchant ship to receive DNV's Silent E-Notation for underwater noise notation. Efforts will continue to be made to develop and disseminate URN reduction technologies and create an environment conducive to preserving marine biodiversity.

Protection of Ecosystem and Habitats

HDKSOE cooperated with the city of Seongnam to protect the endangered flying squirrel habitat and to eradicate invasive species in the Tancheon River ecosystem.

HHI launched the "HHI Dolphin Citizen Squad for Disaster Control" together with the Korea Coast Guard Station Ulsan. The objective is to coordinate with the Coast Guard for prompt first response to marine pollution accidents, to minimize damages from pollution. Furthermore, HHI maintains readiness through regular training to quickly respond to marine pollution incidents.

HMD launched the "Plant Now" campaign, where HMD employees grow seedlings at their homes for 100 days and donate them for transplantation at the Noeul (Sunset) Park in the outskirts of Seoul.

HSHI signed an MOU with Wolchulsan National Park for the transition to a carbon-neutral society and has engaged in volunteer activities, such as seeding efforts for native plants, to secure carbon absorption sources.

Application of Ballast Water Technology

Ballast water is seawater loaded onto a ship's hull to ensure the resilience of the ship. However, when the ballast water from other waters is discharged in another region after completing a voyage, marine organisms from other regions may be released together, disturbing marine ecosystems. Therefore, technologies are applied to prevent such release and disruption.

HHI has independently developed and employed a ballast water treatment system called the "HiBallast" to remove microorganisms and pathogens contained in ballast water. The HiBallast earned a Type Approval from the IMO according to the G8 Guidelines.

HMD, in collaboration with Korea Marine Transport Co. Ltd, (KMTC) and the Korean Register (KR), jointly developed a "Ballast Free" containership that never discharges ballast water, receiving the Approval in Principle (AIP) certification. This container ship replaces ballast water loaded in the hull with solid weights and portable permanent ballast water, enabling the ships to operate without discharging ballast water into the sea.

Biodiversity

Risk Management

Biodiversity Risk Management

Biodiversity Assessment Procedures

Overview of Biodiversity Assessment

HDKSOE and its shipbuilding subsidiaries conduct environmental impact assessments (EIA) in accordance with the relevant laws and regulations for each country to estimate and analyze the impact of environmental factors caused by construction, modification, expansion, and closure of facilities on the lives of residents and the natural environment. The assessment includes atmospheric, aquatic, and terrestrial environments, as well as fauna and flora. The assessment results are used to understand major impacts and establish mitigation measures.

When programs (or activities) subject to EIAs are expected to have impacts on biodiversity and the ecosystem, the Biodiversity Impact Assessment (BIA) on fauna and flora is incorporated into the EIA process. This integrated assessment estimates the impact on specific species and their populations, and mitigation measures are developed based on the assessment. In addition, each business site carries out various biodiversity conservation activities, such as increasing species and populations, protecting habitats, and creating ecological forests. To enhance the effectiveness of conservation activities, efforts are also made to collaborate with government organizations, non-profit agencies, and professional institutions.

The BIA methodology that is outlined on this page—area selection, literature survey, impact prediction, establishment of mitigation measures, and post-observation and monitoring—is in line with the EIA Report Guidelines published by the Korean Ministry of Environment (ME). When HDKSOE and its shipbuilding subsidiaries are required to conduct EIA including BIA in the process of construction, expansion, and operation of facilities, a third-party expert organization is appointed to conduct the EIA in compliance with the methodology as described.

Selection of Survey Areas

According to Environmental Impact Assessments (EIA) guidelines, a survey area is selected to understand the distribution, habitat, and ecological environment of fauna and flora. The survey area includes areas where impacts on fauna and flora are anticipated. These surveys are conducted at different times, depending on seasonal characteristics, migration routes, activity ranges, and distribution of local flora.

The area of the survey location is based on the radius of the long axis of the project area, and nearby local communities and environmental ecosystems that can be affected by the projects are also subject to the assessment.

Literature Surveys

Literature surveys are conducted using open data and materials from the most recent 5 years, such as national natural environment surveys, the Environmental Impact Assessments (EIA) Support System (EIASS), and the Winter Water Birds Census of Korea. If there are no recent materials on area subject to the Biodiversity Impact Assessment (BIA) or other required literature materials, the scope of the literature survey can be expanded to include academic research and study reports from reputable sources. The literature surveys also allow for an understanding of ecological and natural landscapes as well as an overview of fauna and flora, distribution of major organisms, ecological axes, legal protection areas for the natural environment, and distribution and characteristics of major vegetation.

Field Surveys

Routes for field surveys are selected to include various locations by understanding the topographical conditions of the area to be assessed.

The surveys are conducted on foot, and species are observed visually, photographed, detected by sound, or captured using traps to identify their distribution. Through the field surveys, the following is identified: vascular flora, endangered wildlife species, municipal and provincial government-protected wildlife, floristic regional indicator plants, rare plants, natural monuments, protected trees, and other species of high academic value.

Recording Survey Results

Fauna and flora that are observed are listed by survey locations and routes, using pictures or tables so that the species and populations can be clearly displayed.

Prediction of Adverse Impacts

The degree of change in fauna and flora is analyzed, predicted, and evaluated based on environmental changes, air pollution, water pollution, noise, and vibration during construction, expansion, and operation of large-scale facilities. In particular, priority is given to the prediction of impact on major species that are expected to be significantly affected by the project and species sensitive to human interference, analyzing the probability and magnitude of impacts on these species.

Establishment of Mitigation Measures

Based on the prediction of adverse impacts on biodiversity, the species and ecological areas in need of protection are selected, and impact mitigation measures optimized for each species and area are established. Project plans are adjusted to avoid significant negative impacts, safety measures are implemented to minimize impacts on the species and their populations, and alternative habitats for specific species are created when necessary.

Post-observation and Inspection

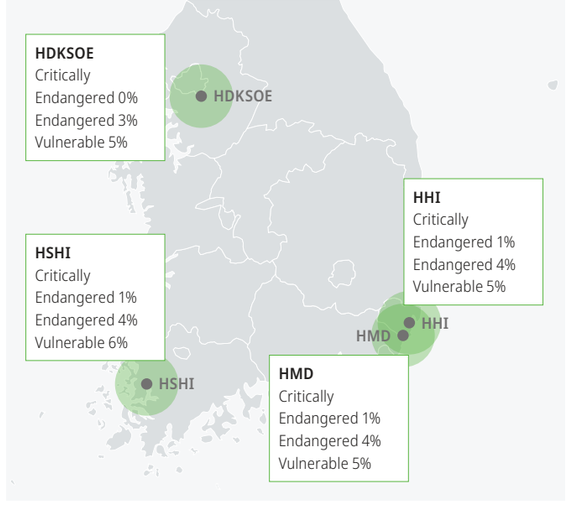
After developing mitigation measures, we monitor whether these measures have been properly implemented, and whether adverse impacts on the identified species have been avoided or mitigated. Changes in species and populations are also monitored by comparing the data before and after projects have been implemented. To enhance the effectiveness of mitigation measures, alternative strategies are also prepared, depending on the situation of project operation areas.

Biodiversity Assessment Procedures

Mitigating Actions

HDKSOE and its shipbuilding subsidiaries analyzed the presence of endangered species on the IUCN Red List near major facilities in order to understand what type of biodiversity exists near the business sites. We calculated the number of endangered species within a 25-km radius as a percentage of the total number of species.

Based on this survey, plans are in place to establish specific strategies to prevent damage to ecologically protected areas and to conserve and restore habitats, and then expand survey and management activities for endangered plants and animals.



Distribution of endangered and vulnerable species on the IUCN Red List (as a percentage of the total number of species) within a 25-km radius.

Biodiversity

Risk Management

Biodiversity Risk Management

BUSINESS CASE **Natural Capital and Biodiversity Risk Assessment by HHI and HMD**

Risk Assessment Process

As part of the efforts to protect biodiversity and manage risks to natural capital, **HHI** and **HMD** conducted a biodiversity risk assessment following the TNFD (Taskforce on Nature-related Financial Disclosures)[1] guidelines, using the LEAP (Locate, Evaluate, Assess, Prepare)[2] approach.

Risk Assessment of Natural Capital and Biodiversity (LEAP Approach)

Locate (Identifying Interfaces with Nature)	Evaluate (Assessment of Dependencies and Impacts)	Assess (Identification of Risks and Opportunities)	Prepare (Response and Disclosure)
❶ Select sites for analysis	❹ Evaluate dependencies and impacts on natural capital across the value chain	❺ Identify risks arising from business activities	❼ Develop response strategies and governance framework
❷ Analyze ecosystem conservation areas and vegetation		❻ Identify business opportunities	❽ Establish key indicators and targets
❸ Identify biodiversity species at risk			

1) A global initiative providing guidance on reporting of issues related to the natural environment, led by UNEP FI (United Nations Environment Programme Finance Initiative), UNDP (United Nations Development Programme), WWF (World Wildlife Fund), and other global organizations.
2) TNFD recommended framework to identify risks and opportunities in issues related to the natural environment

Locate interface with nature- *Locate*

HHI and **HMD** focused on "Locate (define location)" to identify interaction between business activities and nature and biodiversity. We identified key ecological protection areas within 50 km of our major and directly operated business sites, and then analyzed natural interfaces and distribution of vegetation using data such as the National Land Environmental Evaluation Map and IUCN (International Union for Conservation of Nature).

Major Directly Operated Business Sites[3] (Operation)

HHI
- Headquarters (Head facility): 1000, Bangeojinsunhwan-doro, Dong-gu, Ulsan, 44032, Republic of Korea

HMD
- Headquarters (Head facility): 100, Bangeojinsunhwan-doro, Dong-gu, Ulsan, Republic of Korea

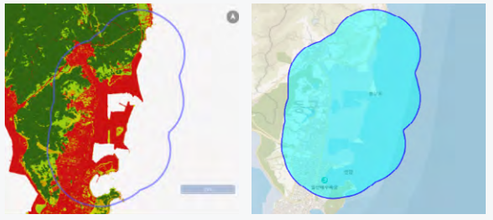
3) The Ulsan Headquarters was selected as a directly operated business site. The scope of the business site under the LEAP approach is the same as above.

Ecological Protection Areas within 50km of Business Sites

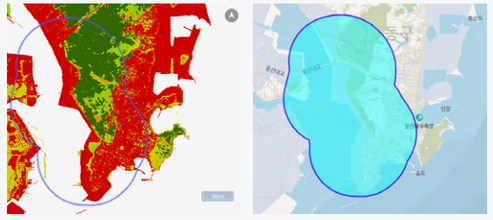
Protection Area	Distance to protection area from business site		Key characteristics of protection area
	HHI	HMD	
Downstream Taehwa River	Approx. 5km	Approx. 6km	• Ecological landscape conservation area designated by Ulsan • Habitat for migratory birds and other wildlife
Mt. Unmun	Approx. 40km	Approx. 42km	• Ecological landscape conservation area designated by the Ministry of Environment • Habitat for endangered species such as otters, flying squirrels, and martens
Mujechi Wetland	Approx. 27km	Approx. 24km	• Wetland protection area designated by the Ministry of Environment • Mountain wetland

Analysis of Ecosystem within 2km of Business Sites[1]

Grade 1 Grade 2 Grade 3 Grade 4 Grade 5 Excluded



HHI: 1000, Bangeojinsunhwandoro, Dong-gu, Ulsan, Republic of Korea



HMD: 100, Bangeojinsunhwandoro, Dong-gu, Ulsan, Republic of Korea

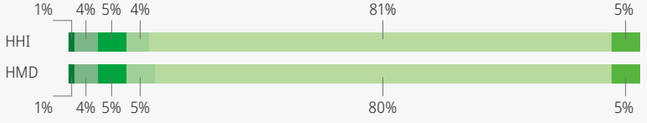
Grade	National Land Environmental Evaluation Map[2]	
	HHI	HMD
Grade 1	17.6%	17.8%
Grade 2	5.5%	3.2%
Grade 3	5.3%	7.6%
Grade 4	1.2%	0.9%
Grade 5	28.1%	31.7%
Out of Scope[3]	42.2%	38.7%

Grade	Analysis of Key Environmental Locations	
	HHI	HMD
Grade 1 Area in the Ecology and Nature Maps[4]	0.4%	0.16%
Grade 2 Area in the Ecology and Nature Maps	14.5%	20.08%
Ecological and Scenery Conservation Area[5]	Not applicable	Not applicable
Wetland protection area[6]	Not applicable	Not applicable
Wildlife Protection Disricts[7]	Not applicable	Not applicable

1) Proportions are presented based on the total area within a 2 km radius of the site.
2) Map based on Article 23 of the Framework Act on Environmental Policy — the closer to Grade 1, the higher the ecological value.
3) Due to the shipyard's coastal location, a significant portion of the surrounding area is designated as 'Out of Scope' (i.e., marine areas).
4) Map based on Article 34 of the Natural Environment Conservation Act, classifying natural environments by ecological value, naturalness, and landscape value.
5) Based on Article 12 of the Natural Environment Conservation Act, areas with high conservation and research value are designated due to their primitive conditions or rich biodiversity.
6) Based on Article 8 of the Wetlands Conservation Act, areas that maintain a natural state or have rich biodiversity are designated as protected wetlands.
7) Based on Articles 27(1) and 33(1) of the Wildlife Protection and Management Act, areas that serve as habitats or breeding grounds for endangered wildlife species are designated as specially protected zones.

IUCN[8] Red List Species within 25km of Business Sites

CR EN VU NT LC DD



10% of the species that exist within 25km of HHI and HMD business sites are categorized as IUCN Red List threatened species (CR, EN, VU)[9]

8) IUCN: International Union for Conservation of Nature
9) IUCN Red List threatened species are classified into three categories — Critically Endangered (CR), Endangered (EN), and Vulnerable (VU) — out of the nine overall categories: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), and Not Evaluated (NE).

Biodiversity

Risk Management

Biodiversity Risk Management

BUSINESS CASE **Natural Capital and Biodiversity Risk Assessment by HHI and HMD**

Evaluate dependencies and impacts- *Evaluate*

HHI and **HMD** utilized the Encore Tool[1] to evaluate the dependencies and impacts on nature throughout the value chain, including business operations within company boundaries, 4 upstream industries, and 3 downstream industries.

Encore-Based Dependence and Impact Assessment Results

Assess nature-related risks and opportunities- *Assess*

HHI and **HMD** utilized the WWF (World-Wide Fund for Nature) Biodiversity Risk Filter Tool[2] to assess nature-related risks and opportunities associated with our business activities.

Nature-related risks and opportunities [3]

●Very Low ●Low ●Medium ●High ●Very High

Category	Description	HHI	HMD	Impact timing
Physical Risk	-	●	●	-
R1. Provisioning Services	Reduced water availability may disrupt water supply	●	●	Short- to Mid-term
R2. Regulating & Supporting Services	Deteriorated air quality may lead to stricter emissions regulations	●	●	Mid- to Long-term
Reputational Risk	-	●	●	-
R3. Environmental Factors	Failure to consider ecosystems and the local environment may negatively impact brand image	●	●	Mid-term

Opportunity type	Opportunity factor	Description	Impact timing
O1. Resource Efficiency	Opportunities arising from efficient use of resources	Reducing raw material and production cost through the efficient use of resource	Short- to Mid-term
O2. Products and Service	Opportunities through Biodiversity-conscious design and technology development	Creating additional synergies through differentiated business activities	Mid- to Long-term
O3. Market Opportunity	Opportunities from leading the low- and zero- carbon markets	Market competitiveness can achieved by meeting customer needs through low- and zero carbon technologies	Short- to Long-term

1) Tool developed by Global Canopy, UNEP FI, and UNEP-WCMC (UN Environment Programme World Conservation Monitoring Centre) to help companies make nature-related assessments on dependencies and impacts by industry, in 5 categories
2) Nature-related risk evaluation tool provided by WWF
3) Refer to HHI and HMD websites to see detailed assessments of nature-related risks and opportunities HHI HMD

Prepare response strategy- *Prepare*

HHI and **HMD** operate dedicated ESG departments, managing performance based on ESG KPIs through the ESG Promotion Committee. The ESG departments appoint a manager to oversee natural capital and biodiversity targets and metrics and systematically manage the implementation and progress. Based on this strategy, HHI and HMD plan to incorporate nature-related risks and opportunities in our decision-making process and sustainable growth strategy. In addition, regular ESG campaigns are conducted to raise awareness among stakeholders, and preparations are underway to respond to TNFD and ISSB requirements.

Key metrics and targets

Risk/ Opportunity (R/O)	Key Activity	Detailed implementation examples	Management indicators	Response Strategy	GBF[1] Goals
R1, R3 /O1	Water Conservation	(HHI) Reduces drain use to prevent the freezing during winter / Building Hi-Energy System (HMD) Recirculates industrial water	Water consumption (m^3)	(HHI) Utilize Hi-Energy System to enhance water usage and management (HMD) Reduce volume of drain water through water circulation pump	Target 11
R2, R3	Reduction of air pollutants	(HHI) Reduced fine dust in 2024 by 40% compared to 2016 (HMD) Achieved air pollution emissions target in 2024(NOx: 8,119 kg, Dust: 3,629 kg)	NOx (ton) , SOx (ton) , dust (ton)	(HHI) Set 2025 fine dust reduction target by 5%, compared to base year (2023) (HMD) Achieve 2025 target (NOx: 8,899 kg, Dust: within 16,407 kg))	Target 7
R3/O2, O3	Next-generation ship technology	(HHI) Developed ammonia and methanol dual-fuel engine (HMD) Delivered Korea's first hybrid RoRo container ship and received order for world's largest eco-friendly liquefied CO_2 carrier	Delivery of low carbon ships[2] (ship)	(HHI) Develop hydrogen powered engine technology (HMD) Apply eco-friendly technology and develop eco-friendly shipbuilding technology	Target 7, 11
R3	Protecting biodiversity	(HHI) Survey of endangered species, conduct river clean-up activity (14 times in 2024) (HMD) Survey of endangered species, conduct quarterly river clean-up, "One Company, One River"	Number of endangered species surveyed, Number of conservation activities implemented	(HHI) Conduct activity to plant nationally designated and managed species, conduct river clean-up activity (HMD) Conduct river clean-up activity and biodiversity related ESG campaigns	Target 4, 6

1) GBF (Global Biodiversity Framework): A framework that begins by emphasizing the need for transformative actions across all sectors of society and the economy to achieve the vision of "Living in harmony with nature" by 2050. It consists of four long-term goals for 2050, 23 action-oriented targets for 2030, and implementation and monitoring mechanisms.
2) A vessel that reduces carbon emissions by using dual fuels—LNG, methanol, and other relatively low-carbon fuels—compared to conventional oil-fueled ships.

Social

We pursue a sustainable industrial ecosystem with mutual growth, driven by technology for humanity and responsibility for society.

Safety & Health

Governance

Safety & Health Governance

Roles and Responsibilities

Role of BOD

The Board of Directors (BOD) for **HDKSOE and its shipbuilding subsidiaries** receive reports on the goals, strategies, and progress related to the safety and health program. Key safety and health agenda items are linked to management policies, organizational structure and roles, budget and facility status, activity performance, and plans, and members of the BOD provide opinions and ideas for the effective implementation of presented issues. The BOD also deliberates on issues that require large-scale investments and process improvements to enhance the safety and health program.

Additionally, the ESG Committee under the BOD receives reports on safety and health plans and management status to manage non-financial ESG risks.

Role of Chief Safety Officer (CSO)

CSOs of **HDKSOE and its shipbuilding subsidiaries** are responsible for planning company-wide safety and health policies and systems, operating the safety and health management system, planning and operating workplace safety programs, and listening to workers' safety and health opinions. Responsible executives and managers, including the CSO, set performance goals related to developing safety and health capabilities and eliminating risks, with KPIs being used to evaluate performance.

In addition, CSOs perform safety inspections on business sites by identifying risk factors for serious accidents at business sites and provide instructions to improve unsafe work conditions.

Roles of Operational Departments

The departments in charge of safety and health at **HDKSOE and its shipbuilding subsidiaries** manage company-wide safety and health standards and policies, plan and operate safety and health programs, and operate a control tower in the case of emergency.

These departments are responsible for safety inspections at workplaces, risk assessments and creating improvement tasks, and responding to and investigating accidents.

Operation of Safety Council for the Three Shipbuilding Subsidiaries

HHI, HMD, and **HSHI** formed the Safety Council to exchange and share safety management activities, and make decisions at the group level on safety and health issues and common issues.

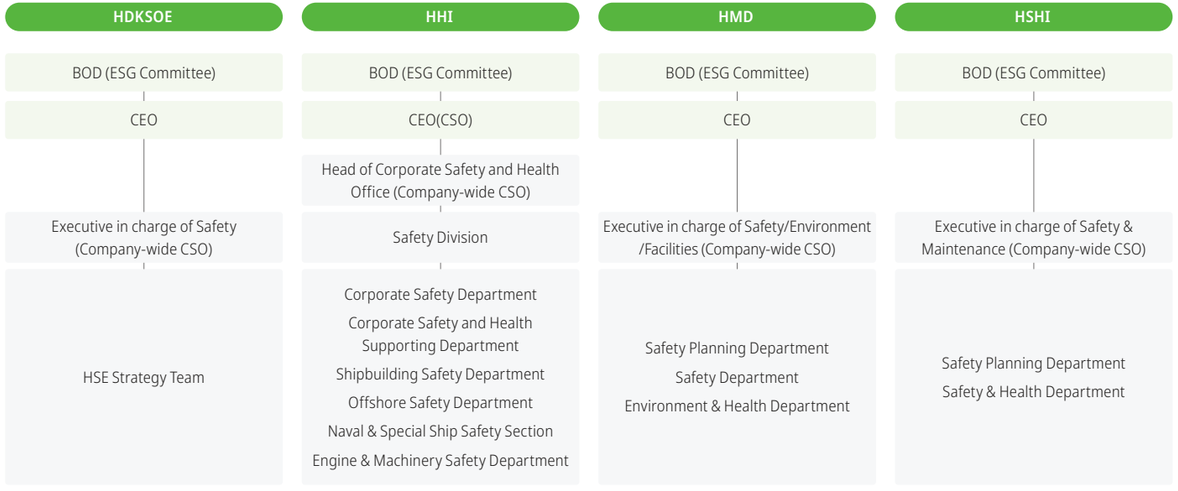
The Safety Council for the three shipbuilding subsidiaries hold two types of meeting, "Strategic Consultation" and "Working-level Consultation." At the strategic consultation, CSOs and safety executives meet once every six months to make decisions on priority tasks for the concurrent year and on key agenda items from the working-level consultation meetings. Meanwhile, the working-level consultation is an operational meeting held once a month, attended by managers and staff in charge of safety issues, to review safety systems and establish safety standards (guidelines).

Operation of Occupational Safety and Health Committee (OSHC)

HDKSOE and its shipbuilding subsidiaries operate the Occupational Safety and Health Committee (OSHC) to deliberate and decide on important issues related to occupational safety and health, such as plans and measures to prevent safety risks or health emergencies and disasters harming workers performing their duties at the workplace. The OSHC regularly takes place once a quarter to encourage the workers on the prevention of industrial accidents, and additional meetings are held as necessary, such as when significant issues emerge.

The matters deliberated, resolved, arbitrated, and decided by the OSHC are promptly communicated to employees through internal communication channels, and the companies and workers dutifully implement the decisions made by the OSHC.

Safety & Health Governance



Key Activities of the Safety Council for Three Shipbuilding Subsidiaries

Category	Period	Key Activities
Strategic Consultation	Once every six months	• Standardization of safety and health budget criteria • Advance safety culture assessments • Current status of qualification standards for equipment operation by foreign workers • Measures to strengthen inspections on compliance with the Serious Accidents Punishment Act by in-house contractors
Working-level Consultation	Once a month	• Re-establishment of confined space standards • Current status of the permit-to-work system for high-risk tasks • Compliance status of mandatory reporting requirements under the Serious Accidents Punishment Act

Composition and Key Agenda Items of OSHC

Composition	Key Agenda Items
HDKSOE 5 members each from labor and management	• Revise OSH management regulations for each business site • Review Process Safety Manual (PSM) • Conduct additional surveys on tasks that put stress on the musculoskeletal system
HHI Up to 10 members each from labor and management	• Install anemometers on tower cranes • Improve return to work procedures after occupational injuries • Enhance certification requirements for aerial work platform operation • Improve dock safety facilities
HMD 8 members each from labor and management	• Expand and improve operations of the health promotion center • Introduce customized personal earplugs • Provide insoles to prevent plantar fasciitis • Improve safety shoes, protective goggles, and mask filters
HSHI 6 members each from labor and management	• Develop cooling vests to prevent heat-related illnesses during hot seasons • Install rest facilities on ships during hot seasons • Establish a health management room in External Work Building 2 • Conduct special health check-ups for workers exposed to organic solvents

Safety & Health

Strategy

Direction for Safety and Health Policies

Key Safety & Health Priorities

Establishment of Safety and Health Policies

HDKSOE and its shipbuilding subsidiaries are continuing to promote safety and health improvement activities based on the safety and health policies, which include matters such as establishing a safety-first culture, creating a pleasant working environment, strengthening safety training, and building a smart and safe workplace based on DT. The company's employees, contractors' workers, and all other stakeholders involved in business activities are subject to these safety and health policies. Business partners are also expected to respect the same safety and health policies.

Safety and Health Management Policy

HDKSOE, HHI, and **HMD** have established safety and health management policies compliant with international standards to practice "Safety for All," a core value in the Group's value systems. Each company's safety and health management policy is enacted and revised by the BOD, and the policy is applicable to all the business sites, employees, contractors, and workers under the management of the company.

Moreover, each company establishes priorities and plans for continuous improvement of the safety and health management program, and sets quantitative targets for key safety and health performance indicators. These targets are regularly reviewed and reset for the continued development of the safety and health management program.

HDKSOE Safety & Health Management Policy
HHI Safety & Health Management Policy
HMD Safety & Health Management Policy

Joint Safety Resolution by Labor, Management, and Contractors

In January 2024, **HHI** held a safety wishing ceremony, with the participation of the Ulsan Regional Office of the Ministry of Employment and Labor (MOEL), Ulsan Office of the Korea Occupational Safety and Health Agency (KOSHA), Ulsan Dongbu Fire Station, all employees, and in-house subcontractors. This event provided a valuable opportunity for labor, management, and contractors to make collective efforts toward a safer company.

In 2024, **HMD** organized a Joint Safety Culture Pledge Ceremony with the labor union and contractors to declare commitment to safety and co-prosperity. The participating representatives from labor, management, and contractors made the following resolutions to create a safe, clean, and happy workplace: prioritize safety, health, and the environment; comply with safety rules and standard work procedures; taking care of colleagues' safety; prevent environmental pollution; maintain basic order; and establish a culture of communication and safety.

In January 2024, **HSHI** held a safety wishing ceremony to establish a self-regulated prevention system and wish for zero accidents throughout the year, attended by the Mokpo Regional Office of MOEL, the KOSHA, the Safety Managers' Council in the Southwest Region, and internal and external contractors.

Mobile Safety Work Instruction system

HHI, HMD, and **HSHI** have adopted a mobile safety work instruction system that allows workers to check work instructions and safety information via their mobile devices. Through this system, workers can not only access safety information but also conduct self-checks on their use of personal protective equipment and the tidiness of their surroundings.

HHI's mobile safety work instruction system is linked to "work standard and risk assessment platform (Hi-STANDARD)" and "permit-to-work and short-term project information on the integrated HSE management system (Hi-SEs)," enabling the collection and provision of integrated safety information.

Safety Reward System

HDKSOE and its shipbuilding subsidiaries reward departments or employees with outstanding safety achievements or have acted commendably related to the prevention of serious accidents, the spread of safety culture, and the identification of safety improvement tasks. In addition, we evaluate the safety leadership, disaster indicators, safety management system, on-site safety management level, and capabilities of safety managers of our contractors and reward those who have excellent safety practices in place.

Major Safety Reward System for 2024

Category	Major Reward	Total Reward Amount
HDKSOE	Safety Excellence Employee Reward	8 teams and contractors, KRW 1.7 million
HHI	HD Safety Pay	All employees company-wide (including contractors), approximately KRW 238.4 million
	Role-Model for Core Values Award	19 departments, KRW 51 million
	Safety Excellence Contractor Reward	29 contractors, KRW 25 million
HMD	Zero Accidents Achievement Award	191 departments and contractors, KRW 68.13 million
	Zero Incidents Achievement Award	40 departments and contractors, KRW 148.11 million
	Safety Excellence Reward	6 teams and contractors, KRW 5.67 million
HSHI	Zero Accidents Achievement Award	67 divisions and departments, KRW 5.8 million
	Zero Incidents Achievement Award	493 departments, KRW 172.25 million
	Safety of Merit Award, Incentives	Total KRW 7.2 million

Safety and Health Training

HDKSOE and its shipbuilding subsidiaries provide mandatory legal safety and health training for its own employees and contractors, including basic training for new hires, onsite and practical training (production workers), training tailored to positions (office workers), and customized training for supervisors and managers. At the same time, each company provides internally developed education programs on on-site safety management, competency improvement for safety personnel and contractors' safety managers, and practical/experiential training for workers involved in high-risk jobs. In addition, we have strengthened safety and health education and training for foreign workers.

HDKSOE held workshops for supervisors and managers on safety leadership, as well as conducted training centered on-site topics for in-house contractors.

HHI operates a structured training program for employees to receive safety training according to their job levels. To strengthen internal safety capabilities, HHI improved existing training programs and developed new courses to establish the SCP (Safety Career Path) program, and continue to maintain and develop.

HMD is expanding participation-based and hands-on training programs, such as risk assessment training using play-based learning methods for foreign workers from 10 countries and fire safety training in collaboration with the Dongbu Fire Station.

HSHI conducts various external training programs to prevent serious accidents and build capabilities, including night-time safety manager training, refresher training for long work at heights, and special safety training for heavy equipment staff.

Safety Big Data Platform

HHI, HMD, and **HSHI** have jointly developed and are operating a safety information visualization and safety accident prediction model based on big data and AI. The model provides information on the status of serious and general accidents, number of incidents over specific periods and types of accidents. It also offers insights by analyzing accident trends and safety incident data.

Safety & Health

Risk Management

Safety and Health Risk Management

Laying the Foundation of Risk Management

Establishment of Safety and Health Management System

In accordance with company-wide safety and health policies and guidelines, **HDKSOE and its shipbuilding subsidiaries** have established a safety and health management system that operates the following activities in a cyclical process: establishing safety and health priority tasks and risk management plans; securing resources and budget required to implement the plans; conducting activities to enhance safety and health management levels, and identifying and rectifying harmful and hazardous factors; inspecting procedures, methods, and results of the activities and taking collective measures; and reviews by the CSO. We will continue to advance the safety and health management system by incorporating relevant domestic and international laws and regulations, expectations of customers and other stakeholders, and the workers' expectations for better working conditions.

Integrated HSE Management System (Hi-SEs)

HHI utilizes the integrated HSE management system called Hi-SEs to build a database that encompasses all areas, including accident cases, safety education, disaster prevention, environment, and health, for effective work performance. Hi-SEs is operated under the principles of planning, practice, confirmation, and action, based on international standards for safety, health, and environment (ISO 45001, 14001). All employees can access this information on Hi-SEs via various channels such as PC and mobile.

HHI worked to advance the integrated HSE management system and consolidated the separate systems, and refined the menu structure to improve user convenience. In addition, we have digitized the management and inspection processes for high-risk tasks based on the risk assessment and permit-to-work data, and significantly enhanced the usability of the mobile application to create a system that enables more efficient and convenient access.

Third-Party Certification of Safety and Health Management System

HDKSOE and its shipbuilding subsidiaries received high evaluations for the effectiveness of the occupational health and safety management system operations, including the prediction of workplace accidents and risks, the prevention of human and material losses, and safety and health risk management activities. As a result, we have obtained and maintained certification for the occupational health and safety management system based on the international standard ISO 45001 from a third-party organization.

Internal Review of Safety and Health Management System

In addition to the third-party certification, **HDKSOE and its shipbuilding subsidiaries** conduct internal audits by professionals who have completed the training program for international safety and health management standards such as ISO 45001. The internal auditors develop a checklist based on the requirements of ISO 45001 to assess and guide the safety and health management at each department, thereby strengthening the robustness of the health and safety management system and its effectiveness in the field.

Safety and Health Guidelines Management

HDKSOE and its shipbuilding subsidiaries have developed and operated the guidelines for safety and health management at the company level as well as for each production site. The safety and health guidelines are established and revised in consideration of the changes in the working environment, work methods, and operating equipment at the production site. Workers at production sites take safety accident prevention measures before work, based on the requirements of the safety and health guidelines.

Granting the Right to Request Work Safety

HDKSOE and its shipbuilding subsidiaries grant workers the "right to request work safety," which allows them to stop work as soon as they discover hazardous elements at the business site. Those who detect hazardous factors may request measures to improve safety for dangerous situations through emergency calls and online messengers. The safety department and safety personnel receiving such reports are required to take immediate action to rectify the situation or, in the case of an emergency, halt the work process.

Third-Party Certification for Safety and Health Management System

Category	Certification Standards	Certifying Body	Validity Period	Certification Scope[1]
HDKSOE	ISO 45001:2018	DNV	December 2022 - December 2025	100%
HHI	ISO 45001:2018	DNV	July 2022 – May 2025[2]	95%
HMD	ISO 45001:2018	LRQA	June 2024 – June 2027[3]	100%
HSHI	ISO 45001:2018	DNV	July 2023 – June 2025	100%

1) HDKSOE: GRC Headquarters, Ulsan Research Building
HHI: Ratio of employees in certified sites (product design, manufacturing, etc.)
HMD: Ulsan Headquarters, Yongyeon Plant, Onsan Plant, Mohwa Plant
HSHI: Yeongam Headquarters, Daebul Plant 1
2) Validity period changed after renewal in 2025 (May 2025 – May 2028)
3) Renewed. Existing validity period: June 2021 – June 2024

Safety Leading Index (SLI) Management

To systematically assess and strengthen the level of safety management within the organization, **HHI** operates a Safety Leading Indicator (SLI) system based on standardized evaluation items. In 2025, HHI partially enhanced the SLI system to improve the effectiveness of risk assessments conducted by operational departments.

The enhanced SLI system analyzes various data, including rule violations, safety incidents, and safety inspections, to identify potential accident types and derive vulnerabilities in safety management. The identified vulnerable items are designated as priority inspection targets during the following month's regular safety inspections conducted by operational departments, thereby enabling proactive management and improvement of these weaknesses.

Compliance with Safety and Health-related Laws and Regulations

Under the CSO's leadership, **HDKSOE and its shipbuilding subsidiaries** established a safety and health management system, developed and implemented measures to prevent serious accidents, complied with safety and health-related laws and regulations, and took necessary actions to fulfill the obligations stipulated in these laws and regulations.

In order to confirm compliance with the obligations in the relevant laws and regulations related to ensuring and promoting the safety and health of workers, we review compliance with the Serious Accidents Punishment Act, Occupational Safety and Health Act, and laws related to the management of hazardous substances, firefighting equipment, chemical substances, and waste. Through these compliance checks, appropriate action plans are established for each finding and actions are taken accordingly.

Operation of Integrated Control Center

HHI, HMD, and **HSHI** operate an integrated control center for safety management. The center operates a video control system, intelligent video analysis system, and emergency reporting application, establishing a system for accident prevention as well as immediate action and response.

Safety & Health

Risk Management

Safety and Health Risk Management

Conducting Risk Management Activities

Risk Assessment

HDKSOE and its shipbuilding subsidiaries conduct risk assessments for employees and contractors, through which we identify harmful and hazardous factors, analyze the probability and severity of injuries and diseases caused by identified factors, and plan and implement risk reduction measures. These risk assessments are regularly conducted on an annual basis, in consideration of the performance of machines, instruments, and equipment at the business sites and the workers' level of knowledge and capabilities regarding safety and health. Moreover, when there are new machines, instruments, and equipment, or any changes in work methods and procedures, additional risk assessments are conducted. Based on the results of risk assessments, we implement appropriate risk mitigation measures.

To enhance the risk assessment system, **HHI** strengthened its mutual feedback and monitoring functions by integrating it with the Hi-SEs based on a structured framework of "regular, ad-hoc, and on-site" assessments. By digitizing ad-hoc risk assessments and the operation status of the Risk Assessment Committee, which were previously managed manually, the overall efficiency of the risk assessment system was improved. In the first and second half of 2024, regular and ad-hoc risk assessments were conducted, and the establishment and revision of work standards for 23,845 tasks and their respective risk assessments were completed. For critical risk factors classified with a risk score of 8 or higher, special mitigation measures were established and registered, and risk reduction activities are being continuously implemented in line with the Plan-Do-Check-Act (PDCA) cycle.

Emergency and Crisis Management Manual

HDKSOE and its shipbuilding subsidiaries have a company-wide emergency and crisis management manual which is continuously updated to protect the employee safety and company assets from emergencies including natural disasters such as typhoons, earthquakes, heavy snow, torrential rain, and accidents such as fires and explosions.

The emergency and crisis management manual contains information on how to systematically respond to emergencies at each stage, including emergency response and management systems, and the establishment and operation of contingency plans. This manual includes procedures on matters such as suspension of work, evacuation of workers, and removal of risk factors in the event of an emergency, as well as relief for victims and prevention of additional damage.

Emergency Preparedness Drill

HDKSOE and its shipbuilding subsidiaries carry out emergency preparedness drills according to an annual plan to make employees fully informed of emergency response measures. After the drills, the results are reviewed and potential problems and vulnerable areas are identified, to reflect the findings and implications in the revisions of the emergency and crisis management manual. In connection with local fire departments, we conduct exercises for swift evacuation, initial response, first aid, and transfer to hospitals in the event of fires or other accidents.

Emergency Drills Conducted in 2024

Category	Descriptions
HDKSOE	Company-wide emergency preparedness drills at all business sites
HHI	Company-wide emergency preparedness drills for all departments
HMD	Public-private joint drill, emergency evacuation drills
HSHI	Emergency rescue training from fires and confined spaces

Medical Check-up and Follow-up Care

To regularly check the health of employees, **HDKSOE and its shipbuilding subsidiaries** provide special medical check-ups to employees exposed to noise, harmful rays, metals, and organic compounds. In addition, we offer professional counseling, medication advice, and health education for high-risk groups and those with symptoms who are highly likely to develop high blood pressure, dyslipidemia, and brain cardiovascular disease.

HHI introduced an indicator system that monitors the entire health sector process, including indicators such as the prevalence of high blood pressure, rate of exceeding workplace environmental measurement limits, and occupational disease rate. Through this system, HHI identifies vulnerabilities related to health and establishes intervention and management directions. In addition, HHI published a "Job Stress Prevention and Management Manual." Details can be found on page 80 of the Sustainability Report.

HMD have systematized the health examination data by building a database organized by type of medical check-ups, results by exam types, and harmful factors by departments. Using this database, we can analyze and predict potential diseases based on each individual's working conditions and provide prevention measures and follow-up management. In addition, HMD operates various programs to manage job stress. Details are available on page 80 of the Sustainability Report.

Operating Health Facilities

HDKSOE and its shipbuilding subsidiaries operate diverse health facilities, including in-house clinics, physical therapy rooms, and oriental medicine treatment rooms to provide medical support and health management for employees and contractors.

HSHI newly constructed a healthcare center in May 2024, and through industry-academia cooperation with Chonnam National University's Department of Occupational and Environmental Medicine, is providing customized follow-up management and health consultations to focus on the early detection and prevention of diseases. To support the health management of contractors and subcontractor workers, the company offered cardiovascular disease consultation programs targeting elderly workers and high-risk health groups.

Accident Response and Investigation Procedures

HDKSOE and its shipbuilding subsidiaries operate procedures to ensure prompt and safe responses in the event of damage (accident) to property and life caused by natural disasters, leaks of hazardous substances, fires, and explosions, as well as case analysis and feedback. In the event of an accident, a thorough investigation is conducted to ensure that no aspects are overlooked in the investigation process or results. Based on the investigation results, measures to prevent recurrence are developed, and disaster statistics are analyzed in parallel to improve safety and health activities and strengthen risk management plans.

Serious Accident Response Procedures

Receipt of Accident Report	• Broadcast and alert for serious accidents • Activate emergency response call tree (including the integrated control center)
Initial Response	• Conduct rescue activities and guide workers for emergency evacuation • Implement initial controls such as installing basic fencing
Full-fledged Response	• Divide roles for accident management among investigators and others • Implement secondary controls such as identifying hazardous areas
On-site Investigation	• Secure statements, verify processes, take photographs, and preserve the site • If there are risks for secondary accidents, implement preventative measures
Remove control	• If controls are deemed unnecessary after completing the on-site investigation, lift controls upon approval from the safety department leader
Post-investigation	• Analyze the root causes of the accident • Establish prevention measures against recurrence and reflecting them in future safety and health activities

Safety & Health

Risk Management

Safety and Health Risk Management

Safety and Health Support for Contractors

Safety and Health Policies for Contractors

HDKSOE and its shipbuilding subsidiaries apply the same safety and health guidelines, policies, and standards to contractors we work with, and assess contractors' safety and health program as part of the selection process. Regular assessments are also conducted to evaluate contractors' health and safety standards, identify related risk factors, and develop initiatives that support continuous improvement.

Supporting Contractors' Health Management

HDKSOE and its shipbuilding subsidiaries monitor the health management practices of contractors, identify areas for improvement, and provide support to contractors in establishing and implementing their own management plans for employees who have been identified as health risks.

To strengthen contractors' health management capabilities, **HHI** holds regular and ad-hoc meetings and cooperates closely with the Occupational and Environmental Health Center at Ulsan University Hospital and the Ulsan Industrial Health Center of the Korea Industrial Health Association. In addition, for contractors with weaker health management programs, HHI conducts on-site inspections twice a year to proactively identify potential health-related vulnerabilities and provides guidance on key management focus areas for each period to support improvements in their health management standards. In particular, in 2024, we refined and quantified the health inspection standards to provide practical technical guidance during site visits, and for contractors to systematically implement workplace environment improvements and protect the health of their employees.

HMD provides practical and specific technical guidance and advice to help in-house contractors improve their health management practices. Any health management weaknesses found on site are discussed with contractors and health management experts, and improvement measures are made from their feedback. This process supports contractors in strengthening their health management capabilities.

HSHI built a "Contractor Health Management System" to provide data-based health management for 80 in-house contractors. We are also expanding safety and health support for contractors in response to the Serious Accidents Punishment Act. In addition, HSHI is promoting health management and health promotion initiatives through cooperative health projects MOUs with the Department of Occupational and Environmental Medicine at Chonnam National University Hwasun Hospital, Yeongam Public Health Center, and the Jeonnam Western Workers' Health Center, as well as with Wolchulsan National Park and the Wando Marine Healing Center. There are also regular consultations with occupational health professional institutions affiliated with our contractor and subcontractor companies to operate a collaborative support system and enhance their overall health management standards.

Supporting Contractors' Risk Assessment Certification

HHI, HMD, and **HSHI** require and support contractors in obtaining the "Recognition of Excellent Risk Assessment Certification" provided by Korea Occupational Safety & Health Agency (KOSHA), in order to establish risk assessment system for contractors and enhance the credibility of risk assessment results. Under this initiative, when a contractor conducts a risk assessment and submits an application for accreditation, KOSHA conducts an objective evaluation and issues a certificate. Certified contractors can receive various benefits such as reduced premiums for industrial accident compensation insurance and additional subsidies. We support contractors to receive their assessment recognition by providing work standards and samples, on-site lectures, and special training.

Number of Contractors with Risk Assessment Certification in 2024

HHI	HMD	HSHI
106	47	40

Safety and Health Communication and Training for Contractors

HDKSOE and its shipbuilding subsidiaries operate various communication channels such as safety and health meetings and councils for contractors to share safety and health policies, review key issues in contractors' safety management programs, and discuss solutions to reported grievances. In addition, we provide a wide range of training programs, such as special lectures on raising safety awareness for the representatives of contractors, and capacity-building programs for contractors' safety managers.

Safety Checks and Technical Guidance for Contractors

HDKSOE and its shipbuilding subsidiaries conduct on-site checks and technical guidance activities for contractors to resolve instability in the supply chain caused by serious accidents. Professional safety experts visit contractor business sites and identify safety-related risk factors. They then propose improvement measures for high-risk factors or pass on the risk management know-how, thus supporting contractors in building an autonomous safety system. The progress of contractors' safety management systems and compliance with OSH laws and regulations is monitored, and support activities are carried out through the sharing of safety policies, safety standards, and technical materials.

Number of Safety Check Support for Contractors in 2024

HDKSOE (In-house)	HHI (External)[1]	HMD (In-house)	HSHI (External)[1]
2	60	18	7

1) HHI and HSHI support safety checks for all in-house subcontractors.

BUSINESS CASE

Safety Management Support for In-house Subcontractor [1]

HHI and **HSHI** operate a contractor safety manager support system to aid in-house subcontractors with establishing autonomous safety management systems. The system includes a 1:1 mentoring program with safety managers and regular training and meetings in order to enable contractor safety managers to quickly identify and respond to hazardous situations.

In particular, **HHI** provides further technical support with the Hi-Standard system to review completed risk assessments and provide continuous feedback, allowing work tasks to be further subdivided and risk levels and improvement measures to be established with greater accuracy.

1) HD Hyundai Mipo plans to implement the contractor safety manager support system starting from June 2025.

Promotion of Safety Management Practices at Contractors

HHI, HMD, and **HSHI** provide technical support to contractors in safety, facilities and management, and other areas to ensure their production stability. To achieve this, the existing safety-related technical support has been expanded to include various support programs operated by the property and mutual growth teams, establishing a comprehensive technical support system through cross-functional collaboration to provide practical assistance to contractors. In addition, safety seminars are conducted by visiting contractors, they are invited to benchmark Hyundai's advanced safety management systems and facilities, and continuous communication is conducted to promote a safety culture among the contractors.

In 2024, **HHI** signed agreements with 40 key contractors to provide comprehensive support, including workforce management and training.

Safety & Health

Metrics & Targets

Safety and Health Indicators and Goals

Short- and Mid- to Long-term Safety and Health Goals

Setting Safety and Health KPIs and Short-term Goals

HDKSOE and its shipbuilding subsidiaries disclose key safety and health performance indicators to strengthen accountability and transparency in safety and health management. Each company manages quantitative safety and health indicators of the company and their contractors, and this information is shared with stakeholders as a show of commitment to responsible management. In addition, the KPIs are reviewed regularly by the BOD and executive management, and the analysis of performance in relation to targets is used to enhance management practices and reduce risk.

HDKSOE and its shipbuilding subsidiaries set measurable and assessable quantitative goals, including company-wide targets for accident prevention, and manage the progress. Based on the safety and health policy, the goals are established by a comprehensive analysis of internal factors, such as risk assessment results, safety inspection and diagnostic outcomes, and cases of accidents, as well as external factors including safety and health trends in the same industry. We will continue to strengthen the transparency and reliability of our safety and health management system to establish a world-class safety culture.

Performance and Short-term Goals in Safety and Health

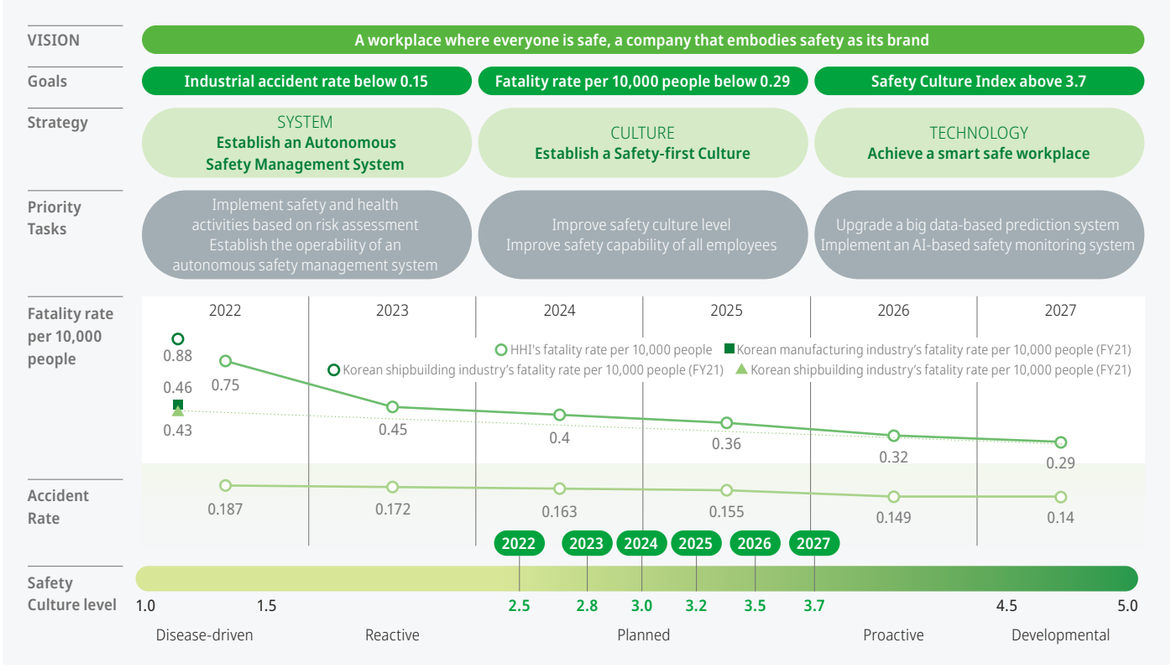
Category		Goals and Performance	
HDKSOE	2024 Performance	• (Goal) Zero serious industrial and public accidents • (Performance) No serious industrial and public accidents	• (Goal) Work Environment Plus! Health Plus! • (Performance) Conducted new health (body + mind) promotion initiative
	2025 Goals	• Zero serious industrial and public accidents - Operate specialized HSE Management System (Companywide /Team/ Contractors) - Initiate autonomous site management centered on worker participation - Strengthen autonomous prevention system for all teams - Strengthen emergency response capabilities	• Create healthy workplace environment - Safe management chemical substances - Strengthen follow-up practices to health examinations - Launch health challenge program
HHI	2024 Performance	• (Goal) Zero serious industrial accidents, with an accident rate of 0.163 or lower • (Performance) 1 serious industrial accident, with an accident rate of 0.120 or lower • (Performance) Strengthened the effectiveness of risk assessments based on company-wide safety management systems	• (Goal) Create prevention-centered health management system • (Performance) Improved health risk assessment • (Performance) Advanced health indicator management framework
	2025 Goals	• Zero serious industrial accidents, with an accident rate of 0.155 or lower	• Create prevention-centered health management system
HMD	2024 Performance	• (Goal) Zero serious industrial accidents • (Performance) 2 serious industrial accidents	• (Goal) Accident rate of 0.120 or lower • (Performance) Accident rate of 0.090 or lower
	2025 Goals	• Zero serious industrial accidents	• Accident rate of 0.110 or lower
HSHI	2024 Performance	• (Goal) Zero serious industrial accidents, with an accident rate of 0.15 or lower • (Performance) Zero serious industrial accidents, with an accident rate of 0.075	• (Goal) Complete construction of on-site company hospital • (Performance) Completed construction of on-site company hospital
	2025 Goals	• Zero serious industrial accidents, with an accident rate of 0.14 or lower	• Create health centered corporate culture

HHI Safety Vision 2027

Under the safety leadership of the top management, **HHI** aims to achieve Safety Vision 2027: "A workplace where everyone is safe, a company where safety is its brand." The strategies to achieve this vision are: establishing an "autonomous safety management system" where all employees are proactive in eliminating risks; instilling a "safety-first culture" by providing integrated safety culture diagnostic programs and safety training programs to strengthen safety management capabilities; and implementing an "intelligent safe workplace" based on big data and AI.

To achieve the 2027 goals of industrial accident rate below 0.15, fatality rate per 10,000 people below 0.29, and Safety Culture Index above 3.7, HHI is working to strengthen risk assessments, operate the safety management system, improve safety capabilities, and advance the accident prediction system. In line with Safety Vision 2027, HHI is aiming to achieve zero serious accidents and an accident rate of 0.155 or lower in 2025 and establishing a preventive health management system.

Safety Vision 2027 System



Safety & Health

Metrics & Targets

Safety and Health Indicators and Goals

Short- and Mid- to Long-term Safety and Health Goals

HMD ESG GOAL TO 2030

Recognizing the importance of ESG management, **HMD** has established the "ESG GOAL TO 2030" with mid- and long-term objectives in the areas of environment, society, and governance to present HMD's commitments and vision toward ESG management.

Among the social goals, "safety indicators" are categorized into three specific metrics: fatality rate, lost time injury frequency rate (LTIFR), and near-miss frequency rate (NMFR). To achieve these concrete goals, detailed action plans have been set for each objective, with KPIs identified and managed for each category.

Key Safety and Health KPI Goals

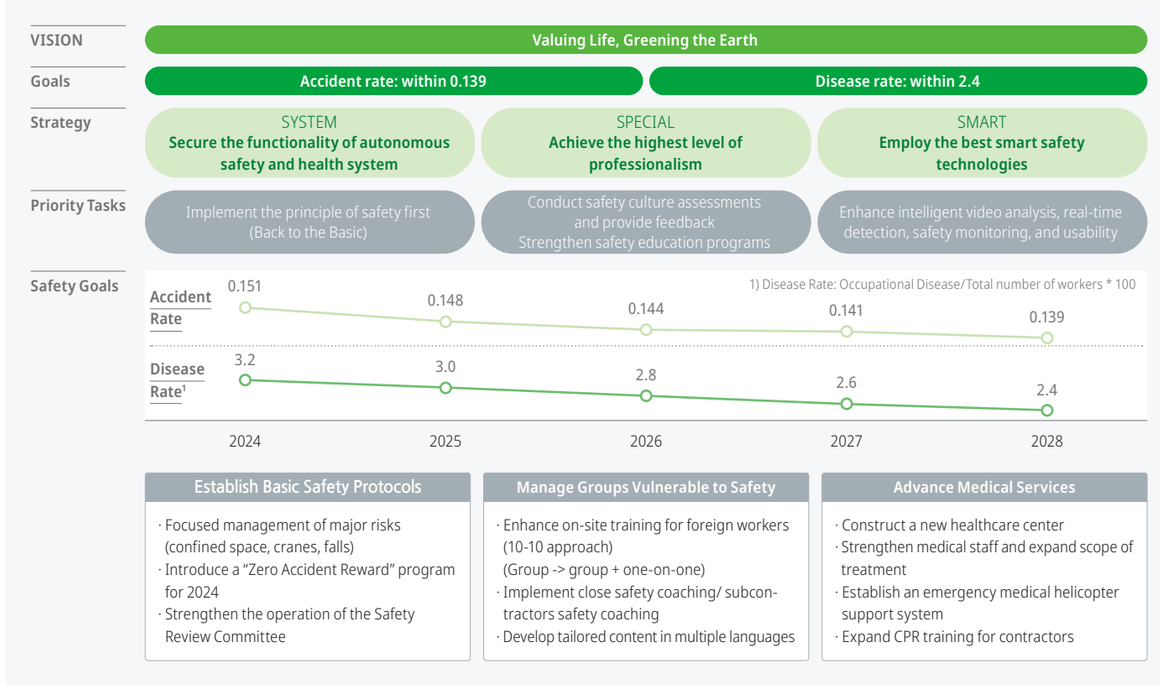
Category		2024 Performance	Goals	
			2025	2030
Safety Indicators	Accident Rate	0.018%	0%	0%
	Lost Time Injury Frequency Rate (LTIFR)	2.11	1.53	1.50
	Near-Miss Frequency Rate (NMFR)	17.55	12.52	12.10

HSHI Safety and Health Vision 2028

Under the slogan "Valuing Life, Greening the Earth," **HSHI** set quantitative goals of achieving an accident rate of 0.139 and lower and a disease incidence rate of 2.4 and lower. To achieve these objectives, HSHI plans to establish safety-focused culture with established basic safety protocols and a positive safety culture. Furthermore, HSHI plans to enhance emergency medical capabilities and provide better medical services by integrating the in-house healthcare system into the newly built healthcare center.

The strategic approach to achieving these goals is structured into the 3S strategy (System, Special, Smart). First, HSHI will secure the functionality of an autonomous safety system by establishing a systematic safety and health management system. Second, HSHI will achieve the highest level of professionalism by strengthening the safety and health capabilities of all employees. Lastly, HSHI will secure and employ the best smart safety technologies.

Vision 2028 Framework



Talent Management

Governance

Talent Management Governance

Roles and Responsibilities

Talent Management Organization

The talent management teams at **HDKSOE and its shipbuilding subsidiaries** are responsible for capacity building, performance evaluation, compensation, and welfare benefits for all employees from recruitment to retirement. These diverse activities aim to attract and retain high-performing talent, thereby enhancing its competitiveness and achieving continuous growth. In addition, continuous efforts are made to improve the capabilities of all employees in line with the changing market environment and technology demands. An innovative and flexible organizational culture is also being established to maintain leadership as an industry leader.

Labor Unions

HHI, **HMD**, and **HSHI** have established labor unions and recognize the legitimacy of activities by labor unions in accordance with the Constitution of the Republic of Korea and labor laws. The scope of employees to whom a collective labor agreement applies is stipulated in the respective collective agreement rules of each company. For employees who are not bound to collective agreement, separate Labor-Management Councils are held to discuss employment-related issues.

HDKSOE guarantees the freedom of association and collective bargaining equal to that of the subsidiaries. However, HDKSOE's channel ceased to take the form of a labor union, with the last member withdrawing from the union in October 2022.

Labor-Management Council Meetings

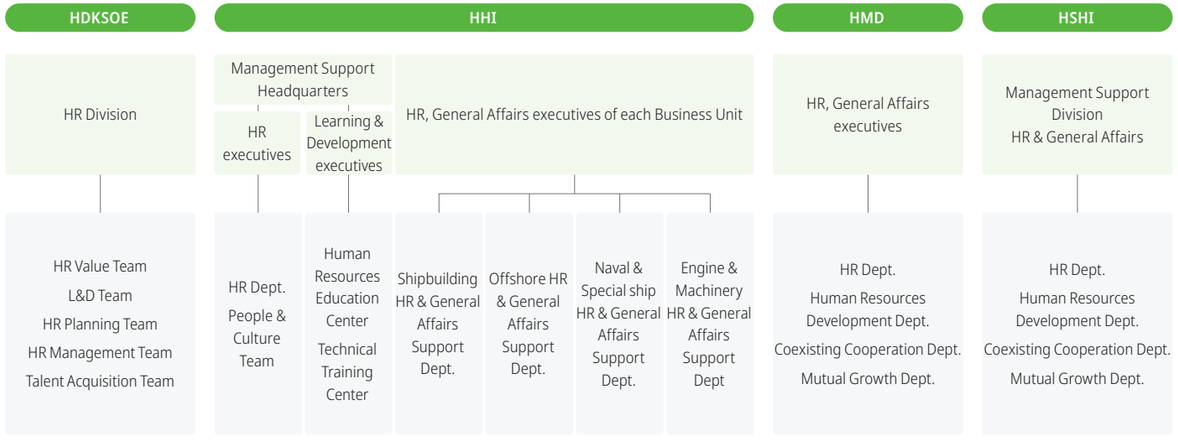
HDKSOE and its shipbuilding subsidiaries regularly hold Labor-Management Council meetings in accordance with relevant laws. Various issues on the employees' working conditions, such as welfare benefits, office amenities, and work arrangement are put on the agenda for the Labor-Management Council, and the council members engage in open communication and consultation on the agenda items. If the labor and management fail to agree on certain issues despite active negotiations, an arbitration system is used or the discussion is continued to seek solutions.

Labor-Management Consultation and Collective Agreements

HHI, **HMD**, and **HSHI** recognize the right of labor unions to collective bargaining and to conclude an agreement, and the matters agreed upon through such agreements are actively implemented. Mutual trust and understanding are built between the companies and labor unions while continuous efforts are made to improve labor conditions.

In addition, **HDKSOE and its shipbuilding subsidiaries** are fully committed to implementing what has been agreed upon through the Labor-Management Council. In 2024, four meetings were held for each company and diverse agenda items has been discussed.

Talent Management Organizational Structure



Operation of Labor-Management Council

(As of 2024)

Category	No. of Meetings	No. of Agenda Items Negotiated	Major Agenda Items
HDKSOE	4	Proposed: 9 Agreed: 9	• Expand health check-up criteria • Increase travel expenses and improve process • Improve working conditions for pregnant employees
HHI	4	Proposed: 55 Agreed: 24	• Improve welfare conditions related to cultural activities • Improve office environment • Upgrade conditions of welfare facilities
HMD	4	Proposed: 36 Agreed: 36	• Provide breakfast at all in-house company cafeterias • Expand duration for celebratory and bereavement leave • Replace aging container break rooms and add new ones • Make changes to business expense reimbursement guidelines • Oversee provision of anti-static uniforms for special ships • Provide support for ski camps expenses for labor union members
HSHI	4	Proposed: 17 Agreed: 14	• Revise guidelines for work attire • Expand and pave main entrance parking lot • Increase number of participants at camp for employees' children • Support operational expenses for teams

Talent Management

Strategy

Directions for Talent Management

Capacity Building and Self-Development

Online Learning Platform "HiClass"

HDKSOE and its shipbuilding subsidiaries operate the online learning platform "HiClass" to support employee training and development. "HiClass" is accessible to employees at any time, and provides a variety of differentiated training courses that have been designed based on employee surveys on job training demands and external trends.

Training Tailored to Level of Positions

HDKSOE and its shipbuilding subsidiaries operate training programs tailored to different position levels, including executives, team leaders, team members, and new hires to enhance their expertise and capabilities. By tailoring training programs to each position level, all employees from new hires to executive managers are given the opportunity to work on different competencies such as professional knowledge, leadership, and innovation. The objective of these training programs is to enhance work performance and organizational competitiveness.

Job Competency Training Courses

HDKSOE and its shipbuilding subsidiaries operate training programs tailored to specific jobs to improve the skills and knowledge required. With the increasing demand for less environmental impact and more automation in the shipbuilding industry, a wide range of technical knowledge is required. In this context, job competency training is provided with a particular focus on core technologies such as liquefied gas technology, ship electrification, and digital transformation. Furthermore, hands-on training is conducted with high-quality content and experienced instructors, and the Human Resources Education Center runs approximately 60 specialized courses including data analysis using Python.

HHI offers not only text-based training programs on quality management for technical workers to strengthen their technical competency, but also programs to build technical capabilities and systems for the transfer of core production technology. Rigorous training is provided to ensure that technical skills, which require years of experience or may halt production processes in the event of loss, are systematically transferred within the company. In addition, HHI developed training courses for electric and electronic engineering to train people of talent in the latest environmentally friendly technologies and ship electrification.

HMD has a variety of training programs conducted in partnership with the Research Institute of Medium & Small Shipbuilding and Korea Maritime & Ocean University to cultivate experts on eco-friendly ships, where 298 people completed a total of 13 courses in 2024. In addition, HMD hosted the "M-Seminar" with special guest lecturers on industrial transition, sharing insights on eco-friendly ships and technology related to digital transformation.

HSHI offers expert training courses in partnership with affiliates and associations (Future Innovation Talent Development Center) to prepare participants for the rapid changes in the technical environment, including eco-friendly technologies, AI, and DT. HSHI holds lectures with external experts to provide employees with the latest trends and industry insights, and also runs "Namak Academy" in collaboration with relevant institutions, providing programs to support the skills and development of the employees.

Major Training Courses

(As of 2024)

Program	Target Group	Course Description
Global Academy	Soon-to-be and prospective expats	• Enhancing the competencies of prospective expatriates by cultivating a business mindset and providing global management training • Learning from the experience of expats, listening to difficulties of prospective expats, and forging networks
HLC[1] Program	High performers from manager level to executives	• Training programs provided in 5 stages based on positions and roles starting from manager-level high-performing talent • Training in basic business administration, technology management, and leadership to cultivate future executives
Leadership 360 Assessment Debriefing	Executives, department leaders and team leaders	• Strengthening self-awareness through interpretation of leadership 360 assessment • Seeking ways to enhance individual leadership skills
HD EDGE and HD Vision Academy	High-performing female talent	• Female leadership courses such as understanding diversity and female executive courses • Strengthening female leadership skills by position to improve diversity

(As of 2024)

Program	Target Group	Course Description
Training for New Managerial workers	New department leaders section leaders, etc.	• Cultivating leadership skills such as goal setting and management, coaching, feedback, etc. • Understanding company-wide systems
Domestic Training for New Hires	New hires in their 2nd year	• Recharge and stress management • Value Trip • Vision design for future growth
Technical Capability Development	All production and technical workers	• Basic competency training
Technical Transfer	All production and technical workers	• Core production technology training

1) HLC: HD Hyundai Leader Course

Talent Management

Strategy

Directions for Talent Management

Capacity Building and Self-development

Internalization and Practice of Core Values

HDKSOE and its shipbuilding subsidiaries offer various training programs for employees to help them better understand and practice HD Hyundai's value system, including its mission, vision, and core values. In-house training is provided for new hires on the fundamentals of the value system, and further training is conducted for existing employees based on the assessment of their practical competencies. Through these programs, continuous support is provided for employees in their development and participation in the group's policy directions.

Support for Degree Acquisition

HDKSOE and its shipbuilding subsidiaries support employees in obtaining master's and doctoral degrees through self-development study programs at prestigious domestic universities. This program covers 70% of the tuition and admission fees up to KRW 20 million when an employee completes the degree program, thereby alleviating the financial burden on employees. Moreover, the company takes consideration of individuals' academic schedules to ensure that they can balance their academic and work commitments.

Support for Language Proficiency Test and Training for Expatriates

HDKSOE and its shipbuilding subsidiaries subsidize the examination fees of language proficiency tests to help employees in administrative, design, and research positions strengthen their language skills. In 2024, over 1,500[1] employees benefited from this support system. To foster more global talent, fees are covered for candidate expatriate employees to take language courses and exams for the regions relevant to their overseas assignment.

1 HDKSOE: 189 participants, HHI: 770 participants, HMD: 261 participants, HSHI: 281 participants

Support for Self-Directed Learning

HDKSOE and its shipbuilding subsidiaries offer diverse educational content including self-development online courses, audiobooks, and e-books to facilitate self-directed learning for employees. In addition, we support learning outside of work-related topics, such as hobbies and general living knowledge, to encourage employees' development in various areas. In 2023, we launched a program called the "Life-Hack Sharing Club," where employees can volunteer to become instructors and share useful tips related to their work or daily life, expanding venues for communication and creating a "Culture of Growing Together."

Evaluation on the Effectiveness of Training Programs

HHI offers an "Expert Technician Training Program" to nurture technical talent that will adapt to future changes in the shipbuilding industry. Participants in the program learn the skills required in the field. In 2024, a total of 594 individuals completed the program through 35 training sessions. High-performing participants are given an advantage in regard to gaining employment at HHI and its contractors. In 2024, the program achieved a high employment rate of 90% among all participants, and successfully contributed to the hiring of outstanding talent within the company. Also, in line with industry changes such as decarbonization and electrification, HHI established a program on electrical and electronic engineering aimed at strengthening related capabilities and generating synergy among affiliates. Based on this program, 1,105 people participated in 30 courses covering everything from basic theory to practical application.

HMD, as part of the effort to promote an environment of self-learning, operates an in-house self-development group called "M-Lab" that supports employees in researching new technologies, learning new knowledge, and obtaining certifications relevant to their job functions. In 2024, 286 employees, up 30% from the previous year (220 employees), formed 41 groups and studied digital coating system, SMR, fuel cell, and other advanced technologies in shipbuilding and offshore engineering, thus contributing to strengthening the company's overall competitiveness. Through this program, employees earned a total of 15 certifications including drone operator, ergonomics engineer, industrial safety engineer certification, which is an 1,400% increase from last year (1 certification). This program has helped strengthen its R&D capabilities and enhance its technical competitiveness. In the survey conducted for the participating employees, the program earned a high satisfaction score of 4.43, 4.7% higher than the previous year (4.23 points).

In addition, HMD operates "M-Seminar," a guest expert lecture series, in order to further boost its employees' technical capabilities. In 2024, 4 lectures were held with experts from the Korea Maritime & Ocean University and KAIST under the theme of "Eco-friendly ships and digital manufacturing innovations," and approximately 1,300 employees were in attendance.

HSHI operates "Namak Academy" in partnership with Makers Space at Mokpo University to support its employees in developing skills and to create a self-led development environment. In 2024, 57 employees participated in four courses on the topics of 3D printing, Arduino programming, introduction to eco-friendly ships, and ship machinery installation. Programs will continue to be operated to meet the various needs of its employees.

Talent Management

Strategy

Directions for Talent Management

Performance Evaluation and Compensation

MBO[1]-based Performance Appraisal

HDKSOE and its shipbuilding subsidiaries have an MBO-based performance appraisal system where executives, department leaders, and team leaders set performance goals in consideration of the roles and characteristics of each division, office, and department. Through this system, performance progress is regularly monitored, and all members are invited to participate in MBO and share feedbacks to achieve the performance goal.

Priority-based Performance Evaluation

HDKSOE and its shipbuilding subsidiaries conduct performance evaluations based on priority tasks, which are determined by the goals for the organization as a whole. Through discussions between managerial workers and team members, priority tasks are specified, and individual tasks are allocated in consideration of each person's competencies and job functions.

HHI, **HMD**, and **HSHI** conduct biannual performance evaluations with objective monthly performances, and **HHI** additionally shares work details and progress as part of the performance-based evaluation.

Furthermore, to maintain fairness in the evaluations, evaluation review sessions and an appeals system are operated, and feedback is provided to evaluators after the evaluations in the spirit of pursuing both individual and company growth.

1) MBO: Management by Objectives

Multidimensional Leadership Appraisal

HDKSOE and its shipbuilding subsidiaries conduct a multidimensional leadership appraisal for executives, department leaders, team leaders, and section leaders. This assessment evaluates "leadership competencies" using various factors such as behaviors, attitudes, collaboration, and communication, with information gathered from multiple assessors. The elements of the multidimensional appraisal are designed based on the objectives of the assessment, the position of the assessed, and the characteristics of their duties.

Agile Conversation and Performance Appraisal

HDKSOE, **HHI**, and **HMD** conduct performance evaluations not only on the individual tasks and KPIs, but also on the work performed by temporary assignment and task force teams on special projects. These evaluations not only assess the subjects' performance, cooperation, and contributions, but also provide continuous feedback on the entire working process and produced results.

Performance Evaluation Platform

HHI, through a "Task Management Platform," continuously evaluates the performance of its employees throughout the year to promote further development. The platform manages tasks categorized into priority tasks, regular tasks (regular missions and duties), and ad-hoc tasks (one-time tasks assigned due to emergencies or direction of senior management).

Performance evaluations are also conducted for tasks performed by employees participating in temporary organizations or task forces that are operated on an ad-hoc basis for specific projects or R&D activities through tasks that can be directly registered by the employees. Goals are set through regular conversations and feedback, and adjusted flexibly when there are changes in tasks, to support employees in successfully carrying out their work. This approach enhances employee engagement while providing flexibility and agility throughout the entire organization.

Performance Evaluation Review and Feedback

HDKSOE and its shipbuilding subsidiaries operate a feedback process where evaluators and evaluation subjects can freely share and review the validity of performance goals, the objectivity of performance evaluation indicators, implementation of subtasks, collaboration during the implementation, and support provided. When evaluation subjects register their plans, current status, and other support requests related to performance goals on the task management system, evaluators not only assess the performance status but also provide feedback on the methods and procedures used in performing such tasks. Regular feedback is provided at registration of the performance goals, interim evaluations, and final evaluations, and ad-hoc feedback is provided at the request of evaluation subjects.

Improving Fairness and Acceptability of Performance Evaluations

HDKSOE and its shipbuilding subsidiaries have established and operate a data-based performance evaluation system in order to ensure the fairness of the performance evaluation process, including goal setting and task allocation, and improve the design of performance evaluation indicators and methods.

To ensure that the employees are comfortable with the performance evaluation process, we establish specific performance goals and indicators according to the ranks and responsibilities of employees. In addition, results are presented transparently and opportunities for feedback exchange are provided throughout the process.

Performance Evaluation Based on the Position Levels

(As of 2024)

Target		Evaluation Method	Evaluation Cycle
Executive		MBO evaluation and leadership 360 assessment	Annual
Department and team leaders		MBO evaluation and leadership 360 assessment	Twice a year
Section leaders and non-managerial workers[1]		Performance-based evaluation	Twice a year
	Professional certificate holders (Lawyer, patent attorney, CPA)	Self-evaluation, 360 evaluation (peers relevant to role), department leader evaluation	Twice a year
	Research staff and office workers	Performance and competency evaluation	Twice a year
	Production workers	Comprehensive evaluation of performance, competency, attitude	Twice a year

1) (HMD) Both section leaders and non-managerial workers are subject to MBO-based evaluation.
(HSHI) While section leaders are subject to MBO-based evaluation, non-managerial workers receive performance-based evaluation.

Talent Management

Strategy

Directions for Talent Management

Performance Evaluation and Compensation

Performance Compensation System

Through the task management system, **HDKSOE and its shipbuilding subsidiaries** provide differentiated skill-based benefits and performance-based bonuses to the employees on an annual salary system, based on individual performance. A separate incentive system is also operated given the diverse and complex work processes and characteristics of each professional group. The incentive system includes various programs such as design incentives, research bonuses, sales incentives, production incentives, incentives for outstanding production teams, and safety incentives. By considering the unique characteristics of each company, rewards are offered that fit the various skills and achievements of employees.

Award System

HDKSOE and its shipbuilding subsidiaries operate various award systems including the Role Model for Core Values and the Outstanding Performance Award, to recognize and appreciate employee efforts and achievements based on the philosophy of "where there is performance, there is reward." Major award programs include the Excellence in Research Awards, Collaboration Points, and Thank You Cards, as well as other award programs such as the Zero-Safety-Accident Awards, Long-term Service Awards, Job Invention Awards, Special Merit Awards for External Contractors, and Safety Excellence Contractor Awards.

Retirement Plan

HDKSOE and its shipbuilding subsidiaries have retirement plans so that the employees approaching retirement age can prepare for a stable post-retirement life. This retirement pension is available to all employees across HDKSOE and its shipbuilding subsidiaries and is protected through the external accumulation of retirement pension reserves. Moreover, we provide training for employees subscribed to the retirement pension to raise their understanding and to encourage employees to actively utilize the pension system.

Employee Stock Ownership Plan

HDKSOE and its shipbuilding subsidiaries operate an Employee Stock Ownership Plan (ESOP) to share the long-term growth of the companies and increase a sense of ownership among the employees. As of December 2024, the ESOP of HDKSOE and its shipbuilding subsidiaries comprises approximately 1,400 members.

Performance Compensation and Key Reward Programs[1]

(As of 2024)

Category		Target	Description
Performance Bonus		All employees	• A certain percentage of the basic salary is given as a performance bonus based on management performance.
Reward Programs	Thank You Card	All employees	• Employees with outstanding performance receive a Thank You Card along with Employee Welfare Mall Points.
	Collaboration Points	All employees	• Employees who collaborate within or across departments receive collaboration points, which are converted to points for the Employee Welfare Mall when exceeding a certain threshold.
	Excellence in Research Awards	Research staff	• Individual performance bonuses for research staff based on biannual evaluation to incentivize R&D activities
	Role-Model for Core Values	All employees	• Award for employees who have acted on core values of innovation, challenge, respect, safety and generated results

1) The specific operation of the system may differ depending on the affiliate.

Defined Benefit Retirement Pension Liability for 2024

(Unit: KRW million)

HDKSOE	HHI	HMD	HSHI
1,813,304	1,045,705	295,521	331,162

Employee Stock Ownership Plan Overview

(As of December 31, 2024)

Category	No. of Shares Owned	Ownership Percentage	No. of Members
HDKSOE	61,625	0.09%	647
HHI	127,876	0.14%	357
HMD	15,356	0.04%	96
HSHI	205,462	0.67%	341

Talent Management

Strategy

Directions for Talent Management

Welfare System

Flexible Work System

HDKSOE and its shipbuilding subsidiaries implemented a flexible work system to respect the work-life balance for employees and enhance work efficiency. If an employee needs to adjust working hours due to circumstances related to work, childcare, or other personal reasons, they are given the ability to choose their working hours. We also strive to create an adjustable working environment through flexible working hours, holiday work substitution, and part-time employment, and have adopted the PC-OFF system to help employees strike a balance between work and life.

Remote Work System

HDKSOE and its shipbuilding subsidiaries operate a remote work system that allows employees to work from any location. To minimize potential work gaps that may arise due to remote work, we provide various forms of support, including VPN and online collaboration tools. This system enables employees to maintain work efficiency while working safely and conveniently.

Major Benefits Related to Childbirth, Childcare, and Family Care[1]

(As of 2024)

Category	Description
Maternity leave and Congratulatory allowance	• Pregnant employee: 90 days of leave from the date of childbirth, with an additional 30 days of special maternity leave. Congratulatory pregnancy allowance of KRW 5 million, congratulatory childbirth allowance of KRW 5 million • Spouse employees: Up to 10 days of leave within 90 days of child's birthdate
Fertility support	• Reproductive leave: Additional 2 days of leave for every 3 day statutory entitlement • Remote work for fertility treatments: remote work for 5 days, including the day of the treatment
Miscarriage, stillbirth leave and condolence allowance	• Leave days granted based on the gestational period • Condolence allowance of KRW 500 million
Parental leave	• 1 year of leave per child under 8 years old or in second grade elementary school, for each parent • Reduced working hours for childcare can be utilized for up to a maximum of 2 years
Childcare leave	• Up to 6 months of childcare leave for female employees with children from ages 6 to 8 (3 months paid)
Family care leave	• If an employee's grandparent, parent, spouse, child, grandchild, or parent-in-law require care due to accidents, illnesses, or old age, the employee is granted family care leave of up to 90 days a year.
Reduced working hours	• Reduced working hours of up to 2 hours a day from early pregnancy (less than 12 weeks) to late pregnancy (after 36 weeks) • Reduced working hours for childcare (15 to 35 hours a week)
Breastfeeding facilities	• 2 breastfeeding breaks during working hours, minimum of 30 minutes each session for female employees with infants under 1 year old.
In-house daycare center	• In-house daycare center operating from 7:00 a.m. to as late as 10:00 p.m.

1) Program details may differ by company

Personal Development Leave System

HDKSOE and its shipbuilding subsidiaries promote a personal development leave system to encourage employees to recharge themselves for sustained business performance and increased employee engagement. All employees are eligible to use up to 5 days of personal development leave twice per year. When using this leave, employees are provided with hotel or resort vouchers or corresponding welfare points so that they can refresh and enjoy a comfortable break.

Work-related Stress Prevention and Management

HHI developed a work-related stress prevention and management manual to support employees in effectively managing stress. HHI also provides support programs specifically designed for employees experiencing high level of work-related stress, which include in-depth stress assessment, stress measurement using specialized equipment, stress counseling, and referrals for psychological counseling.

HMD offers several mental health support programs for employees. Regular consultation sessions and special lectures on mental health are held, online health management support is provided through a digital health care program, and specialist counselling sessions are offered in partnership with an external community mental health center.

HDKSOE and its shipbuilding subsidiaries have in-house counseling centers, such as "Mind Café" (located in the Bundang office) and "Mind Garden" (at the Ulsan and Yeongam facilities) to promote employees' mental health and well-being.

Supporting Education for Retirement Planning

HDKSOE and its shipbuilding subsidiaries offer retirement planning education programs for employees so that they can enjoy a healthy and stable lifestyle after retirement. The program assists employees in preparing for their next phase of life by providing information on change management after retirement and career planning based on five key areas of life (health, career, etc.). In particular, customized education programs are tailored to the needs of potential retirees, offering practical information such as self-assessment for successful life planning, financial planning, health management, re-employment strategies, and job search preparations.

In-house Fitness Center

HDKSOE and its shipbuilding subsidiaries operate in-house gyms for employees. The fitness centers are available for all employees and are equipped with a variety of the latest exercise equipment.

BUSINESS CASE

Family-friendly Company Certified by the Ministry of Gender Equality and Family (MOGEF)

HDKSOE and its shipbuilding subsidiaries have been recognized for maintaining exemplary family-friendly policies such as childbirth and childcare support and flexible working hours, and have earned and maintained the MOGEF's certification as a "Family-friendly Company."

Category	Validity Period
HDKSOE	December 1, 2022 – November 30, 2025
HHI	December 1, 2022 – November 30, 2025
HMD	December 1, 2021 - November 30, 2024[1]
HSHI	December 1, 2022 – November 30, 2025

1) Completed renewal of certification as of this reporting (Validity date: December 1, 2024 – November 30, 2026)

Talent Management

Risk Management

Workforce Planning and Organization Assessment

Working Conditions and Labor Practices

Rules of Employment and Collective Bargaining Agreement

For sustainable growth based on mutual trust between the company and workers, **HDKSOE and its shipbuilding subsidiaries** have stipulated rules concerning recruitment, leave, and benefits of employees, job security, working hours, gender equality, wages, retirement benefits, bonuses, and other allowances, as well as overall welfare, in accordance with the fundamental principles of the Constitution of the Republic of Korea and the National Labor Relations Act. These provisions are also specified in each company's rules of employment and collective bargaining agreements.

Working Hours and Paid Leave

The working hours at **HDKSOE and its shipbuilding subsidiaries** are set at 8 hours a day (lunch-break excluded), 40 hours a week, and paid holidays are provided in accordance with the Labor Standards Act, each company's rules of employment, and collective bargaining agreement.

The statutory working hours are 52 hours a week, and in case of special circumstances such as unforeseen events or a steep increase in workload, employees are able to work over 52 hours a week or on the weekends, subject to the consent of the employees and the approval from the Minister of Employment and Labor. In these cases, overtime wages are paid in accordance with relevant laws.

HDKSOE and its shipbuilding subsidiaries monitor working hours, overtime, and holiday working hours, and systematically manage the records on Human Resources Management System (HRMS).

Wage Gap Monitoring and Reasonable Wages

HDKSOE and its shipbuilding subsidiaries do not apply different working conditions or provide disadvantageous employment terms without reasonable justification on the grounds of gender, marital status, pregnancy, childbirth, or similar. Wage differences are applied only when they can be objectively and reasonably justified by factors such as work experience, length of service, or demonstrable differences in employee capabilities or performance. However, due to the physically demanding nature of certain roles in shipbuilding, these positions tend to have a higher proportion and longer average tenure of male workers. **HDKSOE and its shipbuilding subsidiaries** monitor for any gender-based wage disparities, and if differences are found without reasonable cause, prompt corrective action is taken.

HDKSOE and its shipbuilding subsidiaries uphold the workers' right to a livelihood and pay wages that meet or exceed the minimum wage annually set by the government, in accordance with the Constitution of the Republic of Korea. To ensure a decent standard of living and improve the quality of life, we assess the difference between the living wage levels published by "Living Wage Committees" of local governments at the regions where our major workplaces are located and the actual wages paid by the companies. We aim to provide wages that are more competitive than the local living wage. The living wage is calculated based on a comprehensive analysis of factors including regional household income and expenditures, inflation, private education costs, leisure expenses, and average income.

Employee wages are paid in cash on a designated date each month, along with a pay slip that includes detailed information on total earnings such as base salary and overtime pay, as well as deductions for taxes, union dues, savings plans, and various social insurance contributions.

Wage Payment Status by Major Business Site

(Unit: KRW thousand)

Company	Major Business Site Location	Statutory Minimum Wage[2]	Regional Living Wage[1,2]	Actual Paid Wage[3]
HDKSOE	Seongnam-si, Gyeonggi-do, Republic of Korea	24,729	29,820	116,152
HHI	Ulsan Metropolitan City, Republic of Korea	24,729	28,115	97,571
HMD	Ulsan Metropolitan City, Republic of Korea	24,729	28,115	92,398
HSHI	Yeongam-gun, Jeollanam-do, Republic of Korea	24,729	26,334	115,587

1) The regional living wage is determined and announced by the "Living Wage Committee" of the local government where each company's major business site is located.
2) The statutory minimum wage and regional living wage are calculated based on hourly rates multiplied by the standard monthly working hours (209 hours) × 12 months.
3) Actual paid wage is based on the "average salary per employee" disclosed in the Annual Report.

Talent Management

Risk Management

Workforce Planning and Organization Assessment

Systematic Personnel Management

Workforce Supply and Operation Planning

HDKSOE and its shipbuilding subsidiaries establish mid- to long-term workforce supply and operation strategies to address challenges such as selecting next-generation core talent in future strategic areas. Based on changing economic and market conditions, supply and demand for various positions are analyzed, including administrative, research, and production roles, and strategies are devised to secure or utilize the necessary talent from internal and external sources.

Identification and Analysis of Internal and External Workforce

HDKSOE and its shipbuilding subsidiaries conduct employee competency evaluations and organizational culture assessments to identify capabilities of both internal and external workforces.

Employee competency evaluations are conducted to assess how much of the MBO- or KPI-based targets employees have achieved, and we give recognition to those employees who have consistently met or exceeded the performance targets as outstanding talent. The qualitative and quantitative evaluations of the capabilities of individual employees are assessed by using indicators and criteria that can measure the level of capabilities and skill.

Various mechanisms are in place to secure external talent. In response to external environment changes such as competition in the shipbuilding market, unstable supply chains, and rapid technology development, flexible recruitment systems are operated to timely secure talent capable of addressing these challenges. Collaboration is carried out with universities with excellent research results to foster and secure future talent, and separate recruitment processes are conducted for master's and doctoral-level candidates from prestigious universities and research institutions. Research tasks in various fields are explored and industry-academy research cooperation is promoted to lay the foundation for the growth of future talent.

Employee Satisfaction Survey

HDKSOE and its shipbuilding subsidiaries conduct employee surveys in an effort to create an organizational culture where employees can generate value and display their creativity. The survey items include "employee engagement," "internalization of core values," and "change management activities." Through these surveys, the company analyzes various factors that influence employee performance and productivity such as job satisfaction, goal orientation, job experience and happiness, stress factors, etc.

2024 Employee Engagement Survey Results

(Unit: %)

Positive Response Rate	Survey Participation Rate
61.6	66.2

* Survey subjects: HDKSOE, HHI, HMD, HSHI

Facilitating Labor-Management Communication

Dialogue With the Executive Management

HDKSOE and its shipbuilding subsidiaries hold regular meetings between employees and the executive management to promote smooth communication within the organization and to promote a collaborative labor-management culture. New employee sessions are held with the CEOs of each company and the new "MZ generation" employees to share distinctions between different generations and encourage open communication. Sessions are also held with team leaders, where they share corporate policies and current business updates and listen to any complaints or suggestions from employees.

Management Status Briefing

HHI, **HMD**, and **HSHI** adhere to collective agreements that mandate prior notification to labor unions regarding significant management changes. Moreover, during labor-management council meetings, each company transparently shares the operational status of the businesses.

Since 2020, **HHI** and **HMD** have shared management performance and emerging issues of the companies through separate briefing sessions organized by the CEOs via internal broadcasting channels, coinciding with quarterly performance disclosures. In addition, follow-up briefing sessions are provided by business units to build shared understanding of the company's current business status.

Education on Labor-Management Relations

HDKSOE and its shipbuilding subsidiaries operate a Labor-Management Relations Education program including labor laws to create a sound labor-management culture and establish a collaborative relationship. This program covers topics such as defining labor-management relations, the structure of collective bargaining, cause and understanding of conflicts in labor-management relation, effective communication for resolving conflicts, and labor standards such as labor hours, wages, and leave.

BUSINESS CASE

Meeting With the CEO

HHI and **HMD** organize meetings with CEO where the top management executives share the company's vision and direction with the employees. The employees are able to directly ask the CEO questions about the operational status of the company and receive immediate responses. **HHI** held an online metaverse meeting where the CEO and employees communicated through avatars in a virtual space. Under the theme of "Authoritarian Culture in the Workplace," 40 anonymous employees participated and discussed generational conflicts and potential solutions.

Meeting With the HMD CEO

HHI's Online Metaverse Meeting

Talent Management

Risk Management

Workforce Planning and Organization Assessment

BUSINESS CASE **Major Labor-Management Partnership (LMP) Activities**

Meeting With Foreign Workers

Top executives from HD Hyundai and the shipbuilding subsidiaries met 42 foreign workers from 7 countries, including Vietnam and Uzbekistan, who are currently working for the contractors of **HHI**, **HMD**, and **HSHI**.
During the "Meeting With Foreign Workers," the top management listened to the difficulties and suggestions from the foreign workers and sympathized with them regarding the hardships of living abroad. In return, the foreign workers delivered words of appreciation for various forms of support from their companies including interpretation services and on-the-job training to help their settlement in Korea.

Meeting with foreign workers of contractors

One Heart Communication Committee

HHI established the "One Heart Communication Committee," where each department sends one representative so they can gather together to suggest improvements on the worksites and improve communications between the company and employees. Each representative serves as a bridge of communication as they voluntarily identify and propose areas for improvement and exchange prompt feedback with the relevant department. Since its launch in 2023, the "One Heart Communication Committee," over Groups 1 to 4, has identified 40 tasks to improve the work environment.

One Heart Communication Committee

On-site Visits

HMD's Coexisting Cooperation Department conducts on-site visits for production teams in order to promote internal communications. The Coexisting Cooperation Department attends the morning meetings and TBM (toolbox meetings) of each production team, and listens to the production teams' concerns during breaks and lunchtime. We aim to strengthen active communication channels in the worksites and quickly identify any workplace issues experienced by the production teams, thus contributing to creating a better working environment. From April to June 2024, visits to 20 teams were completed, and visits to 27 teams are planned for 2025.

On-site visits to production teams

'CSO on the Go' Program

HSHI produces the "CSO on the Go" program via YouTube and the internal broadcasting channel to promote diversity. In this program, the Chief Safety Officer (CSO) conducts biweekly interviews with foreign employees, testing their safety knowledge and experiencing foreign cultures. Furthermore, this program serves as an opportunity to listen to and communicate with foreign employees about their concerns.

YouTube still from "CSO on the Go"

Workplace Improvement Committee

HHI holds the "Workplace Improvement Committee" every 6 months as a venue of communication to improve on-site working conditions. The Shipbuilding Business Division and Offshore Energy Business Division handle approximately 800 agenda items every period, and action items for improvement are efficiently handled. A senior executive from each department acts as the Chair, and members freely discuss topics such as worksite difficulties, safety issues, and other related issues.

Workplace Improvement Committee

Sound Management Training Program

HMD operates the "Sound Management Training Program" to strengthen the internal fundamentals of the company. We share business updates and key issues on labor management relations, and provide development of leadership capabilities for worksite-oriented labor management. During the training, executives, division heads, section heads, and production team leaders are able to freely discuss about the internal and external business environment. The program also helps strengthen their ability to flexibly handle rapid changes, including effective communication with the younger MZ generation.

Sound Management Training Program

New Year Cultural Festival for Sri Lankan Workers

HMD celebrated Sri Lanka's biggest holiday by hosting the "Cultural Festival for Sri Lankan Workers" for 150 workers and their families. We held a family sports carnival for the workers and their families to foster unity, and expressed our appreciation for their dedication by providing a traditional Sri Lankan lunch. HMD will continue to create a company culture of acceptance that respects the diversity of our foreign workers.

Family Sports Carnival for Sri Lankan workers

Efforts to Improve Communication and Develop Job Competency for Foreign Workers

HSHI conducts foreign language classes for domestic manager-level employees including executives, department heads, and in-house subcontractor representatives. By learning about the country, basic conversational phrases, and necessary safety terminology and phrases in Vietnamese, Nepalese, Thai, and Uzbek, managers are able to strengthen their connection with foreign workers and create a safe work environment. In addition, job training and Korean language classes are provided to help foreign workers adjust quickly to Korea, and a systematic training program is operated focusing on developing practical skills. Regular discussion sessions are also held to improve the training curriculum and support workers in adjusting to the worksites.

Foreign language class for managers

Respect for Human Rights

Governance

Human Rights Management Governance

Roles and Responsibilities

Role of BOD

To protect the human rights of stakeholders related to our business activities, **HDKSOE and its shipbuilding subsidiaries** operate a human rights management governance system where the ESG Committee under the BOD serves as the highest decision-making body.

The ESG Committee receives reports on potential and high human rights risks involving employees and stakeholders, and deliberates and approves issues related to human rights that may strongly influence the business operations and financial performances of the companies.

Role of the Human Rights Management Committee

HDKSOE and its shipbuilding subsidiaries operate a Human Rights Management Committee, chaired by the Chief ESG Officer (C-Level) or the executive in charge, and comprises executives and managerial workers from relevant departments.

The Human Rights Management Committee reviews issues and performances related to promoting human rights management and approves the Human Rights Management Declaration, establishment and revision of Guiding Principles for Human Rights Management, human rights impact assessments (HRIA), and publication of human rights management reports.

Role of Operating Departments

Departments in charge of human rights management at HDKSOE and its shipbuilding subsidiaries are responsible for carrying out activities to strengthen human rights management and manage potential risks. In addition to promoting the systematic implementation of human rights management, they cooperate with other relevant departments such as HR, compliance, procurement, security, and environmental safety to identify and remove human rights risks.

The departments in charge conduct HRIAs to identify human rights risks and present suggestions for improvement, and regularly monitor human rights issues and report key matters. In addition, these departments conduct training on topics related to human rights management to employees.

Group Human Rights Management Governance

HD Hyundai BOD (ESG Committee)	• Oversees and manages Group human rights management program
Group Chief ESG Officer	• Oversees Group human rights management program • Oversees and manages Group human rights issues
Group Human Rights Management Committee	• Reviews Group human rights activities and progress • Shares and manages key human rights issues by company

Human Rights Management Governance at Each Company

BOD (ESG Committee)	• Makes decisions on ESG-related matters including human rights management
Chief ESG Officer	• Manages human rights management program • Oversees implementation of human rights management program
Human Rights Management Committee	• Reviews human rights management-related matters and its performance • Approves human rights management policies and makes decisions on human rights management matters
Relevant Departments	• Identifies human rights risks, and suggests improvement measures • Monitors human rights issues and reports key matters • Provides human rights education, operates remedial procedures, and discloses human rights management status both internally and externally

Strategy

Directions for Human Rights Management

Laying the Foundation of Human Rights Management

Advancing Human Rights Management Policies

HDKSOE and its shipbuilding subsidiaries continue to work to prevent human rights violations that may arise, and effectively mitigate related risks.

In 2025, we established a group-wide human rights policy to ensure faithful implementation of global human rights standards, including the core principles of the UN Guiding Principles on Business and Human Rights (UNGPs), the OECD Guidelines for Multinational Enterprises, and the EU Corporate Sustainability Due Diligence Directive (EU CSDDD).

The Human Rights Management and Due Diligence Policy incorporates the key principles of the UNGPs and OECD Guidelines, details the due diligence procedures, and clearly defines the roles and responsibilities of each team within the governance framework.

In addition, the "Human Rights Management Declaration" was revised to ensure the direction of the human rights management program and policy are consistent with international standards. Going forward, each company's policy will be refined based on the Group policy, and efforts will continue to enhance human rights management practices.

Human Rights Commitment

The Declaration of Human Rights Management of **HDKSOE and its shipbuilding subsidiaries** details our commitment to respecting human rights of stakeholders, establishing human rights management governance structure, and conducting HRIA. The declaration testifies to support for international agreements on human rights that the Korean government has joined and ratified, including the Universal Declaration of Human Rights (UDHR), UN Guiding Principles on Business and Human Rights (UNGPs), and the ILO Declaration on Fundamental Principles and Rights at Work. Commitment will be continuously demonstrated to live up to these declarations, principles, and agreements.

HD Hyundai Human Rights Declaration

Human Rights Management and Due Diligence Policy

HDKSOE and its shipbuilding subsidiaries adopted the HD Hyundai Group's Human Rights Management and Due Diligence Policy, established in 2025, as the standard for implementing their human rights management.

This policy specifically outlines the requirements necessary to meet international standards, including its scope of application and definitions of key stakeholders. In particular, it stipulates 17 core human rights respect items, obligates human rights due diligence at least once a year, and clearly defines the roles of dedicated departments responsible for implementing the due diligence process.

Prohibition of Discrimination and Workplace Bullying

HDKSOE and its shipbuilding subsidiaries strictly prohibit discrimination and workplace bullying and ensure that all employees are able to work in an environment where their dignity and integrity are respected. No form of discrimination is tolerated based on gender, age, race, disability, religion, political stance, or region of origin, and proactive prevention measures and practices are being implemented to root out workplace bullying and sexual harassment.

If HRIAs discover any cases of discrimination and bullying at the workplace, or if grievance consulting and inspection confirm such cases, the offender will be subject to disciplinary actions based on the standards defined in the employment rules.

Respect for Human Rights

Strategy

Directions for Human Rights Management

Implementation and Promotion of Human Rights Management

Principles of Respect for Human Rights

HDKSOE and its shipbuilding subsidiaries newly established six key areas for respect for human rights reflecting major human rights conventions and agreements ratified by the Korean government, including the ILO Core Conventions. These six areas are defined as core areas that must be protected and promoted by all employees, contractors, and local communities in practicing human rights management, and HDKSOE and its shipbuilding subsidiaries are committed to ensuring they are respected across all business activities.

In addition, HDKSOE and its shipbuilding subsidiaries developed their own assessment criteria, which include 17 human rights required by the international community, and conduct human rights due diligence in line with these criteria. Based on the analysis of human rights impact assessment results, we identify and implement improvement tasks for each indicator.

Six Key Areas for Respect for Human Rights

Human Rights Management Governance	HR/Labor Management
• Declaration of human rights policy • Human rights management governance • Human rights due diligence system	• Forced labor/ illegal labor • Child labor / underage workers • No discrimination
Occupational Safety & Health	**Ethics**
• Occupational accidents and disease • Industrial hygiene • Safe maintenance of machinery and equipment	• Fair trade • Privacy protection • Governance policy
Supply Chain Management	**Environment**
• Purchasing practices • Supply chain assessment/ due diligence • Responsible/ Conflict minerals	• Hazardous materials • Waste • Biodiversity

Human Rights Education

HDKSOE and its shipbuilding subsidiaries provide human rights training for employees to raise understanding of human rights commitment and guiding principles and to instill a culture of respect for human rights. The human rights education program consists of "Sexual Harassment Prevention (1 hour)," "Disability Awareness Training (1 hour)," "Workplace Bullying Prevention (1 hour)," and "Human Rights Management (1 hour)."

These training programs[1] are provided to employees in office-based and production positions as well as dispatched workers. The human rights education program is managed on the employee e-learning platform (HiClass) as well as the training records within the education system.

1) Some training programs vary by company. HSHI started providing anti-bullying and human rights violation prevention training courses in 2024.

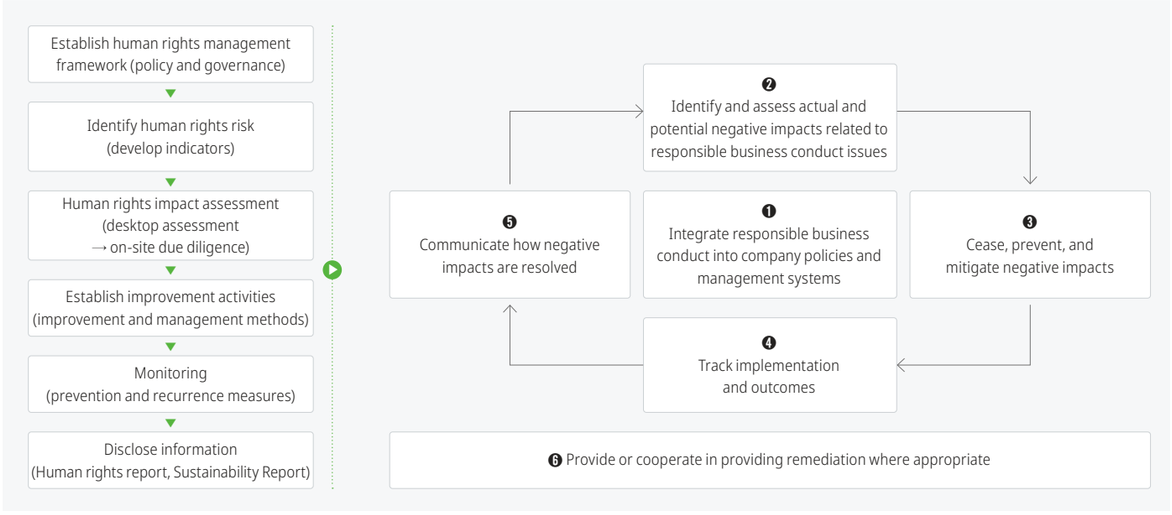
Human Rights Education Programs at HDKSOE and its shipbuilding subsidiaries

Category	2022	2023	2024
Sexual Harassment Prevention	1 hour	1 hour	1 hour
Disability Awareness Training	1 hour	1 hour	1 hour
Workplace Bullying Prevention	1 hour	1 hour	1 hour
Human Rights Management	1 hour	1 hour	30 minutes

Human Rights Due Diligence Framework

HDKSOE and its shipbuilding subsidiaries established a human rights management governance structure that conforms with the international standards and guidelines, and implemented a framework to conduct regular human rights due diligence. The six-step due diligence process was formed in line with the OECD Due Diligence Guidance for Responsible Business Conduct, and also incorporated a broad range of standards from authoritative international and private organizations, including guidelines from the National Human Rights Commission of Korea and the Ministry of Justice, as well as standards set by the ILO, CHRB, KTC, and RBA. HDKSOE and its shipbuilding subsidiaries will continue to review and strengthen the reliability and appropriateness of their human rights due diligence system.

Human Rights Due Diligence Framework



Respect for Human Rights

Risk Management

Human Rights Risk Management

Human Rights Impact Assessment

Developing HRIA Indicators

HDKSOE and its shipbuilding subsidiaries have developed 348 human rights impact assessment indicators, and then categorized these into 6 main categories and 40 items, based on laws, domestic and international guidelines, and external evaluation standards.

HRIA Indicators

Human Rights Management Governance
- Declaration of Commitment to Respect for Human Rights
- Regular human rights impact assessment
- Human rights management framework
- Human rights management performance
- Provision of remedial procedures
- Grievance reporting and investigation system
- Human rights management training

Labor
- Prohibition of forced labor
- Prohibition of child labor
- Working hours
- Wages and benefits
- Respectful treatment with no discrimination and no bullying
- Freedom of association and collective bargaining
- Other labor matters

Occupational Safety & Health
- Occupational safety & health system
- Emergency response
- Occupational accidents and disease
- Industrial hygiene
- Physical labor
- Safe maintenance of equipment and machinery
- Food, hygiene, and housing

Ethics
- Business integrity and prohibition of improper advantage
- Information disclosure
- Intellectual property
- Fair trade, advertisements, and competition
- Privacy protection
- Protection of consumer rights
- Protection of rights of local residents

Supply Chain Management
- Our supply chain management framework
- Agreement with contractors
- Evaluation of contractors
- Contractor risk management
- Responsible mineral sourcing/ Conflict minerals
- Grievance handling for contractors

Environment
- Soil contamination
- Water management
- Sanitation Facilities
- Chemical Substances
- Ecological protection
- Environmental information and training

HRIA Results and Prioritization

HDKSOE and its shipbuilding subsidiaries matched indicators to each department through consultations, and conducted on-site inspections at the same time to identify actual human rights risks. For each risk factor identified from the due diligence, specific improvement tasks were established, laying the foundation for implementing human rights management.

As a principle, improvement tasks for each indicator with identified risks are required to be carried out according to plan. However, priorities can be adjusted based on practical conditions such as the resources and environment at the business sites and departments responsible for the improvement tasks.

Improvement tasks were developed for indicators that did not receive the highest score in the human rights impact assessment. Among these, indicators that received no score were designated as top-priority improvement tasks. However, some indicators cannot be improved in the short term due to structural constraints or institutional limitations, in which case those with relatively low scores were set as secondary improvement tasks. Through this approach, HDKSOE and its shipbuilding subsidiaries aim to respond to human rights issues more promptly and effectively.

Risk Mitigation and Management

HDKSOE and its shipbuilding subsidiaries established a risk management framework using the Prevention Action Plan (PAP)[1] or Corrective Action Plan (CAP)[2] to systematically manage negative impacts identified during human rights and ESG due diligence process, and to prevent events from occurring or to address events that have already occurred.

1) Prevention Action Plan: Action plan to prevent potential negative impacts
2) Corrective Action Plan: Action plan to correct negative impacts that have already occurred

Human Rights Impact Assessment Results and Improvement Activities[1]

Category	Indicator Achievement Rate			Prevention, Mitigation, and Resolution Plans of Human Rights Impact	
HDKSOE	Governance	Labor	Safety & health	• Advance human rights management governance • Advance remedial procedures for human rights violations	• Expand human rights management practices to contractors • Support maternity protection and work-life balance
	67%	80%	93%		
	Ethics	Supply chain management	Environment		
	77%	55%	74%		
HHI	Governance	Labor	Safety & health	• Strengthen safety inspections and focus on managing risk factors • Protect and respect the human rights of contractors	• Respect foreign cultures and protect human rights • Advance human rights management governance
	71%	87%	96%		
	Ethics	Supply chain management	Environment		
	74%	54%	96%		
HMD	Governance	Labor	Safety & health	• Conduct regular inspections of factory and equipment to prevent accidents • Implement simulated training and safety training before commencing work	• Provide cyclical training on protecting foreign workers' human rights and preventing discrimination •Operate support center for foreign workers with interpreters for six languages
	61%	87%	94%		
	Ethics	Supply chain management	Environment		
	77%	51%	96%		
HSHI	Governance	Labor	Safety & health	• Advance human rights management governance • Advance safety and health management regulations	• Respect foreign cultures and protect human rights • Advance grievance handling procedure
	71%	89%	91%		
	Ethics	Supply chain management	Environment		
	65%	55%	100%		

1) Based on business sites in Korea

Respect for Human Rights

Risk Management

Human Rights Risk Management

Reporting and Handling of Grievances

Grievance Handling Procedures

HDKSOE and its shipbuilding subsidiaries operate a structured grievance handling procedure to swiftly and responsibly resolve actual or potential negative human rights impacts. This is available at all times for individuals or groups who have experienced or are concerned about potential adverse impacts, and it provides channels that ensure confidentiality.

Upon receipt of a grievance, the responsible team verifies the facts of the case and may recommend the offender cease the infringement, and if necessary, request disciplinary action in accordance with company regulations. If a grievance is deemed to have sufficient grounds, it is shared with relevant departments for appropriate follow-up measures. Such actions are carried out in stages, taking into account the seriousness and urgency of the issue.

All employees involved in the grievance process are required to strictly protect the confidentiality of the reporter and take necessary protective measures to ensure that the reporter is not disadvantaged as a result of the report. The reporter also has the right to request appropriate follow-up actions from the company.

This grievance procedure goes beyond simply receiving complaints: it plays a key role in proactively managing actual and potential human rights and environmental risks, strengthening trust with stakeholders, and reinforcing responsible corporate operations. Through this process, HDKSOE and its shipbuilding subsidiaries practice the respect for human rights as an essential value of sustainability.

Grievance Handling Procedures

Receipt	• Receive report via internet, email, phone • Prepare and report action plan (Ethics management executive → Ethics management division head)
Investigation	• Verify details and facts • Transfer to relevant department (as necessary)
Report and follow-up measures	• Discuss solutions for grievances/report and prepare results report • Report the results and notify the reporting party
Monitoring	• Review implementation items such as process improvements (as necessary)

Metrics & Targets

Human Rights Metrics and Targets

Human Rights Management Implementation

Human Rights Risk Assessment and Grievance Handling

Grievance Reports Received and Handled in 2024

Category	Unit	HDKSOE	HHI	HMD	HSHI
Rate of human rights reports handled	%	100	100	100	100
Number of received reports related to human rights	Case	8	9	2	4
Number of handled reports related to human rights	Case	8	9	2	4
Number of received reports related to discrimination and bullying	Case	8	9	2	4
Number of handled reports related discrimination and bullying	Case	8	9	2	4

Supply Chain Management

Governance

Supply Chain Management Governance

Roles and Responsibilities

Role of BOD

HDKSOE and its shipbuilding subsidiaries receive reports on compliance with fair trade regulations in their relationships with contractors and provide recommendations for improvement on significant compliance matters.

The ESG Committee under the BOD reviews performance and plans to create a "sustainable supply chain" focused on contractors' risk diagnosis, evaluation, and improvement.

Role of Executive Management

The CEO and Head of Management Support Headquarters and Co-Prosperity Office at **HDKSOE and its shipbuilding subsidiaries** provide directions to advance a co-prosperity model with contractors in order to establish a sustainable supply chain. At the same time, they identify and manage potential financial and non-financial risk factors as well as complaints and difficulties that contractors may have.

In addition, they oversee and manage all strategies and programs for shared growth. These efforts include: building growth infrastructure for contractors and strengthening the contractors' management stability, strengthening cooperative networks and establishing a co-prosperity framework, fostering competitiveness in quality, technology, and productivity, and promoting a culture of mutual respect and win-win cooperation.

Role of Operating Departments

The Procurement Department at **HDKSOE and its shipbuilding subsidiaries** is responsible for the entire process related to external contractors including registering new contractors, selection, and evaluation. The teams ensure that delivery unit prices are contracted in a fair and legal manner and comply with the obligation to deliver written contracts. In addition, the departments conduct diagnosis and due diligence work on supply ESG risks, as well as provide consulting services to enhance ESG management activities for contractors.

The Co-Prosperity Department provides financial, technological, educational support to in-house contractors, and continue to identify practical support programs for contractors to strengthen their capabilities.

Raw Material Risk Management Committee

To mitigate instability of raw material supply from price inflation, **HDKSOE and its shipbuilding subsidiaries** established the Raw Material Risk Management Committee. The Committee reviews and improves regulations and current status related to raw material risks.

In order to reduce the financial risks for contractors cause by fluctuations in raw material prices, the Subcontract Price Adjustment System is operated, which reflects changes in raw material prices in the payments made to contractors.

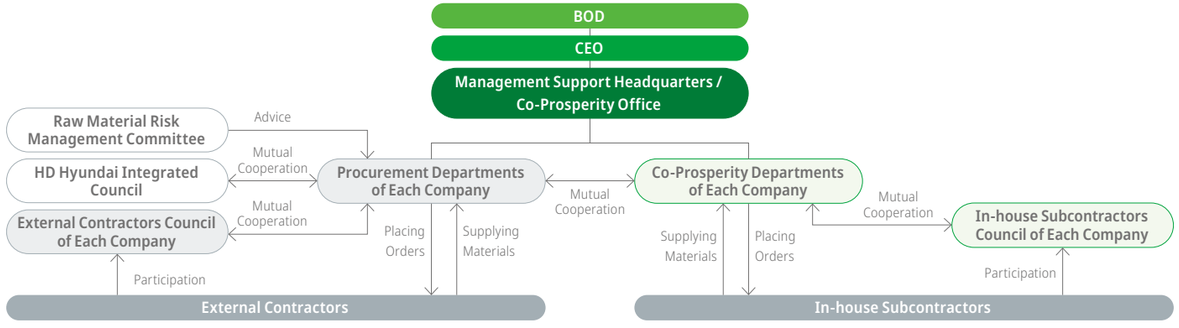
External Contractors Council

HHI, HMD, and **HSHI** operate the External Contractors Council to listen to opinions of suppliers, share management policies, and develop and implement practical support measures for contractors together. Starting with a New Year's Meeting every January, there are regular subcommittee meetings, workshops, and policy briefing sessions throughout the year, in line with the External Contractors Councils at each company.

HHI held a briefing session on Subcontract Price Adjustment System at its second half subcommittee meeting in cooperation with the government. This session helped the contractors gain a better understanding of the system, contributed to the early implementation of the system, and strengthened the financial health of contractors.

HMD conducted a wide range of support programs for contractors, including briefing sessions on Subcontract Price Adjustment System, supply chain ESG management policy, and support program for high-efficiency equipment replacement at the second half subcommittee meeting.

Supply Chain Management Organizational Structure



In-house Subcontractors Council

HHI, HMD, and **HSHI** operate the In-house Subcontractors Council to listen to the opinions of subcontractors and seek various ways to promote the shipbuilding industry and achieve co-prosperity.

Through the In-house Subcontractors Council, **HHI** shares key sustainable management matters and listens to opinions of contractors. Based on this, HHI implements initiatives to fulfill its social responsibilities and make improvements.

HMD shared the status of the local workforce and training demands while discussing current issues such as creating jobs and fostering talent in the shipbuilding industry. In addition, HMD, along with the in-house subcontractors, visited overseas sites and jointly conducted skills verification of foreign professionals with E7 visas.

HSHI maintains active communication for co-prosperity by holding regular meetings between executives at the In-house Subcontractors Council to hear about their challenges and discuss improvement measures.

HSHI has continued to strengthen sustainable co-prosperity relationships with contractors by providing ESG management training, holding subcommittee meetings, and hosting a briefing session on Subcontract Price Adjustment System, building a solid foundation to realize the value of co-prosperity. Through these activities, HSHI actively collected contractors' various opinions, and has incorporated these opinions in improving systems and initiatives to build a practical collaboration system and ESG framework based on trust.

Supply Chain Management

Strategy

Direction for Supply Chain Management

Sustainable Co-prosperity Policy

Supply Chain Management Operation Philosophy

HDKSOE and its shipbuilding subsidiaries support and manage contractors based on the supply chain management philosophy that encourages growth and development of the contractors, and aims to enhance their competitiveness. To this end, the focus is on continuously improving systems, strengthening communication with contractors, and supporting their competitiveness, including initiatives to assist contractors in implementing ESG management.

HDKSOE and its shipbuilding subsidiaries are expanding the scope of contractor management systems to include ESG assessments, training, and consulting, thereby enhancing contractors' capabilities in managing ESG risks.

Procurement policies and support programs are also being introduced to provide practical assistance to contractor operations, and various feedback activities such as satisfaction surveys, meetings, and workshops are being conducted.

Technical advisory programs are continuously operated to support in quality management, on-time delivery, and cost reduction, while also implementing programs to improve occupational health and safety and welfare for contractor employees, thereby strengthening overall competitiveness. In addition, supply chain ESG standards and codes of conduct are continuously reviewed to incorporate them into purchasing practices in alignment with the Supplier Code of Conduct.

Supply Chain Philosophy

VISION	Establish a Sustainable SCM (Supply Chain Management) through Innovation and Coexistence		
Goal	Encouraging the Growth and Development of Contractors, Supporting Increased Competitiveness of Contractors		
Priority Areas	Continuous System Improvement	Strengthen Communication with Contractors	Strengthen Competitiveness of Contractors
Key Policies	• Develop contractor-tailored ESG indicators • Provide ESG training for contractors • Support comprehensive ESG consulting	• Improve policies through Transaction Satisfaction Survey • Collect opinions through regular meetings • Organize knowledge-sharing workshops and seminars	• Operate Total Solution Support Program • Support Safety through Safety and Health Management System • Create Co-prosperity Fund, support welfare programs
Key Examples	• Signed MOU on Joint Responses to ESG Supply Chain of HD Hyundai Shipbuilding Units (Korea SMEs and Startups Agency) • Signed MOU on ESG Support Programs with HHI Contractors (Korea Commission for Corporate Partnership)	• Facilitate communication with contractors, listening to their difficulties, organize information exchange meetings and workshops • Conduct transaction satisfaction surveys on contractors for purchasing / coexisting cooperation policies, and reflect survey results in policies • Share vision and management status with contractors, Award Outstanding Contractor	• HHI Contractor management training and support program (Contractor Total Solution Support Program) • HMD's Company Technical Skills Competition including in-house subcontractor •HSHI's Quality Evangelist Program

Co-prosperity Program

Operating Co-prosperity Fund

HDKSOE and its shipbuilding subsidiaries support internal and external contractors as well as secondary suppliers with low-interest operating funds that demonstrate strong technological capabilities and high growth potential. Contractors that have recommendations from HDKSOE and its shipbuilding subsidiaries can obtain loans within a designated limit at interest rates lower than those offered by commercial banks to finance their business operations and equipment investments. In order to strengthen contractors' ESG risk management capabilities, **HHI, HMD**, and **HSHI** have introduced a support system for excellent ESG management contractors to receive low-interest loans by using the Co-prosperity Fund.

Co-prosperity Fund Overview

(As of December 2024)

Category	Contribution	Support amount
HHI	KRW 131 billion	KRW 261.2 billion
HMD	KRW 23 billion	KRW 59.3 billion
HSHI	KRW 27 billion	KRW 66.8 billion

Financial support for welfare programs

HHI, HMD, and **HSHI** work to enhance the welfare of contractors with various support programs. The companies provide various benefits, including New Year and Chuseok bonuses, summer holiday bonuses, incentives for obtaining professional certificates, incentives to reward skilled fitters, and long-service incentives for young employees.

Joint Labor Welfare Fund

HHI, HMD, and **HSHI** created a joint fund with contractors to provide support for medical expenses, tuition fees for children1, and other benefits for employees of contractors. As of the end of 2024, **HHI** contributed KRW 2.15 billion to the Joint Labor Welfare Fund with 219 participating contractors, **HMD** contributed KRW 2 billion with the participation of 78 contractors, and **HSHI** contributed KRW 2 billion with 80 participating contractors.

1) Fund operation details may vary by subsidiary company.

Award for Outstanding Contractors

Every year, **HHI, HMD**, and **HSHI** reward selected excellent contractors that have made significant contributions to quality control, production innovation, and business performance. In 2025, the Integrated Council, attended by shipbuilding subsidiaries and contractors, awarded 65 contractors for their outstanding performance in quality, innovation, and ESG.

Outstanding Contractors Award System

Outstanding Contractors Award System	• Select and reward contractors with outstanding performance in quality, innovation, ESG • Identify outstanding contractors through multidimensional evaluation of their contributions to the company, including localization of high-level technologies, productivity improvement, and value engineering
Outstanding International Contractors	• Award contractors with outstanding performance and excellent quality • Build foundation for global supply chain by forming long-term cooperative relationships and strategic partnerships
Outstanding Contractor Employee Award	• Strengthen relationships with contractors and boost employee morale • Receive recommendations at the beginning of each year to reward outstanding employees at contractor companies

Supply Chain Management

Strategy

Direction for Supply Chain Management

Co-prosperity Program

Foster Technical Talents

HHI, HMD, and **HSHI** operate technical training centers to foster technical talents with global competitiveness in response to increasing demand for workforce in the shipbuilding industry. The Technical Education Institute provides training to strengthen job competency and competitiveness for employees of the companies and contractors. Trainees who wish to work in the shipbuilding industry can take professional training courses and earn practical skills and theories on ship outfitting, electricity, painting, welding, electrical systems, and safety management.

HHI's Technical Training Center provides training in different areas including welding, installing, and painting to enhance technical capabilities for contractors. In 2024, 2,168 employees of contractors participated in the training programs.

HMD's Technical Education Institute runs structured training courses to foster new shipbuilding professionals. Over 24 years the institute created approximately 5,000 technical professionals in hull constructure and outfitting. In 2024, 98 people participated in the new shipbuilding professional training program and 893 employees from contractors participated in employee skill training.

HSHI's Technical Education Institute has expanded its programs beyond existing skills training such as welding and fitting, and since 2022, it has been offering new specialized courses in shipbuilding safety, green technology, and digital production technologies. These courses focus on specific jobs such as smart leveling (optimal weight distribution for ships), safety managers, and HSE.

Technical Advisory and Guidance for Contractors

HHI operates a "Technical Advisory Program for Contractors," through which retired skilled technicians with over 30 years of experience provide technical solutions in production fields such as painting, thereby supporting contractors in enhancing their competitiveness. Through the Technical Data Deposit System, safe protection and utilization of contractors' core technical data are ensured. Furthermore, under the "External Contractors Safety Technology Support Project," guidance was provided to 20 small-sized contractors in complying with relevant safety laws and regulations in 2024, and the program is planned to be expanded to 30 contractors in 2025.

HSHI operates a "Quality Evangelist Program," under which skilled technicians with extensive experience are selected and dispatched to contractors. These quality evangelists are stationed at the contractors for a certain period, where they participate in the product manufacturing process, establish work standards for new equipment, provide guidance on work processes, and coordinate tasks with the contractors. Through these activities, HMD transfer their quality management know-how and techniques for innovation in production processes.

HHI's Technical Guidance Activities for Contractors

(Unit: case)

Technical Guidance Activities	Number of Cases
Technical guidance for work process stabilization at contractors	80
Technical training for newly hired foreign workers at contractors	2
Quality audits and quality improvement guidance	456

HHI Technical Data Deposit System

(Unit: case)

Name of Technology	Number of Cases
Sheet material used for cryogenic liquid/gas storage tanks	1
Spiral Wound Gasket for Equipment	1
Ring Gasket for Equipment	1

Technology Training and Seminars for Contractors

HHI opened the Root Academy Hall, a building dedicated to cultivating a workforce for fundamental manufacturing companies, supporting their welfare, mitigating difficulties in securing skilled workers, and improving technical capabilities of contractors. The Root Academy Hall is equipped with the latest job training facilities to improve the contractor workers' skills, such as training rooms for painting and welding. In particular, the painting training room is equipped with four state-of-the-art VR (virtual reality) simulators, enabling workers to practice challenging painting tasks as in real-life situation. Additionally, HHI assists the contractors to strengthen their competitiveness through incentive programs, supporting the contractor workers in obtaining technical qualifications.

HMD provides tailored technology training and consulting for contractors to enhance their shipbuilding technical capabilities and quality management competencies, which supports not just mutual growth, but helps contractors build self-sufficiency. Under the leadership of the HMD Technical Education Institute, HMD provides operator license training for gondolas and aerial work platforms used in high-risk elevated tasks, as well as welding training such as EGW (Electro-Gas Welding), which enables high-efficiency and continuous operations. To train welders specializing in shipbuilding, HMD provides ongoing WPS (Welding Procedure Specification) technical support training which includes topics such as understanding welding procedures, setting welding conditions according to specifications, and controlling weld temperature.

In September 2024, HMD hosted the "2024 Company Technical Skills Competition" in order to discover talented technical workers within the company and from contractors, and to encourage worker to enhance their production skills. The competition was held for the first time in ten years as there have been new young technical workers joining from Korea and abroad. 43 domestic workers and 22 foreign workers entered, and competed in hull welding, hull assembly, and outfitting welding. The panel of expert judges scored them on a number of criteria including the quality of the finished work and the time to completion, and awarded the top scorers with a certificate from the CEO and a cash prize.

HSHI holds training sessions and seminars each year aimed at strengthening in technological and quality competitiveness in order to share new technology trends and quality improvement methods with contractors.

In addition to quality guidance activities for Tier 1 and Tier 2 contractors, HSHI provides ongoing technical support, including technical training for welding qualifications and support for the approval of Welding Procedure Specifications (WPS).

Also, starting in 2024, we participated in the Ministry of Employment and Labor's new program, the "Large-Medium-Small Cooperation Academy," and conducted a five-day skill enhancement training course over six months for 783 foreign workers employed by in-house subcontractors, contributing to improved productivity among foreign workers.

State-of-the-art VR simulators

Company Technical Skills Competition

Supply Chain Management

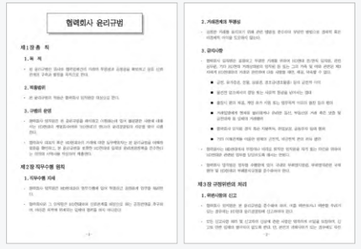
Strategy

Direction for Supply Chain Management

Transparent and Fair Transactions

Promotion of Ethical Standards Among Contractors

HDKSOE and its shipbuilding subsidiaries ensure transparency and fairness of transactions with contractors and establish a relationship of mutual trust based on the "Code of Conduct" and "Supplier Code of Conduct ." The contractors' representatives or persons responsible for the transaction must complete and submit a pledge stating that they understand and accept the Supplier Code of Conduct and will comply with all of HD Hyundai's ethical management policies. We revise the Supplier Code of Conduct when there are changes in internal or external circumstances, such as the introduction of Anti-Corruption Act or other ethical management related laws or the growing social awareness of ethical management. The Supplier Code of Conduct was first created in October 2005, and the latest revision was in April 2025.


협력회사 윤리규범

HD Hyundai Supplier Code of Conduct

Fair Contracting Practices

HDKSOE and its shipbuilding subsidiaries work under the principle of "entering into contracts in which the self-determination rights of all parties are fully guaranteed." Management costs and profits are calculated in a logical manner, taking into account factors such as the quantity, quality, specifications, delivery schedule, material costs, and labor costs of the item supplied. The final supply unit price is determined through consultation with the suppliers. Based on prior consultation with the suppliers, delivery schedules are set according to normal business practices in consideration of the characteristics of the items, installation schedules, and the production lead times required by the suppliers. Even in cases of urgent orders with shortened delivery times, there are always prior consultations with the suppliers.

When outsourcing manufacturing or related work to suppliers, payment is made within 60 days from the date of receipt of the items. In addition, 100% of the material costs is paid in cash to SMEs, protecting mid-market enterprises to help support their cash flow.

Internal Review Committee

HDKSOE and its shipbuilding subsidiaries operate an autonomous review framework with an Internal Review Committee that reviews the fairness and legitimacy of subcontracting agreements, identifies potential violations of the Subcontracting Act in advance, and implements effective and appropriate preventive measures.

The Internal Review Committee reviews whether criteria and procedures for contractor registration and termination are appropriate, and deliberates on appeals from contractors on not being selected or deregistered.

If any agenda item reviewed by the Committee is found to potentially violate the Subcontracting Act or other related laws and regulations, effective corrective actions are implemented. In addition, if employees engage in intentional or grossly negligent misconduct during the process of contracting or transactions with contractors, then disciplinary measures are imposed according to the seriousness of the violation.

Fair Selection and Registration

HDKSOE and its shipbuilding subsidiaries aim for procedural completeness by establishing objective and fair criteria in the contractor selection (registration) and termination processes. We also enhance our reliability by transparently disclosing the selection and termination criteria, verification process, and results.

The integrated procurement system (HiPRO) is used to manage all processes from selection of contractors, signing of contracts, and delivery, all the way to payment. Contractor agreements are based on the standard shipbuilding subcontract agreement. To ensure ethical and legal compliance, all contractors are required to submit an Ethical Management Practice Pledge and a Conflict of Interest Disclosure when entering into contracts.

HiPRO not only provides information on contractor registration procedures and standards, subcontracting practices, and supplier code of conduct, but also operates a reporting channel for violations of ethical standards and illegal collusion, and a consultation channel for advice on ethical standards and fair transaction.

Prohibition of Unfair Management Interference and Coerced Technical Data Submission

HDKSOE and its shipbuilding subsidiaries do not interfere in contractors' personnel matters, such as appointment or dismissal of their employees, and do not pressure contractors to hire a specific individual against their will. Unjust intervention is not made in contractors' subcontracting transactions, regardless of the purpose of the subcontracting agreements.

Confidential materials, intellectual property rights such as patents or utility models, or any technical or management information of economic value are not demanded without a valid reason. However, in cases where there is a legitimate reason, such as joint patent development or a technology development agreement, prior discussion and agreement are made with the contractor on details including the name of the data, purpose of the request, request date, delivery date, delivery method, and confidentiality matters, and the data is requested in writing, with signatures and seals.

Handling Supply Chain Grievances

HDKSOE and its shipbuilding subsidiaries hold regular meetings and operate communication channels with contractors to address grievances that may arise in the supply chain. All stakeholders within the supply chain, including employees, contractors, and customers, can make inquiries and report grievances. Anonymity and confidentiality of the informant (reporter) is guaranteed, and retaliation in any form against the individual who raised an issue is not tolerated. Reports received are investigated with the cooperation of the Ethics and Procurement departments, and appropriate actions are taken based on outcome of the investigation. The outcome of the investigation and the subsequent actions are notified to the stakeholder who reported the grievance.

Contractor Grievances Handled in 2024[1]

Received	Handled	Handled Rate
153 cases	135 cases	88.2%

1) Average number of cases from HHI, HMD, HSHI

Supply Chain Management

Risk Management

Supply Chain ESG Risk Management

Integration and Promotion of ESG in the Supply Chain

Sustainable Sourcing Policy

To fulfill our corporate social responsibilities, **HDKSOE and its shipbuilding subsidiaries** have established and operate a sustainable sourcing policy, and aim to build a healthy corporate ecosystem through mutual cooperation with the contractors. In line with the Sustainable Sourcing Policy, we manage our supply chain by considering areas such as human rights management, safety and health, environment, and ethics. Continuous evaluations and monitoring are conducted of the policies and related processes to strengthen ESG management capabilities within the supply chain.

Based on this Sustainable Sourcing Policy and the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-affected and High-risk Areas," we established a "Conflict Minerals Policy." The contractors are provided with the "Supplier Code of Conduct" and "ESG Guidelines" to ensure guidance and compliance across the supply chain.

Conflict Minerals (Responsible Minerals) Policy

HDKSOE and its shipbuilding subsidiaries have established the "Conflict Minerals (Responsible Minerals) Policy" to ensure the protection of human rights, safety, and environment in the mineral mining process. We continue to carry out responsible management practices in accordance with disclosure requirements under the US Dodd-Frank Wall Street Reform and Consumer Protection Act, the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, and the EU Conflict Minerals Regulation, and provide guidance to contractors and require their compliance with these standards.

In 2023, training and promotional materials were distributed to raise contractor awareness on conflict minerals. In 2024, to assess the effectiveness of these awareness efforts, a survey was conducted of contractors on their use of tin, tantalum, tungsten, gold, and cobalt. Going forward, contractors will be requested to sign a commitment to participate in activities aimed at not using conflict minerals, and the scope of the socially responsible mineral procurement policy will be expanded. Continuous communication will also be maintained with stakeholders regarding the use of conflict minerals sourced from high-risk areas.

Supplier Code of Conduct

HDKSOE and its shipbuilding subsidiaries have introduced the "Supplier Code of Conduct" to create a sustainable supply chain that ensures a safe work environment, respects the human rights of employees, and practices responsible environmental and ethical management. The Supplier Code of Conduct is based on the UN Universal Declaration of Human Rights, UN Convention on the Rights of the Child, and ILO Core Conventions. In cases where there is a conflict between the Supplier Code of Conduct and domestic or international laws, contractors are required to meet the most stringent requirements.

HDKSOE and its shipbuilding subsidiaries use the labor, human rights, safety & health, environment, ethics, and management system requirements included in the Supplier Code of Conduct to carry out contractor risk assessments and due diligence, provide guidance, and make recommendations for improvements. The Supplier Code of Conduct, along with supply chain management and obligations, are disclosed to contractors through HiPRO.

Sustainable Sourcing Policy (Including Conflict Minerals Policy) Link

HDKSOE HHI
HMD HSHI

Supplier Code of Conduct Link

HDKSOE HHI
HMD HSHI

Conflict Minerals (Responsible Minerals) Management Report 2023

Supplier Code of Conduct Pledge

HDKSOE and its shipbuilding subsidiaries distribute the "Supplier Code of Conduct," and receive pledges from contractors to comply with the code. Contractors are obligated to incorporate the provisions and requirements specified in the code into their business operations and decision-making processes, and to establish and implement risk mitigation plans through mutual consultation.

HDKSOE and its shipbuilding subsidiaries continuously monitors contractors' compliance with the code by requesting and obtaining information when necessary (not including information prohibited under the Subcontracting Act, such as cost structures, management strategies, and sales activities).

Revision of Supplier Registration Evaluation Criteria Linked to the Supplier Code of Conduct

HDKSOE and its shipbuilding subsidiaries continuously revise the "Supplier Code of Conduct" to reflect changes in domestic and international supply chain-related laws and regulations, government policy direction, and supply chain management trends within the industry.

When provisions and requirements in the Supplier Code of Conduct are revised, these changes are incorporated into the evaluation indicators and criteria used for the contractor pool, linking them to our purchasing practices. In addition, indicators and criteria for ESG risk assessments and due diligence of contractors are revised in line with updates to the Supplier Code of Conduct, to ensure that contractors implement ESG risk management and improvement measures that comply with the Code.

ESG Factors in Contractor Registration Evaluation

HDKSOE and its shipbuilding subsidiaries decide whether to register contractors based on a comprehensive evaluation of their management practices, product quality, and financial health. ESG factors including safety & health, environment, ethics, labor management, and training account for 15 points (out of 100 points) under the management practices evaluation category. Contractors are registered into the contractor pool if they have:

① High total scores including ESG scores, ② international certifications on occupational health, safety, and environment (e.g., ISO, OHSAS), or ③ good scores on overall management practices including occupational health, safety, environment management regulations, labor management, and training.

After being registered in the contractor pool, a contractor is given the chance to participate in a tender, where it is not to be restricted or discriminated against the contracts without valid reasons.

Measures Against Contractors with Serious ESG Violations

HDKSOE and its shipbuilding subsidiaries evaluate potential contractors for registration on ESG factors including safety & health, environment, ethics, labor management, and training. If serious issues regarding ESG factors are found, or if there is no room for improvement, these contractors are excluded from the contractor pool.

Supply Chain Management

Risk Management

Supply Chain ESG Risk Management

Integration and Promotion of ESG in the Supply Chain

ESG Training for Departments in charge of Supply Chain Management

HDKSOE and its shipbuilding subsidiaries provide professional training on the importance of supply chain ESG risk management and supply chain ESG risk management methodology to the employees in procurement, co-prosperity, and other supply chain related departments. Since 2023, we have been providing regular training by distributing a monthly ESG report that includes practical content such as domestic and international contractor monitoring, ESG consulting, and assessment tools.

Integrated Supply Chain Risk Management

In order to identify potential risks to the sustainability of the supply chain, **HDKSOE and its shipbuilding subsidiaries** have established an integrated supply chain risk management framework which includes financial evaluations, supply and demand evaluations, grade assessments of innovation, quality, and delivery, as well as evaluation of ESG factors.

Contractors that supply specialized key components for essential materials and equipment for ships, ship engines, and offshore plants, are designated as tier 1 contractors. Tier 1 contractors undergo financial evaluations, supply and demand evaluations, ESG evaluations, and grade assessment of innovation, quality, and delivery. Based on these assessments, we aim to minimize and manage any production disruptions from latent or potential issues.

Based on the results of the integrated supply chain risk assessments, high-performing contractors receive incentives, while underperforming contractors are given sanctions, thereby ensuring the quality and timely delivery of supplied products.

Integrated Supply Chain Risk Management

Category	Financial Evaluation	Supply and Demand Evaluation	ESG Evaluation	Grade Assessment of innovation and quality
Target	Tier 1, 2, 3 contractors among all domestic and international registered and currently trading	Tier 1 contractors among all domestic and international registered and currently trading	Tier 1, 2, 3 contractors among all domestic and international registered and currently trading	Tier 1, 2, 3 contractors among all domestic and international registered and currently trading
Type	Regular and ad hoc, financial condition assessment, and in-depth due diligence	Assessment of impact and urgency of potential risks such as reputation, disaster, and supply delays	Registration evaluation, contractor self-assessment, internal evaluation, expert evaluation	Regular annual assessment
Response and support measures	• Suspend transaction in poor financial condition • Provide financial support through use of Co-prosperity Fund	• Prepare response measures at the manager, department, company level • Renew Tier 1 contractors each year and prepare response measures	• Online and offline training for employees and contractors • Select outstanding ESG contractor, award prize and financial support	• Select outstanding contractor, award prize and financial support • If ranked C grade for two consecutive years, refer to Disciplinary Review Committee for deliberation

Strategies to Spread ESG Management among Contractors

HDKSOE and its shipbuilding subsidiaries classify contractors based on importance of the business, such as major supplies, business scale, and size. For each classification, there are specific requirements and support measures to encourage contractors to adopt ESG management. Small and mid-sized contractors in Tiers 1 and 2 are required to establish a ESG implementation organization and ESG data management system. In particular, middle market contractors in Tiers 1 and 2 are also required to publish a sustainability report to disclose ESG information and obtain third-party verification.

In addition, the companies promote various support activities such as providing analysis results on external environmental changes in the ESG sector, and on the prospects for the introduction of laws and regulations so that all contractors can establish customized ESG strategies and manage their performance from mid- and long-term perspectives.

ESG Requirements and Support Measures by Contractor Classification

SMEs and middle market Tier 1, 2 Contractors	[Requirements] Establish implementation framework - Chaired by CEO or Directors [Requirements] Manage ESG data - Governance: operational status of BOD, legal violations, etc. - GHG: energy consumption, carbon emissions, etc. - Safety and human rights: industrial accident occurrences, training status
Middle Market Tier 1, 2 Contractors	[Requirements] ESG information disclosure - Publication of sustainability report - Third-party verification of disclosed information
All contractors	[Support] Establish ESG strategies - Analyze and share external conditions, laws/regulations trends

Establishing Networks to Promote ESG Management in the Supply Chain

HDKSOE and its shipbuilding subsidiaries signed an "MOU for Joint ESG Supply Chain Responses for SMEs in Shipbuilding" with Korea Commission for Corporate Partnership, conducted ESG evaluation for shipbuilding contractors, and then provided expert consulting based on the evaluation outcome to help areas that need improvement. In addition, contractors that had outstanding outcomes from evaluations and consulting, were provided with various support programs including low-interest rate loans using the Co-prosperity Fund and replacement of high-efficiency equipment.

In July 2024, **HHI** signed the "2024 Contractor Support Program Agreement" with the Korea Commission for Corporate Partnership. Under this agreement, we developed customized ESG indicators for the contractors and provided comprehensive support for their ESG management practices, including ESG training, assessments, on-site audits (including consulting), and the publication of sustainability reports. Following ESG consulting, HHI issued "ESG Excellent SME Certificate" to high-performing contractors. Those contractors are eligible for various incentives, such as preferential interest rates from major financial institutions, export support services from the Korea Trade-Investment Promotion Agency, and environmental and energy technology support from the Korea Institute of Energy Research.

Supply Chain Management

Risk Management

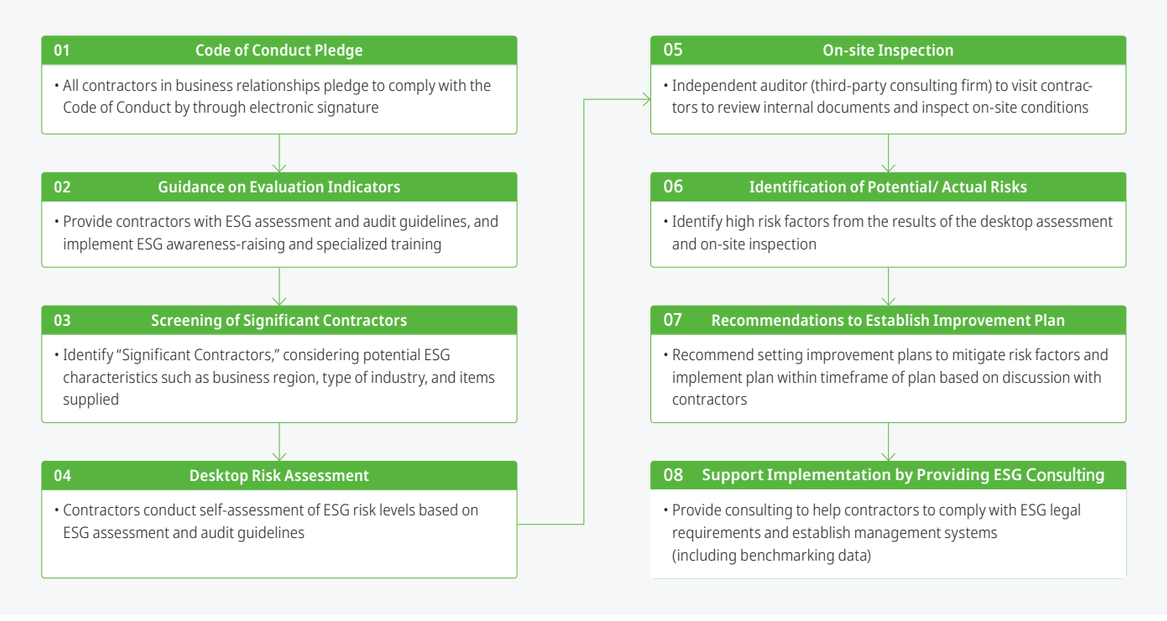
Supply Chain ESG Risk Management

Supply Chain ESG Risk Identification and Assessment

Supply Chain ESG Risk Assessment Procedures

Based on the Code of Conduct pledge signed by all contractors, **HDKSOE and its shipbuilding subsidiaries** operate the following for ESG risk assessment: Distribute and explain assessment guidelines to contractors; Identify "significant contractors," comprehensively analyzing contractors' business practices, social and environmental impact; desktop assessment based on checklist, on-site inspection by an independent auditor (the third-party organization, external consulting company); identify potential and actual risks based on outcomes of desktop assessment and on-site inspection; establish improvement plans and recommend implementation of plan; and support implementation by providing ESG consulting.

Supply Chain ESG Risk Assessment Process



Guidance on Risk Assessment Indicators

HDKSOE and its shipbuilding subsidiaries' supply chain ESG risk assessment and due diligence indicators have been developed in consideration of major ESG-related laws and regulations, including the Environmental Technology and Industry Support Act, Serious Accidents Punishment Act, Industrial Safety and Health Act, supply chain ESG assessment initiatives such as the Responsible Business Alliance (RBA) Validated Assessment Program (VAP) Standard and Sedex's SMETA (Sedex Members Ethical Trade Audit), and ESG disclosure standards including the GRI Standards and SASB Standards.

To manage labor and human rights risks within the supply chain in accordance with international standards, the indicators also reflect principles outlined in the Universal Declaration of Human Rights, the UN Convention on the Rights of the Child, and the UNGC Ten Principles. Additionally, risk assessment procedures and methods are operated in line with government-issued voluntary guidelines for supply chain ESG risk management, such as the "Supply Chain K-ESG Guidelines," as well as the OECD Guidelines for Multinational Enterprises.

The internal guidelines including the supply chain ESG risk assessment indicators, procedures, and methods, are provided to all contractors in advance for their reference.

Supply Chain ESG Risk Assessment Indicators

Laws & Regulations	Industry Initiatives
• Environmental Technology and Industry Support Act •Occupational Safety and Health Act	• RBA - VAP Standards • Sedex – SMETA
Disclosure Standards	**International Standards**
• GRI Standards • SASB Standards	• UN Universal Declaration of Human Rights • Ten Principles of the UN Global Compact

Environmental Indicators	Social Indicators	Governance Indicators
• Goal setting • Governance • Acquisition of permits/ licenses • Legal violations • Waste treatment • Air pollutant management • Water and wastewater management • GHG management • Noise and vibration management • Resource recycling • Energy saving • Energy management	• Human rights issues • Social insurance • Mandatory training • Maternity care • Employment of minors • Grievance handling • Employment contracts • Dismissal and retirement policies • Medical check-up • Employment rule • Human rights management • Freedom of association • Safety policies • Safety prevention • Safety inspection • Fire drills and training • Information security	• ESG policy • ESG risk management • Socially responsible activities • Years of service and turnover rate • Operation of anti-corruption programs • Stakeholder communication • Ethics reporting channel • Violation of corruption related laws • Violation of fair trade laws

Supply Chain Management

Risk Management

Supply Chain ESG Risk Management

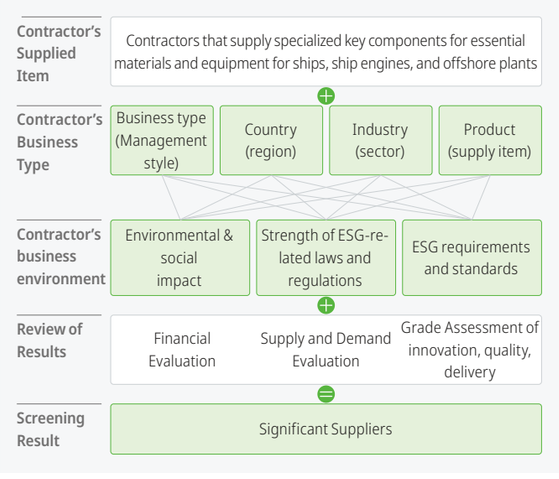
Supply Chain ESG Risk Identification and Assessment

Screening of Significant Suppliers

HDKSOE and its shipbuilding subsidiaries operate screening procedures to analyze ESG risk factors with potential or high probability of occurrence to identify "significant contractors" (Risk filtering). Risk filtering involves a comprehensive review of the following: environmental and social impacts depending on the contractors' business type (management style); strength of ESG-related laws and regulations in the country (region) where business activities are conducted; level of ESG requirements specific to, or significant in, the industry (sector) to which contractors belong; and environmental and social impacts generated when supplies or services produced and delivered by contractors are applied to our products (i.e., ships).

For existing contractors, we analyze data from financial evaluations, supply and demand evaluations, and grade assessment on innovation, quality, and delivery. Contractors that show low performance levels, limited potential for improvement, or anticipated risk are also classified and managed as significant suppliers.

Significant Contractors Screening Process



Desktop Assessment

Contractors conduct self-assessments of their ESG risk once a year by using the checklist on the online system and the ESG Guidelines. Then, the ESG risk levels are calculated based on the comprehensive reviews of contractors' answers to self-assessment, evidence submitted, and supplementary materials for self-assessment answers. In addition to identifying potential risks of contractors, the results of contractors' self-assessments are also used to select contractors for on-site inspections, and to identify focus areas for the on-site assessment.

HDKSOE and its shipbuilding subsidiaries continue to provide training to encourage contractors to not only proactively participate in the self-assessment, but also easily respond to and provide evidence to the questions on the checklist, thereby enhancing the reliability of the assessment results.

On-site Assessment

HDKSOE and its shipbuilding subsidiaries select contractors for on-site assessments by comprehensively considering the results of ESG risk assessment based on written responses and supporting documents, as well as the environmental and social impact, the duration of transactions, and the characteristics of the supplied item, which are identified in the screening process of significant contractors.

On-site assessments are led by independent auditors (third-party expert). To accurately assess the level of ESG risk, the auditor performs document reviews of the contractors' internal regulations and policies, interviews with managers and workers, and tours of the business sites and working environment. Any risk factors discovered during the on-site assessment are reviewed and accepted by representatives of contractors, before final confirmation is given.

Risk Identification

ESG risk factors are identified using the combined results of desktop and on-site ESG risk assessments. For contractors with potential significant risk factors or high probability of a risk factor occurring, improvement measures are provided immediately during the on-site assessment. If necessary, the third-party auditor can provide advice or guidance for the contractor to implement the improvement measure.

In the ESG risk assessment conducted in 2024, the contractors' risk factors were mainly identified in GHG emission management and environmental/social policy establishment.

Recommendations to Establish Improvement Plan

For risk factors identified in desktop and on-site ESG risk assessments that require significant time and effort, contractors are recommended to establish and implement an improvement plan. Implementation schedules and methods for each improvement task, and performance goals are set from discussions with contractors, and the scope of the plan will be determined within the amount of resources and capacity that the contractors are able to utilize.

Then, progress of implementation is monitored. If contractors have problems or difficulties, amendments or updates are made to the plan and further information and support is provided.

Major Risk Factors and Improvement Directions

Risk identification indicators	Establish key improvement plans	Support implementation of improvement plan
Environmental Management System	• Establish and implement environmental impact and low-carbon goals • Provide training and implementation of GHG management system	• Encourage improvements based on support and evaluation - Provide tailored materials and guidelines for contractors' areas of weakness and specific indicators - Utilizing industry-specific indicators for contractors registration and evaluation
Human rights/human resources policies	• Revise Human Rights Declaration (Charter) in line with changes in external environment • Supplement systematic weaknesses such as the grievance handling procedures	
Ethical management system	• Revise Ethical Management Declaration (Charter) with changes in external environment • Supplement weaknesses in procedures such as the conflict of interest system	

Supply Chain Management

Risk Management

Supply Chain ESG Risk Management

Support for Supply Chain ESG Improvements and Capacity Building

ESG Training

HDKSOE and its shipbuilding subsidiaries use various channels, including ESG assessment and due diligence briefing sessions, to support contractors in adopting ESG practices. The training covers topics such as the purpose of establishing sustainable supply chain policies, understanding and complying with the Supplier Code of Conduct, the composition of supply chain ESG risk assessment and due diligence indicators, procedures for ESG assessments and due diligence, and how contractors can participate in and respond to these assessments and audits.

Support for Improvement of ESG Program

HDKSOE and its shipbuilding subsidiaries provide support to contractors who, as a result of the ESG risk desktop and on-site assessment, ① have a low compliance rate; ② have not met key requirements; or ③ have a significant potential risk factor and require support to implement improvement measures.

HDKSOE and its shipbuilding subsidiaries provide consulting services to improve the contractors' ESG risk management and overall ESG management capabilities. First, improvement tasks for each critical risk factor faced by the suppliers are identified. Then, implementation methodology, schedule and plan, and key deliverables for each improvement task are developed through discussions.

To help the contractors implement these improvement tasks and establish their ESG management systems, we provide benchmarking materials such as examples of ESG risk management levels of companies in similar industries or of similar size, as well as best practices for integrating ESG risk improvements and performance management.

Measuring the Effects of ESG Consulting Support for Contractors

HHI measured the effectiveness of ESG consulting by surveying the small- and medium-sized contractors and middle market contractors that participated in the "ESG Support Project for Contractors." First, HHI developed indicators to assess the ESG management levels of contractors before and after consulting. Results showed that contractors compliance indicators, on average, improved by approximately 36%p, which translates to KRW 6,339 million.

Effects of HHI's ESG Consulting for Contractors in 2024

Category	Indicator compliance rate before consulting	Indicator compliance rate after consulting	Improvement effects[1]
Small / medium-sized contractor (19)	53.8 %	90.7 %	KRW 5,812 million
Middle market contractor (2)	60.6 %	88.0 %	KRW 527 million
Total (21 contractors)	54.5 %	90.4 %	KRW 6,339 million

1) Total penalties and fines that may be imposed on contractors if no improvements have been made through ESG consulting

Contractor Total Solution Support Program

HHI is working to stabilize its supply chain and enhance the overall competitiveness of the shipbuilding industry by providing comprehensive support in areas including safety, facilities, and labor to contractors through the "Contractor Total Solution Support Program." In 2024, the program was provided to 40 external contractors, and in 2025, the number of supported contractors will be expanded to 50.

In the area of safety management, the program provides technical guidance and support such as compliance assessments for occupational safety and health regulations, establishment of occupational safety and health management systems, transfer of on-site safety management techniques, joint inspections with relevant authorities (such as the Ministry of Employment and Labor and the Korea Occupational Safety and Health Agency), and provision of various safety technical materials.

In the area of facility operations, we provide technical guidance on the diagnosis, maintenance, and operation of various work facilities, support the utilization of idle equipment, offer simplified diagnostics and improvement guidance for buildings and structures, and support the legal operation of environmental matters such as air, water quality, and chemical substances.

In workforce management, the program supports various job training programs and focuses on assisting contractors with issues that are difficult for them to handle alone, such as securing foreign workers and providing them with safety and technical training.

Improvement Support for Contractors

HDKSOE and its shipbuilding subsidiaries identify potential risk factors at contractors by combining the risk factors identified through ESG assessments and audits with additional surveys and feedback collected from the contractors. Based on these findings, we implement improvement initiatives that provide practical support to the contractors.

Amid the shipbuilding industry's boom in orders and the resulting increase in foreign workers, **HHI, HMD**, and **HSHI** are undertaking initiatives to enhance the technical skills of foreign workers, improve their living conditions, provide opportunities for religious activities, and strengthen the safety management capabilities of in-house subcontractors.

Improvement Support Activities for Contractors

HDKSOE	• Developed "AI Agent," translation service specialized for shipbuilding industry (Enhanced work efficiency of foreign workers)
HHI	• Provided housing and improved living conditions for foreign workers • Provided translators for 10 languages to help foreign workers communicate • Supported foreign workers to participate in local community (Ulsan) (hobby groups, volunteer activities
HMD	• Hosted cultural events by nationality for foreign workers • Accident prevention training for foreign workers • Ran night Korean language classes for foreign workers
HSHI	• Trained in-house subcontractor safety manager • Provided translating and counseling services for foreign workers, and supported safety management • Adopted "AI Agent," translation service specialized for the shipbuilding industry

Supply Chain Management

Metrics & Targets

Supply Chain Management Metrics & Targets

Supply Chain ESG Management Status

Supply Chain ESG Management KPIs

HDKSOE and its shipbuilding subsidiaries established targets and set KPIs by area to strengthen responsible supply chain management, and continue to manage performance against them. The focus is on enhancing sustainability and preventing risk by using indicators such as supply chain assessments and strengthening supply chain ESG capabilities.

Supply Chain Management in 2024

Category	Unit	HDKSOE[1]	HHI	HMD	HSHI
Number of Tier 1 Contractors	contractors	295	3,354	1,917	1,486
Number of Significant Tier 1 Contractors	contractors	56	317	313	173
Share of Purchases from Significant Tier-1 Contractors	%	38	59	57.6	46.2

1) HDKSOE counts contractors separately, limited to the company's own business operations.

Supply Chain Assessment in 2024

Category	Unit	HDKSOE[1]	HHI	HMD	HSHI
Number of Tier 1 Contractors that have completed desktop assessments	contractors	71	516	209	432
Number of Significant Tier 1 Contractors that have completed desktop assessments	contractors	22	119	58	73
Number of Tier 1 Contractors that have completed on-site assessments	contractors	4	22	6	19
Number of Significant Tier 1 Contractors that have completed on-site assessments	contractors	1	22	4	10
Number of Contractors with identified risks	contractors	4	22	6	19
Number of Tier 1 Contractors that received risk mitigation support	contractors	0	22	0	0
]Number of Significant Tier 1 Contractors that received risk mitigation support	contractors	0	22	0	0

ESG Capability Building Program for Supply Chain in 2024

Category	Unit	HDKSOE	HHI	HMD	HSHI
Number of Tier 1 Contractors that participated in ESG capacity building training	contractors	0	516	78	53
Number of Significant Tier 1 Contractors that participated in ESG capacity building training	contractors	0	119	44	36

2024 Supply Chain Management Targets

Category	Unit	HDKSOE	HHI	HMD	HSHI
Target number of contractors for on-site assessments this year	contractors	2	20	3	8
Target number of contractors for risk mitigation support this year	contractors	0	20	0	0
Target number of contractors for capability building training this year [1]	contractors	-	400	-	-

1) HDKSOE, HMD, and HSHI plan to offer capability building training in the future.

Quality Management

Governance

Quality Management Governance

Roles and Responsibilities

Role of Executive Management

The management of **HDKSOE and its shipbuilding subsidiaries** recognize that the products and services provided by the group are directly connected to our customers' safety, convenience, and efficiency. In this regard, we perform the following roles to ensure the stability and reliability of our products and services.

- Establish the group's direction and policies for quality management
- Direct and provide support for the effective operation of the quality management system
- Review quality management performance and make improvements wherever needed

In addition, the executive management encourages all employees, in-house and outside contractors, and suppliers to act with a quality-focused mindset throughout the entire process from design, development, and production to after-sales service of all products, and exercise customer-oriented quality management by enacting strict quality control.

Role of Dedicated Organizations

To strengthen the quality competitiveness of each business, **HDKSOE and its shipbuilding subsidiaries** operate dedicated quality management organizations at the business unit level, which perform the following roles.

- Establish a quality assurance system across the value chain that provides product and services and performs strict quality control
- Establish quality management standards that reflect international standards, legal requirements, and customer needs, and develop processes and procedures to meet these standards
- Monitor each step of the value chain for continuous quality improvement, and collect and analyze quality-related data to identify issues and suggest improvement measures

Furthermore, a separate quality planning organization is operated to maintain the highest quality products in the industry and create quality synergies among affiliates. This organization supports the decision-making process of the management and builds a cooperative framework among dedicated quality management organizations.

Operation of Quality Management Consultative Bodies

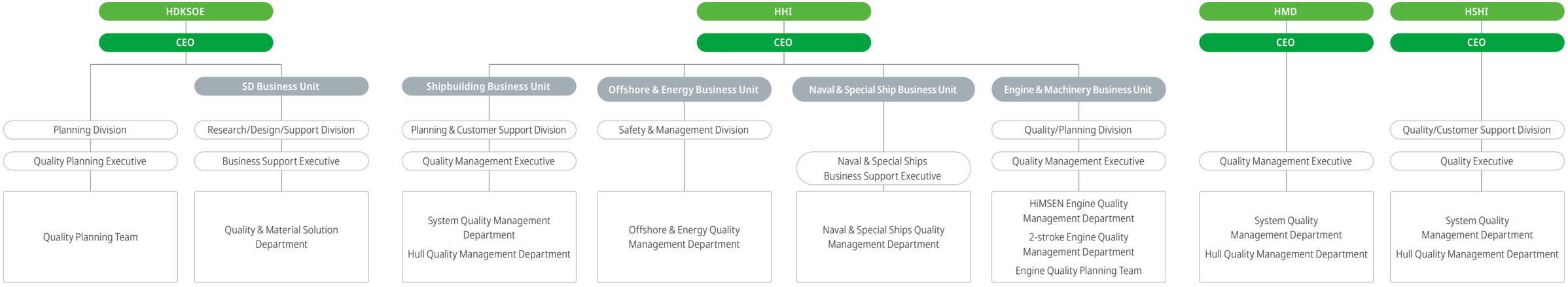
HDKSOE and its shipbuilding subsidiaries operate a number of quality management consultative bodies to secure and maintain our quality competitiveness based on a unified direction. These consultative bodies monitor business activities aligned with the common quality management direction, share current issues of each company, and actively identify and promote quality improvement activities such as "quality standardization and homogenization" and "expansion of warranty systems" with the aim of creating synergy across affiliates.

- Meetings for quality management executives and department leaders (once a year)
- Sub-divisional working committee (once a year for each sub-division)
- Consultative body for joint responses to quality issues (year round)

Starting in 2024, remote workshops, titled "Virtual Quality Workshop for Shipbuilding Affiliates," are operated for working-level employees to share the best initiatives of each company and discuss how to strengthen quality management and cooperation at the worksite.

Based on these quality management cooperation mechanisms, communication is actively and continuously promoted to achieve customer satisfaction, respond to quality management issues, and enhance quality to a premium level according to the changing management environment.

Quality Management Structure



Quality Management

Strategy

Direction for Quality Management

Laying the Foundation for Quality Management

Establishing Quality Policies

HDKSOE and its shipbuilding subsidiaries have established quality management policies for each company under the shared quality management directions of "Stable Quality," "Customer-focused," "Improved Profit," "Self-Reliant Quality," and "Smart Quality." Based on these policies, we set strategic targets and conduct activities to ensure high-quality products and services for our customers, and continuously make product quality-based improvements.

Quality Policies by Company

HDKSOE	• Advance standard systems • Stabilize new businesses and product quality • Ensure stable supply chain management
HHI	• Reduce major quality risks by employing advanced quality management practices • Earn customer trust by advancing self-reliant quality systems • Promote smart quality innovation • Strengthen quality of eco-friendly technology
HMD	• Secure sustainable quality management system • Enhance solution quality through digital transformation • Minimize risk through advanced system integration quality standards • Guarantee self-reliant quality by securing quality transparency • Strengthen manufacturing competitiveness through transfer and advancement of core production technologies
HSHI	• Improve compliance with processes and minimize failure costs by being proactive with quality issues before they arise • Establish self-reliant quality system by setting quality standards • Expand delegated inspection with smart AI-based inspection innovations • Secure quality competitiveness by strengthening capabilities of employees

Quality Management System Certification

HDKSOE and its shipbuilding subsidiaries strive to meet customer demands, enhance customer satisfaction, and improve the quality of our products and services. As a part of these efforts, each company has obtained the ISO 9001 certification, an international standard for quality management systems.

With the quality management systems as the foundation, trust is continuously built with customers by providing products and services of the highest global standard, and efforts are made to improve product quality in the continuously evolving business environment.

Third-Party Certification for Quality Management System

Classification	Certification Standard	Certifying Body	Period of Validity
HDKSOE	ISO 9001:2015	DNV	July 2023 – June 2026
HHI	ISO 9001:2015	DNV	April 2023 – Feb 2025[1]
HMD	ISO 9001:2015	LR	June 2024 – June 2027
HSHI	ISO 9001:2015	DNV	Dec 2022 – Nov 2025

1) Period of validity changed after renewal (Feb 2025 to Feb 2028)

Internal Audit of the Quality Management System

HDKSOE and its shipbuilding subsidiaries operate an internal audit program to regularly review the effectiveness of our quality management system and find ways to make improvements. In accordance with the international standard (ISO 19011), the internal audit is performed at each business site and organization, by qualified internal or external auditors through an independent and systematic process, and the effectiveness of the quality management system and compliance with standards are verified and evaluated based on objective evidence. The auditor reviews and evaluates the effectiveness of the system and confirms whether the system is compliant with the standards. The audit allows the companies to determine the appropriateness and effectiveness of the key quality-related processes, as well as identify areas for improvement. The results of the audits are used to enhance the overall management system and product quality.

Other Quality-related Certifications

HHI, **HMD**, and **HSHI** have each obtained the ISO 3834-2 certification, an international standard for welding quality management systems. This certification proves the global recognition of each company's excellent welding quality.

In addition, **HHI** has obtained quality certifications required by each of its business units. For its naval & special ship business, HHI acquired the "Defense Quality Management System" certification issued by the Korean Defense Acquisition Program Administration. In the engine and machinery business, HHI obtained the "Mechanical Nuclear (MN)" and "Electrical Nuclear and Instrumentation Control (EN)" certifications issued by the Korea Electric Association in accordance with the Korea Electric Power Industry Code (KEPIC). For the offshore & energy business, HHI acquired nine types of nuclear (N, NA, NPT, NS) and non-nuclear ASME certifications (U, U2, S, PP, A), further validating its quality systems for each business unit and its expertise.

Based on these certifications, **HDKSOE and its shipbuilding subsidiaries** ensure the safety and reliability of the products delivered to customers, and aim to enhance customer satisfaction. Moreover, we will lay the foundation for a reliable quality management program by identifying and acquiring additional quality-related certifications required for each business at the appropriate time.

Quality Management

Strategy

Direction for Quality Management

Implementation and Expansion of Quality Management

Quality Management Training

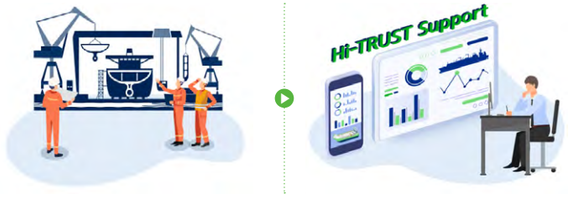
HDKSOE and its shipbuilding subsidiaries consider enhancing employee capabilities as a key factor in ensuring the quality of all products and services. To this end, we provide customized training programs for each job function. For employees in production, including foreign employees, practical, field-oriented training materials are regularly provided utilizing quality standards and defect cases that are applicable to the worksites.

This training helps all employees strengthen their awareness that their work has a direct impact on the quality of products and services and fosters a heightened quality-focused mindset.

Strengthening Self-reliant Quality System

HHI, **HMD**, and **HSHI** have built a strong foundation of customer trust through over 50 years of shipbuilding expertise, establishing a stable level of quality and a systematic framework. This legacy is upheld by a commitment to the highest standards of quality, supported by a comprehensive quality assurance system.

To strengthen mutual trust with customers, the "Hi-TRUST" (Customer Delegated Inspection System), a ship quality assurance program, has been introduced, and quality management and inspection are strengthened throughout every stage, from design and construction to post-delivery, to fulfill the trust customers have placed in the companies.



Ship quality assurance program "Hi-TRUST"

Stabilizing Supply Chain Quality

HDKSOE and its shipbuilding subsidiaries conduct various support activities to ensure the stable quality of products and increase the competitiveness of our contractors. In this context, we provide not only regular quality checks and technology consultation, but also assist with production know-how and technology training free of charge, and support our contractors in developing their own quality management capabilities.

In addition, quality management team visit contractors in person to provide feedback on potential quality issues or best practices that may arise during production. Contractors' quality staff are also invited to the company for meetings, strengthening the sense of partnership and collaboration with our contractors.

Activities to Stabilize Supply Chain Quality

Category	Activity
Visits and feedback by quality management executives and department leaders	• Discuss improvement measures for major repetitive quality issues • Listen to contractors' requests for improvements and complaints
Yard invitation meeting for contractor quality management personnel	• Understand the installation and operation process of supplier materials • Facilitate communication by listening to VOC and meetings
Quality checks on contractors with excessive A/S claims	• Visits to contractors to improve and prevent recurrent A/S claims

Minimizing Quality Failure Costs

Since HHI introduced Quality Failure Costs[1] for the first time in the industry in 2016, **HDKSOE and its shipbuilding subsidiaries** have expanded the concept to all affiliate companies, by using quantitative data to minimize the number of incidents related to poor-quality products. Quality failure costs are managed for 8 subcategories of key value chain including design, procurement, production, and after-sales service. Every year, challenging goals are set for each subcategory to ensure the timely delivery of high-quality ships to customers.

1) Quality Failure Costs: Costs incurred due to quality-related issues arising before or after the delivery of products and services to customers

Customer Satisfaction Survey Platform

HHI, **HMD**, and **HSHI** conduct phased surveys tailored to the shipbuilding schedules to better understand customer perception and apply the survey results to our management activities aimed at improving customer satisfaction.

In particular, since 2023, we have standardized survey formats to capture objective customer satisfaction levels. Based on the results, we identify key areas for improvement and develop enhancement plans in the shipbuilding and post-delivery stages, thereby further advancing our quality management practices.

Customer Satisfaction Survey Areas

Category		Area
Construction Phase	Production Process	Design, production (hull, outfitting, painting), test operation
	Project Management	Quality, contract, and administrative tasks
After Delivery	Ship Quality	Hull, outfitting, accommodation
	Service Quality	A/S (procedures & results, service personnel)

Customer Satisfaction Survey Results [1]

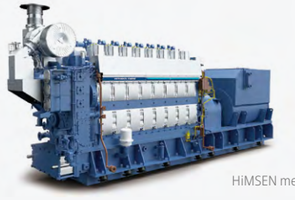
Category	2023	2024
Overall satisfaction	79.4 points	77.4 points
Satisfaction at construction phase	79.1 points	78.5 points
Satisfaction after delivery	80.1 points	76.3 points
Survey response rate[2]	36.1 %	35.7 %

1) Total across all shipbuilding subsidiaries, out of a total of 100 points
2) Number of respondents of the total number of surveys distributed

BUSINESS CASE

"HiMSEN Methanol Engine" Selected as "South Korea's Top 10 Mechanical Technologies of the Year"

HHI's proprietary "HiMSEN methanol engine" was selected as one of "South Korea's Top 10 Mechanical Technologies of 2024."
As the world's first medium-speed methanol dual-fuel engine, it can generate an output of 3 to 4.5 MW (megawatt) and features a "high-pressure direct injection" system, which increases output and efficiency. HHI is contributing to South Korea becoming a global leader in technology by securing state-of-the-art capabilities in the engine sector. As the global top company in the ship engine market, we will continue to lead the eco-friendly engine industry going forward.



HiMSEN methanol engine

Advancing Painting Quality Management using AI

In 2025, **HDKSOE** and **HHI** entered into an MOU with three International Association of Classification Society (IACS) members (American Bureau of Shipping (ABS), Lloyd's Register (LR), DNV) for the "development of ship painting process and quality management system," which aims to use artificial intelligence (AI) technology to improve the reliability of ship painting quality. HDKSOE and HHI are in the process of developing a proprietary painting quality management program using AI technology, which will utilize a standardized inspection process and quality criteria.
This program is expected to transform the existing on-site visual quality inspection process into a digital inspection process and enable remote sharing of information.

Quality Management

Risk Management

Quality Risk Management

Quality Risk Management System

Risk Management for Initial Equipment and Technologies

HDKSOE and its shipbuilding subsidiaries rigorously manage quality-related risks that may arise when developing initial equipment and technologies applied to novel ships and low and zero carbon (LZC) ships.

In order to ensure stable quality products and technology, we operate the "Initial Equipment Application Risk Management Task Force." This encompasses all performance check activities at each stage from design, production, to commissioning. Furthermore, the TF continuously monitors the performance of initial equipment and technology applications after the delivery in order to reduce risks.

Initial Equipment Application Risk Management TF

Category	Activities
Members	Executive officers and working-level employees from research, design, procurement, production, test operation, quality management departments at HDKSOE and its shipbuilding subsidiaries
Role	Share status of initial equipment application from ship design to delivery, and identify and manage risks for each initial equipment
Key Operations	Categorized the management standards for newly applied initial equipment and systems, and monitored progress at each stage—design, production, and commissioning. Any issues were shared and resolved, and improvements were made when applying similar equipment and systems to other vessels, thereby minimizing potential risks. 2024: 33 cases including Methanol LFSS (as of December)

Efforts to Prevent Quality Defects

HDKSOE and its shipbuilding subsidiaries continue to strengthen quality management to prevent customer complaints arising from quality issues.

To enhance customer trust in product quality, we have introduced smart quality inspection technology and are reinforcing self-reliant quality management activities to improve our internal quality management level. In particular, any quality abnormalities are checked before delivery and immediate corrective action is taken when issues are found.

Together with HD Hyundai Marine Solution, which is responsible for the group's ship warranty repairs, service improvement measures have been developed based on process analysis of customer complaint cases, and a feedback system is regularly operated that utilizes the quality database related to after-sales (A/S) defects from shipbuilding subsidiaries. This system enables root cause analysis and the prevention of recurrence, thereby helping to mitigate quality risks.

| Product Recall History | Due to the nature of the business of **HDKSOE and shipbuilding subsidiaries**, quality issues after delivery are handled by warranty repairs. There have been no recalls of delivered ships and products in the last four years.

Metrics & Targets

Quality Management Metrics & Targets

Implementation of Quality Management Practices

Key Achievements and Plans

HDKSOE and its shipbuilding subsidiaries have implemented practical, customer-focused quality management practices to strengthen quality competitiveness. In 2025, each company will establish a quality management plan, and each established plan will be implemented progressively in connection with the companywide quality management system.

Key Achievements in 2024 and Plans for 2025

Category	Key Achievements in 2024	Plans for 2025
HDKSOE	• Developed automated lattice welding system using collaborative robot	• Strengthen quality collaboration among affiliates in new and initial technologies and independent tank businesses
HHI	(Shipbuilding) • Signed MOU related to remote inspection technologies (Korean Register) (Offshore & Energy) • Obtained new ASME nuclear certifications (N, NA, NPT, NS) • Developed proprietary floating offshore wind turbine (Hi-FLOAT) (Engine & machinery) • HiMSEN methanol engine selected as one of the "South Korea's Top 10 Mechanical Technologies of 2024" (Special ships) • Delivered globally recognized Aegis destroyer (Jeongjo the Great)	(Shipbuilding) • Develop automated reporting program for remote inspection (Offshore & Energy) • Sign Joint Study MOU for SMR project (Engine & machinery) • Strengthen quality synergy across engine related affiliates in the group (Special ships) • Establish/revise quality processes in line with expansion of business portfolio
HMD	• Delivered the country's first hybrid roll-on/roll-off (RoRo) ship • Launched the world's largest CO2 carrier • Won gold at the National Quality Innovation Awards for 5 consecutive years	• Create real-time quality database using mobile and DT technology • Automatically adjust working conditions based on predictive data • Share data among affiliates and support collaboration
HSHI	• 2 large-scale cranes selected as World Class Product • Won 9 awards including Presidential Award for National Quality Management Merit, Ministerial Award • Won the Korea CQO Award by the Korean Society for Quality Management	• Hold workshops with outside contractors to strengthen quality competitiveness

(HHI) Jeongjo the Great

(HMD) Hybrid roll-on/roll-off (RoRo) ship

(HHI) Hi-FLOAT

Social Contribution

Governance

Social Contribution Governance

Roles and Responsibilities

Social Contribution Council

As the decision-making body determining social contribution activities at the group level, the Social Contribution Council of **HD Hyundai** sets the basic direction and policies for the group's social commitment.

The Council is composed of the CEOs of **HDKSOE and its shipbuilding subsidiaries**, and it reviews group-wide social contribution activities and establishes goals and plans.

Social Contribution Steering Committee

HDKSOE and its shipbuilding subsidiaries operate the Social Contribution Steering Committee, which comprises the department leaders of each company's social contribution organization. The Steering Committee discusses overall social contribution activities of the group and the operation of the HD Hyundai 1% Nanum (Sharing) Foundation.

Social Contribution Structure

Social Contribution Council

Chair: HD Hyundai CEO
Members: CEOs of HD Hyundai affiliates
(Including HDKSOE and its subsidiaries)

Social Contribution Steering Committee

Chair: Team Leader of CSR Planning Team (HDKSOE)
Members: Department Leaders of shipbuilding subsidiaries

HD Hyundai 1% Nanum Foundation

HD Hyundai 1% Nanum Foundation was established with the shared intention of employees to donate 1% of their salaries. **HDKSOE and its shipbuilding subsidiaries** have also joined this initiative. The contributions, donated with the good intention of employees, are used to implement various social contribution programs by HD Hyundai Group.

HD Hyundai 1% Nanum Foundation website

HD Hyundai Hope Foundation

HD Hyundai established the "HD Hyundai Hope Foundation" in 2024 to console grieving families of workers who lost their lives in tragic shipbuilding-related accidents and fulfill our corporate social responsibilities as the top shipbuilding company in the world. To maintain fairness and transparency in the Foundation's operations, directors of the board are selected mostly from outside the group. The Chairman of HD Hyundai donated KRW 100 million of his own personal wealth, and serves as the honorary Chairman.

HDKSOE and its shipbuilding subsidiaries joined the group's initiative to establish the HD Hyundai Hope Foundation, with **HHI, HMD** and **HSHI** donating funds. The Foundation is focused on providing scholarships for bereaved families, and the group plans to expand assistance to providing living and medical costs and legal assistance. Practical help will continue to be provided to the families affected by serious accidents, instilling within them a new sense of hope.

HD Hyundai Hope Foundation website

Strategy

Directions for Social Contribution

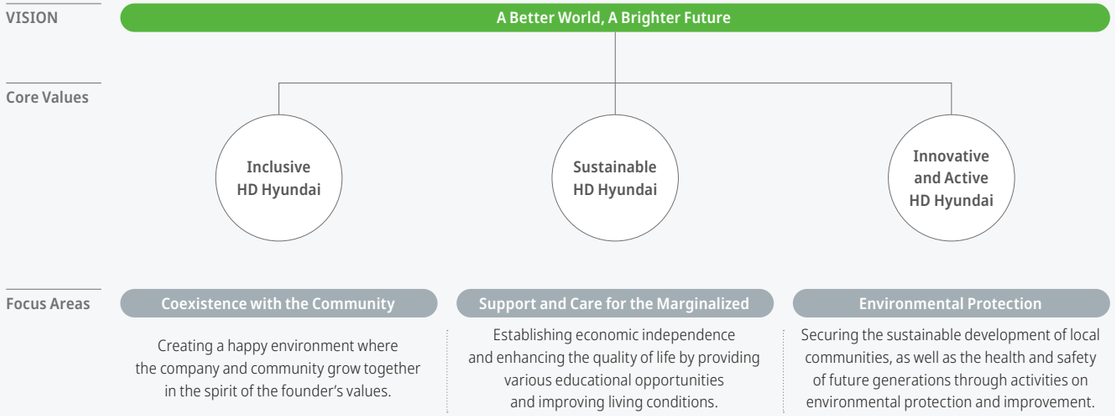
Social Contribution Vision and Core Values

Social Contribution Vision

HD Hyundai sets "Inclusiveness", "Sustainability," and "Innovation and Action" as key directions to realize "A Better World, A Brighter Future," and has continued its contribution to marginalized people and local communities. In addition, HD Hyundai particularly pays careful attention to local communities to attain the UN Sustainable Development Goals (UN SDGs) through its social contribution activities.

HDKSOE and its shipbuilding subsidiaries encourage employees to go beyond simply making donations and actively participate with the spirit of sharing to continue our efforts toward a better future.

Core Values of HD Hyundai Social Contribution



Social Contribution

Strategy

Directions for Social Contribution

Social Contribution Vision and Core Values

Social Contribution Directions of HD Hyundai 1% Nanum Foundation

Happy Family

- Happy Meals for Elders
- Heating Oil Support

The "Happy Family" project supports the underprivileged by providing warmth.

This project distributes free "Happy Meals" to seniors undergoing difficulties and supports vulnerable households with "Heating Oil Support" during the cold winter.

Happy Donor

- Happy Supporters
- HD119

Happy Supporters is the main program of "Happy Donor." Through this program, the group's employees suggest community services suitable to each region, which helps the program continue sustainably.

Another program, "HD119," provides emergency relief activities in case of unexpected accidents or natural disasters by offering financial or material support and dispatching teams of employee volunteers.

HD현대 나눔재단

Dream Future

- Dream Place
- Dream Academy
- Dream Harmony

"Dream Future" is a program that supports space renovations, education and self-reliance, and cultural activities of the socially vulnerable groups.

To ensure the children of socially vulnerable groups settle well into society, we have established an integrated platform with a wide range of support from the protection stage to financial independence.

Dream Partner

- HD Hyundai Honor Award
- I'm Donor
- HD Hyundai MZ Volunteer Group
- Sharing Flea Market

"Dream Partner" seeks to deliver the value of sharing to a wide range of stakeholders.

Donors' opinions (including employees) are incorporated in the "HD Hyundai Honor Award" and "I'm Donor" program, and opportunities are provided for employees to directly participate in sharing activities such as the HD Hyundai MZ Volunteer Group and the Sharing Flea Market.

BUSINESS CASE **Key Activities of HD Hyundai 1% Nanum Foundation**

HD Hyundai Honor Awards

2024 2nd HD Hyundai Honor Awards Ceremony

HD Hyundai 1% Nanum Foundation organizes the HD Hyundai Honor Awards, which recognizes individuals and organizations that help the socially vulnerable, such as the elderly, people with disabilities, single parent families, multicultural families, and children subject to protection, to spread positive influence across society. The winners are selected based on a comprehensive evaluation of how well they align with the Foundation's vision and goals, the proactiveness of the social contribution activities, degree of public and social impact, and their dedication to solving social issues.

At the 2nd HD Hyundai Honor Awards held in 2024, the Grand Prize went to the Purme Foundation, the Best Organization Award to the Korean Unwed Mothers Support Network, and the Best Individual Award and 1% Nanum Award to Kim Byung-rok.

HD Hyundai Employee Reading Donation


Donating employees' voices

In March 2024, the employees of HD Hyundai subsidiaries donated their voices to help multicultural families that have difficulty reading to their children due to their lack of Korean skills. Employees received voice training from voice actors and recorded stories as characters in storybooks. As a result, 15 audiobook devices containing approximately 180 children's stories were produced and delivered to multicultural family support centers in Seongnam and Ulsan.

HD Hyundai MZ Volunteer Group's Volunteer Work on World Environment Day

In May 2024, in commemoration of World Environment Day, HD Hyundai MZ Volunteer Group published an environmental education pop-up book to teach the importance of carbon neutrality. The 350 books that were published are currently being used as an educational tool at local childcare centers in Seongnam.

BUSINESS CASE **Activities of Other Subsidiaries**

HMD Overseas Social Contribution Activities

HD Hyundai Vietnam Shipbuilding (HVS), the overseas subsidiary of HMD, is an official sponsor of "Park Hang Seo International Football Academy," which supports local community development and promotes youth football. The Academy is the first in Vietnam to introduce an advanced youth football system in collaboration with schools and other educational facilities. The objective is to spread football in the country and nurture young players. HVS donated KRW 30 million from September 5, 2023 to September 4, 2024 to support the youths in training and development in a better environment.

Social Contribution

Strategy

Social Contribution Activities

HDKSOE Social Contribution Activities

Volunteering at the Dog Shelter

In September and November of 2024, 70 employees of **HDKSOE** volunteered at a dog shelter in Seongnam. According to the employee survey at the start of the year, the employees took most interest in volunteer work for homeless dogs. As a result, this volunteer activity was organized, in recognition of the younger generation's interest in animal rights. Employees helped refresh the shelter, walked and bathed the dogs, and donated old newspapers and dog toys. Time was spent with dogs in need, providing meaningful support for animal rights.

Volunteering at the dog shelter

ESG-based Volunteer Activities for Endangered Marine Species Conservation

As part of our ESG activities, 39 employees of **HDKSOE** created memory game kits of endangered marine animals. The kits were produced in collaboration with an artist with developmental disabilities and contributed to creating jobs for the developmentally disabled. Through this kit-making activity, our employees had the opportunity to learn more about endangered species and the importance of protecting them. The completed kits were donated to vulnerable children and senior facilities.

Endangered marine species kit volunteer activity

Blood Donation Campaign

Employees of **HDKSOE** have been actively participating in blood drives regularly organized at the group level. In 2024, a total of 60 employees joined the blood donation campaign. The certificates received from the campaigns were delivered to the Korea Childhood Leukemia Foundation and the Korea Pediatric Cancer Foundation to be used to support medical expenses for children with cancer.

Blood donation campaign

HHI Social Contribution Activities

Improvement of Living Conditions for Vulnerable Groups

HHI donated KRW 8 million to the Ulsan Dong-gu Volunteer Center to help improve living conditions for vulnerable groups. This donation was used to purchase materials for house repairs and furniture for low-income households in Dong-gu, Ulsan. Moreover, HHI Association of Master Craftsman volunteered to repair seven households for the vulnerable. They donated their skills to make home repairs, including changing the wallpaper, replacing flooring, and repairing electrical fixtures, and provided household goods and essential appliances, improving the quality of the living conditions for the vulnerable.

Delivery of donation funds for home repair volunteer activity

Supporting Ecological Field Activities for Local Children

HHI, along with HD Hyundai 1% Nanum Foundation, donated KRW 10 million to support ecological field activities for children from socially vulnerable groups in the Ulsan region. The donation was used to support ecological experience activities, lunches, and snacks for 190 children. The children participated in collecting marine animals and other indoor and outdoor activities.

Delivery of donation for marine ecological experience at Jujeon Fishing Village Experience Center

Delivery of Gift Packages for the Holidays

HHI has delivered gift packages for neighbors in need in the local community for 30 years as of 2024. To mark the Chuseok holiday in 2024, HHI donated gift certificates worth KRW 42.5 million to the Dong-gu Office in Ulsan. The donations were then distributed to approximately 850 underprivileged households in the form of traditional market gift certificates. Furthermore, HHI employees visited 30 social welfare facilities in Ulsan and 33 senior community centers in Dong-gu, and delivered care kits worth KRW 16.7 million.

Delivering Chuseok blessing bags

Social Contribution

Strategy

Social Contribution Activities

HMD Social Contribution Activities

Improvement of Local Welfare Facilities

HMD donated approximately KRW 11.28 million to the Ulsan Dong-gu Volunteer Center to help improve the local welfare center facilities. The volunteer activities included refurbishing the toy library, changing old plumbing fixtures, changing LED globes, installing cool roofs and wall light fixtures, installing an insect screen at the front entrance, and making food boxes.

In addition, HMD Association of Master Craftsman donated their skills and inspected electricity and plumbing to improve the living conditions of the welfare facility.

Moreover, HMD donated KRW 300 million to three local childcare centers in Dong-gu, Ulsan and supported facilities renovation projects through activities such as changing old appliances, installing safety rails on the stairs, and renovating old bathrooms.

Support for improving the conditions of local welfare facilities

Donations to Cover Utility Fees of a Welfare Facility for the Visually Impaired

HMD donated KRW 9.6 million to Ulsan Gwangmyeong Won, a rehabilitation facility for people with visual disabilities. The donation was used to support energy costs such as gas, electricity, water at Gwangmyeong Won. HMD supported KRW 8 million in 2021 and 2022, and KRW 9.6 million in 2023 and 2024. Through these efforts, we continue to share with the local community.

Donations for covering the utility fees at welfare facilities for the visually impaired

Quarterly ESG Volunteer Activities

HMD conducted quarterly ESG volunteer activities in 2024. In the first quarter, 45 employees volunteered to create Braille for visually impaired children. In the second quarter, 57 participants created seed balls and delivered them to a welfare facility for people with developmental disabilities. In the third quarter, 70 employees created 50 first aid kits by upcycling old work clothes, and then donated them to seniors in the region through the welfare center in Bangeo-dong, Dong-gu, Ulsan. In the fourth quarter, 72 employees made traffic-safety keyrings to give to children from socially vulnerable groups. HMD actively works to strengthen the connection with the local community through continued volunteer work.

First aid kits created by upcycling old work clothes

HSHI Social Contribution Activities

Environmental Protection Activity at Wolchulsan National Park

HSHI received a Plaque of Appreciation from the Chairman of Korea National Park Service at the "2024 Volunteer Certification Ceremony" in recognition of the contributions made in environmental conservation. Through continued environmental protection activities, HSHI is growing together with the local community. In 2021, HSHI concluded an agreement with the Korean National Park Service and have been conducting environmental activities centered on Wolchulsan National Park. From March to November 2024, approximately 600 people participated in volunteer activities, including environmental cleaning activities, supporting the botanical garden events, painting projects, and removing invasive species. These activities help protect the ecological environment and strengthen cooperative ties with the local community.


Receiving the Plaque of Appreciation from the Chairman of the Korea National Park Service

Public-Private Cooperative Plogging for Biodiversity Conservation

HSHI, along with the Citizen Seommoa Coexistence Volunteer Group, and seven public-private organizations from Samho-eup in Yeongam, conducted biodiversity conservation activities that were organized by the National Honam Biological Resource Center under the Ministry of Environment. Volunteers participated in picking up trash and putting identification labels on plants around Galmasan in Yeongam to help spread awareness and interest in the efforts to protect biodiversity. In addition, the volunteers listened to a special lecture on the importance of biodiversity in the center's main lecture hall.


Plogging for biodiversity protection with Citizen Seommoa Coexistence Volunteer Group and public-private organizations

Children's Environmental Puppet Show on Carbon Neutrality

HSHI held the "Practice Carbon Neutrality in Everyday Life! Children's 1.5-degree Environmental Puppet Show" at Daebul Elementary School in Yeongam on September 24th, 2024. The show depicted an environmental villain who tossed garbage anywhere and the character's transformation into an environmental protector, and the children participated in putting on the show. In addition, there were biodiversity experience activities along with the show to help everyone better understand the importance of environmental conservation.


Children's environmental puppet show on carbon neutrality

Social Contribution

Risk Management

Social Contribution Risk Management

Social Contribution Monitoring

Operating Standards for Use of Funds for the Purpose of Donations

When disbursing donations, **HDKSOE and its shipbuilding subsidiaries** comprehensively review the credibility of the beneficiary organization and the appropriateness of the project. We decide whether to support the organization by evaluating the organization's performance, level of collaboration, and project execution capability. In addition, the effectiveness of the project is managed by analyzing the feasibility of the project in advance, and the outcomes are reviewed after the project. In addition, in order to maintain a transparent fund disbursement process, records of use of funds are systematically managed, and the information is disclosed internally and externally to enhance public trust.

Stakeholder Participation Process

HDKSOE and its shipbuilding subsidiaries operate multiple channels to encourage participation and collect opinions from the stakeholders at the activity planning and implementation stages. These collected opinions are then reviewed internally and utilized in planning social contribution activities, and managing and disbursing donations and funds. In addition, the Social Contribution Steering Committee, which convenes twice a year, shares the current social contribution activities and plans of each subsidiary, and discusses recommendations for decision-making purposes.

In addition, when planning activities for the local community and socially vulnerable groups, **HDKSOE and its shipbuilding subsidiaries** work with local government organizations and social welfare organizations to identify the needs and trends of the local community. By incorporating the needs of stakeholders, social contribution activities such as supporting the vulnerable or providing skilled resources are conducted to provide practical help to the local community.

BUSINESS CASE

Participation of External Stakeholders

During the course of planning and implementing social contribution projects, **HDKSOE and its shipbuilding subsidiaries** identify the needs of the local community through various methods, including meetings and workshops with external partner organizations or incorporating advice from relevant experts, as needed. In addition, after the project is completed, the effectiveness of the project is evaluated by conducting satisfaction surveys, interviews, and outcome report meetings, and improvement measures are identified to incorporate in future projects.

Operational consultation with the local administrative welfare center

Metrics & Targets

Social Contribution Metrics and Targets

Social Contribution Management Status

Performance Management and Establishment of Short-term Targets

HDKSOE and its shipbuilding subsidiaries have established and managed short-term targets under a systematic social contribution governance framework. The social contribution targets focus on volunteering hours and expenses for social contribution projects, which are measured quantitatively. We successfully achieved the 2024 targets and established new short-term targets for 2025 and shared them companywide. By sharing a sense of purpose with employees, the effectiveness of social contribution activities is strengthened.

Goals and Achievements

Classification		2024 Goal	2024 Achievement	2025 Goal
HDKSOE	Hours of Volunteering	1,210 hours	1,404 hours	1,400 hours
	Expenses for Social Contribution	KRW 210 million	KRW 70 million	KRW 150 million
HHI	Hours of Volunteering	13,554 hours[1]	9,020 hours	11,000 hours
	Expenses for Social Contribution	KRW 540 million	KRW 970 million	KRW 1 billion
HMD	Hours of Volunteering	2,880 hours	3,074 hours	3,390 hours
	Expenses for Social Contribution	KRW 100 million	KRW 80 million	KRW 230 million
HSHI	Hours of Volunteering	6,500 hours	7,915 hours	7,000 hours
	Expenses for Social Contribution	KRW 120 million	KRW 720 million	KRW 120 million

1) The figures for the short-term social contribution targets have changed compared to the 2023 Integrated Report due to the upward adjustment of the 2024 targets.

Governance

We will firmly stand on the trust and respect from people with transparent management and business ethics.

Board of Directors

BOD Composition

BOD Composition Status

To ensure effective decision-making, the Boards of **HDKSOE and its shipbuilding subsidiaries** are composed of directors who have expertise in various fields such as business administration, accounting, law, and risk management, as well as a high level of understanding of the shipbuilding industry.

Appointment Procedures for Directors

All directors of **HDKSOE and its shipbuilding subsidiaries** are appointed at the general meeting of shareholders after going through fair procedures and assessments. Candidates for directors are nominated by the BOD and the Outside Director Recommendation Committee. With the notice of general shareholders meeting, personal information about the nominees, recommenders, and their relationship with major shareholders is disclosed. In addition, proposals for the appointment of directors are submitted individually for each candidate at the general shareholders' meeting.

Notice of 2023 HDKSOE General Meeting of Shareholders
Notice of 2023 HHI General Meeting of Shareholders
Notice of 2023 HMD General Meeting of Shareholders

Board Term Limits

According to the Commercial Act of South Korea, the tenure of outside directors at **HDKSOE and its shipbuilding subsidiaries** cannot exceed six years. Directors are provided with the necessary support in diverse aspects to raise their understanding of the company and strengthen decision-making capabilities during their tenure. When outside directors seek advice from external experts on important decisions, the requested assistance is actively offered to the directors.

Enhancing Diversity among Directors

HDKSOE and its shipbuilding subsidiaries respect the diversity of directors to ensure various perspectives are considered in decision-making. At the stage of nomination and review, each company does not discriminate against any nominees based on their gender, age, nationality, race, religion, or ethnicity. In order to enhance the efficiency of the BOD, those with extensive experience in various fields have been appointed as outside directors. As of late March 2025, each company has appointed one female director, respectively.

HDKSOE and **HHI** have appointed female outside directors, Jo Younghee and Park Hyun-jung, respectively. These directors, as experts in law, are able to contribute to enhancing the companies' competitiveness and perform their roles in management and oversight of the companies effectively.

Kim Seong-eun, an outside director of **HMD**, is an accounting and tax expert who has served as an outside director at Citibank Korea. Her experience will contribute greatly to enhancing the soundness and transparency of HMD and further improve the BOD-centered decision-making system.

Shin Ho-young, an outside director of **HSHI**, was appointed based on her expertise, wide range of knowledge, and experience in accounting. She has a Ph.D. in accounting, and has served as President of the Academic Society of Global Business Administration.

Securing Independence of Directors

HDKSOE and its shipbuilding subsidiaries strengthened the independence of the BOD by appointing a majority of directors as outside directors, creating an environment where Board members are open for discussion, free from the interests of businesses, executive management, or controlling shareholders. Outside directors are not involved in the company's regular course of business and are selected based on the following independence requirements.

INDEPENDENCE REQUIREMENTS FOR OUTSIDE DIRECTORS

Outside directors shall meet the following requirements as well as other qualifications as stated in the related laws including the Commercial Act of South Korea.

1. Outside directors shall not have served as an executive of the company within the past two years.
2. Outside directors shall not be an immediate family member of any executives of the company or its subsidiaries.
3. Outside directors shall not have the same interests as advisors, consultants, or employees and major shareholders of the corporation which has concluded with a major advisory contract with the company or its senior management.
4. Outside directors shall not be significant customers, or the employees or major shareholders of suppliers as defined in Items a and b of Article 34 (5) 2 of the Enforcement Decree of the Commercial Act.
5. Outside directors shall not have been partners or employees of the company's external auditor for the past two years.
6. Outside directors shall not have any conflicts of interest regarding matters decided by the BOD, such as economic interests.

Board of Directors

BOD Composition

HDKSOE BOD Composition

(As of March 31, 2025)

Type	Name	Position	Gender	Key Career Highlights	Date of Initial Appointment	Experience (relevant industry experience, etc.)
Inside Directors	Chung Ki-sun	CEO	Male	(Former) President of Sales, HHI (Current) CEO, HDKSOE	March 2022	• Expert in global shipbuilding industry operations • Comprehensive understanding of the Group's shipbuilding, offshore engineering, and energy business portfolio
	Kim Sung-joon	CEO (Chairman of the BOD)	Male	(Former) Head of Advanced Research Center, HDKSOE (Current) CEO, HD Hydrogen	March 2024	• Expertise in future technology strategies and managing global technology network in shipbuilding and offshore industry • Expertise in business strategy, R&D planning
Outside Directors	Kim Hong-kee	Outside Director	Male	(Former) CEO, Samil PWC Accountings (Former) Auditor, Wonik PNE	March 2023	• Expertise in corporate audit and financial risk management • Expert in financial regulations and regulatory systems
	Kim Sung-han	Outside Director	Male	(Former) Second Vice Minister of Foreign Affairs (Current) Professor, Korea University Graduate School of International Studies	March 2024	• Wide range of experience in global economy, trade, and foreign policy • Expert in international security and economic policy advisory
	Jo Young-hee	Outside Director	Female	(Former) Attorney, Sejong law firm (Current) Partner attorney, LAB Partners	March 2022	• Expertise in international relations and international law • Legal expert

HHI BOD Composition

(As of March 31, 2025)

Type	Name	Position	Gender	Key Career Highlights	Date of Initial Appointment	Experience (relevant industry experience, etc.)
Inside Directors	Lee Sang-kyun	CEO	Male	(Former) CEO, HSHI (Former) COO of Shipbuilding Business Unit, HHI (Current) CEO, HHI	April 2021	• Expertise in business, technology, and production within the shipbuilding industry, along with strategic planning capabilities • Currently serving as the Chairman of the Korea Offshore & Shipbuilding Association, demonstrating industry-wide leadership and network capabilities.
	Noh Jin-yul	CEO	Male	(Former) Head of Management Support Headquarters, HHI (Current) Head of Corporate Safety and Health Office, HHI (Current) CEO, HHI	March 2024	• Expertise in corporate support functions, including general affairs, human resources, and co-prosperity, with core competencies in organizational management • Expertise in safety management and risk control leadership as the Chief Safety Officer (CSO)
Outside Directors	Shin Dong-mok	Outside Director	Male	(Current) Dean, Asan Honors College, University of Ulsan (Current) Dean, College of General Education, University of Ulsan	March 2024	• Expertise in shipbuilding production processes with a Ph.D. in industrial engineering from Pennsylvania State University • Authored a number of papers on shipbuilding, including Block Assembly Planning in Shipbuilding Using Case-Based Reasoning, Pipe Offset Routing Program by Using 3D CAD for Shipbuilding
	Chae Joon	Outside Director (Chairman of the BOD)	Male	(Current) Outside director, Yuanta Securities Co., Ltd. (Current) Professor, Business School of Seoul National University	March 2020	• Expertise in corporate finance strategy and investment risk management • Expertise in finance and risk management
	Park Hyun-jung	Outside Director	Female	(Former) Judge, Seoul Central District Court (Current) Professor, Hanyang University School of Law	March 2022	• Expertise in corporate legal risk management and responding to lawsuits • Expertise in public and civil lawsuits

Board of Directors

BOD Composition

HMD BOD Composition

(As of March 31, 2025)

Type	Name	Position	Gender	Key Career Highlights	Date of Initial Appointment	Experience (relevant industry experience etc)
Inside Directors	Kim Hyung-kwan	CEO (Chairman of the BOD)	Male	(Former) Project Planning Division Head, HHI (Former) CEO, HSHI	March 2023	• Technological expertise and experience in ship design and production • Leadership experience at shipbuilding sites and business
	Namgoung Hoon	Inside Director	Male	(Former) Head of HR Department, HDKSOE (Current) Management Support Division Head, HD Hyundai	March 2025	• Expertise in HR and financial management and soundness • Expertise in enhancing corporate value based on experience at HD Hyundai
Outside Directors	Yoo Seung-won	Outside Director	Male	(Former) Professor, Hong Kong University of Science and Technology (HKUST) (Current) Professor, Korea University	March 2020	• Expertise in internal audit and financial risk • Expertise in accounting principles and enhancing financial transparency
	Kim Seong-eun	Outside Director	Female	(Former) President, Korea Association of Business Education (Former) Advisory member, National Economic Advisory Council	March 2022	• Expertise in corporate financial strategy and macroeconomic analysis • Expertise in tax compliance and regulatory response
	Kim Woo-chan	Outside Director	Male	(Former) Judge, Seoul High Court of Korea (Former) Auditor, Financial Supervisory Service	June 2024	• Expertise in corporate legal risk and handling lawsuits • Former Auditor at the Financial Supervisory Service

HSHI BOD Composition

(As of March 31, 2025)

Type	Name	Position	Gender	Key Career Highlights	Date of Initial Appointment	Experience (relevant industry experience etc)
Inside Directors	Kim Jae-eul	CEO (Chairman of the BOD)	Male	(Former) COO of Shipbuilding Business Unit, HHI (Current) CEO, HSHI	March 2025	• Leadership experience in shipbuilding sites and managing businesses • Experience in various projects in shipbuilding and offshore engineering industry
	Lee Sang-hyuk	Inside Director	Male	(Former) Head of Finance and Management Division, HSHI (Current) Head of Cost Accounting Division, HDKSOE	March 2024	• Deep expertise in accounting and finance • Expertise in accounting-based cost improvement and risk analysis
Outside Directors	Jung Do-sam	Outside Director	Male	(Former) Vice CEO, Samil PWC Accountings (Current) Vice Chairman, Beyul Accounting Corporation	March 2020	• Expertise in corporate accounting audit and internal control • Expertise in investment project risk analysis, M&A strategy
	Ko Chang-hyun	Outside Director	Male	(Former) Lawyer at KIM & CHANG (Current) Lawyer at Ko Chang-hyun Law Firm	March 2021	• Expertise in managing risks under the Commercial Act and corporate law • Expertise in financial regulatory responses
	Shin Ho-young	Outside Director	Female	(Former) President of the Academic Society of Global Business Administration (Current) Honorary Professor, Business School of Hanyang University	March 2022	• Expertise in tax risk management • Expertise in responding to government policy changes
	Lee Jang-young	Outside Director	Male	(Former) Deputy Governor of the Financial Supervisory Service (FSS) (Current) Senior Advisor at KIM & CHANG	March 2023	• Expertise in corporate financial regulations and establishing funding strategies • Expertise in responding to global financial market changes and financial policy

Board of Directors

BOD Composition

Enhancing Directors Professionalism

HDKSOE and its shipbuilding subsidiaries appoint directors by comprehensively considering their essential capabilities for business administration and risk management, as well as knowledge about the shipbuilding industry to ensure a stable decision-making process.

In this context, the BOD of **HDKSOE and its shipbuilding subsidiaries** consist of experts from diverse fields including leadership, CEO experience, risk management, finance and accounting, and policy and administration. Directors on the Board all perform the functions of decision-making and oversight of management to increase corporate competitiveness. In addition, each company discloses the Board Skills Matrix (BSM) to support stakeholders in clearly understanding the directors' capabilities at a glance.

HDKSOE Board Skills Matrix

(As of March 31, 2025)

Name	Leadership	CEO Experience	Risk Management	Finance/ Accounting	Policy Administration	Sales & Marketing	Laws/ Regulations	R&D	International Relations	Gender	Certification
Chung Ki-sun	●	●	●			●				Male	-
Kim Sung-joon	●	●	●			●		●		Male	-
Kim Hong-kee	●		●	●	●					Male	CPA
Kim Sung-han	●		●		●				●	Male	-
Jo Young-hee	●		●		●		●			Female	Lawyer

HMD Board Skills Matrix

(As of March 31, 2025)

Name	Leadership	CEO Experience	Risk Management	Finance/ Accounting	Policy/ Administration	Sales & Marketing	Laws/ Regulations	Gender	Certification
Kim Hyung-kwan	●	●	●					Male	-
Namgoung Hoon	●		●	●				Male	-
Yoo Seung-won	●		●	●				Male	-
Kim Seong-eun	●		●	●				Female	-
Kim Woo-chan	●		●				●	Male	Lawyer

HHI Board Skills Matrix

(As of March 31, 2025)

Name	Leadership	CEO Experience	Risk Management	Finance/ Accounting	Laws/ Regulations	Industry Experience[1]	Gender	Certification
Lee Sang-kyun	●	●	●			●	Male	-
Noh Jin-yul	●	●	●			●	Male	-
Shin Dong-mok	●		●			●	Male	-
Chae Joon	●		●	●			Male	-
Park Hyun-jung	●		●		●		Female	Lawyer

1) Board members with business administration, academic, or research experience within the same industry

HSHI Board Skills Matrix

(As of March 31, 2025)

Name	Leadership	CEO Experience	Risk Management	Finance/ Accounting	Policy/ Administration	Sales & Marketing	Laws/ Regulations	Gender	Certification
Kim Jae-eul	●	●	●					Male	-
Lee Sang-hyuk	●		●	●				Male	-
Jung Do-sam	●		●	●				Male	CPA
Ko Chang-hyun	●		●		●		●	Male	Lawyer
Shin Ho-young	●			●	●			Female	-
Lee Jang-young	●		●	●	●		●	Male	-

Board of Directors

BOD Operation

Functions of BOD

The BODs of **HDKSOE and its shipbuilding subsidiaries** establish the long-term vision and goals of the companies and make decisions on significant management issues. For example, the BOD systematically manages those issues that are directly related to the creation of corporate values such as risks, ethical and compliance management, internal accounting, and auditing as well as issues for sustainable management including climate change, human rights, and safety and health.

Chair of the BOD

HDKSOE and its shipbuilding subsidiaries appoint a Chairperson of the Board every year at the first Board meeting following the regular general meeting of shareholders. The Chair is a one-year term, and to ensure continuity in cases where the Chair is absent, the Chair can determine the order of directors who will serve as an acting chair or designate an interim chairperson. In particular, **HHI** appointed an outside director as the Chair in March 2025 to strengthen the Board's independence.

Convening and Organizing Board Meetings

Board meetings at **HDKSOE and its shipbuilding subsidiaries** are convened by the chairman or a director designated by the Board, and the notice of meeting must be given to each director at least one day prior to the meeting. However, if all directors agree, Board meetings can be held at any time without following the convening procedures. The quorum for the Board meeting is the majority of directors, and the Board makes decisions with the majority approval of the members present. However, for matters falling under the Commercial Act Article 397-2 (Prohibition of Appropriation of Company's Opportunities and Assets) and Article 398 (Transaction between Directors, etc. and Company), the approval of the BOD shall be granted with two-thirds or more of the total number of directors. Furthermore, the Articles of Incorporation stipulate that directors who have a special interest are not allowed to exercise their voting rights.

Training for the BOD

HDKSOE and its shipbuilding subsidiaries provide a wide range of training programs to enhance directors' capacity to discern, as well as their expertise in decision-making. In October 2024, training was provided for the directors of the four companies to strengthen ESG management capabilities. This program mainly focused on the analysis and mitigation of internal and external risk factors such as recent financial regulatory trends and AI. The directors shared multifaceted insights and held profound discussions on efficient response strategies.

BOD Operation Status

(January 1 ~ December 31, 2024)

Category	Board Resolutions		Attendance Rate	
	Decisions	Reports	Inside Directors	Outside Directors
HDKSOE	36	12	90.9 %	100 %
HHI	25	13	83.3 %	100 %
HMD	22	12	100 %	100 %
HSHI	11	8	93 %	96.5 %

Training sessions conducted for BOD

Date	Topics	Attendees
February 2024	• Recent changes in accounting regulations and IFRS 18	HHI, HMD, HSHI
April 2024	• Characteristics of accounting standards for shipbuilding and recent trends	HDKSOE, HHI, HMD, HSHI
July 2024	• Trends in recent global ESG disclosure standards	HHI, HSHI
October 2024	• Role of the Audit Committee and the recent financial regulatory trends to watch • Recent trends in AI transformation: Latest trends and what companies need to know and understand • Impact of U.S. presidential election results	HDKSOE, HHI, HMD, HSHI

Board of Directors

BOD Operation

HDKSOE Board Meetings

No	Date	Agenda	Approval Status	Approval Ratio
1st	Feb 6, 2024	Approval of the 50th Financial Statements and Sales Report	Approved	100%
		Approval of amendments to BOD regulations	Approved	100%
		Approval of amendments to Audit Committee regulations	Approved	100%
		Approval of establishment of Compensation Committee, appointment of members, enactment of committee regulations	Approved	100%
		Approval of 2024 safety and health management plans	Approved	100%
		Report of 2H 2023 Fair Trade Compliance Program status inspection	Reported	-
		Report of 2023 Consolidated and Separate Internal Accounting Control System Operation Status	Reported	-
		Report of BOD Evaluation Standards	Reported	-
2nd	Feb 26, 2024	Approval of the 50th Regular General Meeting of Shareholders and the purpose	Approved	100%
		Report of 2023 Consolidated and Separate Internal Accounting Control System Operational Status Evaluation	Reported	-
3rd	Mar 29, 2024	Approval of appointment of CEO	Approved	100%
		Appointment of the BOD Chairman and determining priority order for an acting chair	Approved	100%
		Appointment of Outside Director Recommendation Committee Members	Approved	100%
		Appointment of Related Party Transactions Committee Members	Approved	100%
		Appointment of ESG Committee Members	Approved	100%
		Appointment of Compensation Committee Members	Approved	100%
		Approval of Research Assets (equipment, etc.) Transactions with Affiliated Companies	Approved	100%
		Report on 2023 BOD Evaluation results	Reported	-
4th	Apr 25, 2024	Approval of amendments to Internal Accounting Management regulations	Approved	100%
		Report on 2024 Q1 Business Performance	Reported	-
5th	May 16, 2024	Approval of Partial Sale of HHI shares	Approved	100%
6th	May 31, 2024	Approval of guarantee provision for HHI to obtain bidding qualification for U.S. naval vessel maintenance project	Approved	100%
7th	July 25, 2024	Approval of amendments to Fair Trade Compliance Program regulations	Approved	100%
		Approval of branch closure	Approved	100%
		Approval to open overseas branch	Approved	100%
		Approval of investment in overseas subsidiary	Approved	100%
		Approval of parent company guarantee for overseas subsidiary	Approved	100%
		Approval of transaction limits with affiliate companies	Approved	100%
		Approval of Investment in HD Hydrogen	Approved	100%
		Approval of HD Hydrogen Shareholders Agreement	Approved	100%
		Report on operation of compliance control standards	Reported	-
		Report on 2024 1H Business Performance	Reported	-
8th	Sep 4, 2024	Approval of paid-in capital reduction of China leasing company	Approved	100%
9th	Oct 24, 2024	Approval of transaction limits with affiliated companies	Approved	100%
		Approval of transaction limits with HD Hydrogen	Approved	100%
		Approval of the sale of Ehwa Industrial Park 3BL	Approved	100%
		Report of 1H 2024 Fair Trade Compliance Program status inspection	Reported	-
		Report on 2024 1H Business Performance	Reported	-
10th	Nov 25, 2024	Approval of investment in subsidiary	Approved	100%
11th	Dec 13, 2024	Approval of Mid- to Long-term Shareholder Return Policy	Approved	100%
		Setting of the record date for shareholders	Approved	100%
		Approval of transaction limits between directors, etc. and the company	Approved	100%
		Approval of transaction limits with stakeholders such as major shareholders	Approved	100%
		Approval of Assignment Agreement	Approved	100%
		Report on 2025 Management Plans	Reported	-
		Report on Corporate Value Enhancement Plans	Reported	-

HHI Board Meetings

No	Date	Agenda	Approval Status	Approval Ratio
1st	Jan 2, 2024	Report on 2024 Management Plans	Reported	-
		Approval Report on the completion of the merger with HHI MOS and approval of announcement	Approved	100%
2nd	Feb 6, 2024	Report of 2024 Environmental Management	Reported	-
		Report of 2024 Governance Improvements	Reported	-
		Report of 2H 2023 Fair Trade Compliance Program status	Reported	-
		Report of 2023 Internal Accounting Control System Operational Status Evaluation	Reported	-
		Approval of the 5th Financial Statements	Approved	100%
		Approval of the 5th Business Performance Report	Approved	100%
		Approval of amendments to BOD regulations	Approved	100%
		Approval of establishment of Compensation Committee, appointment of members, enactment of committee regulations	Approved	100%
		Approval of 2024 safety and health management plans	Approved	100%
3rd	Feb 24, 2024	Report of 2023 Internal Accounting Control System Operational Status	Reported	-
		Approval of the 5th regular general meeting of shareholders and the purpose	Approved	100%
4th	Mar 26, 2024	Approval of appointment of BOD Chairman and determining the order of acting chairs in the absence of the chairman	Approved	100%
		Approval of appointment of CEO	Approved	100%
		Appointment of Board committee members	Approved	100%
		Approval of Establishing Qatar Office	Approved	100%
5th	Apr 24, 2024	Report on 2024 Q1 Business Performance	Reported	-
		Report of Amendments to Internal Accounting Control Regulations	Approved	100%
		Approval of appointment of change in compliance officer	Approved	100%
6th	Jun 14, 2024	Approval of Establishing Peru Branch	Approved	100%
7th	Jul 24, 2024	Report on 1H 2024 Business Performance	Reported	-
		Approval of amendment to business registration in Saudi Arabia	Approved	100%
		Approval of change in representative of the permanent establishment in Saudi Arabia	Approved	100%
8th	Oct 23, 2024	Report on 3Q 2024 Business Performance	Reported	-
		Report on 2024 1H Fair Trade Self-compliance status	Reported	-
		Report on Compliance Management	Reported	-
		Approval of appointment of change in Fair Trade Compliance Program Manager	Approved	100%
		Approval of Amendments to Fair Trade Compliance Program regulations	Approved	100%
		Approval of land purchase at the Ehwa Industrial Park	Approved	100%
9th	Dec 13, 2024	Report on 2025 Management Plans	Reported	-
		Report on HHI Corporate Value Enhancement plans	Reported	-
		Approval of corporate bond issuance limit	Approved	100%
		Approval of short-term bond issuance limit	Approved	100%
		Approval of transaction limits between directors, etc. and the company	Approved	100%
		Approval of goods and services transaction amounts with affiliates	Approved	100%
		Setting of record date for determining shareholders	Approved	100%
		Approval of shareholder return policy	Approved	100%

Board of Directors

BOD Operation

HMD Board Meetings

No	Date	Agenda	Approval Status	Approval Ratio
1st	Feb 5, 2024	Approval of the 50th Financial Statements	Approved	100%
		Approval of the 50th Business Performance Report	Approved	100%
		Approval of amendments to BOD regulations	Approved	100%
		Approval of establishment of Compensation Committee, appointment of members, enactment of committee regulations	Approved	100%
		Approval of 2024 safety and health management plans	Approved	100%
		2024 Management Plans	Reported	-
		Report of BOD Evaluation Standards	Reported	-
		Report of 2023 Internal Accounting Control System Operational Status	Reported	-
		Report on 2H 2023 Fair Trade Compliance Program status inspection	Reported	-
		Report of 2023 compliance control standards operational status inspection	Reported	-
2nd	Feb 22, 2024	Approval of 50th Regular General Meeting of Shareholders and the agenda of the meeting	Approved	100%
		Report on 2023 Internal Accounting Control System Operation Status Evaluation	Reported	-
3rd	Mar 21, 2024	Approval of partial amendments to the agenda of 50th Regular General Meeting of Shareholders	Approved	100%
4th	Mar 25, 2024	Appointment of the BOD Chairman and determining the order of acting chairs	Approved	100%
		Appointment of Related Party Transactions Committee Members	Approved	100%
		Report on 2023 BOD Activities	Reported	-
5th	Apr 23, 2024	Approval of amendments to Internal Accounting Control regulations	Approved	100%
		Approval of amendments to Board committee regulations	Approved	100%
		Setting the record date for voting rights at the of 1st extraordinary shareholders meeting in the 51st period	Approved	100%
		Approval of 1st Extraordinary Shareholders Meeting and the agenda of the meeting in the 51st period	Approved	100%
		Report on the Q1 2024 Business Performance	Reported	-
6th	Jun 4, 2024	Approval of appointment of BOD committee members	Approved	100%
7th	Jul 24, 2024	Report on 1H 2024 Sales	Reported	
		Report on 1H 2024 Fair Trade Compliance Program status inspection	Reported	-
8th	Jul 26, 2024	Approval of management consultant and management support transaction and limits	Approved	100%
9th	Oct 23, 2024	Approval of transaction limits between directors, etc. and the company	Approved	100%
		Approval of amendments to Fair Trade Compliance Program Program regulations	Approved	100%
		Report on 3Q 2024 Business Performance	Reported	-
10th	Dec 12, 2024	Approval of shareholder return policy	Approved	100%
		Setting the record date for voting rights at the 51st general meeting of shareholders	Approved	100%
		Approval of goods and services transaction amounts with affiliates for 2025	Approved	100%
		Approval of transaction limits with major shareholders and related parties for 2025	Approved	100%
		Approval of transaction limits between directors, etc. and the company for 2025	Approved	100%
		Report on Disclosure of Corporate Value Enhancement (Value-Up) Plan	Reported	-

HMD Board Meetings

No	Date	Agenda	Approval Status	Approval Ratio
1st	Feb 5, 2024	Approval of the 26th Financial Statements	Approved	100%
		Approval of the 26th Business Performance Report	Approved	100%
		Approval of 2024 safety and health management plans	Approved	100%
		Report on 2023 Internal Accounting Control System Operation Status	Reported	-
		Report on 2H 2023 Fair Trade Compliance Program status inspection	Reported	-
2nd	Feb 22, 2024	Approval of the 26th Regular General Meeting of Shareholders and the purpose	Approved	100%
		Report of 2023 compliance control standards operational status inspection	Reported	-
3rd	Mar 25, 2024	Appointment of the BOD Chairman and determining priority order for an acting chair	Approved	100%
		Appointment of BOD committee members	Approved	100%
4th	Apr 24, 2024	Approval of amendments to Internal Accounting Control regulations	Approved	100%
		Report on Q1 2024 Business Performance	Reported	-
5th	Jul 24, 2024	Report on 1H 2024 Business Performance	Reported	-
		Report on 1H 2024 Fair Trade Compliance Program status inspection	Reported	-
6th	Oct 23, 2024	Approval of amendments to Fair Trade Compliance Program regulations	Approved	100%
		Report on Q3 2024 Business Performance	Reported	-
7th	Dec 6, 2024	Setting the record date for regular general meeting of shareholders	Approved	100%
		Approval of goods and services transaction amounts with affiliates	Approved	100%
		Approval of transaction limits between directors, etc. and the company	Approved	100%
		2025 Management Plans	Reported	-

Board of Directors

Board Committees

Audit Committee

HDKSOE and its shipbuilding subsidiaries strictly adhere to the requirements for the appointment of Audit Committee members as specified in the Commercial Act. The Audit Committee of each company consists of outside directors appointed at the general meeting of shareholders to strengthen the independence of internal audit functions. Each company appoints at least one accounting and finance expert as a member of Audit Committee.

The Audit Committee of each company confirms the legality of the activities of directors and the management based on its expertise in accounting and finance, and oversees the integrity of financial reports and reliability of disclosure. In addition, the Audit Committee reviews other matters related to the independence of corporate management, including the supervision of external auditors and company-wide risk management system.

Composition and Roles of the Audit Committee

(As of March 31, 2025)

HDKSOE	HHI	HMD	HSHI
• Chair: Kim Hong-kee • Members: Kim Sung-han, Jo Young-hee	• Chair: Chae Joon • Members: Shin Dong-mok, Park Hyun-jung	• Chair: Yoo Seung-won • Members: Kim Seong-eun, Kim Woo-chan	• Chair: Jung Do-sam • Members: Ko Chang-hyun, Shin Ho-young, Lee Jang-young

Non-audit Service Cost

Category	2022	2023	2024
HDKSOE	KRW 150 mil.	-	KRW 80 mil.
HHI	KRW 324 mil.	KRW 12 mil.	KRW 179 mil.
HMD	KRW 110 mil.	-	-
HSHI	KRW 120 mil.	-	-

Outside Director Recommendation Committee

HDKSOE and its shipbuilding subsidiaries operate the Outside Director Recommendation Committee to select candidates for outside directors to be appointed at the general shareholders meeting. In line with the relevant laws, the Outside Director Recommendation Committee comprises a majority of outside directors, and the committee reviews the qualifications of the nominees.

Composition and Roles of Outside Director Recommendation Committee

(As of March 31, 2025)

HDKSOE	HHI	HMD	HSHI
• Chair: Kim Hong-kee • Members: Kim Sung-joon, Jo Young-hee, Kim Sung-han	• Chair: Shin Dong-mok • Members: Lee Sang-kyun, Chae Joon, Park Hyun-jung	• Chair: Kim Woo-chan • Members: Kim Hyung-kwan, Yoo Seung-won, Kim Seong-eun	• Chair: Shin Ho-young • Members: Kim Jae-eul, Jung Do-sam, Ko Chang-hyun, Lee Jang-young

Related Party Transactions Committee

HDKSOE and its shipbuilding subsidiaries have established and actively operate the Related Party Transactions Committee to develop basic policies for transactions among affiliates and review the standards for selecting transaction counterparties. The Related Party Transactions Committee of each company is responsible for reviewing large-scale related party transactions over a certain threshold, strengthening internal controls, and enhancing the efficiency of oversight on unfair support practices.

Composition and Roles of Related Party Transactions Committee

(As of March 31, 2025)

HDKSOE	HHI	HMD	HSHI
• Chair: Jo Young-hee • Members: Kim Sung-joon, Kim Hong-kee, Kim Sung-han	• Chair: Park Hyun-jung • Members: Lee Sang-kyun, Shin Dong-mok, Chae Joon	• Chair: Kim Seong-eun • Members: Yoo Seung-won, Kim Woo-chan, Cho Jin-ho	• Chair: Ko Chang-hyun • Members: Kim Jae-eul, Jung Do-sam, Shin Ho-young, Lee Jang-young

Board of Directors

Board Committees

Compensation Committee

As of February 2024, **HDKSOE**, **HHI**, and **HMD** formed the Compensation Committee within the BOD, which comprises outside directors to secure its independence, according to the Board regulations. The Compensation Committee is responsible for enhancing the objectivity and transparency of the compensation decision-making process for directors and the management by reviewing and determining the remuneration limits of registered directors and the compensation system for inside directors.

Composition and Roles of the Compensation Committee

(As of March 31, 2025)

HDKSOE	HHI	HMD
• Chair: Kim Sung-han • Members: Kim Hong-kee, Jo Young-hee	• Chair: Park Hyun-jung • Members: Shin Dong-mok, Chae Joon	• Chair: Kim Seong-eun • Members: Yoo Seung-won, Kim Woo-chan

ESG Committee

HDKSOE and its shipbuilding subsidiaries have established and actively operate the ESG Committee to enhance sustainability and increase ESG management capabilities. The ESG Committee of each company supports initiatives necessary to develop and internalize ESG capabilities. The committee also oversees key issues related to corporate sustainability, such as climate change, safety and health, human rights, and risks.

Composition and Roles of ESG Committee

(As of March 31, 2025)

HDKSOE	HHI	HMD	HSHI
• Chair: Jo Young-hee • Members: Kim Sung-joon, Kim Hong-kee, Kim Sung-han	• Chair: Shin Dong-mok • Members: Noh Jin-yul, Chae Joon, Park Hyun-jung	• Chair: Kim Woo-chan • Members: Kim Seong-eun, Yoo Seung-won, Kim Hyung-kwan	• Chair: Lee Jang-young • Members: Kim Jae-eul, Jung Do-sam, Ko Chang-hyun, Shin Ho-young

ESG Committees Held

Category	Date	Agenda	Approval status	Approval ratio
HDKSOE	Feb 26, 2024	Report on 2023 ESG management performance and 2024 plans	Reported	-
	Mar 29, 2024	Appointment of ESG Committee Chair	Approved	100%
		Report on the 2024 ESG Materiality Assessment Results	Reported	-
		Report on establishing ESG KPIs for 2024	Reported	-
		Report on non-financial risk management plans	Reported	-
	Jul 25, 2024	Report on key ESG issues and 2H 2024 plans	Reported	-
	Oct 24, 2024	Report on plans for EU CSDDD and human rights management	Reported	-
HHI	Mar 26, 2024	Appointment of ESG Committee Chair	Approved	100%
	Apr 24, 2024	Materiality Assessment in 2023 Integrated Report	Reported	-
		Report on non-financial risk management plans	Reported	-
		Report on Board evaluation results	Reported	-
HMD	Jun 4, 2024	Appointment of ESG Committee Chair	Approved	100%
	Dec 12, 2024	Approval of new ESG targets and its public disclosure	Reported	-
		Report on 2024 ESG management performance and 2025 plans	Reported	-
HSHI	Dec 6, 2024	Report on 2024 ESG management performance and 2025 plans	Reported	-

Board of Directors

BOD Performance Evaluation

Evaluating BOD Performance

HDKSOE and its shipbuilding subsidiaries have introduced and are operating a board performance evaluation system to assess the appropriateness of board composition and the efficiency of its operations. The Board evaluation consists of 15 items in 4 areas: BOD's roles and responsibilities, structure, operation, and reflection of evaluation results. The evaluation of Board committees covers 20 items, including authority and responsibilities of each committee, appropriateness of meetings, support from external experts, and provision of training. The outside director evaluation comprises 10 items in 4 areas: participation, experience and knowledge, contribution to Board operations, and strengthening Board accountability. The evaluations of the Board and its committees are conducted by all inside and outside directors, and evaluations of outside directors' activities are conducted by all outside directors. All evaluations are carried out annually on a self-assessment basis.

The evaluation for FY2024 found no significant issues in the composition and operation of the Board, and the BOD was deemed to fulfill its roles and responsibilities faithfully.

Performance Evaluation for the Management

HDKSOE and its shipbuilding subsidiaries evaluate the performance of the management, including the CEO, by considering quantitative indicators such as sales, orders, and operating profits, as well as qualitative indicators such as leadership, expertise, and accountability in job performance. We have set company-wide ESG KPIs for the CEOs of each company and continue to monitor results for each KPI and whether the target has been achieved.

Calculation and Payment of Performance Incentives for the Management

Performance incentives for the management (including the CEO) are divided into management bonuses and long-term incentives. The management bonus is calculated based on the current year's quantitative indicators such as sales, orders received, and operating profits, as well as the leadership and expertise to attain management targets. This is paid at the beginning of the following year.

The long-term incentive was introduced in late 2023 to prevent the management from focusing only on short-term performance and to maximize long-term corporate value. This incentive is calculated comprehensively, considering factors such as organizational evaluation and net profit over a grace period (longer than three years), and paid after the grace period ends.

As for outside directors and Audit Committee members, fixed salaries are paid without performance incentives to ensure their independence.

Calculation Criteria and Methods for Compensation Package

Category		CEO (Inside Directors)
Payment basis		• Executed based on the Executives Remuneration Standards determined by the BOD resolution, within the directors' remuneration limit approved at the general shareholders meeting
Criteria	Basic salary	• Comprises base pay and position allowances, and paid in equal monthly installments - Base pay: Determined according to rank (grade) - Position allowances: Determined according to duties (position)
	Performance-based compensation	• Determined based on organizational evaluation, individual evaluation, and achievement rate of target net profit - Quantitative indicators: Sales, orders, operating profits, etc. - Qualitative indicators: Leadership, expertise, and accountability in job performance

Remuneration for CEO

(As of December 31, 2024)

Category		HDKSOE		HHI		HMD	HSHI
		Chung Ki-sun	Kim Sung-joon	Lee Sang-kyun	Noh Jin-yul	Kim Hyung-kwan	Shin Hyun-dae
CEO Compensation	Basic salary	KRW 774 mil.	KRW 461 mil.	KRW 866 mil.	KRW 774 mil.	KRW 730 mil.	KRW 741 mil.
	Performance-based compensation	KRW 540 mil.	KRW 316 mil.	KRW 475 mil.	KRW 389 mil.	KRW 421 mil.	KRW 454 mil.
	Total[1]	KRW 1,314 mil.	KRW 777 mil.	KRW 1,341 mil.	KRW 1,163 mil.	KRW 1,151 mil.	KRW 1,195 mil.
	Comparison with employee average	11.3 times	6.7 times	13.8 times	11.9 times	12.4 times	10.3 times
Year-end value of shares held compared to base pay		0.16 times	0.26 times	0.37 times	(No shares held)	0.50 times	(Unlisted)

1) Excluding retirement income

Shareholder Protection

Exercise of Shareholder Rights

Notice of General Meeting of Shareholders

HDKSOE and its shipbuilding subsidiaries convene a regular general meeting of shareholders within three months from the settlement day of each fiscal year. The information on the general shareholders meeting such as date, place, and agenda is provided at least four weeks ahead of the meeting date by a notice of meeting of shareholders, notice of meeting on the electronic disclosure system, and electronic notification on each company's website. Furthermore, the results of shareholders' votes, including approval and opposition ratios, are disclosed on each company's website.

Exercise of Shareholder Voting Rights

In accordance with the Articles of Incorporation, **HDKSOE and its shipbuilding subsidiaries** grant one vote for each stock. We have introduced an electronic voting system to enhance the convenience and shareholders' opportunities to exercise their voting rights.

HDKSOE and its shipbuilding subsidiaries participated in a voluntary compliance program in March 2025, which involved staggering the scheduling of general shareholders meetings for the purpose of spacing them out.

Delegation of Voting Rights (Proxy Voting)

HDKSOE and its shipbuilding subsidiaries provide reference documents before the proxy solicitation period starts to help shareholders exercise their voting rights. In this context, we provide all shareholders with guidance on attendance in general shareholders meetings as well as proxy voting. For institutional investors with over a certain percentage of ownership, we directly contact and encourage them to exercise their voting rights by proxy.

Guarantee of Shareholder Proposal

HDKSOE and its shipbuilding subsidiaries have internal standards and procedures in place for handling shareholder proposals. We guarantee shareholders' rights to freely make inquiries and request explanations during general meetings of shareholders, and enable opportunities to question and provide opinions on the agenda items.

HDKSOE Status of Issued Stocks

(As of December 31, 2024)

Category	Authorized Shares	Issued Shares	Issuance Ratio
Common stock[1]	100,000,000	70,773,116	70.77%

1) The company has not issued other classes of shares such as dividend preferred convertible stocks.

HHI Status of Issued Stocks

(As of December 31, 2024)

Category	Authorized Shares	Issued Shares	Issuance Ratio
Common stock[1]	120,000,000	88,773,116	73.98%

1) The company has not issued other classes of shares such as dividend preferred convertible stocks.

HMD Status of Issued Stocks

(As of December 31, 2024)

Category	Authorized Shares	Issued Shares	Issuance Ratio
Common stock[1]	46,000,000	39,942,149	86.83%

1) The company has not issued other classes of shares such as dividend preferred convertible stocks.

HSHI Status of Issued Stocks

(As of December 31, 2024)

Category	Authorized Shares	Issued Shares	Issuance Ratio
Common stock	68,000,000	26,024,324	38.27%
Preferred Stock[1]	15,000,000	4,647,202	30.98%

1) Non-voting, participating, and cumulative preferred stocks such as dividend preferred convertible stocks

Major Shareholders of HDKSOE

(As of December 31, 2024)

Name	No. of Shares Owned	Percentage Ownership
HD Hyundai	24,807,124	35.05%
National Pension Service	4,645,278	6.56%
Employee Stock Ownership Association	61,625	0.09%

Major Shareholders of HHI

(As of December 31, 2024)

Name	No. of Shares Owned	Percentage Ownership
HDKSOE	66,601,116	75.02%
National Pension Service	5,872,109	6.61%
Employee Stock Ownership Association	127,876	0.14%
Lee Sang-kyun	1,107	0.00%

Major Shareholders of HMD

(As of December 31, 2024)

Name	No. of Shares Owned	Percentage Ownership
HDKSOE	16,936,492	42.65%
National Pension Service	4,890,035	12.31%
Fidelity Management & Research Company LLC	1,902,852	4.79%
Employee Stock Ownership Association	15,356	0.04%
Kim Hyung-kwan	2,740	0.01%

Major Shareholders of HSHI

(As of December 31, 2024)

Name	No. of Shares Owned	Percentage Ownership
HDKSOE	29,643,233	96.65%
Employee Stock Ownership Association	205,462	0.67%

Shareholder Protection

Protection of Shareholders' Interests

Communications with Shareholders

HDKSOE and its shipbuilding subsidiaries have engaged in active communication with shareholders by participating in IR conferences targeting domestic and international institutional investors and analysts, as well as organizing Corporate Day events and Non-Deal Road Shows (NDR). In addition, investors' understanding of the operational status is enhanced through interactive conference calls and webcasting (online audio broadcasting) during the quarterly earnings release.

In addition, business performance is regularly provided through posts on IR data such as quarterly earnings reports and monthly IR news in Korean and English. The IR inquiry pages on these websites include contact information for IR departments (phone numbers and email addresses), allowing investors to make inquiries about the companies' business status, and request a one-on-one or group meeting with IR staff when necessary.

Earnings reports, IR news, and contact information for the IR departments are also provided in English on the websites for the convenience of international investors. Since 2024, **HDKSOE** and **HHI** have published disclosures in English on the Korea Exchange's electronic disclosure system (KIND).

Shareholder Return Policies

HDKSOE and its shipbuilding subsidiaries continue to prioritize shareholder values by implementing shareholder-friendly policies, and developed a dividend policy targeting a 30% payout ratio (based on net income in separate profit and loss (P&L) statement). In 2024, **HDKSOE** paid KRW 5,100 per share, exceeding the target 30% payout ratio, and **HHI** and **HMD** paid the 30% target ratio of KRW 2,090 and KRW 710 per share, respectively.

The dividend policy is established to enhance shareholder returns, taking factors including investments, cash flow, financial structure, and dividend stability into comprehensive consideration. This policy may be adjusted, depending on the industry conditions and economic outlook.

The dividend is determined within the scope of profit available, comprehensively considering profit scale, investment plan for future growth, and financial structure. The dividend can be distributed in cash or shares through BOD resolutions and approval at general shareholders meetings.

Regulating Related Party Transactions among Affiliates, and Self-Dealing with Controlling Shareholders

HDKSOE and its shipbuilding subsidiaries stipulate that the matters falling under "Prohibition of Appropriation of Company's Opportunities and Assets" and "Transaction between Company and Directors, etc." should be determined with the approval of two-thirds or more of directors. An institutional mechanism is in place to prevent directors with a special interest from exercising their voting rights.

Without prior approval of the BOD, directors are not permitted to make transactions that are in the same business sectors of the company on their own or a third-party account, or to serve as partners with unlimited liability or directors of other companies with the same business purposes. Company regulation also makes it clear that directors should not exploit the business opportunities of the company for the benefit of their own or a third party.

The Related Party Transactions Committee, under the BOD, handles the monitoring of related party transactions, selection criteria for transaction counterparts, and the state of related party transactions. The committee also reviews and approves the matters delegated by the BOD. Provided that directors are able to make decisions with full understanding of the issues such as conflict of interests, and fairness of procedures and content of related party transactions, the Related Party Transactions Committee of the BOD can give comprehensive approvals on related party transactions when deemed necessary.

BUSINESS CASE

Change in Record Date

HDKSOE, **HHI**, and **HMD** changed the record date to after the dividend declaration date, in order to enhance the shareholders' ability to anticipate dividend payouts. This measure was taken to protect shareholder rights and build long-term trust. HDKSOE and its shipbuilding subsidiaries will continue to prioritize enhancing shareholder value and actively implement shareholder friendly policies.

Respect for the Rights of Sole Shareholders and Minority Shareholders

HDKSOE and its shipbuilding subsidiaries have specified the respect for sole shareholder's rights and minority shareholders' rights in Article 17.2 of the Articles of Incorporation, and Article 17 of the Corporate Governance Charter. For significant changes in ownership structure or major business operations such as mergers, business acquisitions, physical division and spin-off, and comprehensive exchanges and transfers of stocks, measures to protect shareholders' rights will continue to be reviewed and improved, including collecting shareholders' opinions and protecting the rights of dissenting shareholders.

Protection of Shareholders According to Changes in Ownership Structure or Major Businesses

HDKSOE and its shipbuilding subsidiaries stipulate that a merger, a spin-off, or a spin-off & merger requires a merger agreement which is subject to approval by a special resolution at a general shareholders meeting. Dissenting shareholders are also guaranteed to exercise their appraisal rights. For spin-offs, the shareholders with non-voting class stocks are also provided with voting rights. If a merger or spin-off merger increases the burden on the shareholders of the affected company, the company must obtain unanimous consent from all shareholders, in addition to the special resolution at the general shareholders meeting.

Furthermore, if there are any material activities that will affect business operations such as the transfer of all or a critical part of the business operations, or comprehensive exchanges and transfers of stocks, approval through the special resolution at the general shareholders meeting must be obtained. In the case of comprehensive exchanges and transfers of stocks, HDKSOE and its shipbuilding subsidiaries guarantee the appraisal rights of the dissenting shareholders. If the dissenting shareholders exercise their appraisal rights, the companies will buy the corresponding shares within a month from the end of the appraisal request period.

HD Hyundai[1] Shareholding Status

(As of December 31, 2024)

Shareholder	Number of Shares Owned[2]	Percentage Ownership
Chung Mong-jun	21,011,330	26,60%
National Pension Service	6,542,297	8.28%
Chung Ki-sun	4,837,985	6.12%
ASAN Foundation	3,078,300	3.90%
Asan Nanum Foundation	389,915	0.49%
Kwon Oh-gap	45,030	0.06%
Noh Jin-yul	4,782	0.01%

1) Largest shareholder of HDKSOE
2) HD Hyundai issues common stocks only and has not issued other classes of shares such as dividend preferred convertible stocks.

Ethics & Compliance

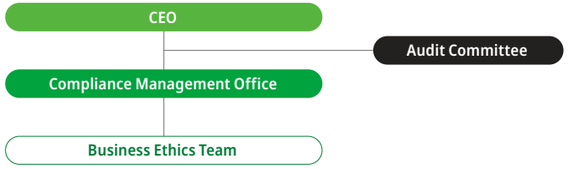
Ethical Management Governance Framework

Roles and responsibilities

Ethical Management Organization

The CEO has the authority to establish ethical management plans and determine its direction for **HDKSOE and its shipbuilding subsidiaries**. The Audit Committee, based on its independence and subject matter expertise, audits, evaluates, and reviews corrective measures. The Business Ethics Team, which works under the Compliance Management Office, operates the ethical management system, and runs ethical management training and programs for employees. This team also investigates unethical acts, conducts risk assessment, and takes preventive risk management measures.

Organizational Chart



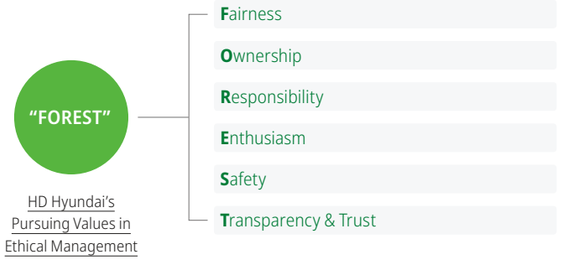
Ethical Management Strategy

Foundation of Ethical Management

Ethical Management Values

HDKSOE and its shipbuilding subsidiaries strive to realize HD Hyundai Group's ethical management values. Like a "Forest" that contributes to the coexistence and mutual growth of the creatures that live in it, we aim to contribute to the growth and development of all our stakeholders.

Pursuing Values in Ethical Management

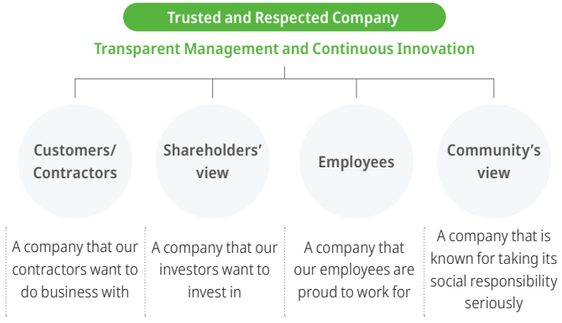


HD Hyundai's Pursuing Values in Ethical Management

Establishment of Ethical Management Goals

All employees of **HDKSOE and its shipbuilding subsidiaries** are required to uphold ethics as a top priority and comply with the code of ethics in all business activities. We aim to conduct transparent and innovative management with the objective of becoming a trusted and respected company.

Ethical Management Goals



Strengthening Ethical Education

HDKSOE and its shipbuilding subsidiaries conduct annual online and offline training to raise awareness of ethical management among all employees (including permanent, contract, and dispatched workers). Offline ethical management training is provided to new employees that are unfamiliar with the corporate culture, and each department conducts its own training. In addition, ethical training programs are provided to contractors to convey the commitment to ethical management and inform them of reporting channels. Contractors receive the same online training as employees.

List of Ethics Training Provided

Hi-Class Training	Video content education
Duty With Integrity Training	Training that teaches ethics guidelines that provide standards for decision making while conducting business activities
Self-Assessment	Annual online (PC, mobile devices) survey to assess employee understanding of the company's ethical management practices
Group Training	Ethical management training for executives and employees of operational departments

Future Direction for Ethical Management

Stakeholders	Value in Pursuit	Future Direction
Shareholders/Investors	Transparency	Strengthening corporate value, providing transparent business management information, equal treatment of shareholders, fair dividends
Contractors/Competitors	Fairness	Fair business practices, protecting technology and business information, fair scouting
Government/Related Agencies	Law-abiding	Maintaining sound and fair relationships, cooperation in policies, faithful payment of taxes
Customers/Consumers	Customer Satisfaction	Promoting customers' interests, technology development, quality improvement
Employees	Respect	Respect for human rights and privacy, improving working conditions, no discrimination
Community	Corporate Citizenship	Eco-friendly management, social contribution activities

Ethics & Compliance

Ethical Management Strategy

Ethical Management Code and Guidelines

Charter of Ethics

HDKSOE and its shipbuilding subsidiaries publicly announced the Charter of Ethics that is commonly applied and respected at the group level. In December 2023, the Charter was revised to reflect the core values of HD Hyundai. All employees learn the Charter and strive to carry out their duties based on a strong sense of responsibility.

Charter of Ethics for HDKSOE and its Shipbuilding Subsidiaries

Code of Conduct

HDKSOE and its shipbuilding subsidiaries have established a Code of Conduct to prescribe ethical behavior for employees in order to promote effective ethical management practices. The Code of Conduct provides clear standards for appropriate behavior within the organization and guidelines for employees to follow.

Code of Conduct for HDKSOE and its shipbuilding subsidiaries

Business Ethics Guideline

HDKSOE and its shipbuilding subsidiaries established the Business Ethics Guideline in accordance with ethical management-related laws as the Anti-Corruption Act, and the growing public awareness of ethical management practices. This serves as a guide for employees to act in an ethical manner and maintain a transparent and fair organizational culture.

Business Ethics Guideline for HDKSOE and its Shipbuilding Subsidiaries

Ethical Management Practice Pledge

HDKSOE and its shipbuilding subsidiaries require all employees and contractors to submit an Ethical Management Practice Pledge. This Pledge expresses the signee's commitment to avoid unfair transactions, misconduct, illegal solicitations, or bribery, and emphasizes compliance with the group's ethics regulations and guidelines to observe the Anti-Corruption Act.

Group's Ethical Management Framework

Charter of Ethics	**Code of Conduct**	**Ethical Management Practice Programs**
A concise declaration of HD Hyundai's management philosophy based on ethical management	Specified guidelines for each area in the Ethics Charter and standards for ethical behaviors	Specific criteria for ethical behaviors and work processes to practice ethical management
Code of Conduct for Business Partner	**Business Ethics Guideline**	**Training and Promotion**
Ethical standards to ensure fair & transparent transactions, coexistence, and mutual prosperity with contractors	Specific systems and procedures to establish and develop a fair and transparent corporate culture	Commitment of employees toward active practice and spread of ethical management

Prevention and Management of Unethical Conduct

Activities for Managing Unethical Conduct

Self-Assessment on Compliance with Ethical Management

HDKSOE and its shipbuilding subsidiaries conduct an annual self-assessment on compliance with ethical management-related regulations with a survey-type checklist, which includes topics such as bribery, entertainment, and conflicts of interest. The self-assessment enables employees to attain a deeper understanding and awareness of the relevant rules.

Gift Refusal System

HDKSOE and its shipbuilding subsidiaries operate a system for refusing and returning monetary gifts received from contractors and partners. The gifts can be returned through a simple notification process, but if returning a gift is not possible, it is donated to a social welfare organization.

HR System and Ethics & Compliance

HDKSOE and its shipbuilding subsidiaries conduct regular activities and training to ensure employees are compliant with the group's code of ethics. In accordance with the group's personnel policies that emphasize compliance and ethical management, violators of the code of ethics are handled based on the regulations of the internal disciplinary committee. Under a zero-tolerance principle, violators may be subject to disciplinary actions depending on the severity of the violation, including warnings, reprimands, pay cuts, suspensions, and dismissal. It is equally applied to all employees of HDKSOE and its shipbuilding subsidiaries.

Disciplinary System

If an employee violates the code of ethics, they will be subject to a disciplinary process according to the employment rules. Under this process, the company notifies the offender 7 days before a Personnel Committee meeting, which will be held to determine whether a violation has occurred and the subsequent disciplinary action. The offender is given an opportunity to speak for themselves, and they may request to have three testifiers and up to three witnesses. If the offender receives severe penalties of suspension or greater, they may file an appeal within 10 days. The Personnel Committee will reconvene within 15 days of the appeal, and the result will be notified within 7 days of the meeting.

Penalty in Evaluation and Promotion

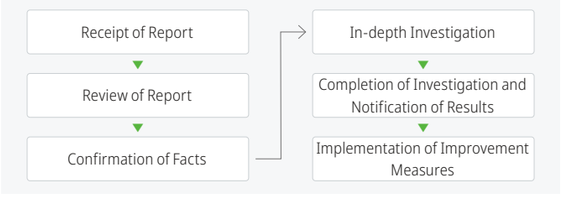
If an employee receives severe penalties of pay cuts or greater for their misconduct in ethical management and compliance, their results in the regular performance evaluation are downgraded (pay cut: 1 level down, suspension: 2 levels). In regard to promotions, the company operates a promotion point system, and points are deducted depending on the severity of disciplinary action (pay cut: -4 points / reprimand: -2 points / warning: -1 point). Furthermore, those who receive severe disciplinary actions of suspension or greater are excluded as candidates for promotion.

Unethical Conduct Reporting Channels

As part of an effort to strengthen an ethical corporate culture, **HDKSOE and its shipbuilding subsidiaries** operate various channels—by phone, mail, and online—that can be used to report unethical conduct or practices. The nature and content of the reports are kept strictly confidential. If an informant faces unfair treatment, they can request the Business Ethics Team for correction and protection, and appropriate action is taken.

Unethical Conduct Reporting/Consulting Service of HDKSOE and its Shipbuilding Subsidiaries

Procedures for Handling Unethical Conduct Reports



Informant Protection and Rewards

HDKSOE and its shipbuilding subsidiaries maintain the strictest confidentiality for the informant and the content of the report. The identity of the informant will not be publicly disclosed without their consent, and it is ensured that there are no adverse consequences or discrimination experienced by the informant as a result of the report. Moreover, if such a report contributes to saving costs and preventing financial losses for the company, a reward of up to KRW 1 billion may be granted.

Ethics & Compliance

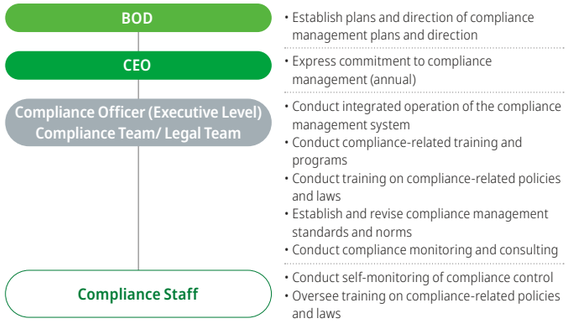
Compliance Management Governance

Governance Roles and Responsibilities

Compliance Management Organization

HDKSOE and its shipbuilding subsidiaries have respectively established their own compliance management governance. In line with the compliance management plan and direction determined by the Board of Directors (BOD) and CEO, various activities including compliance-related training and compliance control monitoring are carried out.

Compliance Management Organizational Chart



Designation of Compliance Officers

Category	Name	Appointment Date (Term)	Experience
HDKSOE	Kim Min-sung	February 7, 2023 (3 years)	Former Legal Team Leader at HD Hyundai Oilbank Current Head of Domestic Legal Division and Compliance executive at HDKSOE
HHI	Kim Tae-jeong	April 24, 2024 (3 years)	Former Compliance Team and International Legal Team Leader at HDKSOE Current Executive of Legal Team at HHI Current Head of International Legal Team at HDKSOE
HMD	Bae Sang-woon	December 9, 2022 (3 years)	Former In-house Counsel at Seongdong Shipbuilding & Marine Engineering Co., Ltd. Current Senior Counsel at HMD Legal Team
HSHI	As an unlisted company, there has not been any designation or operation of a Compliance Officer. The Fair Trade Compliance Manager is in charge of compliance control.		

Compliance Management Strategy

Foundation Compliance Management

Ethics and Compliance Management Practice Declaration

Every year, the CEOs of **HDKSOE and its shipbuilding subsidiaries** publicly declare their commitment and policies to practice ethical and compliance management, including establishing an anti-corruption management system, spreading a culture of fair trade, and continuously revising ethical and compliance management systems.

Compliance Control Standards

HDKSOE and its shipbuilding subsidiaries set compliance control standards in 2012 and have applied them to adhere to laws and regulations and to promote transparent business practices. The compliance control standards define the roles and responsibilities of the BOD, CEO, and Compliance Officer and address matters such as compliance risk assessment, operation of compliance-related training programs, employees' voluntary compliance monitoring, reporting and processing of violations, and validity evaluation of compliance control standards. The CEO establishes and revises the compliance control standards with the approval of the BOD. In case of the revisions caused by amendments to related laws, reporting to the BOD can be substituted for its approval.

Compliance Guidelines for Anti-corruption and Economic Sanctions Laws

To establish a fair and clean management culture and manage the risks of legal violations, **HDKSOE and its shipbuilding subsidiaries** conduct thorough preliminary checks and reviews on anti-corruption activities in accordance with the Anti-Corruption Laws Compliance Guidelines. Furthermore, monitoring activities are conducted based on the Economic Sanctions Laws Compliance Guidelines to prevent risks related to domestic and international economic sanctions. Efforts are made to minimize the risks of illegal acts that employees may commit while performing their duties by operating a compliance pre-approval system, including the approval of providing economic benefits and due diligence for transactions related to economic sanctions, as well as providing one-on-one consultation with experts through a legal support system.

Anti-Corruption Laws Compliance Guidelines, Economic Sanctions Laws Compliance Guidelines

- HDKSOE Anti-Corruption Laws Compliance Guidelines
- HHI Anti-Corruption Laws Compliance Guidelines
- HMD Anti-Corruption Laws Compliance Guidelines
- HSHI Anti-Corruption Laws Compliance Guidelines

Compliance Training

HDKSOE and its shipbuilding subsidiaries regularly hold compliance training sessions for all employees. The training covers topics such as fair transaction practices, subcontracting, and illegal dispatch, with differentiated curriculum for different responsibilities and positions. Moreover, awareness of compliance management among employees is increased by identifying specific training needs on key compliance issues based on risk assessment results and providing online and offline training, as well as consulting services.

Completion of Key Compliance Training Programs in 2024

(Unit: person)

Category	Compliance Staff Training	Compliance Training in 1H	Compliance Training in 2H[1]
HDKSOE	81	1,236	361
HHI	125	5,911	1,581
HMD	40	1,504	547
HSHI	57	3,571	854

1) 2H compliance training is conducted for departments that scored mid-risk or higher in the risk assessments, so the number of participants is less than those in 1H

Ethics & Compliance

Compliance Risk Management

Operation of Compliance Program (CP)

In accordance with the CP regulations, **HDKSOE and its shipbuilding subsidiaries** monitor CP operation and employee compliance at least once every six months. Based on the monitoring results, manuals and on-site training are provided, as appropriate, for those departments that have a higher risk of violations. The results of monitoring and record of training are reported to the BOD twice a year.

Compliance Risk Assessment

HDKSOE and its shipbuilding subsidiaries conduct an annual compliance risk assessment to identify and analyze compliance risks. The compliance risk assessment evaluates the risks that employees may face in the course of business such as the Monopoly Regulation and Fair Trade Act (hereinafter referred to as "Fair Trade Act"), the Fair Transactions in Subcontracting Act (hereinafter referred to as "Subcontracting Act"), and the Anti-Corruption Act. The assessment also evaluates the effectiveness of the risk controls. Based on the assessment results, measures are implemented to mitigate risks through risk-specific training, monitoring, and auditing. In addition, the effectiveness of the training is monitored by reviewing improvements for each risk indicator.

Cyber Counseling for Unfair Transactions

To establish a culture of fair subcontracting practices, **HDKSOE and its shipbuilding subsidiaries** operate a cyber-counseling system by which contractors can report or inquire about potential unfair transactions directly to the compliance management teams. To ensure that the system operates efficiently, any information on the informant is kept confidential. If an informant is disadvantaged from exposure of identity or discriminated against, the informant can request the Business Ethics Team for protection or relief.

In 2024, two cases of subcontract counseling were received. These cases were investigated and were closed in due process.

Compliance Newsletter

HDKSOE and its shipbuilding subsidiaries select compliance issues related to fair trade, anti-corruption, and economic sanctions and provide timely information to employees in a newsletter format. In 2024, 15 compliance newsletters were delivered to employees on key legal amendments of the Fair Trade Act and Enforcement Decree of the Improper Solicitation and Graft Act, as well as Russian economic sanctions.

Anti-bribery Management System Certification

HDKSOE and its shipbuilding subsidiaries obtained ISO 37001, an international certification for anti-bribery management systems from the international verification organization, Lloyd's Register Quality Assurance (LRQA), in 2022. This international standard defines the system that prevents and manages the risks of bribery and corruption arising from corporate activities. To obtain the certification, a total of 45 items in 7 ethical management categories were analyzed for over 2 months, including organizational context, leadership, planning, and support. The results satisfied all detailed criteria and demonstrated high-level compliance management capabilities and efforts toward fair transactions with contractors.

ISO 37001 Certificates

Third-party Certification Status of Anti-bribery Management System

Category	Certification Standard	Certifying Body	Validity Period	Scope of Certification Status
HDKSOE	ISO 37001:2016	LRQA	Sep 2022 ~ Sep 2025	100%
HHI	ISO 37001:2016	LRQA	Sep 2022 ~ Sep 2025[1]	100%
HMD	ISO 37001:2016	LRQA	Sep 2022 ~ Sep 2025	100%
HSHI	ISO 37001:2016	LRQA	Oct 2022 ~ Oct 2025	100%

1) Validity period changed after renewal in 2025 (Sep 2025 – Sep 2028)

Compliance Risk Management Areas

Risk Assessment	Fair Trade Act, Subcontracting Act, Anti-Corruption Act, etc.
Pre-check Systems	Consultation systems including legal support system, email, phone calls, and visits
Internal Control Systems	Compliance control standards and Compliance Program

Compliance Risk Assessment Status

Category	Number of Departments Assessed (Percentage)
HDKSOE	102 (100%)
HHI	182 (100%)
HMD	40 (100%)
HSHI	57 (100%)

Number of Compliance Violations

(Unit: case)

Category	HDKSOE	HHI	HMD	HSHI
Fair trade	0	0	0	0
Corruption and bribery	0	0	0	0

Information Security

Information Security Governance

Roles and Responsibilities

Executive Management Responsibility

HDKSOE and its shipbuilding subsidiaries appoint employees with expertise in information security and privacy protection for the roles of Chief Information Security Officer (CISO) and the Chief Privacy Officer (CPO). The CISO is responsible for the operation of information security organizations, security planning, audit, risk management, and mock training and drills. The CPO is in charge of establishing internal management plans for privacy protection, overseeing management of personal information, processing complaints and damage relief, and managing personal information files.

Roles of the Security Committee

HDKSOE and its shipbuilding subsidiaries hold a meeting for the Security Committee at least once a year which is attended by key executives and the CEO of each company as Chair of the Committee. The Security Committee deliberates and coordinates important security decisions such as the establishment, revision, and abolition of company-wide security regulations, plans, and budgets for security programs, securing of human resources, improvement measures and support for enhanced security levels, the introduction of new technologies, responses to security incidents, and preventative measures to prevent recurrences.

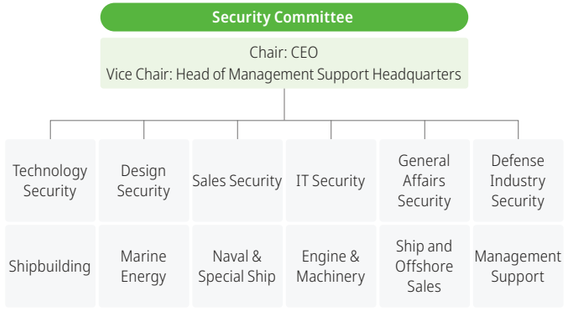
HDKSOE Security Committee

Incident Response Team (IRT)

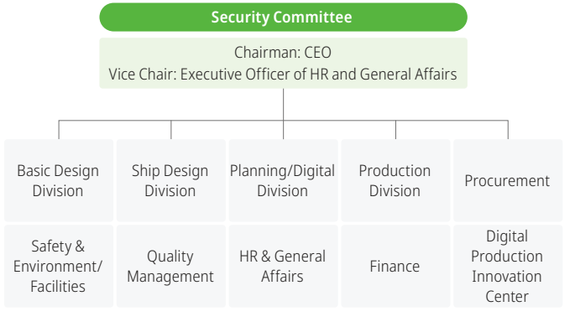
HDKSOE and its shipbuilding subsidiaries have formed an Incident Response Team (IRT) to promptly respond to information security incidents, thereby minimizing damages from such incidents and returning to normal operations as soon as possible.

The IRT, led by the CISO, consists of security officers in each business unit, security managers and staff in each department, operators of each computer system, and outside technicians as necessary. The IRT investigates incidents, takes necessary actions, establishes measures to prevent recurrence of incidents, and shares relevant information within the group. In particular, if there is a leak of personal information, information on national core technology, defense industry technology, or any other critical national information asset, the IRT reports the incident to the CPO or the Managing Officer of National Core Technology/ National Defense Industry Technology, as appropriate, who will report to external agencies and cooperate with them for damage recovery.

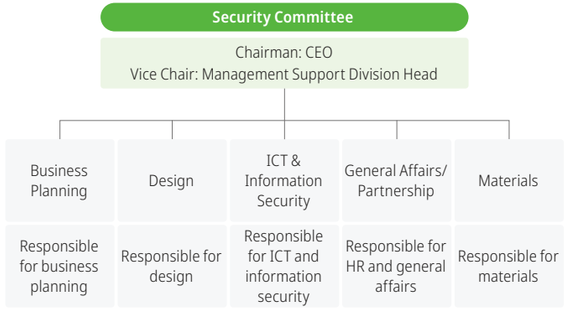
HHI Security Committee



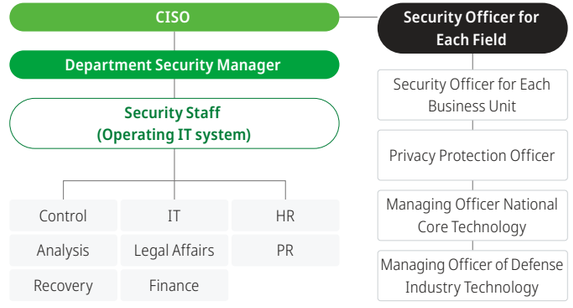
HMD Security Committee



HSHI Security Committee



IRT Structure



Information Security

Information Security Strategies

Internalization of Information Security Principles

Establishment and Revision of Information Security Regulations

HDKSOE and its shipbuilding subsidiaries have built an integrated security management system at the group level by establishing and revising information security regulations (on security management, security of national core technologies, privacy protection, security of GRC facilities, etc.) to respond to changes in governing domestic and international laws as well as in security environments.

Such information security regulations are revised regularly, reflecting revisions of relevant laws, examinations of the security level, analysis of information security vulnerabilities, results of penetration testing, and inspections of the incident response system.

Posting of Information Security Regulations

HDKSOE and its shipbuilding subsidiaries post the information security regulations (on security management, security of national core technologies, privacy protection, security of GRC facilities, etc.) on the intranet to which all the executives and employees have access. They should refer to such regulations posted on the intranet to comply with the detailed requirements specified in the security regulations while performing their duties.

Operation of Information Security Regulations

HDKSOE and its shipbuilding subsidiaries operate a Personal Penalty Point System for employees. Based on this, penalty points are imposed on any violation of information security regulations.

Under this system, penalty points are imposed on those employees who fail to comply with security regulations or to properly perform security management tasks during regular, random, and special inspections. The penalty points differ depending on the seriousness of violations, and the points double for a second offense of the same issue, and triple for three or more offenses. The penalty points are accumulated for two years. When accumulated penalty points exceed 10 points, the employee involved is referred to the Personnel Committee and is subject to disciplinary measures stipulated by the employment rules and regulations on reward and punishment.

Information Security Training

To raise the awareness of employees, **HDKSOE and its shipbuilding subsidiaries** regularly provide security training on the structure and use of information security systems, as well as proper compliance and behavior in performing duties. Moreover, information security training is provided at least once a year for employees who handle national core technology and personal information.

Security Training Program

Title	Target	Description
Security training for new employees	New employees	• Security rules, the practice of security commitment, compliance with the protection of national core technology and confidential business information
Training for division security managers	Department security managers	• Internal security regulations (comprehensive), use of security portal system
Privacy protection training	Employees handling personal information	• Laws related to personal information, measures to secure safety, procedures of response to information leakage
Training for national core technology handlers	Employees handling national core technology	• Relevant laws related to national core technology and export reporting procedures, response procedures to technology leakages and breaches
Training in security change management	GRC residents	• Shift of perception on security, preventing phishing scams, and precautions when using a business laptop
Monthly security training	All employees	• Monthly training on “Security Day” (security measures related to email, documents, and in everyday life)
Training for prospective retirees	Prospective retirees	• Procedures to review security for prospective retirees, compliance with the protection of national core technology and confidential business information

Information Security Risk Management

Information Security Risk Management Framework

Third-party Certification of Information Security System

HDKSOE and its shipbuilding subsidiaries have continued to advance various matters to ensure information security such as physical measures against threats to information security, continuous revision of information security procedures and regulations, and enhanced system security programs and networks. Based on these management activities and achievements, the information security system has obtained and maintained the international standard (ISO 27001) certification by an accredited third party.

HDKSOE and **HHI** has obtained and maintained third-party certifications for its Privacy Information Management System (ISO 27701), as well as cloud information protection and privacy protection (ISO 27017, ISO 27018), in recognition of its robust security management capabilities. In particular, in 2022, **HHI** became the first company in the shipbuilding industry to obtain and maintain all 4 international standard certifications on information security, proving its excellence in information security management in the global market.

Third-party Audit of General IT Technologies

HDKSOE and its shipbuilding subsidiaries have secured the capability for the overall operation, data access security, and development and modification of IT programs necessary for operating the internal accounting management system and other systems.

In addition, third-party audits are conducted concerning the infrastructure setup, security management activities, and overall information technology general controls related to the acquisition, development, maintenance, and operation of IT programs.

Third-party Certifications for Information Security Systems

Classification	Certification Standard	Valid Term	Scope of Certification
HDKSOE	ISO/IEC 27001:2022	February 2024 – February 2027	All business sites using the HDKSOE system
	ISO/IEC 27017:2015		
	ISO/IEC 27018:2019		
	ISO/IEC 27701:2019	February 2025 – February 2027	
	ISO 22301:2019	December 2022 – December 2025	HD Hyundai Global R&D Center
HHI	ISO/IEC 27001:2022	February 2024 – January 2027	All business sites using the HHI system
	ISO/IEC 27017:2015		
	ISO/IEC 27018:2019		
	ISO/IEC 27701:2019		
HMD	ISO/IEC 27001:2022	January 2025 – January 2028	All business sites using the HMD system
HSHI	ISO/IEC 27001:2022	December 2024 – December 2027	All business sites using the HSHI system

Information Security

Information Security Risk Management

Information Security Risk Management Framework

Assessment of Security Level (Analysis of vulnerability, penetration testing, etc.)

To enhance the security level and strengthen competitiveness, **HDKSOE and its shipbuilding subsidiaries** conduct security level assessments annually, thereby minimizing security weaknesses and stabilizing the security system.

Criteria for Security Level Assessment

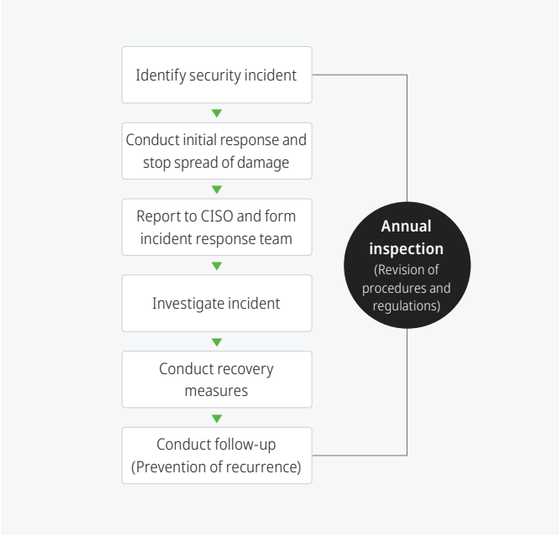
Classification	Items
Management security (43 items)	• Establishment and revision of security regulations • Development of an annual business plan • Commitment to security pledge, security activities, security training, etc.
Physical security (43 items)	• Designation of protected areas and management of access authorization • Operation of security guards and access control procedures • Installation, operation, and management of CCTVs
IT security (44 items)	• Control of access to servers and databases, security management • Security incident response procedures and team • Confirmation of protection level of IT assets
Privacy protection (55 items)	• Establishment of privacy protection management team and an annual plan for privacy protection • Collection, use, provision, and destruction of personal information • Check on the existence of mandatory safety measures for private information
Technology security (2 areas)	• Inspection of vulnerabilities in servers, network equipment, etc. • Third-party penetration testing of a publicly accessible web system (such as company website)

Responses to Security Incidents

To identify any attempts related to security incidents or threats, **HDKSOE and its shipbuilding subsidiaries** detect signs of potential security incidents through regular monitoring (EDR integrated security incident, firewalls, penetration prevention systems).

If an employee reports an incident or an incident is identified through security controls, an emergency response procedure is undertaken by the IRT that comprises security control and analysis teams, the IT system manager, and other internal experts. In addition, actions to recover and improve systems are taken to prevent recurrence through in-depth analysis of the types and progress of the incident.

Response Process in Case of Incident



Privacy Protection Activities

Privacy Protection System and Raising Awareness

HDKSOE and its shipbuilding subsidiaries recognize the importance of privacy protection and strive to protect the personal information of all stakeholders. To manage personal information related risks across the entire group, each company appoints its own CPO to ensure that the personal information of all stakeholders including customers, employees, and supplier companies is safely managed according to the governing laws, and any loss, theft, leakage, forgery, falsification, or corruption is prevented.

Furthermore, it is monitored whether the personal information handling system complies with the mandatory safety measures for personal information (administrative, technical, and physical safety measures) to enhance the level of privacy protection through improvement activities.

Collection and Processing of Personal Information

HDKSOE and its shipbuilding subsidiaries collect personal information only to the minimum extent necessary to provide customer consultation and various services. Collected personal information is not used for purposes other than those previously defined. If the purpose of use is changed, prior consent is sought from the individuals.

Personal information is immediately destroyed once the objective of collecting personal information has been fulfilled. The information is destroyed in a safe and unrecoverable manner such as permanent deletion or incineration.

Automatic Collection of Personal Information and Refusal

In principle, **HDKSOE and its shipbuilding subsidiaries** do not use cookies, which enable users to store and retrieve personal information automatically. The rights of information subjects to opt in/out of the automatic collection of personal information (cookie installation) are respected, and instructions on how to opt out of automatic collection are provided through the Privacy Policy.

Rights and Obligations of Personal Information Subjects

HDKSOE and its shipbuilding subsidiaries respect the right of information subjects to access personal information, correct errors, and request deletion, and are committed to our obligations to take necessary actions to uphold these rights. When an information subject requests corrections of errors, such personal information will not be used until the corrections are made. Moreover, when deletion is requested, the information that is deleted will not be retained any longer.

Rights of Personal Information Subject

Right to access	Information subjects have the right to request access to their personal information held by the company at any time
Right to correction and deletion	Information subjects have the right to request for the correction and deletion of their personal information held by the company at any time
Right to suspend personal information processing	Information subjects have the right to request for the suspension of processing their personal information held by the company at any time

Personal Information Safety Measures

In handling personal information, **HDKSOE and its shipbuilding subsidiaries** take physical and administrative measures to ensure the prevention of loss, theft, leakage, forgery, falsification, or corruption of such information. For further details about personal information safety measures, please refer to the Privacy Policy of each company.

- HDKSOE Privacy Policy
- HHI Privacy Policy
- HMD Privacy Policy
- HSHI Privacy Policy

Risk Management

Risk Management Governance

Roles and Responsibilities

Risk Management Oversight

HDKSOE and its shipbuilding subsidiaries work to accurately identify business-related risks, while minimizing the impacts of risk factors on businesses and finance through systematic and effective countermeasures. In addition, responsibilities are allocated to relevant departments to identify and address impacts of the company on the economy, environment, and stakeholders.

Role of the Senior Management

The senior management of **HDKSOE and its shipbuilding subsidiaries** operate and monitor risk management processes. In particular, the Risk Management Committee reviews risks and seeks countermeasures at the company level for significant risk factors as foreign exchanges, raw materials, etc. The Chief Financial Officer reports to the Board of Directors about the key risks that can have significant impact on current operations or future business plans.

In line with the shift to an ESG management paradigm, key identified risks and response measures related to the environment, society, and governance are reported by the Chief ESG Officer to the ESG Committee under the Board.

Role of the Internal Auditor

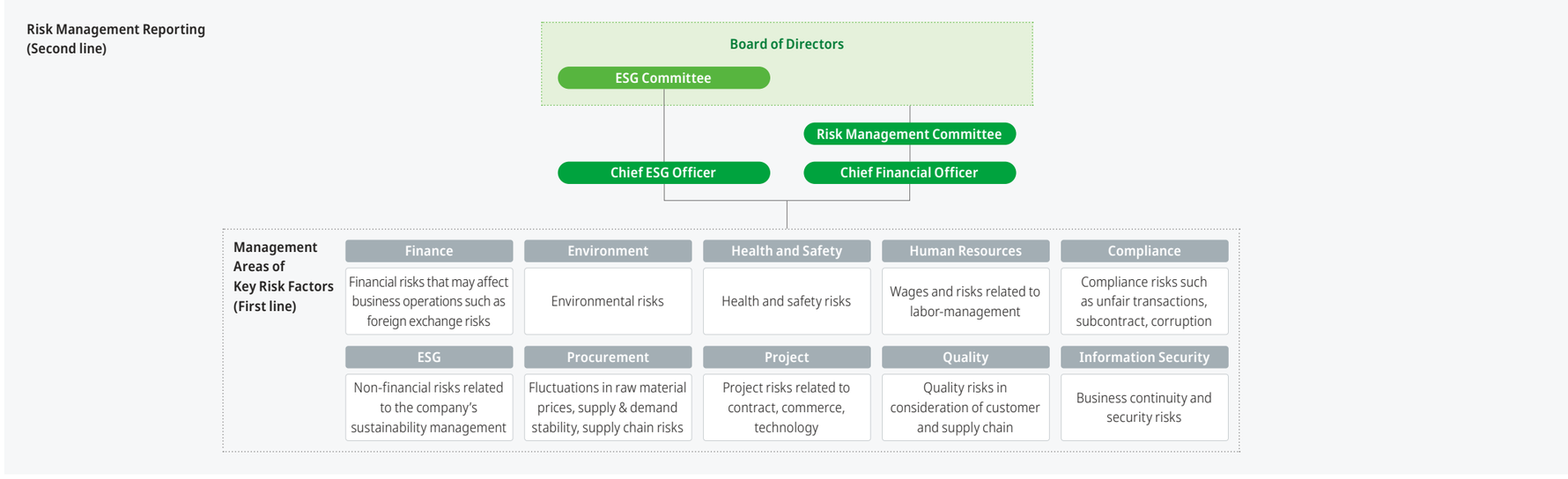
HDKSOE and its shipbuilding subsidiaries monitor the effectiveness of risk management activities through internal accounting control, support functions and ethical management functions to ensure that such activities are conducted systematically and effectively in accordance with internal regulations and guidelines.

The internal auditors review the appropriateness and effectiveness of each department's responsibilities related to internal control and risk management, and then report the results directly to the Audit Committee under the Board of Directors. In order to maintain its objectivity and reliability, the internal audit function has unrestricted access to required documents and data, and is independent from the executive team.

Role of the External Auditor

HDKSOE and its shipbuilding subsidiaries undergo annual audits by independent auditors to protect the interests of all stakeholders and to assess and manage the company's risk management system. The accounting practices of each company and internal controls are thoroughly reviewed in order to minimize potential risk. Any issues in the financial statements that may have a significant impact on stakeholder decision-making are jointly reviewed by the company's Audit Committee and external auditor, thus enhancing reliability and transparency.

Risk Management Structure



Risk Management

Risk Management Strategy

Risk Management Procedures

Enterprise-wide Risk Management

HDKSOE and its shipbuilding subsidiaries conduct enterprise-wide risk management activities led by the Risk Management Committee to properly manage a variety of risks and ensure the soundness, reliability, and stability of the company.

Risk exposures are calculated by applying measurement and analysis indicators based on risk factors that have significant impacts on the business. Then, policies are developed and implemented to mitigate and reduce individual risks. Priority risks that are deemed to be crucial for business performance (profitability), such as foreign exchange and raw material, are managed by the Risk Management Committee. To minimize risks such as value change in foreign currency transactions and loss in assets, as well as price fluctuations and unstable supply of raw materials, the committee puts efforts on accurate prediction and proactive measures. As for the non-financial risks, the company conducts double materiality assessment and analyzes impacts, risks, and opportunities (IRO) of material risks, and reflects them in the corporate strategy for systematic management.

HDKSOE and its shipbuilding subsidiaries offer risk management training for all employees and share the company's risk management rules and regulations. To strengthen the oversight of enterprise-wide risk management, separate training sessions are conducted for Audit Committee members (outside directors) at least once a year, in line with the company's internal accounting management policy.

Based on the internal policy on "Risk and Opportunity Management," HDKSOE and its shipbuilding subsidiaries incorporate risk and opportunity management plans established by each department into department-level and enterprise-level quality policies. The results of overall risk and opportunity management are compiled and reported as part of the quality management performance. Throughout these efforts, continuous improvements are explored. In addition, the company has established "Principle of Product & Service Safety for Customers" to manage consumer safety risks regarding products and services.

Risk Identification

HDKSOE and its shipbuilding subsidiaries comprehensively analyze overall data on the company's past management performance, together with revisions to laws related to the shipbuilding industry, changes in economic conditions, and shifts in the expectations or requirements of stakeholders. Through this analysis, we are able to identify risks that may have great impacts on current operations or future business plans.

Risk Assessment

HDKSOE and its shipbuilding subsidiaries confirm risk factors according to the risk identification process, then assess the likelihood (frequency) and magnitude (intensity) of each risk factor.

The likelihood and magnitude of individual risk factors can be assessed by both a quantitative method as an absolute measure and a qualitative method as a relative measure, depending on the characteristics of risks. The likelihood and magnitude of each risk factor are regularly evaluated to monitor any exposure to these risks.

Risk Prioritization

HDKSOE and its shipbuilding subsidiaries conduct risk assessments to select priority risks, which are risk factors that require imminent action due to high likelihood (frequency), or which require planning of countermeasures due to their great magnitude (intensity). When prioritizing risks, we consider not only the results from the risk assessment, but also any issues from past experience or lessons learned and their financial impacts.

Risk Appetite and Response Measures

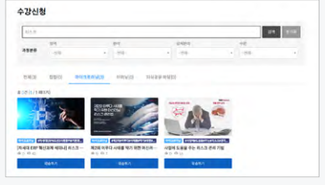
HDKSOE and its shipbuilding subsidiaries analyze both the probability as well as potential business and financial impacts of assessed risks including priority risks. Based on this analysis of probability and impact, appetite and tolerance are assigned to each risk factor. In order to calculate the probability and impact of key risks, sensitivity analysis is conducted for key risk factors as needed. If there are concerns regarding potential restrictions on business activities or financial losses, appropriate mitigation measures are developed.

Probability and Impact Assessment of Risk Factors

HDKSOE and its shipbuilding subsidiaries manage risks across key areas such as environmental, safety, security, quality, and compliance. Based on internationally recognized risk management frameworks (such as ISO), a proprietary risk assessment methodology is applied to assess the probability and impact of priority risks, which are then used to analyze and identify the overall level of risk. In addition, operational conditions are assessed to define the impact that each risk factor has on the company.

2024 Audit Committee Risk Management Training

Category	Details
Compliance risk	Role of the Audit Committee and key trends of financial authorities
Technical risk	Understanding new trends in AI transformation and their influence on businesses
Accounting risk	Characteristics of shipbuilding accounting and recent accounting trends
Business risk	Impact of the U.S. presidential election results



HiClass Risk Management Training

Risk Assessment Cycle

Assessor	Assessment Cycle
Foreign Exchange Risk Management Committee	Monthly, and as required
Raw Material Risk Management Committee	Quarterly
ESG Committee	Annually, and as required

Risk Management

Risk Management Activities

Business Continuity Risk Management

Business Continuity Management System Certification

HDKSOE established and is actively operating a business continuity management system that can minimize damages and restore operations in the shortest amount of time in case of disruptions of the company's major functions due to security incidents, physical accidents, and natural disasters. Based on this system, the company has obtained and maintained ISO 22301 certification from DNV (Det Norske Veritas), an international standard for the business continuity management.


DNV
MANAGEMENT SYSTEM CERTIFICATE
Korea Shipbuilding & Offshore Engineering Co., Ltd.

HDKSOE ISO 22301 certification

Business Continuity Management System Certification

Classification	Certification Standard	Validity Period	Scope of Certification
HDKSOE	ISO 22301:2019	December 2022 – December 2025	HD Hyundai Global R&D Center

Risk Sensitivity Analysis

Sensitivity Analysis of Financial Risks

HDKSOE and its shipbuilding subsidiaries are exposed to financial risks such as credit, liquidity, and market risks. We are exposed to market risks since the fair value of financial products or future cash flows may fluctuate to changes in market prices. In this context, market price management activities are conducted to manage and control market risk exposures to an acceptable level while optimizing profits. In particular, interest rate risk is hedged by using interest rate swaps that minimize the impact on current net income from fluctuations of variable interest bonds and borrowings.

Sensitivity Analysis of Non-financial Risks

Since a complete process requires 2 to 3 years from receipt of an order to delivery of ships, **HDKSOE and its shipbuilding subsidiaries** are exposed to the risk of increased prices of equipment and materials, fluctuation in exchange rates and oil prices, as well as changes in labor hours required for production. Accordingly, we analyze the impact of the required number of workers, labor hours, and working days for shipbuilding on current or future profits.

To manage uncertainties from fluctuations in labor hours, a dedicated department for labor hour management has been established to oversee and control related risks.

Sensitivity Analysis of Current Profit and Loss Based on Interest Rate Fluctuation

(Unit: KRW million)

Category	Variable Interest Rate Financial Instruments		Interest Rate Swap Contract		Note
	100bp Increase	100bp Decrease	100bp Increase	100bp Decrease	
HDKSOE	3,835	(3,835)	0	0	Consolidated basis
HHI	(1,136)	1,136	0	0	Consolidated basis
HMD	525	(525)	N/A	N/A	Consolidated basis
HSHI	3,810	(3,810)	N/A	N/A	Separate basis

Sensitivity Analysis of Profit and Loss According to Changes in Labor Hours

(Unit: KRW million)

Category	Impacts on Current Profit/Loss		Impacts on Future Profit/Loss		Note
	10% Increase	10% Decrease	10% Increase	10% Decrease	
HDKSOE	(138,493)	132,106	(1,109,106)	1,115,492	Consolidated basis
HHI	(95,306)	90,051	(645,086)	650,340	Consolidated basis
HMD	(20,664)	19,203	(217,172)	218,633	Consolidated basis
HSHI	(22,523)	22,852	(246,848)	246,518	Separate basis

Risk Management

Risk Management Activities

Identifying and Addressing Financial Risk

Foreign Exchange Risk

HDKSOE and its shipbuilding subsidiaries, as leading export companies, generate most of the revenues in foreign currency, and need to manage foreign exchange risks. Foreign exchange risk refers to the uncertainty that the net value of foreign currency-denominated assets or net value of cash flow may change due to unexpected foreign exchange movements.

HDKSOE and its shipbuilding subsidiaries manage a considerable portion of foreign exchange risk exposure unhedged by the balance of foreign exchange derivatives transactions out of the net inflows of foreign currency or the net assets denominated in foreign currencies by adopting hedging strategies such as forward exchange transactions. We set currency hedging standards and execute hedge transactions based on comprehensive analysis factors such as exchange rate volatility and amount of order intakes.

Raw Material Price Risk

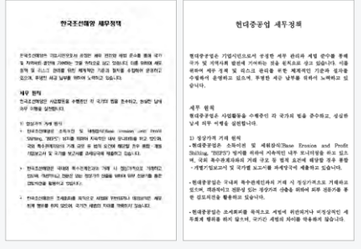
HDKSOE and its shipbuilding subsidiaries' profit is prone to the fluctuation of raw material prices. Raw material prices can increase from estimates at the time of ship orders due to changes in domestic and foreign economic conditions and the global political climate, which can lead to reduced profit.

Based on an analysis of raw material supply & demand as well as price fluctuations, HDKSOE and its shipbuilding subsidiaries factor foreseeable raw material price risks into shipbuilding contracts at the time of signing. However, if raw material prices are expected to exceed initial forecasts, we minimize the price impacts by implementing various response measures such as entering into long-term purchase agreements, diversifying suppliers, securing optimal inventory levels, and executing hedge transactions.

Tax Risk

In line with our fundamental principle of contributing to national and regional development, **HDKSOE** and **HHI** actively manage potential tax risks that may occur during business operations. To this end, the companies establish and operate tax policies, ensuring that we are in compliance with the tax laws of the countries in which we operate. Moreover, strict controls are maintained to prevent any violations of tax laws, including tax evasion and improper tax accounting practices.

HDKSOE and its shipbuilding subsidiaries disclose details of corporate taxes annually through the Financial Supervisory Service (FSS)'s DART (Data Analysis, Retrieval, and Transfer System), and secure transparency and objectivity by utilizing an independent auditor.



See full text

HDKSOE, HHI Tax Policies

Full Text of Tax Policies

As corporate citizens, HDKSOE and HHI are committed to contributing to national and regional development through fair tax management and compliance with tax laws. To this end, structured standards and procedures for tax policy and risk management have been established and implemented, and transparent payment of taxes is ensured.

Tax Principle

The company complies with the laws of the countries in which they operate businesses, and it faithfully fulfills their tax obligations.

❶ Principle of Arm's Length Transaction

- The company conducts internal monitoring to prevent Base Erosion and Profit Shifting ("BEPS"), and submits integrated/individual company reports and respective country reports to the tax authorities when legal requirements such as transaction volume with foreign related parties are met.
- The company transacts with domestic and foreign related parties at Arm's Length Prices (ALP) and engages independent expert opinions for objective and professional ALP.
- The company does not violate tax laws or engage in abnormal tax accounting practices for the purposes of tax evasion, and does not exploit differences in tax laws in different countries.

❷ Principle of Tax Risk Management

- The company carefully reviews and evaluates potential tax risks that can arise from business operations, including entry into new businesses, corporate restructuring such as mergers and acquisitions, and revision of tax laws, and has established a decision-making system based on its assessments.
- The company abides by all tax reporting and payment dates, and all evidence of transactions are documented and stored.
- In the event of significant issues arising from business activities, the company consults with external experts to investigate the issue.

❸ Principle of Tax Information Disclosure

- The company discloses details of corporate taxes annually through the Financial Supervisory Service's DART including calculation and composition of corporate tax expenses (income), deferred tax asset, liabilities, and changes, and it ensures transparency and objectivity through the audits by an independent auditor.

Risk Management

Risk Management Activities

Identifying and Addressing Potential Risks

Uncertainty of Decreased Working Age Population

South Korea's population growth rate is expected to decline by an annual average of 0.16% for ten years after 2025, while the working-age population is forecast to decrease by an average of 500,000 people annually from 2030. This projection is based on OECD fertility rate estimates and a stable domestic fertility rate, demonstrating that future changes in the working-age population present a high level of uncertainty.

HDKSOE and its shipbuilding subsidiaries require a large labor force to perform diverse and complex shipbuilding tasks, and R&D personnel with a high level of technical expertise. The risk factors resulting from insufficient labor include extended production hours and delayed delivery, as well as excessive increases in costs to secure labor. These may lead to negative impacts on the company's current profits and profitability.

Uncertainty of Marine Environmental Regulations

Regulations on greenhouse gas (GHG) and air pollutant emissions from ships have become more stringent at both locally and abroad. The IMO (International Maritime Organization)'s Energy Efficiency Design Index (EEDI) regulations, which vary by ship type and size, require at least a 20% reduction in carbon emissions from ships by 2025 compared to 2008 levels, and a 30% reduction from 2025. In addition, new regulations such as the Energy Efficiency Existing Ship Index (EEXI) and the Carbon Intensity Indicator (CII) have been introduced to regulate carbon emissions from existing ships. While it is expected that these regulations will continue to become more stringent, it is still not easy to estimate the degree of change due to evolving interests related to the marine environment.

HDKSOE and its shipbuilding subsidiaries anticipate that the ship replacement cycle for (potential) customers will begin around 2025 and 2026, and a paradigm shift to low- and zero- carbon (LZC) ships is being observed. Consequently, it is important to establish market leadership in the high value-added LZC shipbuilding market.

The increased demand for LZC ships will impact business decisions such as technological developments, production process changes, and investment priorities, so the ability to lead the market will be a key factor in the company's growth.

(Emerging Risks) Mitigating Actions for Decreasing Working Age Population

Category	Main Activities
HDKSOE	• Increase global talent by providing research internships to foreign students studying at Korean universities • Design HR programs that reflect employee needs, such as retention training, to prevent the loss of skilled and core talent
HHI	• Continue to expand opportunities to secure foreign talent • Establish and operate the Support Center for Foreign Workers to help foreign employees settle early and smoothly • Progress competency strengthening programs for foreign workers at in-house partner companies, including regular skill assessments and refresher training
HMD	• Attract outstanding production workers from 10 countries including Vietnam, Indonesia, and Thailand (including subcontractors) • Provide specialized welding training to support the transition of skilled workers and introduce training programs in electrical job functions • Open the Foreigner Support Center to help foreign workers settle (support services such as interpretation and administrative services)
HSHI	• Conduct specialized training for foreign workers • Strengthen the competency of foreign workers and conduct activities to support foreign workers with their settlement in Korea, including paint skill contest, safety culture campaign, and Korean speaking competition

(Emerging Risks) Mitigating Actions for Marine Environmental Regulations

Category	Main Activities
HDKSOE	• Develop environmental impact reduction systems for LZC ships and establish demonstration facilities - Develop integrated absorption-type ammonia mitigation system for ammonia-fueled and carrier vessels - Develop low voltage variable frequency drive (LV VFD) for electric propulsion vessels - Build R&D demonstration facilities for carbon-neutral ships
HHI	• Initiate development of engine and cargo hold for low and zero carbon ships - Complete development of H22 model ammonia and methanol engine and progress development of H32 model ammonia engine - Develop 174k ultra-large ammonia cargo hold and obtain ship classification certificate - Develop standalone Type-B ammonia fuel tank for 15.3K container ships
HMD	• Develop dual-fueled ammonia-powered vessel • Develop liquefied LCO2 carrier • Develop ammonia cracking-based hydrogen-fueled container ships
HSHI	• Realize progress in special projects for efficient LNG supply to reduce energy supply time for LNG-fueled ships and minimize BOG (boil-off gas) during fuel supply

ESG Factbook

Summary of Financial Data

Summary of Consolidated Financial Statements

(Unit: KRW million)

Title of Account	49th Reporting Period (Jan. 1, 2022 ~ Dec. 31, 2022)	50th Reporting Period (Jan. 1, 2023 ~ Dec. 31, 2023)	51st Reporting Period (Jan. 1, 2024 ~ Dec. 31, 2024)
Current assets	15,775,914	17,735,127	20,431,356
Cash and cash equivalents	2,697,223	3,018,391	3,717,319
Short-term financial assets	1,304,041	1,595,619	1,922,179
Trade and other receivables	1,026,706	1,460,129	1,640,343
Contract assets	6,435,957	7,156,818	7,503,004
Inventories	2,203,317	2,005,665	2,232,067
Other current assets	2,108,670	2,498,505	3,416,444
Non-current assets	14,107,562	14,507,441	16,287,781
Investments in associates and joint ventures	269,724	308,959	256,615
Long-term financial assets	201,295	232,714	141,591
Investment properties	222,374	218,330	216,566
Tangible assets	10,143,113	10,503,503	11,110,890
Intangible assets	163,697	190,793	374,651
Other non-current assets	3,107,359	3,053,142	4,187,468
Total assets	29,883,476	32,242,568	36,719,137
Current liabilities	15,033,482	17,497,867	19,325,058
Non-current liabilities	2,537,864	2,374,598	3,238,266
Total liabilities	17,571,346	19,872,465	22,563,324
Capital stock	353,866	353,866	353,866
Capital surplus	2,467,506	2,459,695	2,599,782
Capital adjustments	(8,703,262)	(8,609,897)	(8,609,021)
Accumulated other comprehensive income	1,296,442	1,325,568	1,670,921
Retained earnings	14,300,367	14,374,459	15,083,879
Non-controlling interests	2,597,211	2,466,412	3,056,386
Total equity	12,312,130	12,370,103	14,155,813
Valuation method for the stocks of associates and joint ventures	Equity method	Equity method	Equity method

Summary of Consolidated P&L (Profit & Loss) Statement

(Unit: KRW million)

Title of Account	49th Reporting Period (Jan. 1, 2022 ~ Dec. 31, 2022)	50th Reporting Period (Jan. 1, 2023 ~ Dec. 31, 2023)	51st Reporting Period (Jan. 1, 2024 ~ Dec. 31, 2024)
Sales	17,302,020	21,296,206	25,538,577
Operating profit (loss)	(355,561)	282,261	1,434,090
Profit (loss) for the year	(295,177)	144,930	1,454,580
Equity attributable to owners of parent	(216,950)	221,711	1,172,336
Non-controlling interests	(78,227)	(76,781)	282,244
Total comprehensive income (loss)	(260,212)	(11,608)	1,274,836
Equity attributable to owners of parent	(202,696)	103,218	1,054,773
Non-controlling interests	(57,516)	(114,286)	220,063
Earnings per share (loss) (KRW)	(3,068)	3,135	16,578
No. of consolidated subsidiaries	17	19	25

Summary of Financial Data

Financial Highlights for the Group Companies[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Sales	KRW 100 mil.	1,805	2,699	5,168	90,455	119,639	144,865	37,169	40,391	46,300	46,464	59,587	70,031
Operating profit (loss)	KRW 100 mil.	(183)	(116)	173	(2,892)	1,786	7,052	(1,091)	(1,529)	885	177	3,017	7,236
Profit (loss) for the year	KRW 100 mil.	3,755	3,015	1,656	(3,521)	247	6,215	(438)	(1,390)	1,132	29	2,112	6,841
Total assets	KRW 100 mil.	114,302	117,742	120,573	162,894	171,336	193,909	47,482	49,091	51,089	55,883	74,573	83,862
Total liabilities	KRW 100 mil.	3,057	2,447	3,767	110,016	119,262	136,865	25,730	28,939	30,024	39,274	56,256	59,011
Total equity	KRW 100 mil.	111,245	115,296	116,805	52,878	52,074	57,044	21,753	20,152	21,064	16,610	18,318	24,851
Debt ratio	%	2.75	2.12	3.23	208.1	229.0	239.9	118.3	143.6	142.5	236.5	307.1	237.5
Net debt-to-equity ratio[2]	%	-	-	-	32.1	39.8	-	-	11.16	1.68	40.9	-	-
Operating margin	%	-10.1	-4.3	3.3	-3.2	1.5	4.9	-2.9	-3.8	1.9	0.4	5.1	10.3
Return on assets	%	3.3	2.6	1.4	-2.2	0.1	3.2	-0.9	-2.8	2.2	0.1	2.8	8.2

1) Financial data of HDKSOE and HSHI are on a separate basis, while those of HHI and HMD are on a consolidated basis.
2) As it is a negative (-) ratio, the net debt-to-equity ratio is not calculated.

Distribution to Stakeholders

Category		Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Contractors	Cost for raw material procurement[1]	KRW 100 mil.	-	-	-	60,199	73,230	84,391	26,893	27,044	28,686	31,791	36,712	39,314
Employees	Personnel expenditure	KRW 100 mil.	803	1,133	1,512	8,867	10,536	12,335	3,742	4,206	4,910	3,585	4,050	4,651
Shareholder and investor	Interest expense	KRW 100 mil.	8	42	62	1,061	1,319	1,497	51	138	195	469	377	292
	Dividend	KRW 100 mil.	0	0	0	0	0	0	0	0	0	52	52	52
Government	Corporate tax (profit)	KRW 100 mil.	(539)	(2,398)	491	(694)	97	1,766	(134)	(192)	286	(23)	973	2,051
	Tax and public imposts	KRW 100 mil.	14	14	13	22	28	27	2	3	3	24	23	28
Local community	Donation	KRW 100 mil.	22	43	27	27	46	409	29	48	38	18	32	71

1) HHI's major vendors for raw materials: POSCO, Hyundai Steel Co., Ltd., Haedong Metal Co., Ltd., Emerson Process Management (Korea), Hanyang ENG Co., Ltd., etc.
Raw material procurement cost for HMD included HVS data and its major vendors are POSCO, Hyundai Steel Co., Ltd., FRANK MOHN AS, etc.
HSHI's major vendors for raw materials: POSCO, Hyundai Steel Co., Ltd., HHI, etc.

Environmental*

Environmental Investments

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
GHG reduction financial performance	KRW mil.	-	-	-	242	73	117	-	23	14	-	-	-
GHG reduction investment amount	KRW mil.	-	-	-	12,422	1,851	1,666	-	884	1,795	-	-	-

Green Procurement[2]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Ratio of green procurement amount compared to total purchase amount[1]	%	-	-	-	5.33	4.06	2.72	15.51	9.49	10.25	16.41	8.88	7.92
Green procurement amount	KRW mil.	-	-	-	321,000	297,200	229,745	424,716	256,769	294,027	521,754	326,176	311,250
Total purchase amount	KRW mil.	-	-	-	6,019,906	7,323,023	8,439,111	2,738,846	2,704,388	2,868,619	3,179,104	3,671,749	3,931,428

1) The denominator was changed from "Total procurement" to "Total procurement amount" in accordance with the change in the calculation basis, and the indicator name was also revised from "Ratio of green procurement amount" to "Ratio of green procurement amount compared to total procurement amount."
2) Based on eco-labeled products, excellent recycling certified products, and low carbon products

Patents Related to Environmental Impact Reduction

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Patent application related to environmental impact reduction technologies	Case	145	187	338	195	220	310	21	13	36	-	-	110
Patent registration related to environmental impact reduction technologies	Case	36	22	41	96	60	89	4	1	6	-	-	9

* Following the implementation of integrated reporting standards for HD Hyundai affiliates, some disclosure items and quantitative data standards have been updated from those used in the 2023 Integrated Report

Environmental

Violations of Environmental Laws[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
No. of significant violations of environmental laws	Cases	0	0	0	0	0	0	0	0	0	0	0	0
Total monetary sanctions for significant violations of environmental laws	KRW mil.	0	0	0	0	0	0	0	0	0	0	0	0

1) Only significant fines (over USD 10,000 fines imposed on confirmed major violations) are indicated

Environmental Training for Employees[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Employees trained for environmental management	Persons	788	1,058	1,322	10,743	11,157	13,127	2,286	2,558	2,739	0	0	2,865

1) HDKSOE: Training programs for chemical substance handlers
HHI/HMD/HSHI: Based on chemical substance training for facilities handling hazardous chemicals in accordance with the Chemicals Substances Control Act

Environmental

Scope 1 & 2 Emissions[1]

Category	Unit	HDKSOE[5]			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total emissions (Scope 1+2)[2]	tCO_2eq	8,191	7,286	8,408	549,552	639,878	671,156	160,988	163,100	166,913	239,869	266,223	276,469
Direct emissions (Scope 1)	tCO_2eq	3,333	2,862	3,201	244,228	276,779	309,407	55,660	57,122	57,110	102,258	113,555	118,736
Indirect emissions (Scope 2)	$tCO2_2eq$	4,858	4,424	5,207	305,331	363,104	361,755	105,514	105,982	109,807	137,613	152,670	157,737
Scope 1+Scope 2 emission intensity	tCO_2eq/KRW bil.	45.38	26.99	16.26	60.62	53.51	46.36	43.56	40.76	36.50	51.62	44.68	39.48
Total reduction (Scope 1+2)[2,3]	tCO_2eq	-[4]	-[4]	-[4]	15,151	8,071	12,342	0	2,601	1,481	0	0	0
Direct reduction (Scope 1)	tCO_2eq	-[4]	-[4]	-[4]	8,127	566	5,840	0	1,494	177	0	0	0
Indirect reduction (Scope 2)	tCO_2eq	-[4]	-[4]	-[4]	7,024	7,505	6,502	0	1,108	1,304	0	0	0

1) HDKSOE: GRC Headquarters, Ulsan Research Building, Seoul Gyedong Office, Seamarq Hotel
HHI: All business sites
HMD: All business sites
HSHI: All business sites
2) There may be some slight discrepancies in the total emissions amount due to the rounding of emissions from each business site to whole numbers.
3) Figures are based on the standards applied in the submission of the greenhouse gas emissions statement.
4) Unmanaged data
5) GHG emissions are calculated according to the guidelines on ETS reporting and certification under the Emissions Trading System (ETS).

Environmental

Scope 3 Emissions[3]

Category	Unit	HDKSOE[5]			HHI			HMD			HSHI		
		2022	2023	2024[6]	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total Scope 3 emissions[1]	tCO_2eq	26,445	115,967	859,847	51,907,477	56,118,291	63,052,869	21,626,799	25,698,052	28,770,946	41,171,974	37,519,464	40,147,729
Upstream emissions	tCO_2eq	5,960	17,394	40,970	2,736,292	3,055,146	3,500,753	1,283,510	1,191,329	1,227,497	2,250,296	2,297,032	2,157,089
Category 1. Purchased products and services	tCO_2eq	4,523	14,346	34,747	2,586,628	2,890,103	3,317,675	1,210,194	1,117,940	1,146,315	2,167,905	2,234,450	2,057,399
Category 2. Capital goods[4]	tCO_2eq	0	1,051	1,261	44,190	24,263	15,529	7,681	5,909	4,438	38,125	6,707	6,861
Category 3. Fuel and energy-related activities	tCO_2eq	703	379	1,115	39,905	49,445	79,378[7]	10,945	11,736	20,785	15,359	19,209	32,595
Category 4. Upstream transportation and distribution	tCO_2eq	0	209	438	37,132	62,152	57,110	27,726	27,868	26,420	2,015	8,505	10,018
Category 5. Waste generated in operations	tCO_2eq	69	76	30	9,293[2]	13,254[2]	13,027[2]	23,746	23,052	24,387	16,739	17,507	39,840
Category 6. Business travel	tCO_2eq	383	754	2,553	5,193	3,614	4,547	425	616	878	310	469	686
Category 7. Employee commuting	tCO_2eq	282	580	826	13,951	12,315	13,487	2,793	4,208	4,274	9,843	10,185	9,690
Category 8. Upstream leased assets	tCO_2eq	-	-	-	-	-	-	-	-	-	-	-	-
Downstream emissions	tCO_2eq	20,486	98,573	818,877	49,171,186	53,063,145	59,552,116	20,343,289	24,506,723	27,543,449	38,921,678	35,222,432	37,990,640
Category 9. Downstream transportation and distribution	tCO_2eq	-	-	-	-	-	-	-	-	-	-	-	-
Category 10. Processing of sold products	tCO_2eq	-	-	-	-	-	-	-	-	-	-	-	-
Category 11. Use of sold products	tCO_2eq	0	76,190	808,166	49,166,120	53,058,683	59,538,675	20,341,722	24,505,194	27,541,265	38,918,514	35,218,698	37,987,468
Category 12. End-of-life treatment of sold products	tCO_2eq	0	2	6	5,066	4,462	5,245	1,567	1,529	2,184	3,164	3,734	3,172
Category 13. Downstream leased assets	tCO_2eq	-	-	-	-	-	-	-	-	-	-	-	-
Category 14. Franchises	tCO_2eq	-	-	-	-	-	-	-	-	-	-	-	-
Category 15. Investments	tCO_2eq	20,486	22,381	10,705	-	-	8,196	-	-	-	-	-	-

1) The sum of emissions may differ as the emissions for each category are rounded up to whole numbers
2) HHI incinerates some of the wastes from its business sites internally in addition to outsourcing waste disposal to third parties. The resulting GHG emissions are reflected in Scope 1 and 2.
3) Scope 3 emissions for 2022-2024 were calculated using a methodology currently being established by HDKSOE and its shipbuilding subsidiaries, domestic and foreign classification groups, and domestic shipbuilders; third-party verification was conducted by the Korea Foundation for Quality (However, some methodologies and scope of application may differ depending on each company's circumstances, and additional changes may occur during the ongoing standardization of the Scope 3 calculation methodology and updates to global guidelines.)
4) As the capital goods emissions are calculated based on investment or acquisition amounts for major facilities as recorded in the Business Report, yearly deviations may occur.
5) With the establishment of the SD Division in 2022, emissions from Category 1 (Purchased products and services), Category 4 (Upstream transportation and distribution), Category 11 (Use of sold products), and Category 12 (Disposal of sold products) were generated
6) There was an increase in emissions compared to the previous year due to an increase in business activities and sales of the SD division in 2024
7) There was an increase in emissions due to changes in electricity emission factors based on the Scope 3 guidelines published by the National Institute of Environmental Research

Environmental

Energy[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total energy consumption[2]	TJ	167	149	172	9,887	11,511	11,891	2,900	2,905	3,009	4,095	4,552	4,802
Total energy consumption intensity	TJ/KRW bil.	0.93	0.55	0.33	1.09	0.96	0.82	0.79	0.73	0.66	0.88	0.76	0.69
Non-renewable energy consumption	TJ	167	148.7	171.4	9,891	11,515	11,893	2,904	2,911	3,013	4,095	4,552	4,802
Direct energy consumption	TJ	65	57	62	3,268	3,700	4,075	699	696	718	1,222	1,365	1,509
Indirect energy consumption	TJ	102	92	110	6,623	7,815	7,818	2,205	2,215	2,295	2,876	3,190	3,296
Electricity consumption	TJ	102	90	107	6,380	7,588	7,558	2,205	2,214	2,294	2,876	3,190	3,296
Steam/heat consumption	TJ	0	2	3	243	227	260	0	0.312	0.323	0	0	0
Renewable energy consumption	TJ	0	0.3	0.5	2	2	2	0	0.03	0.433	0	0	0
Percentage of renewable energy	%	0	0.201	0.309	0.020	0.017	0.017	0	0.001	0.014	0	0	0
Percentage of eco-friendly vehicles owned	%	0	2.27	2.38	0.29	0.61	4.49	0	6.51	6.98	2.04	7.95	14.58

1) HDKSOE: GRC Headquarters, Ulsan Research Building, Seoul Gyedong Office, Seamarq Hotel
HHI: All business sites
HMD: All business sites
HSHI: All business sites
2) Energy consumption by business site may be rounded down to whole numbers, which could result in slight discrepancies in the total.

Environmental

Raw Materials[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Steel purchase amount	KRW mil.	0	0	0	1,279,990	1,234,824	1,188,358	842,609	734,266	738,672	1,039,758	863,679	793,265
Recycled steel purchase amount	KRW mil.	0	0	0	59,511	52,618	47,394	29,416	27,679	7,955	31,200	38,582	43,334

1) Based on steel (excluding equipment and outfitting materials)

Water Withdrawal[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total water withdrawal	m^3	24,037	18,549	18,022	3,095,418	3,421,160	3,196,442	1,330,212	1,605,895	1,435,009	3,346,926	2,796,532	2,876,151
Total surface water withdrawal	m^3	0	0	0	0	0	0	0	0	0	0	0	0
Business site 1	m^3	0	0	0	0	0	0	0	0	0	0	0	0
Business site 2	m^3	0	0	0	0	0	0	0	0	0	0	0	0
Business site 3	m^3	0	0	0	-	-	-	0	0	0	-	-	-
Business site 4	m^3	-	-	-	-	-	-	0	0	0	-	-	-
Total seawater withdrawal	m^3	0	0	0	0	0	0	0	0	0	0	0	0
Business site 1	m^3	0	0	0	0	0	0	0	0	0	0	0	0
Business site 2	m^3	0	0	0	0	0	0	0	0	0	0	0	0
Business site 3	m^3	0	0	0	-	-	-	0	0	0	-	-	-
Business site 4	m^3	-	-	-	-	-	-	0	0	0	-	-	-
Total Third-party water withdrawal	m^3	24,037	18,549	18,022	3,095,418	3,421,160	3,196,442	1,330,212	1,605,895	1,435,009	3,346,926	2,796,532	2,876,151
Business site 1	m^3	0	0	0	2,504,169	2,621,224	2,565,970	1,205,309	1,465,943	1,285,858	3,332,053	2,778,732	2,851,277
Business site 2	m^3	24,037	18,549	18,022	591,249	799,936	630,472	35,155	41,928	47,627	14,873	17,800	24,874
Business site 3	m^3	0	0	0	-	-	-	1,704	1,717	1,825	-	-	-
Business site 4	m^3	-	-	-	-	-	-	88,044	96,307	99,699	-	-	-
Total water withdrawal (intensity)	m^3/KRW mil.	0.133	0.069	0.035	0.276	0.219	0.177	0.36	0.401	0.314	0.72	0.469	0.411

1) HDKSOE: Compiled from a total of three business sites. "Business site 1" includes the GRC Headquarters, "Business site 2" includes the Ulsan Research Building, and "Business site 3" includes the Seoul Gyedong Office.
HHI: Compiled from a total of two business sites. "Business site 1" includes the head office (main plant) and "Business site 2" includes the offshore plant.
HMD: Compiled from a total of four business sites. "Business site 1" includes the head office (main plant), "Business site 2" includes the Onsan Plant, "Business site 3" includes the Mohwa Plant, and "Business site 4" includes the Yongyeon Plant.
HSHI: Compiled from a total of two business sites. "Business site 1" includes the head office (main plant) and "Business site 2" includes the Daebul 1 Plant.

Environmental

Water Pollutants[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total Organic Carbon	kg	-	-	-	21	33	23	11.8	5.7	14	1.5	1.5	1.2
Biochemical Oxygen Demand	kg	-	-	-	5	17	11	3.1	6.1	7.2	1.0	1.3	0.7
Suspended Solids	kg	-	-	-	6	6	4	2.1	1.3	4.8	1.2	0.4	0.9

1) HDKSOE: Ulsan Research Building
HHI: Head office (main plant)
HMD: Head office (main plant)
HSHI: Head office (main plant)

Air Pollutants[1,2]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Nitrogen oxides[2]	kg	97	100	54	26,577	21,694	19,786	5,931	6,447	8,119	6,443	10,880	11,958
Sulfur oxides[2]	kg	0	11	1	4,461	1,802	2,087	184	849	139	268	2,472	1,738
Total suspended particulate[2]	kg	18	25	31	18,280	16,930	19,912	4,075	6,312	3,629	18,584	21,386	15,800

1) HDKSOE: Ulsan Research Building
HHI: Head office (main plant)
HMD: Head office (main plant)
HSHI: Head office (main plant)
2) In accordance with the integrated reporting standards for HD Hyundai affiliates, calculations of pollutant concentration, exhaust gas flow rates, and facility operating time are all taken into account when calculating air pollutants

Environmental

Waste[1,2]

Category			Unit	HDKSOE			HHI			HMD			HSHI		
				2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total waste disposed[3]			ton	158	239	335	214,603	263,915	264,834	30,747	33,642	36,864	73,292	84,648	94,632
General waste	Waste disposed		ton	153	231	323	149,020	174,667	180,373	27,405	29,937	32,059	69,598	79,822	82,472
	Recycled	Internal treatment	ton	0	0	0	0	0	0	0	0	0	0	0	0
		Outsourced treatment	ton	118	207	309	113,601	137,024	140,368	15,116	16,676	18,160	53,309	63,188	66,147
	Landfilled	Internal treatment	ton	0	0	0	0	0	0	0	0	0	0	0	0
		Outsourced treatment	ton	0	0	0	5,294[4]	552	861	457	272	279	4,968	6,298	6,647
	Incinerated (energy recovery)	Internal treatment	ton	0	0	0	29,648	36,557	38,512	10,649	11,665	12,165	0	0	0
		Outsourced treatment	ton	35	24	15	478	534	632	0	0	0	0	0	0
	Incinerated (without energy recovery)	Outsourced treatment	ton	0	0	0	0	0	0	1,183	1,324	1,455	11,321	10,337	9,678
Hazardous waste	Waste disposed		ton	5	8	12	6,860	7,877	9,412	2,041	2,110	2,219	3,694	4,347	4,579
	Recycled	Internal treatment	ton	0	0	0	0	0	0	0	0	0	0	0	0
		Outsourced treatment	ton	2	1	2	4,122	4,993	6,252	1,343	1,287	1,307	2,154	2,287	2,525
	Landfilled	Internal treatment	ton	0	0	0	0	0	0	0	0	0	0	0	0
		Outsourced treatment	ton	0	0	0	848	863	980	54	72	14	0	13	2
	Incinerated (energy recovery)	Internal treatment	ton	0	0	0	65	58	58	0	0	0	0	0	0
		Outsourced treatment	ton	3	7	10	1,824	1,953	2,122	0	0	0	0	0	0
	Incinerated (without energy recovery)	Outsourced treatment	ton	0	0	0	0	0	0	644	751	898	1,541	2,047	2,052
	Neutralized	Outsourced treatment	ton	0	0	0	0	10	0	0	0	0	0	0	0
	Other	Outsourced treatment	ton	0	0	0	0	0	0	0	0	0	0	0	0
Construction waste[5]	Waste disposed		ton	-	-	-	58,723	81,371	75,049	1,301	1,595	2,586	0	480	7,581
	Recycled	Outsourced treatment	ton	-	-	-	58,723	81,371	75,049	1,301	1,595	2,586	0	480	7,581

1) HDKSOE: Ulsan Research Building
HHI: Head office (main plant), offshore plant, Pipe Shop & Hydro Test Shop, Offshore Piping Fabrication Shop, Offshore Pipe Painting Shop, Munsan Shop, Hyundai Incineration Plant, Gunsan Shipyard
HMD: Head office (main plant) and outside plants (Yongyeon, Onsan, Mohwa)
HSHI: Head office (main plant)
2) Based on the figures reported in the Allbaro system of the Ministry of Environment, and some items, such as waste paper and scrap metal, are based on their weight.
3) Since the amount of waste discharged for each category are rounded up to whole numbers, there may be some differences with the sum of total waste disposed
4) Some of the existing recyclable waste is landfilled due to the recycling company's circumstances, which results in increased consignment landfill amount.
5) Construction wastes are fully recycled through outsourced processing companies.

Social*

Labor-Management Relations

Category	Unit	HDKSOE[1]			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Unionization rate[2]	%	-	-	-	96	97	98	100	100	100	88	87	86
Percentage of employees covered by collective bargaining agreements	%	-	-	-	100	100	100	100	100	100	100	100	100
Employees who directly participated in a strike	Persons	0	0	0	824	55	561	0	95	1,115	199	194	220
No. of labor-management council meetings held	Times	4	4	4	4	4	4	4	4	4	4	4	4

1) HDKSOE's last union member withdrew from the union in October 2022.
2) Calculation: (Number of union members / number of employees eligible for the membership) x 100

Status of Employees[1,2]

Category		Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total number of employees		Persons	895	1,194	1,416	12,770	13,282	14,542	3,108	3,551	4,008	3,785	3,875	3,918
Registered executives		Persons	5	5	5	5	5	5	5	5	5	7	6	6
Employees excluding registered executives		Persons	890	1,189	1,411	12,765	13,277	14,537	3,103	3,546	4,003	3,778	3,869	3,912
External workers		Persons	16	13	22	100	129	111	5,093	5,763	6,034	10,948	13,163	13,440
By employment type	Total permanent employees	Persons	866	1,142	1,365	12,287	12,061	12,393	3,037	3,117	3,177	3,596	3,651	3,639
	Male	Persons	716	947	1,116	11,819	11,559	11,847	2,981	3,036	3,066	3,532	3,566	3,542
	Female	Persons	150	195	249	468	502	546	56	81	111	64	85	97
	Total temporary employees	Persons	24	47	46	478	1,216	2,144	66	429	826	182	218	273
	Male	Persons	11	16	18	360	1,107	1,999	35	381	779	135	179	228
	Female	Persons	13	31	28	118	109	145	31	48	47	47	39	45
By managerial position[4]	Total number of managerial positions	Persons	152	201	254	3,303	3,408	3,797	952	985	1,075	493	542	525
	Top management positions[3]	Persons	37	45	47	107	118	123	26	27	31	29	30	29
	Middle management positions	Persons	77	92	116	200	217	234	65	64	70	57	61	51
	Junior management positions	Persons	38	64	91	2,996	3,073	3,440	861	894	974	407	451	445
	Total number of non-managerial positions	Persons	740	990	1,159	9,464	9,871	10,742	2,153	2,563	2,930	3,286	3,328	3,390

1) As of the end of the reporting period
2) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report
3) Managerial officials of director or higher rank
4) Management and non-management positions are calculated excluding non-executive directors and outside directors among registered executives, resulting in a discrepancy in the total number of employees.

* Following the implementation of integrated reporting standards for HD Hyundai affiliates, some disclosure items and quantitative data standards have been updated from those used in the 2023 Integrated Report

Social

Employee Diversity[1,2]

	Category	Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
By age	Under 30	Persons (%)	142(15.9)	287(24.0)	336(23.7)	888(7.0)	1,085(8.2)	1,285(8.8)	265(8.5)	422(11.9)	503(12.6)	219(5.8)	302(7.8)	324(8.3)
	30 – 50	Persons (%)	675(75.4)	813(68.1)	954(67.4)	8,707(68.2)	8,756(65.9)	9,210(63.3)	2,097(67.5)	3,053(85.9)	3,289(82.1)	2,131(56.3)	2,042(52.7)	1,946(49.7)
	Over 50	Persons (%)	78(8.7)	94(7.9)	126(8.9)	3,175(24.9)	3,441(25.9)	4,047(27.8)	746(24.0)	80(2.3)	216(5.4)	1,435(37.9)	1,531(39.5)	1,648(42.1)
By gender[3]	Employee													
	Male	Persons (%)	731(81.7)	967(81.0)	1,138(80.4)	12,183(95.4)	12,669(95.4)	13,850(95.2)	3,020(97.2)	3,420(96.3)	3,849(96.0)	3,673(97.0)	3,750(96.8)	3,775(96.4)
	Female	Persons (%)	164(18.3)	227(19.0)	278(19.6)	587(4.6)	613(4.6)	692(4.8)	88(2.8)	131(3.7)	159(4.0)	112(3.0)	125(3.2)	143(3.7)
	Registered executives													
	Male	Persons (%)	4(80.0)	4(80.0)	4(80.0)	4(80.0)	4(80.0)	4(80.0)	4(80.0)	4(80.0)	4(80.0)	6(85.7)	5(83.3)	5(83.3)
	Female	Persons (%)	1(20.0)	1(20.0)	1(20.0)	1(20.0)	1(20.0)	1(20.0)	1(20.0)	1(20.0)	1(20.0)	1(14.3)	1(16.7)	1(16.7)
	Managerial position													
	Male	Persons (%)	145(95.4)	191(95.0)	236(92.9)	3,295(99.8)	3,997(99.7)	3,782(99.6)	951(99.9)	984(99.9)	1,073(99.8)	492(99.8)	539(99.4)	523(99.6)
	Female	Persons (%)	7(4.6)	10(5.0)	18(7.1)	8(0.2)	11(0.3)	15(0.4)	1(0.1)	1(0.1)	2(0.2)	1(0.2)	3(0.6)	2(0.4)
	Top management													
	Male	Persons (%)	36(97.3)	43(95.6)	44(93.6)	106(99.1)	117(99.2)	121(98.4)	26(100.0)	27(100.0)	31(100.0)	29(100.0)	30(100.0)	29(100.0)
	Female	Persons (%)	1(2.7)	2(4.4)	3(6.4)	1(0.9)	1(0.8)	2(1.6)	0	0	0	0	0	0
	Middle management													
	Male	Persons (%)	74(96.1)	87(94.6)	107(92.2)	199(99.5)	215(99.1)	232(99.1)	65(100.0)	64(100.0)	70(100.0)	57(100.0)	61(100.0)	51(100.0)
	Female	Persons (%)	3(3.9)	5(5.4)	9(7.8)	1(0.5)	2(0.9)	2(0.9)	0	0	0	0	0	0
	Junior management													
	Male	Persons (%)	35(92.1)	61(95.3)	85(93.4)	2,990(99.8)	3,065(99.7)	3,429(99.7)	860(99.9)	893(99.9)	972(99.8)	406(99.8)	448(99.3)	443(99.6)
	Female	Persons (%)	3(7.9)	3(4.7)	6(6.6)	6(0.2)	8(0.3)	11(0.3)	1(0.1)	1(0.1)	2(0.2)	1(0.2)	3(0.7)	2(0.4)
	Non-managerial position													
	Male	Persons (%)	584(78.9)	774(78.2)	900(77.7)	8,886(93.9)	9,270(93.9)	10,066(93.7)	2,067(96.0)	2,434(95.0)	2,774(94.7)	3,176(96.7)	3,207(96.4)	3,250(95.9)
	Female	Persons (%)	156(21.1)	216(21.8)	259(22.3)	578(6.1)	601(6.1)	676(6.3)	86(4.0)	129(5.0)	156(5.3)	110(3.3)	121(3.6)	140(4.1)
	Managerial employees in revenue-generating departments													
	Male	Persons (%)	64(95.5)	97(96.0)	122(93.1)	3,040(99.8)	3,073(99.8)	3,374(99.8)	825(99.9)	857(99.9)	929(99.9)	249(100.0)	276(99.6)	261(99.6)
	Female	Persons (%)	3(4.5)	4(4.0)	9(6.9)	5(0.2)	7(0.2)	8(0.2)	1(0.1)	1(0.1)	1(0.1)	0	1(0.4)	1(0.4)
	STEM employees													
	Male	Persons (%)	498(89.4)	642(88.9)	724(87.9)	1,995(91.0)	1,998(90.4)	2,011(88.9)	2,648(98.2)	3,027(97.5)	3,468(97.4)	513(93.3)	518(91.5)	513(90.3)
	Female	Persons (%)	59(10.6)	80(11.1)	100(12.1)	197(9.0)	211(9.6)	251(11.1)	48(1.8)	78(2.5)	94(2.6)	37(6.7)	48(8.5)	55(9.7)

1) As of the end of the reporting period
2) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report
3) Managerial and non-managerial positions are calculated excluding non-executive directors and outside directors among registered executives, resulting in a discrepancy in the total number of employees.

Social

Employee Diversity[1,2]

	Category	Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Employment of marginalized groups	Percentage of employees with disabilities[4]	%	0.22	0.17	0.14	1.82	1.74	1.70	1.64	1.58	1.57	3.09	3.17	3.06
	Employees with disabilities[4]	Persons	2	2	2	232	231	247	51	56	63	122	119	108
By nationality[3]	Employee													
	South Korea	Persons (%)	892(99.7)	1,189(99.6)	1,407(99.4)	12,752(99.86)	12,789(96.29)	13,665(93.97)	3,108(100)	3,238(91.2)	3,414(85.2)	3,784(99.97)	3,874(99.97)	3,917(99.97)
	Russia	Persons (%)	0	0	1(0.1)	0	0	0	0	0	0	0	0	0
	Malaysia	Persons (%)	0	0	0	1(0.01)	1(0.01)	1(0.01)	0	0	0	0	0	0
	US	Persons (%)	1(0.1)	2(0.2)	2(0.1)	1(0.01)	1(0.01)	1(0.01)	0	0	0	0	0	0
	Myanmar	Persons (%)	0	0	1(0.1)	1(0.01)	0	0	0	0	0	0	0	0
	Bangladesh	Persons (%)	0	0	1(0.1)	0	0	0	0	0	0	0	0	0
	Vietnam	Persons (%)	0	0	0	0	0	101(0.69)	0	189(5.3)	488(12.2)	0	0	0
	Sri Lanka	Persons (%)	0	0	0	0	331(2.49)	454(3.12)	0	0	0	0	0	0
	UK	Persons (%)	1(0.1)	2(0.2)	2(0.1)	1(0.01)	0	1(0.01)	0	0	0	0	0	0
	Uzbekistan	Persons (%)	0	0	0	0	0	22(0.15)	0	0	0	0	0	0
	India	Persons (%)	0	0	0	11(0.1)	57(0.43)	61(0.42)	0	0	0	1(0.03)	1(0.03)	1(0.03)
	Indonesia	Persons (%)	0	0	0	0	0	3(0.02)	0	79(2.2)	75(1.9)	0	0	0
	China	Persons (%)	0	0	1(0.1)	0	0	1(0.01)	0	0	0	0	0	0
	Cambodia	Persons (%)	0	0	0	0	0	12(0.08)	0	0	0	0	0	0
	Canada	Persons (%)	1(0.1)	1(0.1)	1(0.1)	1(0.01)	1(0.01)	1(0.01)	0	0	0	0	0	0
	Thailand	Persons (%)	0	0	0	1(0.01)	101(0.76)	219(1.51)	0	45(1.3)	31(0.8)	0	0	0
	Philippines	Persons (%)	0	0	0	1(0.01)	1(0.01)	0	0	0	0	0	0	0

1) As of the end of the reporting period
2) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report
3) Due to rounding to the first decimal place, the percentage sum of employees by nationality may slightly exceed 100%
4) Based on the reporting standards provided by the Korea Employment Agency for Persons with Disabilities (KEAD)

Social

Employee Diversity[1,2]

	Category	Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
By nationality[3]	Managerial employees													
	South Korea	Persons (%)	152(100)	201(100)	253(99.6)	3,305(99.97)	3,411(100)	3,796(99.9)	952(100)	985(100)	1,075(100)	492(100)	542(100)	524(100)
	Russia	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Malaysia	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	US	Persons (%)	0	0	0	1(0.03)	0	1(0.03)	0	0	0	0	0	0
	Myanmar	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Bangladesh	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Vietnam	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Sri Lanka	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	UK	Persons (%)	0	0	1(0.4)	0	0	0	0	0	0	0	0	0
	Uzbekistan	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	India	Persons (%)	0	0	0	0	0	3(0.08)	0	0	0	0	0	0
	Indonesia	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	China	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Cambodia	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Canada	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Thailand	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	Philippines	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0

1) As of the end of the reporting period
2) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report
3) Due to rounding to the first decimal place, the percentage sum of employees by nationality may slightly exceed 100%

Social

Recruitment and Retention[3]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total number of new recruits	Persons (%)	149(18.3)	222(20.5)	173(13.3)	468(3.8)	382(3.2)	274(2.2)	109(3.6)	184(5.9)	215(6.8)	258(7.2)	173(4.7)	100(2.7)
Male	Persons (%)	121(81.2)	177(79.7)	125(72.3)	438(93.6)	335(87.7)	227(82.8)	83(76.1)	156(84.8)	183(85.1)	233(90.3)	145(83.8)	82(82.0)
Female	Persons (%)	28(18.8)	45(20.3)	48(27.7)	30(6.4)	47(12.3)	47(17.2)	26(23.9)	28(15.2)	32(14.9)	25(9.7)	28(16.2)	18(18.0)
Under 30	Persons (%)	70(47.0)	155(69.8)	59(34.1)	177(37.8)	233(61.0)	139(50.7)	67(61.5)	127(69.0)	127(59.1)	110(42.6)	130(75.1)	87(87.0)
30-50	Persons (%)	79(53.0)	67(30.2)	114(65.9)	290(62.0)	148(38.7)	135(49.3)	36(33.0)	57(31.0)	87(40.5)	148(57.4)	43(24.9)	13(13.0)
Over 50	Persons (%)	0	0	0	1(0.2)	1(0.3)	0	6(5.5)	0	1(0.5)	0	0	0
Percentage of positions filled by internal recruitment	%	51.0	37.3	45.3	13.8	8.2	9.3	0.9	4.2	2.3	53.6	51.1	50.3
Average hiring cost per employee	KRW	1,333,000	1,220,000	1,140,000	383,265	514,051	850,318	1,267,388	1,150,000	839,302	628,691	838,539	1,358,073
Employee turnover[2]	Persons (%)	70(9.3)	44(5.1)	61(5.3)	569(4.5)	448(3.6)	543(4.5)	141(4.7)	132(4.3)	122(3.9)	154(4.5)	109(3.0)	134(3.7)
Male	Persons	55	33	52	547	440	529	135	129	121	145	104	122
Female	Persons	15	12	9	22	8	14	6	3	4	9	5	12
Under 30	Persons	16	13	20	101	60	81	41	26	21	35	15	24
30-50	Persons	47	27	34	130	130	126	43	34	51	35	25	27
Over 50	Persons	7	5	7	338	258	336	57	72	53	84	69	83
Voluntary employee turnover[1]	Persons (%)	65(98.5)	41(4.7)	55(4.8)	217(1.7)	192(1.6)	216(1.8)	65(2.2)	53(1.7)	66(2.1)	64(1.9)	37(1.0)	39(1.1)
Average years employed by the company	Years	4.9	4.2	4	17.1	17.3	17.2	17.6	16.1	14.9	18.6	18.5	18.4
Male	Years	4.8	4.1	4	17.3	17.5	17.4	17.8	16.5	15.3	19	19	19.2
Female	Years	4.9	4.2	4	14.3	14.0	13.0	7.7	5.7	5.3	5.3	4.7	4.8

1) Excluding involuntary departures such as retirement
2) Total turnover rate (%) = (Total number of turnover / number of permanent employees) x 100%
3) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report

Performance Evaluation[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Percentage of employees who receive regular performance evaluations	%	96.3	85.8	91.1	100	100	100	100	100	100	91.5	92.0	92.4
Male	%	97.5	87.4	91.9	100	100	100	100	100	100	91.8	92.2	92.6
Female	%	91.1	78.8	87.7	100	100	100	100	100	100	75.9	83.4	86.7

1) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report

Social

Remuneration[1]

Category	Unit	HDKSOE[2]			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Average annual compensation	KRW mil.	82	89	116	85	91	98	86	84	92	84	104	116
Male	KRW mil.	88	96	124	86	92	99	87	86	93	86	105	117
Female	KRW mil.	57	61	86	61	67	74	43	65	66	43	69	75
Average fixed annual salary of registered executives													
Male	KRW mil.	358	436	359	467	467	450	189	222	257	132	173	180
Female[2]	KRW mil.	-	-	-	-	-	-	-	-	-	-	-	-
Average total salary of registered executives (fixed salary + variable salary)													
Male	KRW mil.	492	591	570	590	571	666	174	232	328	168	226	271
Female[2]	KRW mil.	-	-	-	-	-	-	-	-	-	-	-	-
Average fixed annual salary of managers													
Male	KRW mil.	165	172	156	78	84	85	72	78	79	79	81	83
Female	KRW mil.	125	139	117	101	97	102	47	50	63	80	84	129
Average total salary of managers (fixed salary + variable salary)													
Male	KRW mil.	202	202	204	88	96	105	82	86	91	98	108	123
Female	KRW mil.	142	150	146	108	102	124	51	50	65	95	105	91
Average fixed annual salary of non-managerial positions													
Male	KRW mil.	74	84	76	59	60	61	58	60	58	60	64	66
Female	KRW mil.	60	70	65	53	55	56	43	48	50	40	48	47
Average total salary of non-managerial positions (fixed salary + variable salary)													
Male	KRW mil.	80	90	89	67	69	73	65	65	65	80	93	103
Female	KRW mil.	66	77	79	59	63	69	50	54	58	48	61	64

1) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report.
2) Since the number of female registered executives is too small to calculate the average, the data is not disclosed for personal data protection.

Social

Employee Benefits

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Maximum period of paid parental leave													
Male	Weeks	52	52	52	52	52	52	52	52	52	52	52	52
Female	Weeks	52	52	65	52	52	78	52	52	64	52	52	65

Employee Training[1]

Category		Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Regular[2]	Training hours per employee	Hour/Person	80.1	71.6	65.1	49.2	42.3	46.7	36.0	35.6	43.1	30.2	32.8	13.9
	Training expenditure per employee	KRW mil./Person	0.6	0.7	1.2	0.4	0.7	0.7	0.4	0.3	0.4	0.3	0.7	0.4
By age	Under 30	Hour/Person	110.7	103.9	85.8	65.1	66.5	67.2	75.9	58.7	56.2	96.9	138.5	67.3
	30-50	Hour/Person	80.3	64.3	61.8	50.6	41.5	46.9	34.4	24.6	31.7	31.5	27.3	12.0
	Over 50	Hour/Person	17.8	37.8	35.1	40.9	36.7	39.8	26.4	333.1	184.9	18.1	19.4	5.7
By gender	Male	Hour/Person	69.1	73.9	65.9	50.2	42.5	46.8	35.8	35.1	42.8	30.1	30.9	12.9
	Female	Hour/Person	82.6	62.5	62.1	28.6	39.8	45.3	40.6	47.1	49.5	33.1	89.9	42.1
By managerial position[3]	Top management	Hour/Person	-	-	40.8	18.4	29.2	50.6	14.9	23.9	23.8	25.2	17.6	23.1
	Middle management	Hour/Person	-	-	75.4	49.3	59.6	72.8	32.7	27.5	57.4	21.8	37.5	45.1
	Junior management	Hour/Person	-	-	69.6	65.1	52.8	56.1	34.4	34.6	47.9	21.1	31.9	13.1

1) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report.
2) Based on all employees (permanent, non-permanent)
3) Due to a change in classification criteria, the management classification system has been revised from the previous year. HDKSOE began collecting data based on the new criteria starting from 2024.

Social

Grievance Handling[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Percentage of corrective actions taken regarding human rights incident	%	100	100	100	100	100	100	100	-	100	100	100	100
Reported	Cases	4	1	8	5	9	9	1	0	2	4	5	4
Discrimination and bullying	Cases	4	1	8	5	9	9	1	0	2	4	5	4
Corrective actions taken	Cases	4	1	8	5	9	9	1	0	2	4	5	4
Discrimination and bullying	Cases	4	1	8	5	9	9	1	0	2	4	5	4

1) Due to the updates in data reporting standard, some figures have changed compared to the 2023 Integrated Report.

Safety and Health Risk Management[1]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total working hours													
Employee	Hour	1,708,800	2,282,880	1,739,840	27,253,692	27,047,573	29,901,476	6,901,212	7,369,444	8,920,064	7,782,680	7,923,712	8,011,776
Contractor	Hour	57,600	78,720	184,320	29,366,364	35,411,113	38,986,238	13,247,760	14,104,188	13,811,712	15,956,760	18,900,992	19,859,456
Fatality rate													
Employee	%	0	0	0	0.007	0	0	0	0	0.022	0	0	0
Contractor	%	0	0	0	0.007	0	0.005	0	0	0.014	0.013	0.011	0
No. of fatal accidents													
Employee	Cases	0	0	0	1	0	0	0	0	1	0	0	0
Contractor	Cases	0	0	0	1	0	1	0	0	1	1	1	0
Lost Time Injury Frequency Rate (LTIFR)													
Employee	Occurrence per million hours	0	0	0	1.504	1.22	0.736	1.884	3.257	3.139	1.927	1.01	0.624
Contractor	Occurrence per million hours	0	12.703	0	0.306	0.508	0.462	0.83	0.638	1.448	0.564	0.423	0.403
Lost Time Incident (LTI)													
Employee	Cases	0	0	0	41	33	22	13	24	28	15	8	5
Contractor	Cases	0	1	0	9	18	18	11	9	20	9	8	8

1) Mortality and fatal accidents refer to deaths resulting from work-related injuries (construction-related accidents, equipment, raw materials, gas, steam, dust, etc., or other work activities)

Social

Supply Chain[1,2,3]

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
No. of Tier 1 suppliers	companies	13	50	295	3,716	3,275	3,354	1,929	2,110	1,917	1,253	1,418	1,486
No. of significant suppliers in Tier-1	companies	13	25	56	315	314	317	264	291	313	162	172	173
Percentage of total spend on significant suppliers in Tier-1	%	21	18	38	62	58	59	39	33	58	41	38	46
Supply chain evaluation													
No. of Tier 1 suppliers assessed via desk assessments	companies	0	0	71	35	40	516	0	23	209	0	23	432
No. of significant suppliers assessed via desk assessments	companies	0	0	22	31	33	107	0	2	58	0	5	73
No. of Tier 1 suppliers assessed via on-site assessments	companies	0	0	4	35	40	22	0	6	6	0	6	19
No. of significant suppliers assessed via on-site assessments	companies	0	0	1	33	37	22	0	2	4	0	1	10
No. of suppliers assessed with substantial actual/potential negative impacts	companies	0	0	4	35	40	22	0	6	6	0	6	19
Risk mitigation of supply chain													
No. of Tier 1 suppliers with risk mitigation plan established	companies	0	0	0	35	40	22	0	0	0	0	0	0
No. of significant suppliers with risk mitigation plan established	companies	0	0	0	33	37	22	0	0	0	0	0	0
No. of Tier 1 suppliers with risk mitigation plan actively in operation	companies	0	0	0	35	40	21	0	0	0	0	0	0
No. of significant suppliers with risk mitigation plan actively in operation	companies	0	0	0	33	37	21	0	0	0	0	0	0
No. of Tier 1 suppliers supporting risk mitigation plan	companies	0	0	0	35	40	22	0	0	0	0	0	0
No. of significant suppliers supporting risk mitigation plan	companies	0	0	0	33	37	22	0	0	0	0	0	0
No. of suppliers whose contracts were terminated due to a lack in improvement on risks	companies	0	0	0	0	0	0	0	0	0	0	0	0
Supply chain ESG capacity building programs													
No. of Tier 1 suppliers participating in ESG capacity building programs	companies	0	0	0	401	335	516	0	0	78	0	0	53
No. of significant suppliers participating in ESG capacity building programs	companies	0	0	0	243	199	119	0	0	44	0	0	36

1) Significant contractors are partners classified as core companies (Tier 1) according to internal standards, and are all considered Tier 1 companies
2) HHI began conducting supply chain ESG evaluations in 2022; HMD and HSHI began in 2023.
3) HDKSOE data was collected based on a separate criteria for its businesses and contactors. Data from the supply chain evaluation was collected starting in 2024.

Social

Community

Category	Unit	HDKSOE			HHI			HMD			HSHI		
		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Total contribution to community initiatives	KRW mil.	259	55	81	781	955	2,035	227	267	379	161	378	718
Total cash donations	KRW mil.	259	55	81	554	722	970	212	234	347	161	378	718
Total in-kind donations[1]	KRW mil.	0	0	0	227	233	1,065	15	33	32	-	-	-

1) Criteria for in-kind donations: Based on the amount printed on the donation receipt

Governance*

Board of Directors

Category		Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Board composition	No. of members	Persons	5	5	5	5	5	5	5	5	5	7	6	6
	Percentage of outside directors	%	60	60	60	60	60	60	60	60	60	57.1	66.7	66.7
	No. of outside directors	Persons	3	3	3	3	3	3	3	3	3	4	4	4
	No. of inside directors	Persons	2	2	2	2	2	2	2	2	2	1	1	2
	No. of other non-executive directors	Persons	0	0	0	0	0	0	0	0	0	2	1	0
	Target percentage of outside directors	%	50	50	50	60	60	60	50	50	50	100	100	100
Board diversity	Percentage of female members	%	20	20	20	20	20	20	20	20	20	14.3	16.7	16.7
	Female	Persons	1	1	1	1	1	1	1	1	1	1	1	1
	Male	Persons	4	4	4	4	4	4	4	4	4	6	5	5
	Under 30	Persons (%)	0	0	0	0	0	0	0	0	0	0	0	0
	30-50	Persons (%)	1(20)	1(20)	1(20)	1(20)	1(20)	1(20)	1(20)	1(20)	0	0	0	0
	Over 50	Persons (%)	4(80)	4(80)	4(80)	4(80)	4(80)	4(80)	4(80)	4(80)	5(100)	7(100)	6(100)	6(100)
Board expertise	No. of outside directors with 4 or less other mandates	Persons	3	3	3	3	3	3	3	3	3	4	4	4
	No. of other mandates that is allowed for an outside director	Should be less than	2	2	2	2	2	2	2	2	2	2	2	2
	Average tenure of Board members	Years	2.6	2.4	1	2.8	1.8	2.8	1.4	1.6	2.0	2.7	2.0	1.8
	No. of outside directors with industry experiences	Persons	0	0	0	0	0	1	1	1	1	0	0	0
Board operation	Average attendance rate	%	92	95	96.4	98	95	93	95	94.3	95.8	90.5	95.2	95
	Minimum attendance required for Board meetings	%	50	50	50	50	50	50	50	50	50	38	22	21

* Following the implementation of integrated reporting standards for HD Hyundai affiliates, some disclosure items and quantitative data standards have been updated from those used in the 2023 Integrated Report

Governance

Remuneration System

Category		Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Evaluation and remuneration	CEO-to-employee annual total compensation ratio	Times	10.6	11.0	9.0	13.4	12.1	12.8	6.7	9.1	12.5	5.8	9.2	27.7
	Average pay for CEO	KRW mil.	873	977	1,046	1,135	1,101	1,252	573	761	1,151	487	954	3,209
Stock ownership	Ratio of CEO stock holdings to base salary	Times	0.3	0.5	0.2	0.3	0.3	0.2	0.6	0.5	0.5	0	0	0
	Required ratio of CEO stock holdings to base salary	Times	-	-	-	-	-	-	-	-	-	-	-	-
	Ratio of executive directors' stock holdings to base salary (excluding CEO)	Times	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]	-[1]
	Required ratio of executive directors' stock holdings to base salary (excluding CEO)	Times	-	-	-	-	-	-	-	-	-	-	-	-
	Total ownership percentage of government agencies and pension funds holding 5% or more	%	5.52	5.98	6.56	6.51	6.15	6.61	0	0	12.31	0	0	0
	Total ownership percentage of founders and their families holding 5% or more	%	11.17	11.17	11.47	8.71	8.71	8.6	0	0	0	0	0	0

1) Excluding the CEO, none of the inside directors own stocks to the company

Ethics and Compliance Management

Category		Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Violation of the Code of Ethics	Resolution rate of breaches of Code of Conduct	%	100	100	100	100	100	100	100	100	100	100	100	100
	Total number of breaches of Code of Conduct	Cases	1	0	1	2	5	10	3	5	1	3	3	1
	Total number of resolved breaches of Code of Conduct	Cases	1	0	1	2	5	10	3	5	1	3	3	1

Compliance

Category		Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Fair trade Regulatory violations[1]	Number of violations of fair-trade regulations	Cases	0	1	1	0	0	1	0	0	0	0	0	0
	Total monetary sanctions for violations of fair-trade regulations	KRW mil.	0	100	25	0	0	0	0	0	0	0	0	0
Corruption and bribery Regulatory violations	Number of violations of anti-corruption and anti- bribery regulations	Cases	0	0	0	0	0	0	0	0	0	0	0	0
	Total monetary sanctions for violations of anti-corruption and anti- bribery regulations	KRW mil.	0	0	0	0	0	0	0	0	0	0	0	0

1) Violations of fair trade laws and regulations were prepared based on the Annual Report, excluding cases currently under litigation, trials, or objections.

Governance

Policy Spending

	Category	Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Policy Spending[1]	Total policy expenditure	KRW mil.	261	295	110	2,214	2,114	1,749	624	723	788	738	983	1,426
	Lobbying and interest groups	KRW mil.	0	0	0	0	0	0	0	0	0	0	0	0
	Political contributions	KRW mil.	0	0	0	0	0	0	0	0	0	0	0	0
	Associations and tax-exempt organizations	KRW mil.	261	295	110	2,214	2,114	1,749	624	723	788	738	983	1,426

1) The company does not provide political donations in accordance with relevant laws such as the Political Funds Act.

Association Fees

	Category	Unit	HDKSOE	HHI	HMD	HSHI
Association fees[2]	Top 1	KRW mil.	Korea Chamber of Commerce & Industry (36)	Korea Offshore & Shipbuilding Association (1,342)	Korea Offshore & Shipbuilding Association (403)	Korea Offshore & Shipbuilding Association (872)
	Top 2	KRW mil.	Korea Listed Companies Association (14)	Korea Enterprises Federation (306)	Foreign Workers Support Center (168)	The Federation of Korean Industries (370)
	Top 3	KRW mil.	Korea Offshore & Shipbuilding Association (10)	Korea Defense Industry Association (259)	Korea Chamber of Commerce & Industry (90)	Korea Chamber of Commerce & Industry (60)
	Top 4	KRW mil.	KAIST (10)	Korea Chamber of Commerce & Industry (110)	Korea Enterprises Federation (32)	Corporate Safety and Health Committee (40)
	Top 5	KRW mil.	K-CCUS Association (8)	Defense Industry Incident Response Association 1(30)	Corporate Safety and Health Committee (24)	Korea Enterprises Federation (31)

1) The association's name was changed to Defense Industry Incident Response Association in 2025.
2) Purpose of participation: Engage as a member of economic organizations and associations that represent the industry and business community by communicating views to domestic and international institutions.

Privacy and Information Protection

	Category	Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Privacy protection	No. of violations of laws and regulations related to privacy protection	Cases	0	0	0	0	0	0	0	0	0	0	0	0
Information protection	No. of information security breaches	Cases	0	0	1	0	0	0	0	0	0	0	0	0

HD Hyundai Marine Engine

Environmental

General Environmental Data

Category	Unit	2022	2023	2024
ISO 14001 (Environmental Management Systems)	%	100	100	100
No. of significant violations of environmental laws[1]	Cases	0	0	0
Total monetary sanctions for significant violations of environmental laws	KRW mil.	0	0	0
Employees trained for environmental management	Persons	2	0	2

1) Indicates only significant fines (serious legal violations with a fine exceeding USD 10,000)

Energy

Category	Unit	2022	2023	2024
Total energy consumption	Unit	137	150	116
Total energy consumption intensity	TJ	0.78	0.64	0.39
Non-renewable energy consumption	TJ/KRW bil.	137	150	116
Direct energy consumption	TJ	61	93	53
Indirect energy consumption	TJ	76	57	63
Electricity consumption	TJ	76	57	63
Steam/heat consumption	TJ	0	0	0
Renewable energy consumption	TJ	0	0	0
Percentage of renewable energy	TJ	0	0	0

GHG Emissions[1]

Category	Unit	2022	2023	2024
Total emissions (Scope 1+2)	tCO_2	7,831	8,779	6,519
Direct emissions (Scope 1)	tCO_2	4,095	5,951	3,411
Indirect emissions (Scope 2)	tCO_2	3,736	2,828	3,108

1) Calculations are based on HD Hyundai Marine Engine's internal standards, which may differ from HDKSOE's.

Water Withdrawal

Category	Unit	2022	2023	2024
Total water withdrawal	m^3	68,000	40,300	35,500
Surface water	m^3	0	0	0
Groundwater	m^3	0	0	0
Seawater	m^3	0	0	0
Rainwater	m^3	0	0	0
Water from third-party sources	m^3	68,000	40,300	35,500
Service water	m^3	68,000	40,300	35,500
Industrial water	m^3	0	0	0
Other water sources	m^3	0	0	0
Total water withdrawal intensity	m^3/KRW mil.	0.389	0.171	0.12

HD Hyundai Marine Engine

Environmental

Waste

Category			Unit	2022	2023	2024
Total waste disposed			ton	405	795	744
General waste	Waste disposed		ton	247	429	459
	Recycled	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	201	267	383
	Landfilled	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	46	74	68
	Incinerated (energy recovery)	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	0	0	0
	Incinerated(without energy recovery)	Outsourced treatment	ton	0	0	0
	Other	Outsourced treatment	ton	0	88	8
Hazardous waste	Waste disposed	Outsourced treatment	ton	158	366	284
	Recycled	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	153	350	259
	Landfilled	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	0	0	0
	Incinerated (energy recovery)	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	0	0	0
	Incinerated(without energy recovery)	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	5	16	25
	Other	Outsourced treatment	ton	0	0	0

Social

Employee Diversity

Category		Unit	2022	2023	2024
Total number of employees		Persons	279	292	301
Registered executives		Persons	7	7	5
Employees excluding registered executives		Persons	272	285	296
External workers		Persons	0	0	0
By employment type	Total number of permanent employees	Persons	257	265	277
	Male	Persons	233	240	253
	Female	Persons	24	25	24
	Total number of temporary employees	Persons	15	20	19
	Male	Persons	13	17	17
	Female	Persons	2	3	2
By managerial position	Total number of managerial positions	Persons	47	52	47
	Top management	Persons	9	10	3
	Middle Management	Persons	3	4	9
	Junior management	Persons	35	38	35
	Total number of non-managerial positions	Persons	232	240	254
By age	Under 30	Persons (%)	29(10.4)	40(13.7)	33(11.0)
	30 – 50	Persons (%)	213(76.3)	213(72.9)	234(77.7)
	Over 50	Persons (%)	37(13.3)	39(13.4)	34(11.3)
By gender	Employees				
	Male	Persons (%)	253(90.7)	264(90.4)	275(91.4)
	Female	Persons (%)	26(9.3)	28(9.6)	26(8.6)
	Registered executives				
	Male	Persons	7	7	5
	Female	Persons	0	0	0
	Managerial positions				
	Male	Persons	47	52	47
	Female	Persons	0	0	0
	Non-managerial positions				
	Male	Persons	206	212	228
	Female	Persons	26	28	26
	STEM employees	Persons	41	44	45
	Male	Persons	37	40	42
	Female	Persons (%)	4(9.8)	4(9.1)	3(6.7)
Employment of marginalized groups	Percentage of employees with disabilities	%	0.72	0.69	0.66
	Total no. of employees with disabilities	Persons	2	2	2

HD Hyundai Marine Engine

Social

Labor-Management Relations

Category	Unit	2022	2023	2024
Unionization rate	%	77.6	80.5	76.0
Percentage of employees covered by collective bargaining agreements	%	100	100	100

Recruitment, Employment, and Training

Category	Unit	2022	2023	2024
Total number of new recruits	Persons (%)	55(21.4)	18(6.8)	19(6.9)
Employee turnover	Persons (%)	35(14.6)	12(4.7)	13(4.9)
Voluntary employee turnover	Persons (%)	34(14.2)	10(3.9)	4(1.5)
Training hours per employee	Hour/Person	6.5	10.3	5.2
Training expenditure per employee	KRW mil./Person	60.9	212.3	43.2

Safety and Health

Category	Unit	2022	2023	2024
ISO 45001 (occupational health and safety system) certification	%	100	100	100
Total working hours				
Employee	Hours	574,740	619,040	630,896
Contractor	Hours	226,600	231,080	249,424
Fatality rate				
Employee	%	0	0	0
Contractor	%	0	0	0
No. of fatal accidents				
Employee	Cases	0	0	0
Contractor	Cases	0	0	0
Lost Time Injury Frequency Rate (LTIFR)				
Employee	Occurrence per million hours	1.74	3.231	3.17
Contractor	Occurrence per million hours	0	4.328	12.028
Lost Time Incident (LTI)				
Employee	Cases	1	2	2
Contractor	Cases	0	1	3

Governance

Privacy and Information Protection

	Category	Unit	2022	2023	2024
Privacy protection	No. of violations of laws and regulations related to privacy protection	Cases	0	0	0
Information protection	No. of information security breaches	Cases	0	0	0

Ethics and Compliance Management

	Category	Unit	2022	2023	2024
Violation of the Code of Ethics	Resolution rate of breaches of Code of Conduct	%	-	-	-
	Total number of breaches of Code of Ethics	Cases	0	0	0
	Total number of resolved breaches of Code of Conduct	Cases	0	0	0

Compliance

	Category	Unit	2022	2023	2024
Fair trade violations	No. of violations of fair-trade regulations	Cases	0	0	0
	Total monetary sanctions for violations of fair-trade regulations	KRW	0	0	0
Corruption and bribery violations	No. of violations of anti-corruption and anti- bribery regulations	Cases	0	0	0
	Total monetary sanctions for violations of anti-corruption and anti-bribery regulations	KRW	0	0	0

HD Hyundai Engine

Environmental

Environment

Category			Unit	2022	2023	2024
ISO 14001 (environmental management system)			%	100	100	100
No. of significant violations of environmental laws[1]			Cases	0	0	0
Total monetary sanctions for significant violations of environmental laws[1]			KRW mil.	0	0	0
Total GHG emissions [2](Scope 1+2)			tCO_2eq	-	-	8,196
Direct emissions (Scope 1)			tCO_2eq	-	-	6,231
Indirect emissions (Scope 2)			tCO_2eq	-	-	1,965
Scope 1+Scope 2 emission intensity			tCO_2eq/KRW bil.	-	-	268.72
Total energy consumption[3]			TJ	-	-	143
Fuel consumption			TJ	-	-	102
Electricity consumption			TJ	-	-	41
Non-renewable energy-based electricity consumption			TJ	-	-	41
Nitrogen oxides emissions			kg	0	158	111
Sulfur oxides emissions			kg	0	0	0
Total suspended particulate emissions			kg	59	204	176
Total waste disposed			ton	235	496	656
General waste	Waste disposed		ton	187	356	476
	Recycled	Outsourced treatment	ton	185	350	409
	Incinerated (without energy recovery)	Outsourced treatment	ton	2	6	67
Designated waste	Waste disposed		ton	47	140	180
	Recycled	Outsourced treatment	ton	46	134	169
	Incinerated (without energy recovery)	Outsourced treatment	ton	1	6	11
Construction waste	Waste disposed		ton	0	0	0

1) Indicates only significant fines (serious legal violations with a fine exceeding USD 10,000).
2) Although not subject to the GHG emissions trading system, GHG emissions calculation has been conducted since 2024.
3) Energy usage calculation has been conducted since 2024.

Social

Employee Diversity

Category	Unit	2022	2023	2024
Total number of employees	Persons	17	22	27
Male	Persons	16	21	24
Female	Persons	1	1	3
Under 30	Persons	2	4	3
30-50	Persons	12	13	18
Over 50	Persons	3	5	6
Permanent employees	Persons	15	20	22
Male	Persons	15	19	21
Female	Persons	0	1	1
Non-permanent employees	Persons	1	1	4
Male	Persons	0	1	2
Female	Persons	1	0	2
Managerial positions	Persons	3	4	4
Male	Persons	3	4	4
Female	Persons	0	0	0
Top management	Persons	1	1	1
Male	Persons	1	1	1
Female	Persons	0	0	0
Middle management	Persons	2	2	2
Male	Persons	2	2	2
Female	Persons	0	0	0
Junior management	Persons	0	1	1
Male	Persons	0	1	1
Female	Persons	0	0	0
Non-managerial positions	Persons	14	19	23
Male	Persons	13	18	20
Female	Persons	1	1	3
External workers	Persons	1	2	3
Females in revenue-generating departments	Persons	0	0	0
Percentage of females working in revenue-generating departments	%	0	0	0
Female in STEM-related work	Persons	0	0	0
Employees with disabilities	Persons	0	0	0
Employees with foreign nationality	Persons	0	0	0

HD Hyundai Engine

Social

Employment

Category	Unit	2022	2023	2024
Total number of new recruits	Persons	15	4	2
Under 30	Persons	2	2	2
30-50	Persons	10	2	0
Over 50	Persons	3	0	0
Male	Persons	15	4	2
Female	Persons	0	0	0
Employee turnover	Persons	1	1	0
Under 30	Persons	0	1	0
30-50	Persons	1	0	0
Over 50	Persons	0	0	0
Male	Persons	1	1	0
Female	Persons	0	0	0
Voluntary employee turnover	Persons	1	1	0

Performance Evaluation

Category	Unit	2022	2023	2024
Percentage of employees who receive regular performance evaluations	%	58.8	90.9	85.2
Male	%	58.8	86.4	81.5
Female	%	0.0	4.5	3.7

Employee Training

Category	Unit	2022	2023	2024
Training hours per employee	Hours	25	30	27

HD Hyundai Engine

Social

Safety and Health

Category		Unit	2022	2023	2024
ISO 45001 (occupational health and safety system) certification		%	100	100	100
Employee	Total working hours	Hours	16,692	39,357	52,688
	Death due to work-related injuries	Cases (%)	0	0	0
	Work-related injuries requiring records	Cases (%)	0	0	0
	Lost Time Incident (LTI)	Cases	0	0	0
	Lost Time Injury Frequency Rate (LTIFR)	Occurrence per million hours	0	0	0
	Industrial accident rate	%	0	0	0
Contractor	Total working hours	Hours	21,885	119,567	246,329
	Work-related injuries requiring records	Cases(%)	0	0	3(3.65)
	Lost Time Incident (LTI)	Cases	0	0	3
	Lost Time Injury Frequency Rate (LTIFR)	Occurrence per million hours	0	0	12.17
	Industrial accident rate	%	0	0	3.65
Serious accidents		Cases	0	0	0
Rate of serious accidents		Occurrence per million hours	0	0	0

Governance

Information Security

Category	Unit	2022	2023	2024
No. of violations of laws and regulations related to privacy protection	Cases	0	0	0
No. of individuals affected by violations of laws and regulations related to privacy protection (leakage, theft, etc.)	Cases	0	0	0

Board of Directors

Category		Unit	2022	2023	2024
Board composition	No. of members	Persons	3	3	3
	No. of outside directors	Persons	0	0	0
	No. of inside directors	Persons	1	1	1
	No. of other non-executive directors	Persons	2	2	2
Board operation	Average attendance rate	%	100	100	100
Board expertise	Average tenure of Board members	Years	1	0	1
Board diversity	Female	Persons	0	0	0
	Male	Persons	3	3	3
	Under 30	Persons	0	0	0
	30-50	Persons	2	0	1
	Over 50	Persons	1	3	2

HD Hyundai Vietnam Shipbuilding

Environmental

General Environmental Data

Category	Unit	2022	2023	2024
No. of significant violations of environmental laws[1]	Cases	0	0	0
Total monetary sanctions for significant violations of environmental laws[1]	KRW mil.	0	0	0

1) Indicates only significant fines (serious legal violations with a fine exceeding USD 10,000)

Scope 1&2 Emissions

Category	Unit	2022	2023	2024
Total emissions (Scope 1+2)	tCO_2eq	45,468	55,414	52,480
Direct emissions (Scope 1)	tCO_2eq	12,678	19,004	14,413
Indirect emissions (Scope 2)	tCO_2eq	32,806	36,410	38,067
Scope 1+Scope 2 emission intensity	tCO_2eq/KRW bil.	64.70	77.26	61.70

Scope 3 Emissions

Category	Unit	2022	2023	2024
Total Scope 3 emissions	tCO_2eq	0	4,242,244	5,797,466
Upstream emissions	tCO_2eq	0	443,195	476,191
Category 1. Purchased products and services	tCO_2eq	-	406,809	442,669
Category 2. Capital goods	tCO_2eq	-	1,189	1,914
Category 3. Fuel and energy-related activities	tCO_2eq	-	7,165	6,998
Category 4. Upstream transportation and distribution	tCO_2eq	-	9,212	18,879
Category 5. Waste generated in operations	tCO_2eq	-	17,673	4,030
Category 6. Business travel	tCO_2eq	-	34	37
Category 7. Employee commuting	tCO_2eq	-	2,195	1,664
Category 8. Upstream leased assets	tCO_2eq	0	0	0
Downstream emissions	tCO_2eq	0	3,799,049	5,321,275
Category 9. Downstream transportation and distribution	tCO_2eq	0	0	0
Category 10. Processing of sold products	tCO_2eq	0	0	0
Category 11. Use of sold products	tCO_2eq	-	3,798,654	5,320,506
Category 12. End-of-life treatment of sold products	tCO_2eq	-	395	769
Category 13. Downstream leased assets	tCO_2eq	0	0	0
Category 14. Franchises	tCO_2eq	0	0	0
Category 15. Investments	tCO_2eq	0	0	0

HD Hyundai Vietnam Shipbuilding

Environmental

Energy

Category	Unit	2022	2023	2024
Total energy consumption	TJ	797	945	932
Total energy consumption intensity	TJ/KRW bil.	1.13	1.32	1.10
Non-renewable energy consumption	TJ	797	945	932
Direct energy consumption	TJ	111	195	137
Indirect energy consumption	TJ	686	750	796
Electricity consumption	TJ	686	750	796
Steam/heat consumption	TJ	0	0	0
Renewable energy consumption	TJ	0	0	0
Percentage of renewable energy	%	0	0	0

Water Withdrawal

Category	Unit	2022	2023	2024
Total water withdrawals	m^3	682,600	696,850	646,230
Surface water	m^3	682,600	696,850	646,230
Groundwater	m^3	0	0	0
Seawater	m^3	0	0	0
Rainwater	m^3	0	0	0
Water from third-party sources	m^3	0	0	0
Service water	m^3	0	0	0
Industrial water	m^3	0	0	0
Other water sources	m^3	0	0	0
Total water withdrawal intensity	m^3/KRW mil.	0.971	0.972	0.76

HD Hyundai Vietnam Shipbuilding

Environmental

Waste

Category			Unit	2022	2023	2024
Total waste disposed			ton	298,857	362,217	374,224
General waste	Waste disposed		ton	297,954	362,094	373,330
	Recycled	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	11,104	11,648	12,899
	Landfilled	Internal treatment	ton	225,330	255,285	281,720
		Outsourced treatment	ton	0	0	0
	Incinerated (energy recovery)	Internal treatment	ton	0	0	0
		Outsourced treatment	ton	61,520	95,161	78,711
	Incinerated (without energy recovery)	Outsourced treatment	ton	0	0	0
Hazardous waste	Waste disposed		ton	903	123	894

Social

Labor-Management Relations

Category	Unit	2022	2023	2024
Unionization rate	%	98.2	99.9	99.8
Percentage of employees covered by collective bargaining agreements	%	100	100	100
Employees who directly participated in a strike	Persons	0	0	0
No. of labor-management council meetings held	Times	1	1	1

Employee Diversity

Category		Unit	2022	2023	2024
Total number of employees		Persons	2,792	3,033	3,095
Total number of registered executives		Persons	6	6	4
Regular employees		Persons	2,792	3,033	3,095
External workers		Persons	0	0	0
By employment type	Total number of permanent employees	Persons	2,792	3,033	3,095
	Male	Persons	2,657	2,893	2,954
	Female	Persons	135	140	141
	Total number of temporary employees	Persons	0	0	0
	Male	Persons	0	0	0
	Female	Persons	0	0	0
By managerial position	Total number of managerial positions	Persons	834	842	859
	Top management	Persons	1	1	1
	Middle Management	Persons	69	70	72
	Junior management	Persons	764	771	786
	Total number of non-managerial positions	Persons	1,946	2,178	2,223

HD Hyundai Vietnam Shipbuilding

Social

Employee Diversity

	Category	Unit	2022	2023	2024
By age	Under 30	Persons (%)	549(19.7)	707(23.3)	754(24.4)
	30-50	Persons (%)	1,995(71.5)	2,012(66.3)	1,979(63.9)
	Over 50	Persons (%)	248(8.9)	314(10.4)	362(11.7)
By gender	Employees				
	Male	Persons (%)	2,657(95.2)	2,893(95.4)	2,954(95.4)
	Female	Persons (%)	135(4.8)	140(4.6)	141(4.6)
	Registered executives				
	Male	Persons	6	6	4
	Female	Persons	0	0	0
	Managerial positions				
	Male	Persons	822	829	846
	Female	Persons (%)	12(1.4)	13(1.5)	13(1.5)
	Top management				
	Male	Persons	1	1	1
	Female	Persons (%)	0	0	0
	Middle management				
	Male	Persons	69	70	72
	Female	Persons (%)	0	0	0
	Junior management				
	Male	Persons	752	758	773
	Female	Persons (%)	12(1.6)	13(1.7)	13(1.7)
	Non-managerial positions				
	Male	Persons	1,823	2,051	2,095
	Female	Persons	123	127	128
	Managerial employees in revenue-generating departments	Persons	686	684	641
	Male	Persons	686	684	641
	Female	Persons (%)	0	0	0
	STEM employees	Persons	29	36	60
	Male	Persons	26	33	57
	Female	Persons (%)	3(10.3)	3(8.3)	3(5.0)
By nationality	Employees				
	South Korea	Persons (%)	64(2.3)	71(2.3)	71(2.3)
	Executives and employees				
	South Korea	Persons (%)	64(7.7)	71(8.4)	71(8.3)
	Vietnam	Persons (%)	1(0.1)	1(0.1)	1(0.1)

Recruitment and Retention

Category	Unit	2022	2023	2024
Total number of new recruits	Persons (%)	244(8.7)	374(12.3)	245(7.9)
Male	Persons (%)	239(98.0)	365(97.6)	238(97.1)
Female	Persons (%)	5(2.0)	9(2.4)	7(2.9)
Under 30	Persons (%)	200(82.0)	298(79.7)	207(84.5)
30-50	Persons (%)	44(18.0)	76(20.3)	37(15.1)
Over 50	Persons (%)	0	0	1(0.4)
Employee turnover	Persons (%)	182(6.0)	131(4.7)	178(5.9)
Under 30	Persons	62	60	88
30-50	Persons	120	71	67
Over 50	Persons	0	0	0
Voluntary employee turnover	Persons (%)	182(6.0)	131(4.7)	178(5.9)
Average years employed by the company	Years	14.5	13.9	14.1
Male	Years	14.5	13.9	14.1
Female	Years	13.5	13.5	13.9

Performance Evaluation

Category	Unit	2022	2023	2024
Employees subject to regular performance evaluations	Persons	2,792	3,033	3,095
Male	Persons	2,657	2,893	2,954
Female	Persons	135	140	141
Percentage of employees who receive regular performance evaluations	Persons (%)	2,487(89.1)	2,560(84.4)	2,764(89.3)
Male	Persons (%)	2,357(88.7)	2,420(83.7)	2,623(88.8)
Female	Persons (%)	130(96.3)	131(93.6)	134(95.0)

HD Hyundai Vietnam Shipbuilding

Social

Employee Benefits

Category	Unit	2022	2023	2024
Maximum period of paid parental leave				
Male[1]	Weeks	1	1	1
Female[2]	Weeks	24	24	24

1) Normal birth: 5 business days / Birth by surgery: 7 business days / Birth of twins: 10 business days / Birth of twins by surgery: 14 business days
2) 6 months of leave per child. In the case of multiple births, an additional month is added for each child from the second child.

Employee Training

Category	Unit	2022	2023	2024
Training hours per employee	Hour/Person	27.0	51.1	33.2

Safety and Health Risk Management

Category	Unit	2022	2023	2024
Total working hours				
Employee	Hours	6,843,984	6,937,030	10,132,137
Contractor	Hours	2,175,994	2,484,634	2,824,781
Fatality rate				
Employee	%	0	0	0
Contractor	%	0	0	0
Death due to work-related injuries				
Employee	Cases	0	0	0
Contractor	Cases	0	0	0
Lost Time Injury Frequency Rate (LTIFR)				
Employee	Occurrence per million hours	0.438	0.144	0
Contractor	Occurrence per million hours	0	0	0
Lost Time Incident (LTI)				
Employee	Cases	3	1	0
Contractor	Cases	0	0	0
Total Recordable Injury Frequency Rate (TRIFR)				
Employee	Occurrence per million hours	0	0	0
Contractor	Occurrence per million hours	0	0	0
Recordable Injury (RI)				
Employee	Cases	0	0	0
Contractor	Cases	0	0	0

HD Hyundai Vietnam Shipbuilding

Social

Occupational Health and Safety System

Category	Unit	2022	2023	2024
Occupational health and safety system certificate acquisition rate	%	-	100	100
No. of sites subject to occupational health and safety system certification	Sites	-	1	1
No. of sites that have acquired occupational health and safety system certification	Sites	-	1	1

Local Community

Category	Unit	2022	2023	2024
Total contribution to community initiatives	KRW mil.	22.1	142.1	107.6
Total cash donations	KRW mil.	16.5	106.1	99
Total in-kind donations	KRW mil.	5.6	36	8.6

Governance

Board of Directors

Category		Unit	2022	2023	2024
Board composition	No. of members	Persons	6	6	4
	Percentage of outside directors	%	0	0	0
	No. of outside directors	Persons	0	0	0
	No. of inside directors	Persons	6	6	4
	No. of other non-executive directors	Persons	0	0	0

Economic Value Creation

Category	Unit	2022	2023	2024
Revenue (standalone basis)	KRW mil.	702,773	717,208	850,540

Appendix

Initiative Index

GRI

Universal Standard

Category	Note
GRI 1: Foundation 2021	
Statement of use	HDKSOE and its shipbuilding subsidiaries report their sustainability information for the period from January 1, 2024 to December 31, 2024 in accordance with the GRI Standards reporting principles (In accordance with).
GRI 1 used	GRI 1 : Foundation 2021
Applicable GRI Sector Standards	As of the publication date, the GRI Sector Standard for the shipbuilding and offshore industry, which is the main industry of HDKSOE and its shipbuilding subsidiaries, has not yet been released and therefore is not applied.

Category		Indicator	Page	Note
GRI 2: General Disclosures				
GRI 2: The organization and its reporting practices	2-1	Organizational details	3~16	
	2-2	Entities included in the organization's sustainability reporting	2	
	2-3	Reporting period, frequency and contact point	2	
	2-4	Restatements of information	-	In case of any restatements, the details of the restatements and their reasons are disclosed in footnotes.
	2-5	External assurance	175~176	
GRI 2: Activities and workers	2-6	Activities, value chain, and other business relationships	2, 4~16	
	2-7	Employees	143	
	2-8	Workers who are not employees	143	
GRI 2: Governanc	2-9	Governance structure and composition	108~111	
	2-10	Nomination and selection of the highest governance body	108	
	2-11	Chair of the highest governance body	108~111,122	
	2-12	Role of the highest governance body in overseeing the management of impacts	127	
	2-13	Delegation of responsibility for managing impacts	18~22	
	2-14	Role of the highest governance body in sustainability reporting	18~22	
	2-15	Conflicts of interest	106	
	2-16	Communication of critical concerns	112~116	
	2-17	Collective knowledge of the highest governance body	112	
	2-18	Evaluation of the performance of the highest governance body	24~26, 29, 117	
	2-19	Remuneration policies	117	
	2-20	Process to determine remuneration	116~117	
	2-21	Annual total compensation ratio	117, 154	

Category		Indicator	Page	Note
GRI 2: Strategy, policies and practices	2-22	Statement on sustainable development strategy	5, 8, 11, 14	
	2-23	Policy commitments	84~87, 92	
	2-24	Embedding policy commitments	84~87	
	2-25	Processes to remediate negative impacts	87	
	2-26	Mechanisms for seeking advice and raising concerns	87	
	2-27	Compliance with laws and regulations	136, 154~155	
	2-28	Membership associations	178	
	2-29	Approach to stakeholder engagement	27	
	2-30	Collective bargaining agreements	75	
GRI 3: Material Topics				
	3-1	Process to determine material topics	23~26	
	3-2	List of material topics	23~26	
GRI 3: Disclosures on material topics	3-3	Management of material topics	① Occupational Safety and Health: 24, 68–73 GRI: 403-1-10 ② R&D and products with less environmental impact: 25, 41–47 GRI: non-GRI ③ Climate change response: 26, 29-40 GRI: 305-1–7 ④ Workplace environment: 75–83 GRI: 401-1–3, 404-1-3 ⑤ Labor-management relations: 75, 82 GRI: 407-1 ⑥ Supply chain ESG management: 88–97 GRI: 308-1–2, 414-1–2	

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GRI

Topic Standard

Category		Indicator	Page	Note
GRI 201: Economic performance	201-1	Direct economic value generated and distributed	133~134	
	201-2	Financial implications and other risks and opportunities due to climate change	35~38	
	201-3	Defined benefit plan obligations and other retirement plans	79	
	201-4	Financial assistance received from government	155	
GRI 202: Market presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	148	
	202-2	Proportion of senior management hired from the local community	-	100%
GRI 203: Indirect economic impacts	203-1	Infrastructure investments and services supported	102~106, 152	
	203-2	Significant indirect economic impacts	134	
GRI 204: Procurement practices	204-1	Proportion of spending on local suppliers	151	
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	123	
	205-2	Communication and training about anti-corruption policies and procedures	120~123	
	205-3	Confirmed incidents of corruption and actions taken	123	
GRI 206: Anti-competitive behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practice	154	
GRI 207: Tax	207-1	Approach to tax	130	
	207-3	Stakeholder engagement and management of concerns related to tax	130	

Category		Indicator	Page	Note
GRI 301: Materials	301-1	Materials used by weight or volume	140	
	301-2	Recycled input materials used	140	
GRI 302: Energy	302-1	Energy consumption within the organization	139	
	302-3	Energy intensity	139	
	302-4	Reduction of energy consumption	29, 139	
	302-5	Reductions in energy requirements of products and services	42~45	
GRI 303: Water and effluents	303-1	Interactions with water as a shared resource	57	
	303-2	Management of water discharge-related impacts	57~58	
	303-3	Water withdrawal	57, 140	
GRI 304: Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas, as well as areas of high biodiversity value outside of protected areas	65	
	304-2	Significant impacts of activities, products and services on biodiversity	62~66	
	304-3	Habitats protected or restored	63	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	64	
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	40, 137	
	305-2	Energy indirect (Scope 2) GHG emissions	40, 137	
	305-3	Other indirect (Scope 3) GHG emissions	32, 138	
	305-4	GHG emissions intensity	137	
	305-5	Reduction of GHG emissions	137	
	305-6	Emissions of Ozone-Depleting Substances (ODS)	-	N/A
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	141	

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GRI

Topic Standard

Category		Indicator	Page	Note
GRI 306: Waste	306-1	Waste generation and significant waste-related impacts	59	
	306-2	Management of significant waste-related impacts	59	
	306-3	Waste generated	142	
	306-4	Waste diverted from disposal (e.g., reuse, recycling, etc.)	142	
	306-5	Waste directed to disposal (e.g., incineration, landfill, etc.)	142	
GRI 308: Supplier environmental assessment	308-1	New suppliers that were screened using environmental criteria	151	
	308-2	Negative environmental impacts in the supply chain and actions taken	95~96	
GRI 401: Employment	401-1	New employee hires and employee turnover	147	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	80	
	401-3	Parental leave	149	
GRI 402: Labor/Management relations	402-1	Minimum notice periods regarding operational changes	-1	
GRI 403: Occupational health and safety	403-1	Occupational health and safety management system	70	
	403-2	Hazard identification, risk assessment, and incident investigation	68, 71	
	403-3	Occupational health services	71~72	
	403-4	Worker participation, consultation, and communication on occupational health and safety	68~69	
	403-5	Worker training on occupational health and safety	69	
	403-6	Promotion of worker health	70~72	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	72	
	403-8	Workers covered by an occupational health and safety management system	69~70	
	403-9	Work-related injuries	69~70, 150	
	403-10	Work-related ill health	-	N/A

1) In accordance with Article 9 of the Collective Agreement, Labor and Management promptly exchange written notifications in cases of operational changes, including those regarding company name, article of incorporation, employment rules, personnel, organizational restructuring, labor welfare, training programs, in-house contractors and other personnel-related matters.

Category		Indicator	Page	Note
GRI 404: Training and education	404-1	Average hours of training per year per employee	149	
	404-2	Programs for upgrading employee skills and transition assistance programs	76~77	
	404-3	Percentage of employees receiving regular performance and career development reviews	147	
GRI 405: Diversity and equal opportunity	405-1	Diversity of governance bodies and employees	144~146	
	405-2	Ratio of basic salary and remuneration of women to men	148	
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	150	
GRI 407: Freedom of association and Collective bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	75, 82, 92	
GRI 413: Local communities	413-1	Operations with local community engagement, impact assessments, and development programs	106	
GRI 414: Supplier social assessment	414-1	New suppliers that were screened using social criteria	151	
	414-2	Negative social impacts in the supply chain and actions taken	95~96, 151	
GRI 415: Public policy	415-1	Political contributions	155	
GRI 416: Customer health and safety	416-2	Incidents of non-compliance related to the health and safety impacts of products and services	-	0 cases
GRI 417: Marketing and labeling	417-1	Requirements for product and service information and labeling	-	0 cases
	417-2	Incidents of non-compliance related to product and service information and labeling	-	0 cases
	417-3	Incidents of non-compliance related to marketing communications	-	0 cases
GRI 418: Customer privacy	418-1	Substantiated complaints related to breaches of customer privacy and losses of customer data	155	

Initiative Index

SASB - Industrial Machinery & Goods

Sustainability Disclosure Topics & Metrics[1]

Topic	SASB Code	Accounting Metrics	Unit	HDKSOE			HHI			HMD			HSHI		
				2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
Energy management	RT-EE-130a.1	Total energy consumed	TJ	167	149	172	9,887	11,511	11,891	2,900	2,905	3,009	4,095	4,552	4,802
		Percentage of electricity purchased from the grid	%	61.1	61.1	62.2	64.5	65.9	63.6	76.0	76.2	76.3	70.2	70.1	68.6
		Percentage of renewable energy used	%	0	0.201	0.309	0.020	0.017	0.017	0	0.001	0.014	0	0	0
Health & Safety	RT-IG-320a.1	Total Recordable Injury Frequency Rate (TRIFR)	Cases per 1 million working hours	0	0.423	0	0.883	0.817	0.581	1.191	1.537	2.112	1.011	0.596	0.466
		Fatality rate	%	0	0	0	0.007	0	0.003	0	0	0.020	0.009	0.008	0
		Near Miss Frequency Rate (NMFR)	Cases per 1 million working hours	82.540	88.923	87.184	26.422	31.125	29.918	11.465	10.525	17.553	15.420	8.847	7.596
Fuel economy & emissions in use-phase	RT-IG-410a.1	Sales-weighted fleet fuel efficiency for medium- and heavy-duty vehicles	gal/1,000ton-mile	-	-	-	-	-	-	-	-	-	-	-	-
	RT-IG-410a.2	Sales-weighted fuel efficiency for non-road equipment	gal/hr	-	-	-	-	-	-	-	-	-	-	-	-
	RT-IG-410a.3	Sales-weighted fuel efficiency for stationary generators	W/gal	-	-	-	-	-	-	-	-	-	-	-	-
	RT-IG-410a.4	Sales-weighted emissions of nitrogen oxides (NOx)	g/kJ	-	-	-	stroke engine Tier II 0.0035 Tier III 0.0006 stroke engine Tier II 0.0023 Tier III 0.0005	stroke engine Tier II 0.0034 Tier III 0.0007 stroke engine Tier II 0.0023 Tier III 0.0005	stroke engine Tier II 0.0033 Tier III 0.0007 stroke engine Tier II 0.0023 Tier III 0.0005	-	-	-	-	-	-
		Sales-weighted emissions of particulate matter (PM) for: (a) marine diesel engines, (b) locomotive diesel engines, (c) on-road medium- and heavy duty engines, and (d) other non-road diesel engines	g/kWh	-	-	-	-	-	-	-	-	-	-	-	-
Materials sourcing		Description of the management of risks associated with the use of critical materials	-	Operation of Raw Material Risk Committee			Operation of Raw Material Risk Committee			Operation of Raw Material Risk Committee			Operation of Raw Material Risk Committee		
Remanufacturing design & services		Revenue from remanufactured products and remanufacturing services	-	-	-	-	-	-	-	-	-	-	-	-	-

1) Metrics marked with dashes ("-) are either not applicable or not monitored.

Initiative Index

SASB - Industrial Machinery & Goods

Activity Metrics

SASB Code	Accounting metrics	Unit	HDKSOE			HHI			HMD			HSHI		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
RT-IG-000.A	Number of units produced by product category	Ships	-	-	-	T/K 2 ships CNTR 6 ships LNGC 8 ships LPGC 3 ships VLEC 2 ships SHUTTLE T/K 2 ships VLCC 14 ships TOTAL 37 ships	CNTR 14 ships LNG 9 ships LPG 8 ships BV 1 ships ETH 2 ships PC 1 ships VLCC 2 ships TOTAL 37 ships	CNTR 22 ships LNG 14 ships LPG 4 ships PC 3 ships TOTAL 43 ships	P/C 40 ships LPG 10 ships LNG 1 ships RO-PAX 1 ships CONT 11 ships RO-RO 1 ships B/C 2 ships TOTAL 66 ships	P/C 16 ships LPG 16 ships LNG 3 ships RO-PAX 1 ships CONT 24 ships RO-RO 3 ships TOTAL 63 ships	P/C 13 ships LPG 8 ships LNG 1 ships CONT 42 ships RO-RO 3 ships B/C 3 ships TOTAL 70 ships	T/K 11 ships LPGC 4 ships LNGC 7 ships CNTR 5 ships B/C 3 ships	T/K 7 ships LPGC 10 ships LNGC 8 ships CNTR 6 ships B/C 2 ships	T/K 1 ships LPGC 4 ships LNGC 8 ships CNTR 17 ships PCTC 1 ships
RT-IG-000.B	Number of employees	Persons	895	1,194	1,416	12,770	13,282	14,542	3,108	3,551	4,008	3,785	3,875	3,918

Initiative Index

UN SDGs

In line with global efforts, HDKSOE and its shipbuilding subsidiaries are committed to achieving the United Nations Sustainable Development Goals (SDGs). To this end, we pursue growth and innovation that facilitate economic development and job creation while also reducing impacts on the environment—a shared resource for humanity—through technology development. By doing so, we aim to align our business directions with the SDGs. As part of these efforts, HDKSOE and its shipbuilding subsidiaries have developed strategies to attain the goals of sustainable development and focused on contributing to 12 out of 17 SDGs and their associated 30 targets.

Key SDGs	Targets		Page	Contributions of HDKSOE and its shipbuilding subsidiaries
Ensure healthy lives and promote well-being for all at all ages	3.4	Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	58~59, 71	• Operate various health facilities such as an in-house clinic, physical therapy room, and oriental medicine treatment room to enhance employee's health • Conduct special medical check-ups for employees exposed to noise, harmful radiation, metals, and organic chemicals • Implement a hazard assessment process through a chemical management system
	3.9	Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination		
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.4	Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship	75~83	• Foster excellent workforce through systematic technical education programs such as a core technology transfer system • Develop and operate job competency training courses to nurture shipbuilding professionals
	4.5	Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations		
Ensure availability and sustainable management of water and sanitation for all	6.3	Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally	57~58	• Reduce wastewater and improve water quality by minimizing water usage and reusing water • Conduct environmental clean-up activities such as collecting marine debris and removing hazardous materials
	6.6	Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes		
	6.7	Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling, and reuse technologies		
Ensure access to affordable, reliable, sustainable, and modern energy for all	7.2	Increase substantially the share of renewable energy in the global energy mix	31, 48~53	• Develop LZC ships and engines • Maintain an efficient energy management system certified by ISO 50001 • Establish optimal ship energy management systems by developing autonomous intelligent ships
	7.3	Double the global rate of improvement in energy efficiency		
Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all	8.2	Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors	48~53, 88~97	• Expand high-value-added industries, enhance economic productivity, and reduce risk factors by establishing a super gap smart shipyard • Support education and financial services to achieve co-prosperity with contractors
	8.3	Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services		
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.4	Upgrade infrastructure and retrofit industries to make them sustainable, realizing increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	48~53	• Realize saving fuel costs and energy optimization through the digital transformation of shipyards • Enhance the efficiency of ship operations through automation solutions
Reduce inequality within and among countries	10.4	Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality	102~106	• Conduct social contribution activities to practice sharing by supporting vulnerable groups, promoting coexistence with the local community, and supporting the self-reliance of future generations
Ensure sustainable consumption and production patterns	12.2	achieve the sustainable management and efficient use of natural resources	42~45, 57~59	• Obtain international certification for environmental management system (ISO14001) • Minimize pollutant emissions through periodic inspections of emission concentration • Reuse resources and recycle wastes • Install prevention facilities and educate environmental personnel • Manage chemical accidents prevention
	12.4	Achieve the environmentally sound management of chemicals and all waste throughout their life cycle in accordance with agreed international frameworks, and significantly reduce their release to air, water, and soil in order to minimize their adverse impacts on human health and the environment		
	12.5	Substantially reduce waste generation through prevention, reduction, recycling, and reuse		
Take urgent action to combat climate change and its impacts	13.2	Integrate climate change measures into national policies, strategies and planning	30~31, 95	• Declare commitment to carbon neutrality and establish a roadmap • Support contractors in achieving carbon neutrality
Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	14.1	Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	62~66	• Possess equipment to prevent marine accidents and manage safety during ship entry and departure • Prevent the destruction of ecosystem conservation areas, and protect and restore habitats • Reduce underwater radiated noise from ships to decrease negative impacts on marine life
	14.2	Sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including measures such as strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans		
	14.3	Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels		
Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss	15.4	Ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	62	• Biodiversity Conservation Declaration, Deforestation Prohibition Declaration • Prevent the introduction of invasive species through the development of ballast water treatment systems such as the Hi-Ballast system and Ballast-free system
	15.8	Introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species		
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels	16.3	Promote the rule of law at the national and international levels and ensure equal access to justice for all	108~123	• Practice transparent and responsible management through ethical and compliance management • Realize a rational governance that maintains checks and balances • Promote inclusive management by encouraging the engagement of various stakeholders such as communication with labor union
	16.5	Substantially reduce corruption and bribery in all their forms		
	16.7	Ensure responsive, inclusive, participatory, and representative decision-making at all levels		

Independent Assurance Statement

To readers of HDKSOE INTEGRATED REPORT 2024

Introduction

Korea Management Registrar (KMR) was engaged to conduct an independent assurance of HDKSOE INTEGRATED REPORT 2024 for the year ending December 31, 2024. The preparation, information and internal control of the report are the sole responsibility of HD Korea Shipbuilding & Offshore Engineering's the management. KMR's responsibility is to comply with the agreed engagement and express an opinion to HD Korea Shipbuilding & Offshore Engineering's management.

Subject Matter

The reporting boundaries included the performance and activities of sustainability-related organizations as described in HD Korea Shipbuilding & Offshore Engineering's report:

• HDKSOE INTEGRATED REPORT 2024

Reference Standard

• GRI Standards 2021 : 2023 (GRI)

Assurance criteria

KMR conducted the verification in accordance with the globally recognized standard AA1000AS v3 and KMR's assurance standard SRV1000 based on requirements of ISO 17029 and KMR EDV 01, and set the levels of assurance and materiality as below. Under AA1000AS v3, We assessed the adherence to the four principles presented in AA1000AP:2018—Inclusivity, Materiality, Responsiveness, and Impact—and evaluated the reliability and quality of the data and information using the GRI index specified in the report. Under SRV1000, we conducted a multidimensional review aimed at zero data errors, applying expert judgment to determine the materiality criteria.

• ISO 17029 : 2019, ISO 14065 : 2020, AA1000AS v3 : 2020 (AccountAbility), AA1000AP : 2018 (AccountAbility), SRV 1000 : 2022 (KMR), KMR EDV 01 : 2024 (KMR)
• Levels of assurance/materiality: AA1000AS v3 – Type 2/moderate

Scope of assurance

The scope of our assurance included the verification of compliance with the reporting requirements of the GRI Standards 2021. We confirmed that the following indicators of material topics were identified through the materiality assessment process.

• GRI Standards 2021 reporting principles
• Universal Standards
• Topic Specific Standards
  - GRI 305: Emissions
  - GRI 308: Supplier Environmental Assessment
  - GRI 401: Employment
  - GRI 403: Occupational Health and Safety
  - GRI 404: Training and Education
  - GRI 407: Freedom of Association and Collective Bargaining
  - GRI 414: Supplier Social Assessment

As for the reporting boundary, the engagement excludes the data and information of HD Korea Shipbuilding & Offshore Engineering'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:

• Evaluating the appropriateness of the reference standard used as a basis for preparing sustainability information and the reliability of the materiality assessment process and its findings;
• Conducting inquiries to understand the data management and control environment, processes, and information systems (the effectiveness of controls was not tested);
• Evaluating the appropriateness and consistency of the methodology for estimation (note that the underlying data was not tested and KMR has not made any estimates);
• Visiting the headquarters, determining visit sites based on the site's contribution to sustainability and the possibility of unexpected changes since the previous period and sampling data, and carrying out due diligence on a limited number of source records at the sites visited;
• Interviewing people in charge of preparing the report;
• Considering whether the presentation and disclosures of sustainability information are accurate and clearly defined;
• Identifying errors through comparison and check against underlying information, recalculation, analyses, and backtracking; and
• Evaluating the reliability and balance of information based on independent external sources, public databases, and press releases.

Limitations and Recommendations

The absence of generally accepted reporting frameworks or well-established practices on which to draw to evaluate and measure non-financial information allows for different measures and measuring techniques, which can affect comparability between entities. Therefore, our assurance team relied on professional judgment. The scope of this assurance included the confirmation of the truthfulness of claims regarding results that have already been obtained as stipulated by ISO 17029. However, the plausibility of intended claims of forecasts or hypotheses was not validated even if the related content was contained in the report.

A limited assurance evaluates the appropriateness of the criteria used by HD Korea Shipbuilding & Offshore Engineering for preparing sustainability information on subject matters, the risk of material misstatement in the sustainability information, whether due to fraud or error, responses to risks, and disclosure of the sustainability information on subject matters. However, the scope of the risk assessment process and the subsequent procedures performed in response to assessed risks, including an understanding of internal controls, is more limited than that of a reasonable assurance.

Our assurance team conducted our work to a limited extent through inquiries, analysis, and limited sampling based on the assumption that the data and information provided by HD Korea Shipbuilding & Offshore Engineering are complete and sufficient. To overcome these limitations, we confirmed the quality and reliability of the information by referring to independent external sources and public databases, such as DART and the National GHGs Management System (NGMS).

Independent Assurance Statement

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with HD Korea Shipbuilding & Offshore Engineering 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 was prepared in accordance with the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

| Inclusivity | HD Korea Shipbuilding & Offshore Engineering 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 | HD Korea Shipbuilding & Offshore Engineering 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 | HD Korea Shipbuilding & Offshore Engineering 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 HD Korea Shipbuilding & Offshore Engineering's actions.

| Impact | HD Korea Shipbuilding & Offshore Engineering 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 data related to sustainability performance, including technologies to improve vessel operation efficiency, water recycling and reuse, scrap metal resource circulation, energy efficiency improvement and reduction at business sites, greenhouse gas emissions, waste generation, employee status, new hires, and length of service. 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.

KMR's Competence, Independence, and Quality Control

Korea Management Registrar (KMR) is a verification body for the greenhouse gas emissions trading scheme, accredited by the Korea Laboratory Accreditation Scheme (KOLAS) under the National Institute of Technology and Standards of Korea for ISO/IEC 17029:2019 (Conformity Assessment - General principles and requirements for validation and verification bodies), ISO 14067, and additional accreditation criteria, ISO 14065. It is also recognized by the Korea Accreditation Board (KAB) for ISO/IEC 17021:2015 (Requirements for bodies providing audit and certification of management systems), and the National Institute of Environmental Research under the Ministry of Environment of Korea. Additionally, KMR maintains a comprehensive quality control system that includes documented policies and procedures of the KMR EDV 01:2024 (ESG Disclosure Assurance System) based on ISO/IEC 17029 requirements and compliant with IAASB ISQM1:2022 (International Standard on Quality Management 1 by the International Auditing and Assurance Standards Board). Furthermore, KMR adheres to the ethical requirements of integrity, objectivity, professional competence and due care, confidentiality, and professional behavior in accordance with the IESBA Code:2023 (International Code of Ethics for Professional Accountants). Our assurance team consists of sustainability experts. Other than providing an independent assurance, KMR has no other contract with HD Korea Shipbuilding & Offshore Engineering and did not provide any services to HD Korea Shipbuilding & Offshore Engineering that could compromise the independence of our work.

Limitations of Use

This assurance statement is made solely for the management of HD Korea Shipbuilding & Offshore Engineering for the purpose of enhancing an understanding of the organization's sustainability performance and activities. We assume no liability or responsibility for its use by third parties other than the management of HD Korea Shipbuilding & Offshore Engineering. The statement is valid as of the assurance date below. Certain events that may occur between the assurance date and the time of reading this report could have a material impact on the report, which may lead to revisions to this assurance statement. Therefore, we recommend visiting the HD Korea Shipbuilding & Offshore Engineering website and verifying whether this is the latest version.

June 21, 2025
Chief Executive Officer (CEO)

E. J Hwang

KMR SRV1000 Sustainability Committee Assurance AA1000 Licensed Report 000-129/V3-ZJZJY

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GHG & Energy Assurance Statement

GHG Emissions Verification

Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Scope 3 Greenhouse Gas Emissions (hereinafter 'GHG emissions') of HD Korea Shipbuilding & Offshore Engineering Co., Ltd., HD Hyundai Heavy Industries Co., Ltd., HD Hyundai Mipo Co., Ltd., HD Hyundai Samho Co., Ltd.[1] (hereinafter 'Company') for 2024. KFQ is responsible for providing an assurance statement on the GHG emissions based on the verification scope and criteria described below, while the responsibility for the claims made regarding the GHG emissions rests with the company.

1) Address (based on group headquarters) : 477, Bundangsuseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do

Verification Purpose

The purpose is to provide an independent verification opinion on the company's Scope 3 emissions.

Verification Scope

The verification covered ten emission categories[2] selected by the company during 2024.

2) Category 1, 2, 3, 4, 5, 6, 7, 11, 12, 15

Verification Criteria

The following criteria and coefficients used by the company were applied.

- **Criteria**
  - ISO 14064-1:2018, ISO 14064-3:2019
  - GHG Protocol Corporate Standard
  - WBCSD/WRI, Corporate Value Chain (Scope 3) Accounting and Reporting Standard
  - Rule for emission reporting and certification of greenhouse gas emission trading Scheme (Notification No. 2025-64 of Ministry of Environment)
- **Coefficient**
  - Environmental Product Declaration evaluation coefficient (2021)
  - EEDI (Energy Efficiency Design Index)

Level of Assurance

The verification has been conducted in accordance with the verification principles and standards of the 'ISO14064-3:2019' under the limited verification level.

Verification Limitation

GHG emissions verification involves inherent limitations that may arise depending on the organization's data characteristics, calculations and estimates, sampling method, and limited assurance level. Additionally, this verification does not include responsibility for the accuracy of the original data provided by the company.

Conclusion

Based on the criteria and guidelines stated above, KFQ's verification opinion is as follows.

1) GHG emissions of the company for 2024 were properly calculated based on the materials provided, and no material errors or omissions that could affect the verification opinion were identified.
2) The criteria and process established by the company for calculating GHG emissions were transparently documented in the internal calculation process to prevent potential misunderstandings.
3) Accordingly, KFQ provides a verification opinion that is "Unmodified".

Appendix A. Summary of Scope 3 GHG Emission Results

Organization: HD Korea Shipbuilding & Offshore Engineering Co., Ltd., HD Hyundai Heavy Industries Co., Ltd., HD Hyundai Mipo Co., Ltd., HD Hyundai Samho Co., Ltd.

Emission calculation period: The emission calculation period is from January 1st to December 31st, 2024.

Company Scope 3 Emissions verification Results

(Unit: tCO_2eq)

	Category	Scope 3 Emissions			
		HDKSOE	HHI	HMD	HSHI
1	Purchased goods & services	34,747	3,317,675	1,146,315	2,057,399
2	Capital goods	1,261	15,529	4,438	6,861
3	Fuel- and Energy- Related Activities Not Included in Scope 1 or Scope	1,115	79,378	20,785	32,595
4	Upstream Transportation and Distribution	438	57,110	26,420	10,018
5	Waste Generated in Operations	30	13,027	24,387	39,840
6	Business Travel	2,553	4,547	878	686
7	Employee Commuting	826	13,487	4,274	9,690
11	Use of Sold Products	808,166	59,538,675	27,541,265	37,987,468
12	End of Life Treatment of Sold Products	6	5,245	2,184	3,172
15	Investments	10,705	8,196	-	-
	Total	859,847	63,052,869	28,770,946	40,147,729

* As total emissions are summed by rounding emissions by category to whole numbers, a difference of $\pm 1 tCO_2eq$ may occur

June 18, 2025

CEO Ji-Young Song
Korean Foundation for Quality

National Institute of Environmental Research

Ji Young Song

Membership Status & Public Information

Public Information

Classification	Disclosure Channel
HD Hyundai Website	https://www.hd.com/
HD Hyundai ESG Website	https://esg.hd.com/ko/main
HD Hyundai Business Ethics Website	https://ethics.hd.com/html/main.html
HD Hyundai Social Contribution Website	https://csr.hyundai-holdings.co.kr/front/index
HDKSOE Website	https://www.hdksoe.co.kr/
HHI Website	https://www.hhi.co.kr/
HMD Website	https://www.hd-hmd.com/
HSHI Website	https://www.hshi.co.kr/
Financial Supervisory Service (FSS) Data Analysis, Retrieval, and Transfer System (DART)	https://dart.fss.or.kr/

Membership Status

Membership	HDKSOE	HHI	HMD	HSHI
Korea Enterprises Federation		●	●	●
Korea International Trade Association	●	●	●	●
Korean Standards Association		●	●	●
Korea Chamber of Commerce & Industry	●	●	●	●
Korea Listed Companies Association	●	●	●	
Korea Fair Competition Federation	●		●	
Korea Offshore & Shipbuilding Association	●	●	●	●
Korea Association of Machinery Industry		●		
Korea Defense Industry Association		●		
Korea Association for Space Technology Promotion		●		

Organizations that Contributed to the Report

HDKSOE

Business Support Team
Technology Management Team
Corporate Planning Team
Internal Accounting Team
Corporate Relations Team
Digital Innovation Planning Team
Risk Management Team
Future Talent Development Team
Security Planning Team
Brand Planning Team
Social Contribution Planning Team
Tax Team
Consolidated Accounting Team
Ethical Management Planning Team
Treasury Team
Finance Support Team
Compliance Team
Quality Planning Team
Public Relations Team
ESG Department
HR Value Team
HR Management Team
HSE Strategy Team
IP Strategy & Filing Team
Investor Relations Team
Learning & Development Team
SCM Department

HHI

Shipbuilding Technology Planning Department
Procurement Planning Department
Green Resources Department
Technology Planning Department
Technical Training Center
Co-prosperity Planning Department
Corporate Culture & PR Department
Security Planning Team
Legal Team
Co-existing Cooperation Department
Safety Management Department
Safety & Health Support Department
Cargo Containment System Research Department
Energy Management Department
Engine & Machinery Business Planning Department
Engine System Sales Department 1
Human Resources Development Institute
Property Development Department
Project & Production Planning Department
Shipbuilding HR & General Affairs Support Department
Financial Analysis Department
General Affairs Department
Naval & Special Ship Business Planning Team
Offshore & Energy Project Planning Department
Accounting Department
ESG Department
FOS Planning Team
HR Department
People & Culture Team

HMD

Initial Planning Department
Technology Strategy & Planning Department
Internal Accounting Control Team
Co-Prosperity Department
Digital Manufacturing Innovation Center
Digital Innovation Department
Legal Team
Business Planning Department
Coexisting Cooperation Department
Production Equipment Solutions Department
System Quality Management Department
Safety Department
Safety Planning Department
Cost Management Department
Talent Development Department
Procurement Department 1
Procurement Department 2
Integrated Design Department
General Affairs Department
PR Team
Environment & Health Department
Accounting Department
HR Department
HD Hyundai Vietnam Shipbuilding

HSHI

Internal Accounting Team
Shared Growth Department
Business Planning Department
Co-existing Cooperation Department
Outfitting Design Department
Hull Design Department
Hull Quality Management Department
Design Platform Innovation Department
Facility, Environment & Energy Department
System Quality Management Department
Safety Planning Department
Safety & Health Department
Ethical Management Team
Human Resources Development Department
Automation Innovation Center
Materials Purchasing Department
Information Security Team
Integrated Design Department
General Affairs Department
Accounting Department
DT Innovation Promotion Department
HR Department


HD
KOREA SHIPBUILDING &
OFFSHORE ENGINEERING